



**Final Supplement No. 1
Remedial Investigation/Feasibility Study Addendum
at Sites 2 and 12, Former Fort Ord, California**

Michaels and REI Indoor Investigation at Site 12

Prepared for:

Department of the Army
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814-2924

Prepared by:

Ahtna Environmental Inc.
296 12th Street
Marina, California 93933-6001

USACE Contract No. W91238-14-C-0048

A handwritten signature in black ink that reads "Derek S. Lieberman".

Derek S. Lieberman, P.E. Certificate No. C 57417
Project Manager

A handwritten signature in blue ink that reads "Holly Dillon".

Holly Dillon
Task Lead

January 2016

**Final Supplement No. 1
Remedial Investigation/Feasibility Study Addendum
at Sites 2 and 12, Former Fort Ord, California**

Michaels and REI Indoor Investigation at Site 12

Contract No. W91238-14-C-0048

This document was prepared by Ahtna Environmental Inc. (Ahtna) under the U.S. Army Corps of Engineers (USACE), Sacramento District, for the sole use of USACE, the only intended beneficiary of this work. No other party should rely on the information contained herein without the prior written consent of the USACE. This report and the interpretations, conclusions, and recommendations contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

Table of Contents

Acronyms and Abbreviations	iv
1.0 Introduction	1
1.1 Site Background	1
1.2 Purpose of Supplement No. 1	2
2.0 Field Activities	3
2.1 Safety and Quality	3
2.2 Sample Locations	3
2.3 Sample Procedures	4
2.4 Deviations from the Work Plan.....	5
3.0 Laboratory Results	6
4.0 Human Health Risk Assessment.....	7
5.0 Conceptual Site Model.....	8
6.0 Conclusions and Recommendations	9
7.0 References	10

Figures

- 1 Michaels and REI Indoor Air and Sub-Slab PCE/TCE Results and First Quarter 2015 Soil Gas and Groundwater Remedial Areas
- 2 Indoor Air and Sub-Slab PCE/TCE Results Building 5 (Michaels)
- 3 Indoor Air and Sub-Slab PCE/TCE Results Building 9 (REI)

Tables

- 1 Indoor Air and Sub-Slab PCE and TCE Screening Levels
- 2 October 2013 and May 2015 Indoor Air and Sub-Slab PCE and TCE Results – Michaels and REI
- 3 May 2015 Ambient Air PCE and TCE Results
- 4 Summary of Cancer Risks and Non-cancer Hazards

Attachments

- 1 Utility Clearance Records
- 2 Field Reports
- 3 Photographic Record
- 4 Laboratory Analytical Data
- 5 Validation Summary Report
- 6 Human Health Risk Assessment
- 7 Responses to Comments on the Draft Supplement No. 1
- 8 Responses to Comments on the Draft Final Supplement No. 1

Acronyms and Abbreviations

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AES	Ahtna Engineering Services
AHA	Activity Hazard Analysis
Ahtna	Ahtna Environmental Inc.
APP	Accident Prevention Plan
AR#	Administrative Record Number
Army	U.S. Department of the Army
BCT	BRAC Cleanup Team
BRAC	Base Realignment and Closure
COC	chemical of concern
CSM	conceptual site model
DoD	Department of Defense
DQO	data quality objective
DTSC	California Department of Toxic Substances Control
ELAP	Environmental Laboratory Accreditation Program
FSP	Field Sampling Plan
Hg	mercury
HHRA	human health risk assessment
HI	Hazard Index
HVAC	heating, ventilating, and air conditioning
IA	indoor air
IA-SL	indoor air screening level
ID	identification
InHg	inches of mercury
PCE	tetrachloroethene
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
REI	Recreational Equipment, Inc.
RI/FS	Remedial Investigation/Feasibility Study
RWQCB	California Central Coast Regional Water Quality Control Board
Sites 2/12	Sites 2 and 12
SS	sub-slab
SS-SL	sub-slab screening level
TCE	trichloroethene
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

1.0 Introduction

On behalf of the U.S. Army Corps of Engineers (USACE) Sacramento District, per Contract No. W91238-14-C-0048, Ahtna Environmental Inc. (Ahtna) prepared this supplement to the *Final Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California* (RI/FS Addendum; AES, 2015). Based on the results of the field work conducted in accordance with the *Final Work Plan, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California* (RI/FS Addendum Work Plan; AES, 2013), the U.S. Environmental Protection Agency (USEPA) and the California Department of Toxic Substances Control (DTSC) requested additional indoor air sampling at Michaels and Recreational Equipment, Inc. (REI) retail facilities in The Dunes on Monterey Bay shopping center in Marina, California. With the concurrence of the Fort Ord Base Realignment and Closure (BRAC) Cleanup Team (BCT),¹ samples were collected at one (1) additional indoor air and sub-slab soil gas location at Michaels and three (3) additional indoor air and sub-slab soil gas locations at REI, and analyzed for tetrachloroethene (PCE) and trichloroethene (TCE) according to the *Final Work Plan Supplement No. 1, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California* (Work Plan; Ahtna, 2015c).

1.1 Site Background

Remedial Investigation/Feasibility Study (RI/FS) Addendum field work was conducted in accordance with the RI/FS Addendum Work Plan (AES, 2013) at Site 12 between September 2013 and July 2014. Results are presented in the RI/FS Addendum (AES, 2015). The PCE and TCE² soil gas plumes (Figure 1) in the Site 12 area are delineated as part of the quarterly sampling program and with the latest results reported in the *Sites 2 and 12 Second Quarter 2015 Groundwater and Soil Gas Monitoring and Treatment System Report, Former Fort Ord, California* (Ahtna, 2015e). The source of the PCE and TCE soil gas plumes is presumed to be surface disposal of those compounds near the former Directorate of Logistics Automotive Yard and the former Cannibalization Yard while Fort Ord was still an active military installation (AES, 2015). These facilities were located in the area of the shopping center parking lot.

Diffusion and advection resulted in expansion of the soil gas PCE plume toward the retail buildings currently at the site; however, based on the sub-slab soil gas and indoor air data collected, the existing building slabs currently appear to be protective against vapor intrusion to indoor air (AES, 2015). Diffusion of the soil gas plumes has also resulted in expansion downward to the water table, where chemicals of concern (COCs) have moved from the vadose zone into the saturated zone by direct dissolution from the vapor phase into the groundwater and/or by dissolving into soil water infiltrating through the capillary fringe.

The results of comprehensive indoor air and sub-slab sampling of the retail areas at Site 12 conducted in September and October 2013 as part of the RI/FS Addendum were used in a risk assessment that found

¹ The BCT includes the U.S. Department of the Army (Army), USACE, USEPA, DTSC and the California Central Coast Regional Water Quality Control Board (RWQCB).

² PCE and TCE are the primary chemicals of concern (COCs) as determined by the RI/FS Addendum (AES, 2015).

no unacceptable risk to indoor workers or shoppers via the vapor intrusion pathway. Indoor air sample analytical results at the retail areas at Site 12 were below screening levels (see the RI/FS Addendum; AES, 2015), except for two retail buildings (Michaels and REI) where PCE and TCE were present in indoor air at concentrations above indoor air screening levels (IA-SLs; Table 1). At Michaels, the indoor air PCE results were above the IA-SL in two of the three sample locations, and in REI the indoor air TCE result was above the IA-SL in the single sample location. These detections above the IA-SLs were attributed to indoor sources and not sub-slab sources of PCE and TCE (AES, 2015).

1.2 Purpose of Supplement No. 1

As stated in the RI/FS Addendum (AES, 2015) Section 7.0, Appendix K, and Appendix O, additional samples were to be collected at Michaels and REI to confirm whether:

- Indoor air PCE and TCE concentrations are similar to those detected in samples collected during RI/FS Addendum field work given potential seasonal variation;
- Detected PCE and TCE concentrations still do not present an unacceptable risk to workers or shoppers.

The additional data are also to be evaluated in combination with data collected during RI/FS Addendum field work to update the human health risk assessment (HHRA) and conceptual site model (CSM) presented in the RI/FS Addendum (AES, 2015), and determine whether there should be any changes to the RI/FS Addendum conclusions and recommendations.

2.0 Field Activities

The additional sub-slab soil gas and indoor air samples in Michaels and REI were collected in spring 2015, which is an opposite season from the original RI/FS Addendum sampling event conducted in autumn 2013, as requested by DTSC. Opposite sampling seasons potentially present different weather conditions and different building heating, ventilating, and air conditioning (HVAC) conditions.

2.1 Safety and Quality

All field activities were conducted according to the *Final Accident Prevention Plan, Groundwater Remedies and Monitoring at Operable Unit 2, Sites 2 and 12, and Operable Unit Carbon Tetrachloride Plume; and Soil Gas Remedy and Monitoring at Sites 2 and 12, Former Fort Ord, California* (APP; Ahtna, 2015a) and associated Activity Hazard Analysis (AHA). To avoid encountering underground utilities and other potential obstructions, a utility clearance was performed on May 18, 2015 at each sub-slab location before temporary sub-slab soil gas probe installation activities commenced. Utility clearance records are presented in Attachment 1.³ The sub-slab sample collection area was secured to prevent access by unauthorized personnel. Indoor air and ambient air sample canisters were secured and labeled as “Do Not Touch” with sampler contact information. Each day of field work, a safety tailgate meeting was conducted with onsite personnel. Field forms are located in Attachment 2.

Field work was conducted according to the three phase quality control (QC) inspection process as identified in the Quality Assurance Project Plan/Field Sampling Plan (QAPP/FSP) in Appendix A of the RI/FS Addendum Work Plan (AES, 2013). A preparatory phase meeting was held on May 22, 2015; the initial phase inspection was conducted on the first day of field work on May 27, 2015; and follow-up phase inspections were conducted on May 27 and May 28, 2015. Quality (QA) assurance activities were conducted by USACE personnel during field preparation and field sampling activities to ensure work was completed as planned. Field duplicate QC samples were collected from the sub-slab (SS-12-26) and indoor air (IA-12-26) at Michaels.

2.2 Sample Locations

Field documentation is in Attachment 2 and a photographic log of field activities is in Attachment 3. Figures 1 through 3 show the RI/FS Addendum October 2013 sample locations for co-located sub-slab soil gas (SS-12-08, -09, -10, and -25) and indoor air (IA-12-08, -09, -10, and -25) as well as the May 2015 supplemental sub-slab soil gas (SS-12-26, -27, -28, and -29) and indoor air (IA-12-26, -27, -28, and -29) sample locations. Figure 1 also shows the location of the two ambient air samples collected as part of the May 2015 supplemental sampling.

Indoor sample locations were determined in the Work Plan (Ahtna, 2015c) to provide conservative estimates of indoor air and sub-slab soil gas PCE and TCE concentrations, and to meet site specific data quality objectives (DQOs):

³ Sub-slab sample locations were misidentified during the utility clearance. Corrections are noted on the utility clearance records in Attachment 1.

Sample IDs	Location Description	Data Quality Objective (DQO)	Rationale
IA-12-26 / SS-12-26	Southeast corner of Michaels at the front of the store.	Confirm spring 2015 sub-slab and indoor air concentrations are similar to those from autumn 2013, which indicates no unacceptable risk to indoor receptors.	Measured indoor air concentrations at Michaels do not indicate risk to commercial or public receptors based on previous sample results; however, concentrations of PCE and TCE exceeded soil gas and sub-slab screening levels. Verify remedial actions by the Army are not required for indoor air at Sites 2/12.
IA-12-27 / SS-12-27	Southwest corner of REI in the checkout lanes area.	Confirm sub-slab concentrations of PCE and TCE do not indicate a potential vapor intrusion pathway or Army activity related sub-slab source.	DTSC Vapor Intrusion Guidance (DTSC, 2011) recommends two distinct seasonal rounds of sampling. The Army agreed to perform the second round of sampling in spring 2015.
IA-12-28 / SS-12-28	Center of REI in the retail area.		
IA-12-29 / SS-12-29	Northwest corner of REI in the office area.		

Notes:

IA = indoor air SS = sub-slab

2.3 Sample Procedures

Sampling was conducted on May 27 and May 28, 2015 in accordance with the Work Plan (Ahtna, 2015c), QAPP/FSP (AES, 2013), APP (Ahtna, 2015a) and AHA, and the *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (Vapor Intrusion Guidance; DTSC, 2011). Sub-slab sampling was conducted during non-business hours before Michaels and REI opened. Co-located indoor air samples were set up for an 8-hour sample period immediately after the co-located sub-slab soil gas sampling was completed.

Each SUMMA® canister was checked prior to sampling for appropriate vacuum (at least 25 inches of mercury [inHg]) and leak (shut-in) tested with the sample manifold attached and closed for 15 minutes. This test was performed on all SUMMA® canisters for sub-slab soil gas, ambient air, and indoor air sampling. All SUMMAs® passed the tests (Attachment 2).

Following removal of the existing flooring in the sub-slab sample location, the concrete slab was cored with a 1.25-inch diameter concrete drill, and each boring was hand drilled to 3-4 inches below the bottom of the slab. The temporary sub-slab soil gas probe was constructed and tested according to Vapor Intrusion Guidance Appendix G (DTSC, 2011). A stainless steel probe tip (1 inch long by ¼ inch diameter) and screen (1 inch long by ½ inch diameter) with ¼ inch diameter Nyaflo® tubing was placed in the borehole with sand pack surrounding the screen and a Teflon® separator above the sand pack. A layer of dry bentonite was placed above the Teflon® separator and then hydrated bentonite was placed in the borehole annulus up to the ground surface. The bentonite was allowed time to hydrate before sampling.

The sampling assembly, including a 1-liter SUMMA[®] canister and sample manifold with flow regulator, was attached to the temporary soil gas probe tubing. The sampling assembly was then attached to a vacuum pump for purging the minimum 25 milliliters of air from the probe (approximately three probe volumes). A 15-minute soil gas probe integrity test was conducted for each temporary sub-slab soil gas probe prior to sampling using helium as a tracer gas and a shroud placed over the probe and sampling assembly. The shroud was filled with helium gas at approximately 30 percent by volume and a helium detector was fitted onto the soil gas tubing that was being purged to determine whether there were leaks in the sampling assembly. All soil gas probe integrity tests were completed and passed specifications prior to sampling (Attachment 2). Sampling was conducted by filling the 1-liter SUMMA[®] canister to a vacuum of 4 to 8 inHg.

Following sampling, the temporary sub-slab soil gas probe was removed from the borehole, the boring was filled with epoxy to match the existing concrete slab, and the flooring material (e.g., carpet, tile) was repaired or replaced to match the existing material.

Indoor air samples were collected in accordance with the Vapor Intrusion Guidance (DTSC, 2011). The sampling assemblies, including a 6-liter SUMMA[®] canister and sample manifold with flow controller, were placed in discrete locations where possible and signage was placed on the SUMMA[®] canister to deter tampering. The indoor air sample assembly inlet was placed 3 to 5 feet above the ground surface to sample an area representative of breathing space. Prior to sample collection, each indoor air sample location was surveyed and photo-documented for potential sources of volatile organic compounds (VOCs), such as degreasers, spot removers, paint thinners, adhesives, paints or metal cleaners (Attachment 3). Sampling was conducted by filling the 6-liter SUMMA[®] canisters over an 8-hour time period to a vacuum of 4 to 8 inHg.

Ambient air samples were collected upwind of the building during indoor sampling. The sampling assemblies, including a 6-liter SUMMA[®] canister and sample manifold with flow controller, were placed in discrete locations where possible and signage was placed on the SUMMA[®] canister to deter tampering. The ambient air sample assembly inlet was placed 5 feet above the ground surface. Sampling was conducted by filling the 6-liter SUMMA[®] canisters over an 8-hour time period to a vacuum of 4 to 8 inHg. Ambient air sample analytical results are used as a qualitative tool to determine potential outdoor sources to indoor air concentrations. Ambient air sample locations are shown on Figure 1.

All investigation derived waste was non-hazardous and was contained in a plastic bag, removed from the sampling location once sampling was completed and disposed of in a waste receptacle at the Operable Unit 2 Groundwater Treatment Plant.

2.4 Deviations from the Work Plan

Work was completed according to the Work Plan (Ahtna, 2015c) without deviations.

3.0 Laboratory Results

The sub-slab samples (SS-12-26 through SS-12-29) were analyzed for PCE and TCE by method TO-15 5&20 and the indoor air samples (IA-12-26 through IA-12-29) and ambient air samples (AA-12-01 and AA-12-02) were analyzed for PCE and TCE by method TO-15 Low-Level. Samples were analyzed by Eurofins Air Toxics, Inc., a Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) certified laboratory, in accordance with DoD Quality Systems Manual (QSM) 5.0 and the *Quality Assurance Project Plan, Former Fort Ord, California, Volume I, Appendix C, Final Revision 0, Soil Gas Monitoring at Sites 2 and 12* (Soil Gas QAPP; Ahtna, 2015b).

Laboratory reports are located in Attachment 4. Figures 1 through 3 show the RI/FS October 2013 sample locations for co-located sub-slab soil gas sample (SS-12-08, -09, -10, and -25) and indoor air sample (IA-12-08, -09, -10, and 025) as well as the May 2015 supplemental sub-slab soil gas sample (SS-12-26, -27, -28, and -29) and indoor air sample (IA-12-26, -27, -28, and -29) results. A summary of analytical results for the RI/FS October 2013 and the May 2015 supplemental sampling is provided in Table 2. A summary of analytical results for ambient air is provided in Table 3.

Supplemental indoor investigation results are comparable to RI/FS Addendum results for samples collected in Michaels (Table 2). Supplemental indoor investigation results also indicate there is no vapor intrusion occurring at REI and the elevated concentration of TCE in the indoor air sample collected during the RI/FS Addendum was likely the result of a transient indoor source (Table 2).

The data validation summary report is located in Attachment 5. Two duplicate samples were collected during this sampling event. The ten sample results required qualification based on 100% Level III and 10% Level IV data validation review due to initial and continuing instrument calibrations marginally outside limits identified in the QAPP/FSP (AES, 2013), but within limits identified in the Soil Gas QAPP (Ahtna, 2015b). All data are considered acceptable and suitable for use.

4.0 Human Health Risk Assessment

The revised HHRA based on data collected in May 2015 is in Attachment 6. The objective of the risk assessment was to evaluate potential human exposures and health risks using indoor air data collected with co-located sub-slab soil gas data at Michaels and REI in May 2015 to supplement data collected in October 2013 (AES, 2015).

Non-cancer and cancer risks were estimated for the Indoor Retail Worker and Indoor Shopper receptors and found to be at levels at the point of departure for regulatory decision-making, as presented in Attachment 6. Results of the HHRA suggest that, if VOCs are migrating into indoor air, concentrations are so low as to be negligible, as supported by the actual indoor air data for PCE and TCE collected in May 2015.

Indoor air concentrations of PCE and TCE in samples collected at Michaels and REI during the 2015 supplemental indoor investigation were below risk-based indoor air screening values for these chemicals, and corresponding cancer risks and non-cancer hazards for the Indoor Retail Worker and Child and Adult Shopper receptors were below threshold criteria and do not present an unacceptable risk to workers or shoppers (Attachment 6).

A summary of the cumulative non-cancer hazards and incremental cancer risks for the Indoor Retail Worker and Child and Adult Shopper receptors is presented in Table 4. The calculated non-cancer hazards for the Indoor Retail Worker and the Indoor Child and Adult Shopper receptors at the Michaels and REI stores were less than the regulatory target of 1 based on measured PCE and TCE indoor air concentrations. A Hazard Index (HI) less than or equal to 1 represents a condition for assumed exposures that is unlikely to cause adverse non-cancer health effects, even for sensitive populations (USEPA, 1989). The PCE and TCE cancer risks for the location-specific data collected at Michaels and REI were below the regulatory threshold of $1E-06$ for the Indoor Retail Worker and Child and Adult Shopper receptors based on the indoor air data collected in the 2015 supplemental indoor investigation; however, during the 2013 RI Addendum (AES, 2015), the incremental cancer risks for the Michaels Indoor Retail Worker at two sampling locations (IA-12-08 and IS-12-09) were at the regulatory point of departure.

As presented in Table 4, for the combined 2013 and 2015 data set, the HIs were less than 1 and the cumulative incremental cancer risks for the Michaels Indoor Retail Worker and Total Shopper were at or below the point of departure of $1E-06$ based on the maximum concentrations of PCE and TCE detected. For the REI Indoor Retail Worker and Total Shopper, the HIs were less than 1, but the cumulative incremental cancer risks were $3E-06$ for the Indoor Retail Worker and $2E-06$ for the Total Shopper. The incremental cancer risks greater than the regulatory threshold of $1E-06$ were driven by the elevated TCE detection (6.8 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) in indoor air during the RI Addendum in October 2013 (AES, 2015). The cumulative incremental cancer risks for both the Michaels and REI Indoor Retail Worker, as well as the Total Shopper receptors, were well within the risk management range of $1E-06$ to $1E-04$ used for regulatory decision-making.

5.0 Conceptual Site Model

The CSM presented in the RI/FS Addendum (AES, 2015) provides information on known and suspected contaminant sources (soil gas and groundwater plumes), potential routes of migration (contaminant diffusion in soil gas, partitioning between soil gas and groundwater, migration in groundwater, and migration from soil gas to indoor air), and known or potential receptors (groundwater as a drinking water source and occupants of current and future buildings at Site 12). The CSM was used to assist in the identification of remedial technologies. Based on the results of this supplemental indoor investigation at REI and Michaels, no update to the CSM is required.

6.0 Conclusions and Recommendations

Based on the results of the indoor investigation at REI and Michaels in October 2013, the additional indoor sampling in May 2015, and the associated HHRA, the objectives of the supplemental indoor investigation at Michaels and REI were met:

- Concentrations of PCE and TCE in samples collected at Michaels in spring 2015 are similar to those in samples collected in autumn 2013. These results continue to indicate no unacceptable risk to indoor receptors.
- Analytical results from samples collected at REI in spring 2015 do not indicate a potential vapor intrusion pathway or unacceptable risk to indoor receptors.
- The HHRA was updated with the data collected in spring 2015 and confirmed the RI/FS Addendum conclusion that remediation of soil gas and implementation of risk management strategies are not warranted in the footprint of the retail stores under current conditions.
- The CSM in the RI/FS Addendum was reviewed with respect to the new data and found to still appropriately provide sufficient information about known and suspected contaminant sources, potential pathways, and known or potential receptors.

Site 12 remedial actions include a full scale soil vapor extraction treatment system and additional groundwater extraction and treatment to remediate soil gas and groundwater PCE and TCE contamination. Soil gas remediation is being conducted because PCE and TCE in soil gas are a continuing source of contamination to groundwater.

Property owners and managers will be notified of the results of this supplemental indoor investigation. No future actions regarding vapor intrusion at Site 12 are recommended or warranted at this time.

7.0 References⁴

Ahtna Engineering Services (AES), 2013. *Final Work Plan, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California* (RI/FS Addendum Work Plan). September 12. AR# BW-2665A.

AES, 2015. *Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California* (RI/FS Addendum). February 27. AR# BW-2721B.

Ahtna Environmental Inc. (Ahtna), 2015a. *Final Accident Prevention Plan, Groundwater Remedies and Monitoring at Operable Unit 2, Sites 2 and 12, and Operable Unit Carbon Tetrachloride Plume; and Soil Gas Remedy and Monitoring at Sites 2 and 12, Former Fort Ord, California* (APP). March 4.

Ahtna, 2015b. *Quality Assurance Project Plan, Former Fort Ord, California, Volume I, Appendix C, Final Revision 0, Soil Gas Monitoring at Sites 2 and 12* (Soil Gas QAPP). March 31. AR# BW-2727B.

Ahtna, 2015c. *Final Work Plan Supplement No. 1, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California; Michaels and REI Investigation at Site 12* (Work Plan). May 22. AR# BW-2742B.

Ahtna, 2015d. *Sites 2 and 12 First Quarter 2015 Groundwater and Soil Gas Monitoring and Treatment System Report, Former Fort Ord, California*. June. AR# BW-2748.

Ahtna, 2015e. *Sites 2 and 12 Second Quarter 2015 Groundwater and Soil Gas Monitoring and Treatment System Report, Former Fort Ord, California*. August. AR# BW-TBD.

California Department of Toxic Substances Control (DTSC), 2011. *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (Vapor Intrusion Guidance). October.

U.S. Environmental Protection Agency (USEPA). 1989. *Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual (Part A)*. EPA 540/1-89/002. December.

⁴ At the end of references included in the Fort Ord Administrative Record are the Administrative Record Numbers (AR#s) (e.g. BW-1234). To find the referenced document, this number may be typed into the Online Search tool at: <http://www.fortordcleanup.com/documents/search/>. Please note the referenced documents were available in the Fort Ord Administrative Record at the time this document was issued; however, some may have been superseded by more current versions and were subsequently withdrawn.

FIGURES



Legend

- Ambient Air - PCE & TCE below AA-SLs
- Sub-Slab Soil Gas Results**
- PCE and TCE below SS-SLs
- PCE above SS-SL
- Indoor Air Results**
- PCE and TCE below IA-SLs
- PCE above IA-SL
- TCE above IA-SL
- 2015-1Q Modeled Soil Gas TCE above the SGCL
- 2015-1Q Modeled Soil Gas PCE above the SGCL

Label Description:
 SS-12-25/IA-12-25 Sub-slab soil gas/indoor air sample identification
 PCE: 250 PCE and/or TCE concentration (ug/m3)
 TCE: 0.50 UJ with validation qualifier
 J= estimated U= not detected above the limit of detection (LOD) UJ = not detected, LOD estimated
 (Results in parenthesis are duplicate results)

Notes:
 (1) RI/FS sub-slab and indoor air data collected in October 2013.
 (2) Additional sub-slab and indoor air data collected in May 2015.
 (3) First quarter 2015 soil gas samples were collected between March 17 and May 6, 2015.
 (4) Modeled plume extents were also determined with previous data collected from temporary soil gas probes sampled before the Remedial Investigation, temporary sub-slab soil gas probes sampled during the Remedial Investigation, and the known limits of the soil excavation conducted in 1997.
 (5) SS-SLs and IA-SLs are listed in Table 1.

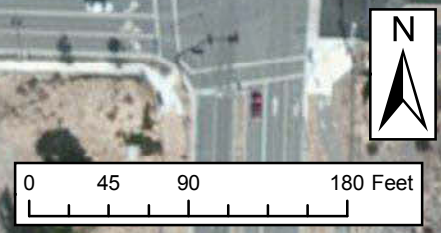
Michaels and REI Indoor Air and Sub-Slab PCE/TCE Results and First Quarter 2015 Soil Gas and Groundwater Remedial Areas

Supplement No. 1
 RI/FS Addendum at Sites 2/12
 Michaels and REI Indoor Investigation



Figure

1





PHASE 1A
MARINA UNIVERSITY VILLAGES

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect ©MBH ARCHITECTS - 2005

No.	Date	Issue
10/05/06	BLDG. DEPT.	1st SUBMITTAL
11/03/06	PLAN CHECK	SUBMITTAL
03/05/07	DELTA 3	SUBMITTAL
04/19/07	INST. BULLETIN #5	
05/03/07	INST. BULLETIN #2	
05/21/07	INST. BULLETIN #17	
06/01/07	UPDATED DRAWINGS	
06/08/07	INST. BULLETIN #17	
06/08/07	INST. BULLETIN #23	
06/27/07	INST. BULLETIN #20	
06/27/07	INST. BULLETIN #8	
06/27/07	INST. BULLETIN #19	

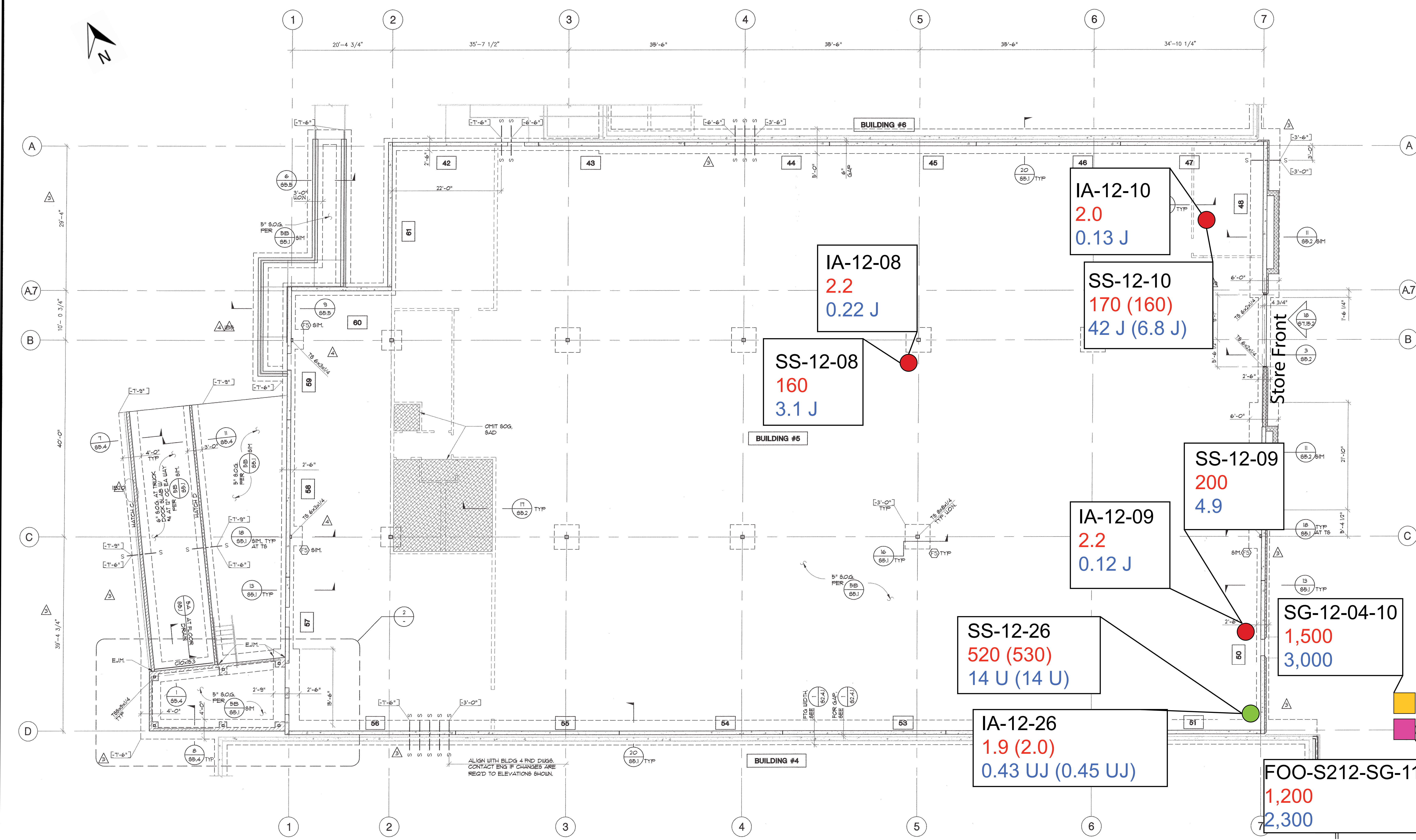
RECEIVED

JUL 02 2007

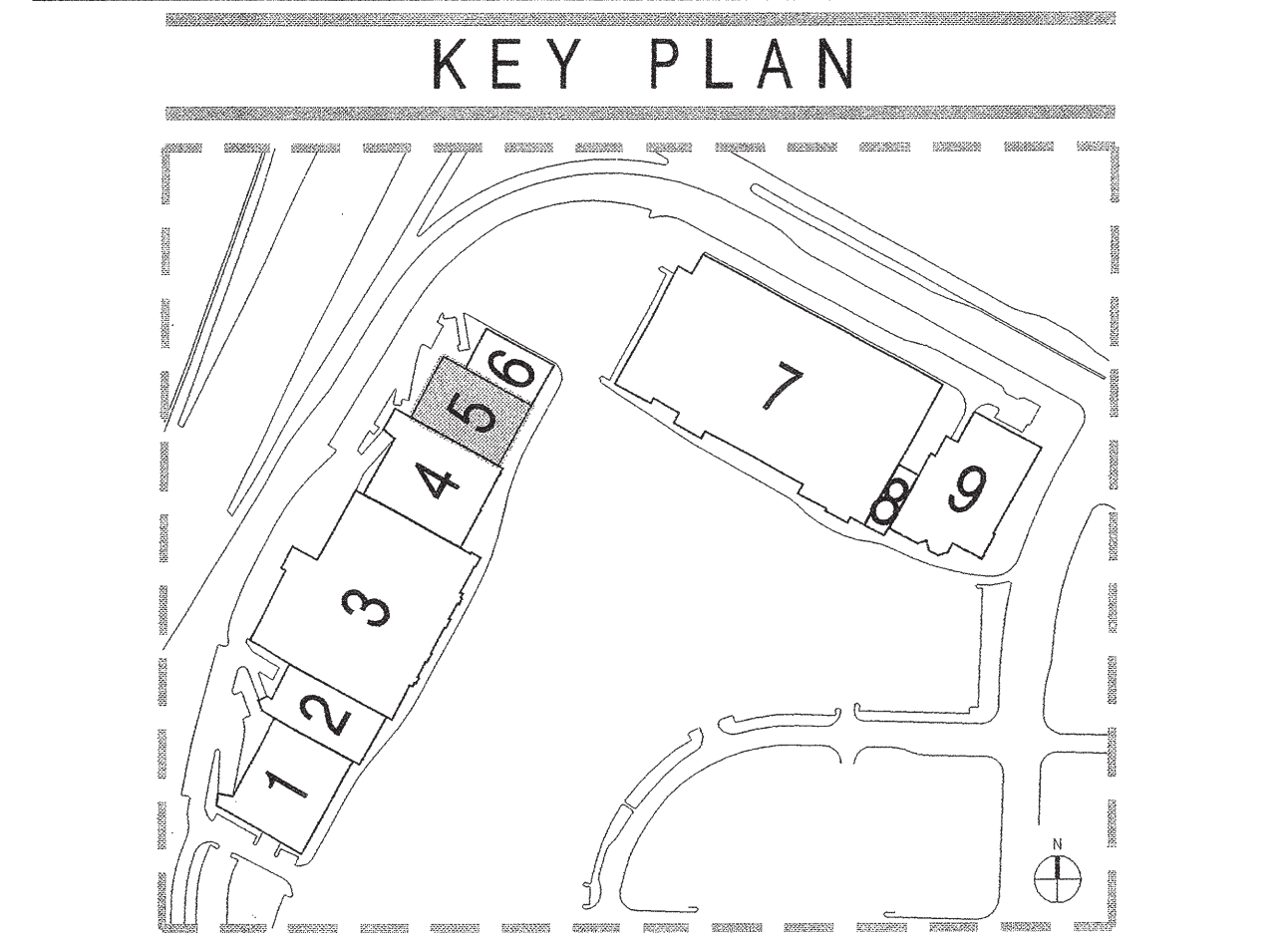
W.L. BUTLER

Project No. 41665
Scale 1/8"=1'-0"
Drawing Title FOUNDATION PLAN
MICHAELS
BUILDING 5

S2.5.1



FOUNDATION PLAN - BUILDING 5 | 1



SEE NOTES ON SHEET 02.21.

NOTE: GEOTECHNICAL ENGINEER TO INSPECT THE BOTTOM OF THE FOOTING AND PROVIDE A MEMO FOR THE INSPECTION OF SAID FOOTING FOR THE BUILDING INSPECTOR, PRIOR TO CALLING FOR THE FOOTING INSPECTION.

Indoor Air and Sub-Slab PCE/TCE Results Building 5 (Michaels)

Supplement No. 1
RI/FS Addendum at Sites 2/12
Michaels and REI Indoor Investigation

Figure

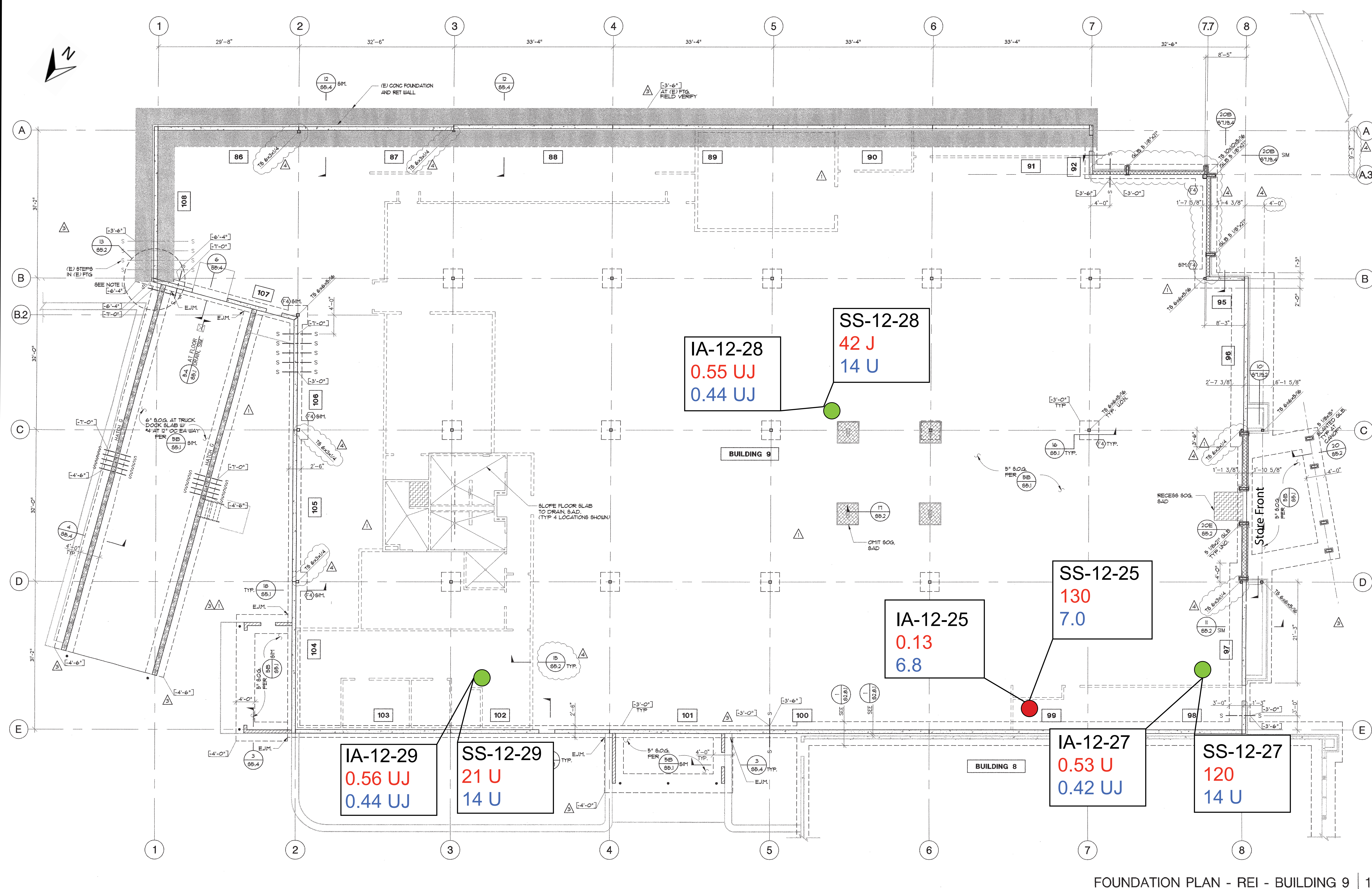
2

Legend

- May 2015 Indoor Air and Sub-Slab Sample Locations (Co-located)
- Oct 2013 RI/FS Addendum Indoor Air and Sub-Slab Sample Locations (Co-located)
- RI/FS Addendum Soil Gas Sample Location
- April 2013 USACE Investigation

SS-12-10 Sub-Slab Sample ID	IA-12-10 Indoor Air Sample ID
10 PCE Result (ug/m ³) - SS-SL 42 ug/m ³	0.05 PCE Result (ug/m ³) - IA-SL 2.08 ug/m ³
0.2 J TCE Result (ug/m ³) - SS-SL 60 ug/m ³	0.04 J TCE Result (ug/m ³) - IA-SL 3.0 ug/m ³
SG-12-04-10 Soil Gas Sample ID	U = not detected above the limit of detection
1,500 PCE Result (ug/m ³) - SG-SL 603 ug/m ³ SGCL 1,800 ug/m ³	(<LOD)
3,000 TCE Result (ug/m ³) - SG-SL 888 ug/m ³ SGCL 1,000 ug/m ³	UJ = not detected, LOD estimated

J = estimated result ug/m³ = micrograms per cubic meter (Results in parenthesis are duplicate samples)
SS-SL = Sub-Slab Screening Level IA-SL = Indoor Air Screening Level SG-SL = Soil Gas Screening Level SGCL = Soil Gas Cleanup Level



FOUNDATION PLAN - REI - BUILDING 9 | 1

SEE NOTES ON SHEET 92.2.

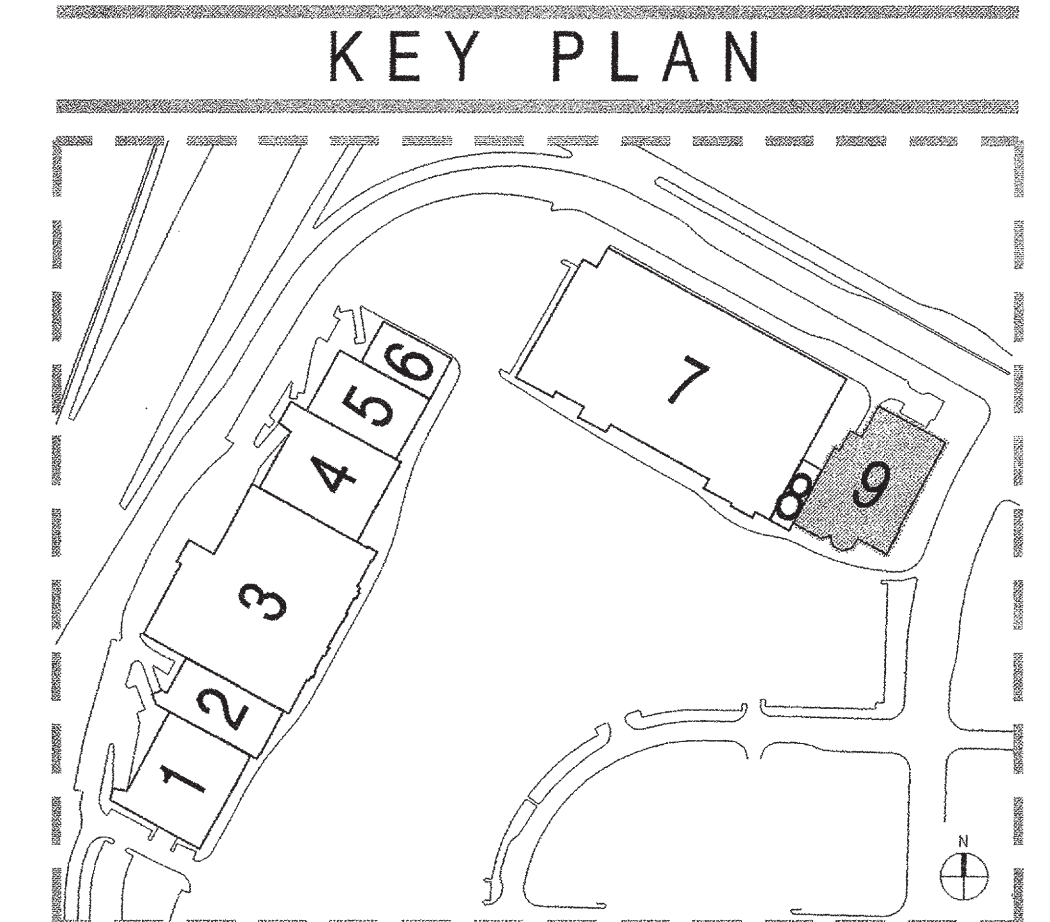
NOTE:
 GEOTECHNICAL ENGINEER TO INSPECT THE BOTTOM OF THE FOOTING AND PROVIDE A MEMO FOR THE INSPECTION OF SAID FOOTING FOR THE BUILDING INSPECTOR PRIOR TO CALLING FOR THE FOOTING INSPECTION.
 1. FIELD VERIFY BOF OF (E) FOOTING MATCHES ELEVATION SHOWN. CONTACT ENGINEER IF BOF OF (E) FOOTING IS DIFFERENT FROM THAT SHOWN.

Legend

- May 2015 Indoor Air and Sub-Slab Sample Locations (Co-located)
- Oct 2013 RI/FS Addendum Indoor Air and Sub-Slab Sample Locations (Co-located)

SS-SL-10	Sub-Slab Sample ID	IA-12-10	Indoor Air Sample ID
10	PCE Result (ug/m ³) - SS-SL 42 ug/m ³	0.05	PCE Result (ug/m ³) - IA-SL 2.08 ug/m ³
0.2 J	TCE Result (ug/m ³) - SS-SL 60 ug/m ³	0.04 J	TCE Result (ug/m ³) - IA-SL 3.0 ug/m ³

ug/m³ = micrograms per cubic meter Results in parenthesis are duplicate samples U = not detected above the limit of detection
 SS-SL = Sub-Slab Screening Level IA-SL = Indoor Air Screening Level UJ = not detected, LOD estimated (<LOD)



Indoor Air and Sub-Slab PCE/TCE Results Building 9 (REI)
 Supplement No. 1
 RI/FS Addendum at Sites 2/12
 Michaels and REI Indoor Investigation

Figure 3

MBH ARCHITECTS
 1115 Atlantic Avenue
 Alameda, CA 94501
 Tel: 510 865 8663
 Fax: 510 865 1611

HOBACH-LEWIN, INC. STRUCTURAL ENGINEERS
 260 Sheridan Avenue, Suite 150
 Palo Alto, CA 94306
 (650) 617-5930, Fax (650) 617-5932

RECORD DRAWINGS



PHASE 1A
MARINA UNIVERSITY VILLAGES

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect ©MBH ARCHITECTS - 2005

QA/QC XXX

No.	Date	Issue
10/05/06	BLDG. DEPT.	1st SUBMITTAL
11/03/06	PLAN CHECK	SUBMITTAL
03/05/07	DELTA 3	SUBMITTAL
04/19/07	INST. BULLETIN #5	
05/03/07	INST. BULLETIN #2	
05/21/07	INST. BULLETIN #17	
06/01/07	UPDATED DRAWINGS	

RECEIVED
 JUN 07 2007
 W. L. BUTLER

Project No. 41665
 Scale 1/8" = 1'-0"
 Drawing Title: FOUNDATION PLAN
 REI
 BUILDING 9

S2.9.1

TABLES

Table 1. Indoor Air and Sub-Slab PCE and TCE Screening Levels

Soil Gas Chemicals of Concern	Sub-Slab Screening Level (SS-SL) ($\mu\text{g}/\text{m}^3$)	Indoor Air Screening Level (IA-SL) ¹ ($\mu\text{g}/\text{m}^3$)
Tetrachloroethene (PCE)	42	2.08
Trichloroethene (TCE)	60	3.00

Notes:

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

¹Ambient Air Screening Levels (AA-SLs) are the same as IA-SLs.

Table 2. October 2013 and May 2015 Indoor Air and Sub-Slab PCE and TCE Results - Michaels and REI

Building	Location Description	Sample Date	Sub-Slab/Indoor Air Sample IDs	Sub-Slab		Indoor Air	
				PCE ($\mu\text{g}/\text{m}^3$)	TCE ($\mu\text{g}/\text{m}^3$)	PCE ($\mu\text{g}/\text{m}^3$)	TCE ($\mu\text{g}/\text{m}^3$)
				Value Qual	Value Qual	Value Qual	Value Qual
Michaels	center (papers)	SS: 10/02/2013 IA: 10/14/2013	SS-12-08/IA-12-08	160	3.1 J	2.2	0.22 J
	front emergency exit	SS: 10/02/2013 IA: 10/15/2013	SS-12-09/IA-12-09	200	4.9	2.2	0.12 J
	custom framing	SS: 10/02/2013 IA: 10/15/2013	SS-12-10/IA-12-10	170	42 J	2.0	0.13 J
		SS: 10/02/2013	SS-12-10*	160	6.8 J	NS	NS
	southeast corner	5/27/2015	SS-12-26/IA-12-26	520	14 U	1.9	0.43 UJ
			SS-12-26*/IA-12-26*	530	14 U	2.0	0.45 UJ
REI	southwest checkout area	SS: 10/02/2013 IA: 10/10/2013	SS-12-25/IA-12-25	130	7.0	0.13	6.8
	southwest checkout area	5/27/2015	SS-12-27/IA-12-27	120	14 U	0.53 U	0.42 UJ
	center retail area	5/28/2015	SS-12-28/IA-12-28	42 J	14 U	0.55 UJ	0.44 UJ
	northwest back room	5/27/2015	SS-12-29/IA-12-29	21 U	14 U	0.56 UJ	0.44 UJ

Notes:

* Duplicate sample

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

PCE = tetrachloroethene

TCE = trichloroethene

Qual = qualifier

SS = sub-slab

IA = indoor air

NS = not sampled

Results in **bold** are above the screening level (see Table 1)

Sub-slab results in **gray** are non detected results below the method detection limit (MDL)

Indoor air results in **gray** are non detected results below the limit of detection limit (LOD)

J = estimated value below the limit of quantitation (LOQ)

U = result not detected above the LOD

UJ = not detected (LOD estimated)

Table 3. May 2015 Ambient Air PCE and TCE Results

Ambient Air Sample ID	Analyte/ Units:	PCE ($\mu\text{g}/\text{m}^3$)	TCE ($\mu\text{g}/\text{m}^3$)
	Date	Value Qual	Value Qual
AA-12-01	5/27/2015	0.52 U	0.42 UJ
AA-12-02	5/28/2015	0.55 UJ	0.44 UJ

Notes:

Results in gray are non detected results below the Limit of Detection (LOD)

PCE: tetrachloroethene

TCE: trichloroethene

Qual: qualifier

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

U = result not detected above the LOD

UJ = not detected (LOD estimated)

Table 4. Summary of Cancer Risks and Non-cancer Hazards

Receptor	Tetrachloroethene (PCE)		Trichloroethene (TCE)		Cumulative Risk	
	Excess Lifetime Cancer Risk	Noncancer Hazard	Excess Lifetime Cancer Risk	Noncancer Hazard	Excess Lifetime Cancer Risk	Hazard Index
Michaels						
Indoor Retail Worker	1.1E-06	0.01	1.5E-07	0.05	1E-06	<1
Child Shopper	4.0E-08	0.002	3.0E-08	0.008	7E-08	<1
Adult Shopper	1.6E-07	0.002	7.9E-08	0.008	2E-07	<1
Total Shopper	2.0E-07	--	1.1E-07	--	3E-07	--
REI						
Indoor Retail Worker	2.7E-07	0.004	2.3E-06	0.78	3E-06	<1
Child Shopper	1.0E-08	0.001	4.5E-07	0.12	5E-07	<1
Adult Shopper	4.0E-08	0.001	1.2E-06	0.12	1E-06	<1
Total Shopper	5.0E-08	--	1.7E-06	--	2E-06	--

Notes:

Cancer risk and non-cancer hazard are based on the maximum chemical concentration detected in indoor air from the AES (2013) and AES (2015) investigations.

Total Shopper excess lifetime cancer risks are the sum of the Child Shopper and Adult Shopper cancer risks.

-- No cumulative value; non-cancer hazard for the adult and child shopper are evaluated separately.

ATTACHMENTS

ATTACHMENT 1

UTILITY CLEARANCE RECORDS

1. SS-12-26 (misidentified on the utility clearance record as SS-28)
2. SS-12-27 (misidentified on the utility clearance record as SS-25)
3. SS-12-28 (misidentified on the utility clearance record as SS-26)
4. SS-12-29 (misidentified on the utility clearance record as SS-27)

UTILITY CLEARANCE RECORD

(Note: not all underground utilities can be detected by geophysical methods)

Client Altrus

Project No. 15-036-1CA

Location FFORD SITE 2/12 (Michaels)

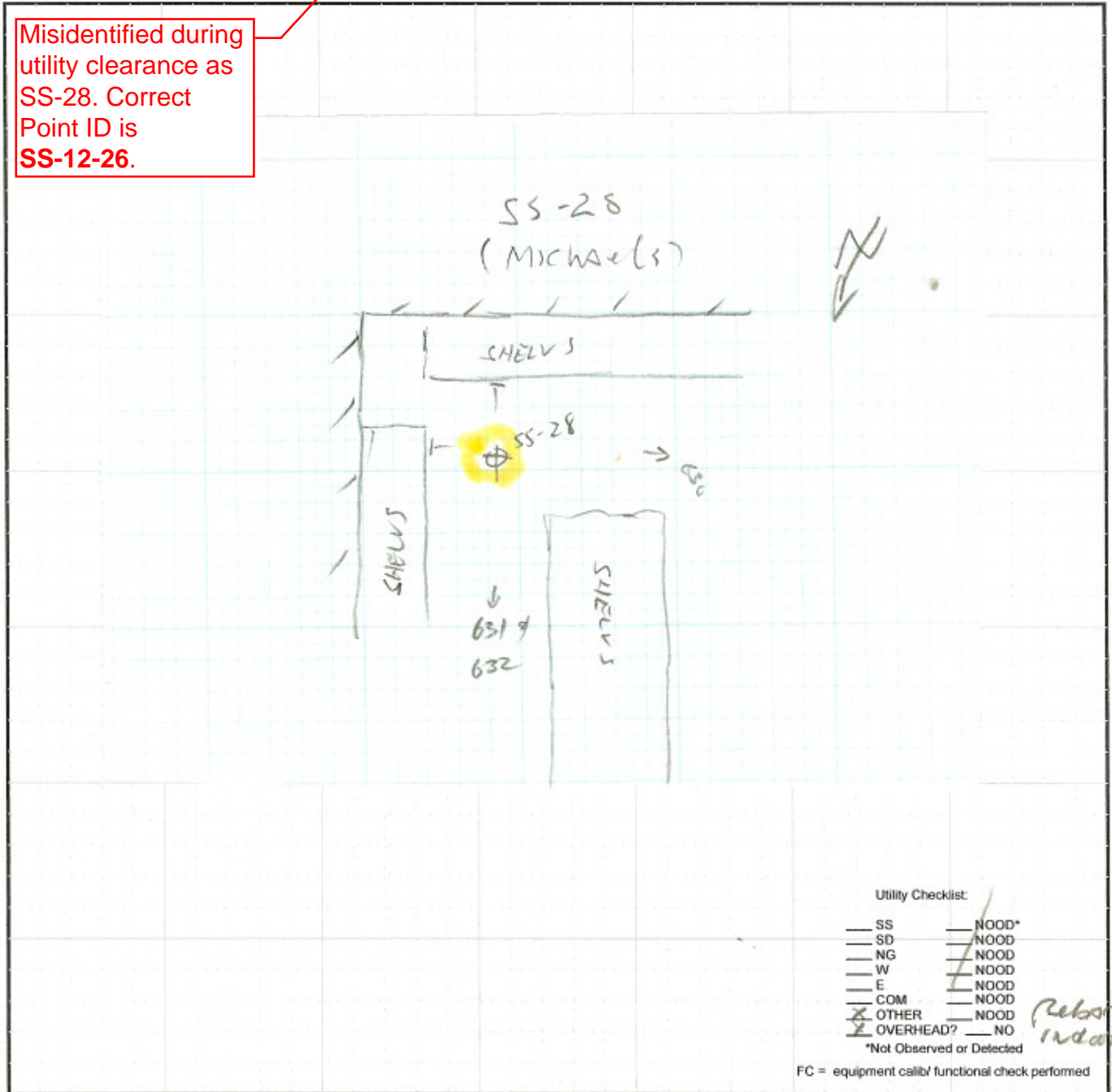
Date 5/18/15 Time 0955

Point I.D. SS-28

Operator JMS

Sketch Map

Misidentified during utility clearance as SS-28. Correct Point ID is SS-12-26.



Utility Checklist:

- SS
- SD
- NG
- W
- E
- COM
- OTHER
- OVERHEAD?
- NOOD*
- NOOD
- NOOD
- NOOD
- NOOD
- NOOD
- NOOD
- NO

*Not Observed or Detected

FC = equipment calibr/functional check performed

*Revised
INDOOR LOCATION*



Feet
(approx)



RESULTS AND INSTRUMENTATION

GROUND PENETRATING RADAR (GPR): SIR-3000 Other _____

Antenna 400 MHz Other _____

Range 60 ns Other _____ ns

File Name(s) 630-632

Results Buried objects imaged? (Y) N Other anomalous reflections? Y N

Rebar in floor SLAB

No Buried objects imaged at final marked location

Estimated Signal Penetration Depth (ft): 2 1/2

RF PIPE & CABLE LOCATAOR: RD-8000 Other _____

Applied Signal, Direct Connect _____ No Surface Utility Features for Connection

Other Scanning Modes: P R Applied Signal, Induced

Results Underground utilities detected near boring/trench location? (N)

No underground utilities detected at final marked location(s)

EM PIPE & CABLE LOCATAOR: Fisher TW-6 M-Scope

Results Buried metal detected? Y N Sensitivity Setting _____

Underground utilities detected near boring/trench location? Y N

Rebar

____ No anomalous response observed at final marked location(s)

MAGNETOMETER (for use in Military Training Areas) Schonstedt _____ Other _____

Results Buried metal detected? Y N

ELECTROMAGNETIC TERRAIN CONDUCTIVITY (EM31)

____ Not used due to proximity of surface metal objects (e.g., vehicles)

Background Conductivity: _____ mS/m (mmhos/m)

Results Buried metal detected? Y N Other anomalous readings? Y N

UTILITY CLEARANCE RECORD

(Note: not all underground utilities can be detected by geophysical methods)

Client AhtNA

Project No. 15-036-1CA

Location FF+0 Site 2/12 (REE)

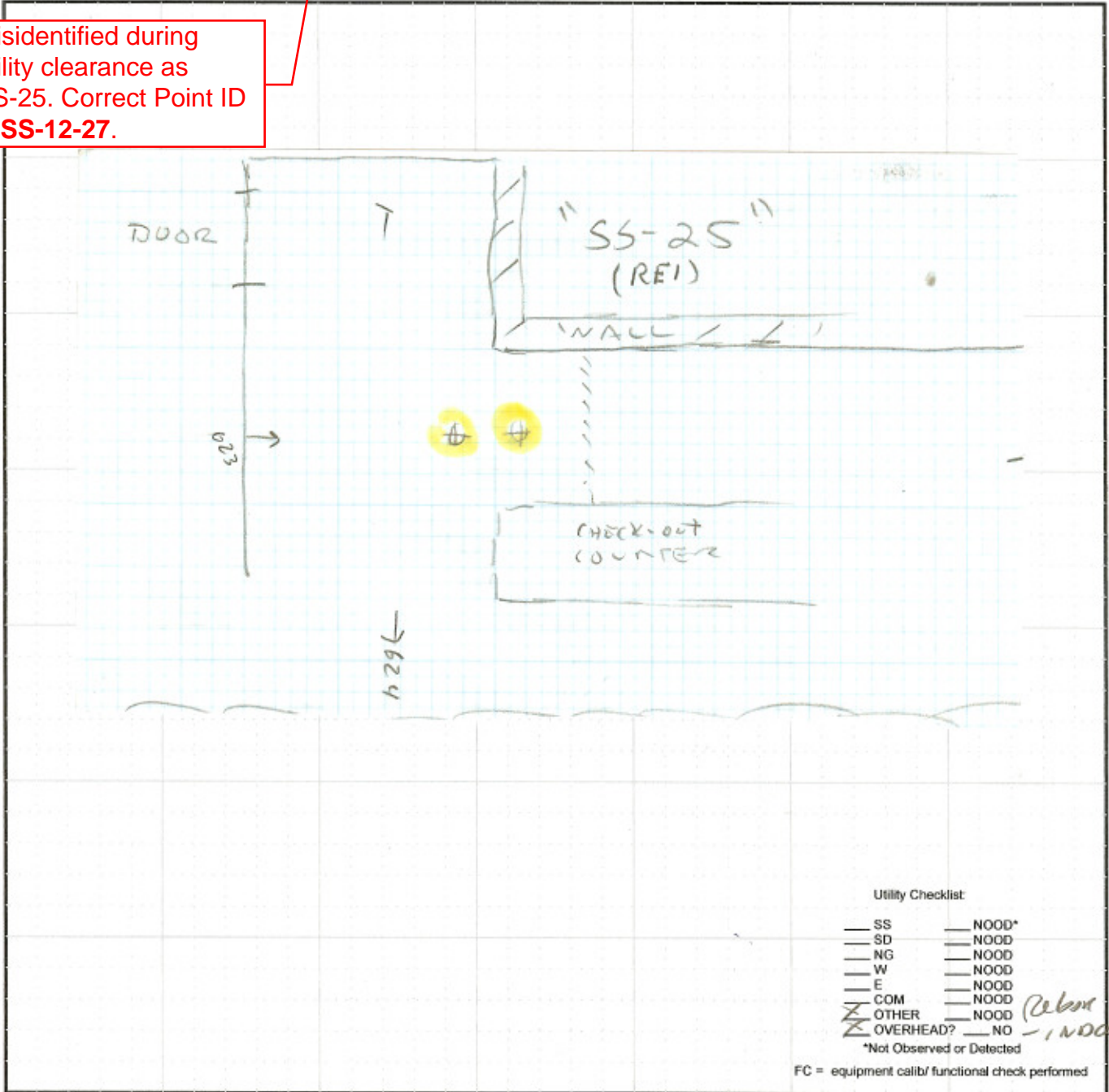
Date 5/18/15 Time 0845

Point I.D. SS-25

Operator RWS

Sketch Map

Misidentified during utility clearance as SS-25. Correct Point ID is **SS-12-27**.



Utility Checklist:

- | | |
|---|--------------------------------|
| <input type="checkbox"/> SS | <input type="checkbox"/> NOOD* |
| <input type="checkbox"/> SD | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> NG | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> W | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> E | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> COM | <input type="checkbox"/> NOOD |
| <input checked="" type="checkbox"/> OTHER | <input type="checkbox"/> NOOD |
| <input checked="" type="checkbox"/> OVERHEAD? | <input type="checkbox"/> NO |
- *Not Observed or Detected
- FC = equipment calib/ functional check performed
- Below - 1 NOOD Locations*





RESULTS AND INSTRUMENTATION

GROUND PENETRATING RADAR (GPR): SIR-3000 Other _____

Antenna 400 MHz Other _____

Range 60 ns Other _____ ns

File Name(s) 623-624

Results Buried objects imaged? N Other anomalous reflections? Y N

Rebar in Floor SLAB

No Buried objects imaged at final marked location

Estimated Signal Penetration Depth (ft): 2 1/4

RF PIPE & CABLE LOCATAOR: RD-8000 Other _____

Applied Signal, Direct Connect _____ No Surface Utility Features for Connection

Other Scanning Modes: P R _____ Applied Signal, Induced

Results Underground utilities detected near boring/trench location? Y N

No underground utilities detected at final marked location(s)

EM PIPE & CABLE LOCATAOR: Fisher TW-6 M-Scope

Results Buried metal detected? Y N Sensitivity Setting _____

Underground utilities detected near boring/trench location? Y N

(Rebar in Floor)

No anomalous response observed at final marked location(s)

MAGNETOMETER (for use in Military Training Areas) Schonstedt _____ Other _____

Results Buried metal detected? Y N

ELECTROMAGNETIC TERRAIN CONDUCTIVITY (EM31)

Not used due to proximity of surface metal objects (e.g., vehicles)

Background Conductivity: _____ mS/m (mmhos/m)

Results Buried metal detected? Y N Other anomalous readings? Y N

UTILITY CLEARANCE RECORD

(Note: not all underground utilities can be detected by geophysical methods)

Client Ahtna

Project No. 15 036-10A

Location FFWARD site 2/2 (RET)

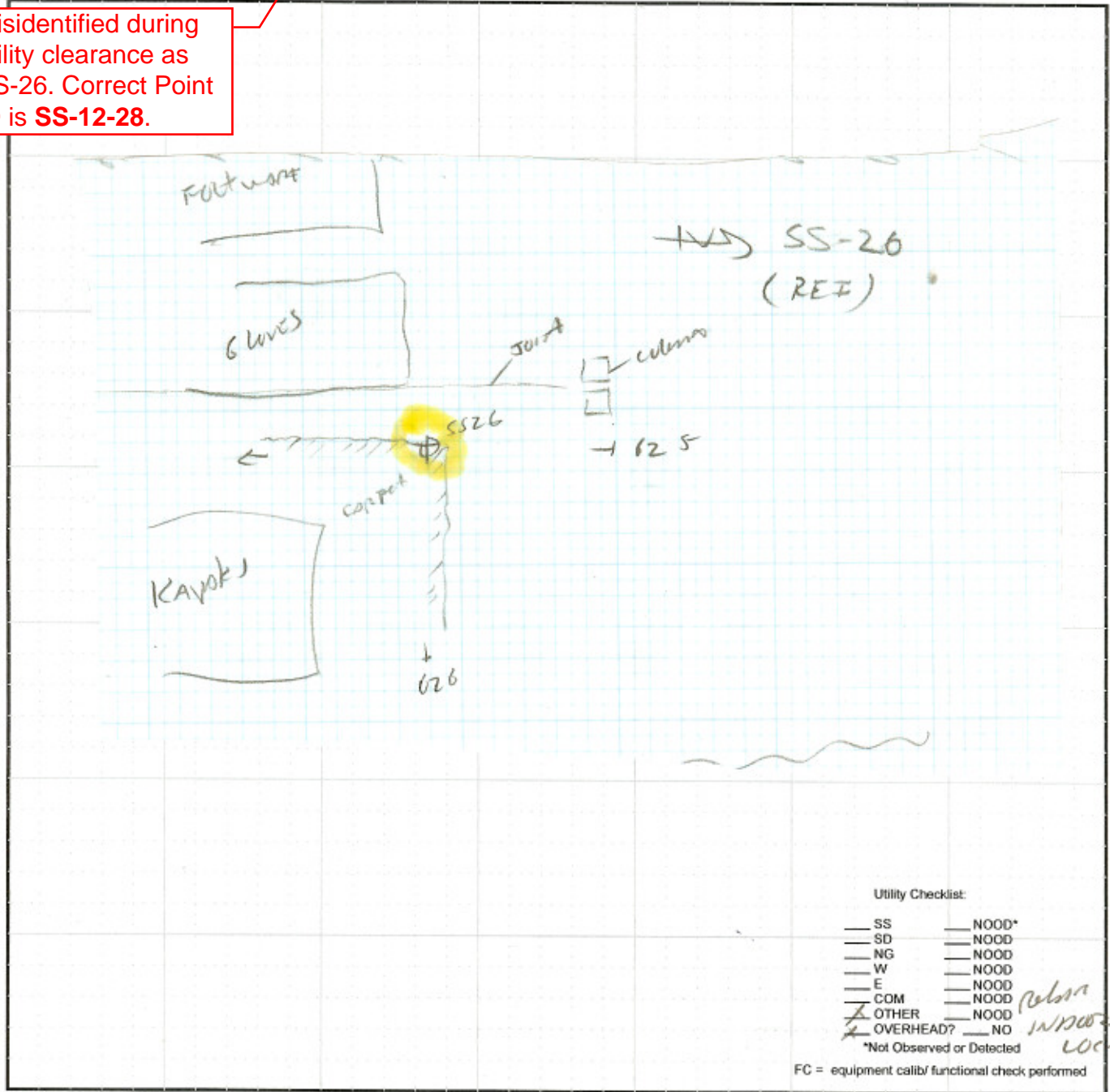
Date 5/18/15 Time 0915

Point I.D. SS-26

Operator TWS

Sketch Map

Misidentified during utility clearance as SS-26. Correct Point ID is **SS-12-28**.



Utility Checklist:

- | | |
|---|--------------------------------|
| <input type="checkbox"/> SS | <input type="checkbox"/> NOOD* |
| <input type="checkbox"/> SD | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> NG | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> W | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> E | <input type="checkbox"/> NOOD |
| <input type="checkbox"/> COM | <input type="checkbox"/> NOOD |
| <input checked="" type="checkbox"/> OTHER | <input type="checkbox"/> NOOD |
| <input checked="" type="checkbox"/> OVERHEAD? | <input type="checkbox"/> NO |
- reason in photo location*

*Not Observed or Detected

FC = equipment calib/ functional check performed





RESULTS AND INSTRUMENTATION

GROUND PENETRATING RADAR (GPR): SIR-3000 Other _____

Antenna 400 MHz Other _____

Range 60 ns Other _____ ns

File Name(s) 625-626

Results Buried objects imaged? (Y) N Other anomalous reflections? Y (N)

Return in floor slab

X No Buried objects imaged at final marked location

Estimated Signal Penetration Depth (ft): 24

RF PIPE & CABLE LOCATAOR: RD-8000 Other _____

Applied Signal, Direct Connect _____ No Surface Utility Features for Connection

Other Scanning Modes: P R Applied Signal, Induced

Results Underground utilities detected near boring/trench location? Y (N)

X No underground utilities detected at final marked location(s)

EM PIPE & CABLE LOCATAOR: Fisher TW-6 M-Scope

Results Buried metal detected? Y N Sensitivity Setting _____

Underground utilities detected near boring/trench location? Y N

(Return)

____ No anomalous response observed at final marked location(s)

MAGNETOMETER (for use in Military Training Areas) Schonstedt _____ Other _____

Results Buried metal detected? Y N

(Return)

ELECTROMAGNETIC TERRAIN CONDUCTIVITY (EM31)

____ Not used due to proximity of surface metal objects (e.g., vehicles)

Background Conductivity: _____ mS/m (mmhos/m)

Results Buried metal detected? Y N Other anomalous readings? Y N

UTILITY CLEARANCE RECORD

(Note: not all underground utilities can be detected by geophysical methods)

Client Ahtna

Project No. 15-036-100

Location FFTRAN site 2/12 (REE)

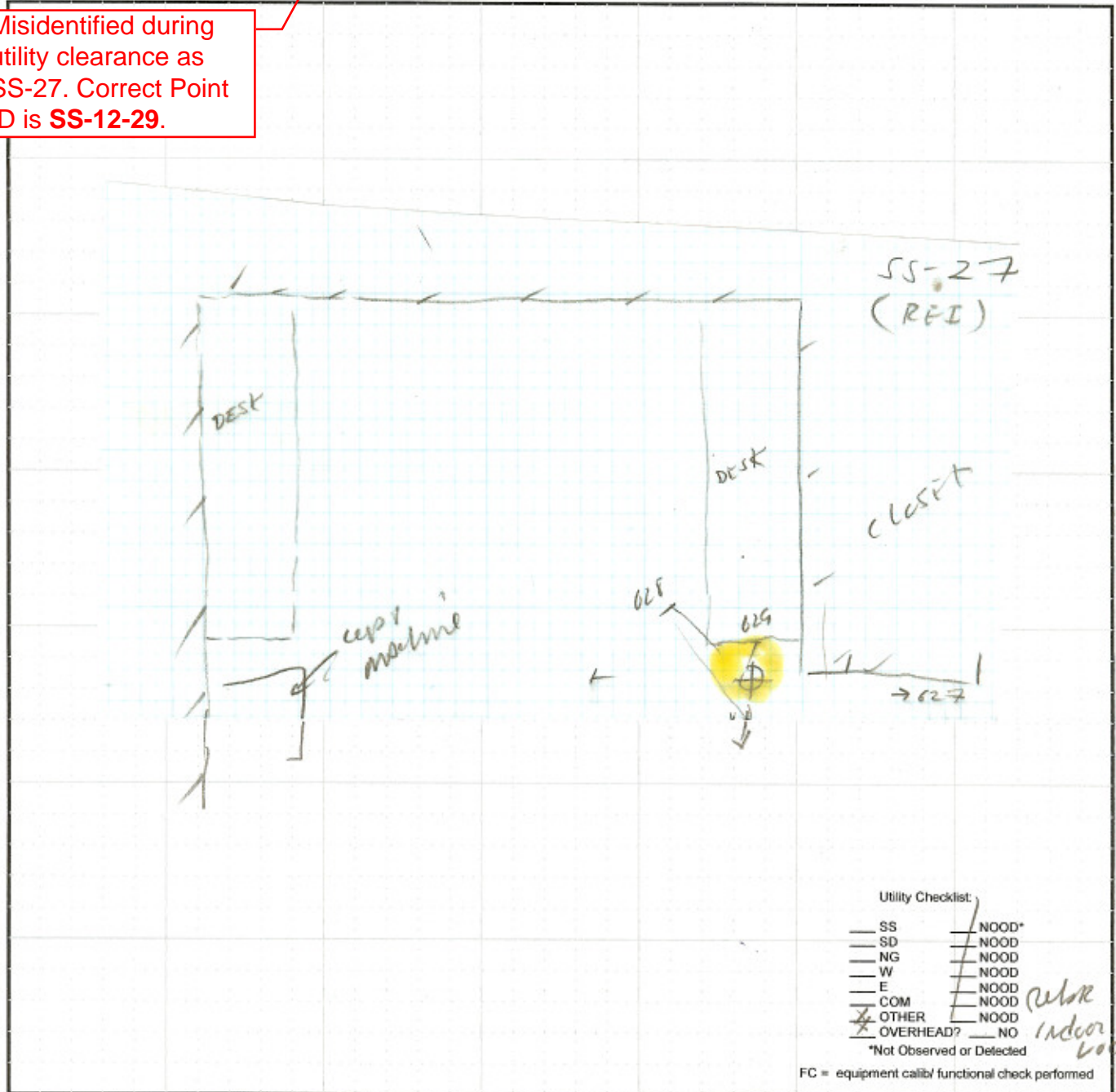
Date 5/18/15 Time 0940

Point I.D. SS-27

Operator RMS

Sketch Map

Misidentified during utility clearance as SS-27. Correct Point ID is **SS-12-29**.





RESULTS AND INSTRUMENTATION

GROUND PENETRATING RADAR (GPR): SIR-3000 Other _____

Antenna 400 MHz Other _____

Range 60 ns Other _____ ns

File Name(s) 025-625

Results *Buried objects imaged?* Y N *Other anomalous reflections?* Y N

Reflector in Floor SLAB

No Buried objects imaged at final marked location

Estimated Signal Penetration Depth (ft): _____

RF PIPE & CABLE LOCATAOR: RD-8000 _____ Other _____

Applied Signal, Direct Connect _____ No Surface Utility Features for Connection

Other Scanning Modes: P R _____ Applied Signal, Induced

Results *Underground utilities detected near boring/trench location?* *Y N

No underground utilities detected at final marked location(s)

EM PIPE & CABLE LOCATAOR: Fisher TW-6 M-Scope

Results *Buried metal detected?* Y N *Sensitivity Setting* _____

Underground utilities detected near boring/trench location? Y N

Reflector

No anomalous response observed at final marked location(s)

MAGNETOMETER (for use in Military Training Areas) Schonstedt _____ Other _____

Results *Buried metal detected?* Y N

ELECTROMAGNETIC TERRAIN CONDUCTIVITY (EM31)

Not used due to proximity of surface metal objects (e.g., vehicles)

Background Conductivity: _____ mS/m (mmhos/m)

Results *Buried metal detected?* Y N *Other anomalous readings?* Y N

ATTACHMENT 2

FIELD REPORTS

**Ahtna Environmental Inc. (Ahtna)
Former Fort Ord Site 12
Preparatory Phase QC Meeting**

Time and Location: Friday, May 22, 2015, 10:00 AM Pacific - Ahtna Office in Marina, California. Call-in (800) 882-3610 Guest Code 4451658#

Purpose: Site 12 Indoor Investigation at Michaels and REI Preparatory Phase Meeting

MEETING INVITEES

Ahtna: Derek Lieberman, Mark Fisler, Megan Gehrke, Andrew Mauck, and Holly Dillon

Eurofins Air Toxics: Kyle Vagadori and Dave Velasquez

Chenega: Tom Ghigliotto

La Brucherie Builders: Steve La Brucherie

USACE: James Specht, Teresa Rodgers, Bonnie McNeill, Alex Kan, Cory Koger and Bruce Van Etten

1. SAFETY MOMENT

2. CONTACT INFORMATION

<u>Ahtna</u>	
Derek Lieberman Technical Manager	(831) 384-3735; (831) 224-3327 (cell) dlieberman@ahtna.net
Holly Dillon Site Safety and Health Officer	(831) 384-3735; (831) 324-3299 (cell) hdillon@ahtna.net
Mark Fisler Field Services Supervisor	(831) 384-3735; (831) 224-3133 (cell) mfisler@ahtna.net
Megan Gehrke Scientist	(831) 384-3735; (831) 582-7199 (cell) mgehrke@ahtna.net
Andrew Mauck Field Support	(831) 384-3735; (831) 402-0727 (cell) amauck@ahtna.net
<u>Eurofins Air Toxics</u>	
Kyle Vagadori Project Manager	(916) 605-3339 KyleVagadori@EurofinsUS.com
Dave Velasquez Senior Account Manager	(510) 872-2016 DavidVelasquez@EurofinsUS.com
<u>Chenega</u>	
Tom Ghigliotto Field Coordinator and Inspector	(831) 824-2318; (831) 212-4122 (cell) Thomas.f.Ghigliotto@USACE.Army.mil
<u>La Brucherie Builders</u>	
Steve La Brucherie	(831) 747-1602
<u>Shea Properties</u>	
Carol Trueman	Carol.Trueman@sheaproperties.com
<u>USACE</u>	
James Specht Senior Project Manager	(916) 557-7906 James.A.Specht@usace.army.mil
Teresa Rodgers Technical Lead	(916) 557-6624 Teresa.M.Rodgers@usace.army.mil
Alexander Kan Environmental Engineer	(916) 557-7578 Alexander.Kan@usace.army.mil
Bonnie McNeill Project Chemist	(916) 557-7366 Bonnie.J.McNeill@usace.army.mil
Cory Koger Toxicologist	(916) 557-5112 Cory.S.Koger@usace.army.mil

**Ahtna Environmental Inc. (Ahtna)
Former Fort Ord Site 12
Preparatory Phase QC Meeting**

Bruce Van Etten Quality Assurance Manager	(916) 557-5377 Bruce.L.VanEtten@usace.army.mil
--	---

3. PROJECT BACKGROUND

The Fort Ord Site 12 indoor investigation at Michaels and REI will be used to verify that Remedial Investigation field work conducted in Fall 2013 is consistent over different seasons and that sub-slab sources of PCE and TCE do not contribute to indoor air concentrations in the retail stores.

4. PROJECT ROLES AND RESPONSIBILITIES¹

Executed contract and pricing in place between Ahtna, La Brucherie Builders and Eurofins Air Toxics.

5. PROJECT PLANNING DOCUMENTS

- A. October 2011 Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance).
- B. September 2013 Final Work Plan, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California (RI/FS Addendum Work Plan).
- C. March 2015 Quality Assurance Project Plan, Volume 1, Appendix C, Soil Gas Monitoring at Sites 2 and 12 (Soil Gas QAPP, Final Revision 0).
- D. March 2015 Accident Prevention Plan and associated activity hazard analyses (AHAs).
- E. May 2015 Work Plan Supplement No. 1, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 2; Michaels and REI Indoor Investigation at Site 12 (Indoor Investigation Work Plan).

6. SCHEDULE

Tuesday May 26, 2015 through Friday May 29, 2015.

7. HEALTH AND SAFETY TRAINING²

- A. Current 40-Hour and 8-Hour HAZWOPER field personnel certifications
- B. Current First Aid and CPR field personnel certifications

8. FIELD PROCEDURES

- A. Sub-slab soil gas sampling for PCE and TCE at four (4) locations.
 - a. Geophysical utility clearance
 - b. Remove flooring and drill through concrete slab
 - c. Install probe, cure for approximately 2 hours, leak test, and sample
 - d. Remove probe, repair concrete slab and flooring to match existing
- B. Co-located indoor air samples for PCE and TCE in four (4) locations.
 - a. 8-hour samples collected during time periods preferred by store managers
- C. Daily outdoor ambient air sampling for PCE and TCE.

9. NUMBER OF SAMPLES AND ANALYSES (including QC samples)

- A. Approximately five (5) samples for PCE and TCE by EPA TO-15 (sub-slab).
- B. Approximately eight (8) samples for PCE and TCE by EPA TO-15 Low Level (indoor and ambient air).

10. SAMPLE CONTAINERS AND SHIPMENT

- A. Lab supplies order was requested by May 22, 2015 to the Ahtna Marina Office.
- B. Courier pick-up – Fri May 29, 2015.

¹ See QAPP Section 2.4 for more information.

² See QAPP Section 2.7 for more information.

**Ahtna Environmental Inc. (Ahtna)
Former Fort Ord Site 12
Preparatory Phase QC Meeting**

- C. Courier pick-up location/directions:
 - 1. Take 101 South.
 - 2. Exit 156 West off of 101 in Prunedale.
 - 3. 156 will merge into Highway 1 South.
 - 4. Take the 12th Street exit.
 - 5. Go through the first stoplight.
 - 6. Turn left at first street onto 3rd Avenue.
 - 7. Turn right at the stop sign onto 12th Street.
 - 8. Turn right after the college into the gravel driveway.
 - 9. The Ahtna Marina office is in the trailers on the left.

11. TURNAROUND TIME AND DELIVERABLES

- A. Sample receipt confirmation to be provided to Ahtna project team.
- B. Turnaround time for lab reports is 10 business days for final lab report with Electronic Data Deliverables (EDDs).
- C. EDD formats are required to meet the following reporting requirements:
 - 1. FODIS/ADR compatible.
 - 2. GeoTracker compatible.

12. QUALITY CONTROL

- A. Field Activities: Three-phase quality control inspections.³
- B. Laboratory Analysis:
 - 1. DOD QSM 5.0.
 - 2. Project planning documents.
 - 3. Field duplicates will be submitted blind.

13. NOTIFICATIONS AND REMINDERS

- A. Michaels and REI.
 - a. Fact Sheets distributed and available.
 - b. Operate HVAC as during normal business hours.
 - c. Photodocument store products and materials near indoor air sample locations upon initial placement and collection of sample containers.

14. REPORTING, MEETING SUMMARY AND FOLLOW-UP ACTIONS

- A. Results to be included in:
 - a. A tech memo (*Supplement No. 1, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12*) estimated to be issued as Preliminary Draft by July 13, 2015.
 - b. Reference the tech memo in the *Sites 2 and 12 Second Quarter 2015 Groundwater and Soil Gas Monitoring and Treatment System Report* estimated to be issued as Final in late August 2015.
 - c. Reference the tech memo in the *Sites 2 and 12 Fourth Quarter 2014 through Third Quarter 2015 Groundwater and Soil Gas Monitoring and Treatment System Report* estimated to be issued as Preliminary Draft in mid December 2015.

³ See QAPP Attachment D.

PREPARATORY PHASE INSPECTION COVER SHEET

Contract No.: W91228-14-C-0048
 Task No.: TASK 16
 Location/Project: FO

Date: 5/22/15

A. Key Personnel Present:

	<u>Name</u>	<u>Position</u>	<u>Company</u>
1.	Derek Lieberman	PM	Antra
2.	Mark Fisher	Field Supervisor	↓
3.	Megan Gehrke	scientist	
4.	Andrew Mauck	Field Support	
5.	Holly Dillon	SSHO	
6.	Kyle Vagadorie	PM Lab	
7.	Steve LaBrucherie	Flooring Tech	LaBrucherie Builders
8.	Teresa Rodgers	PM	USACE
9.	Alex Kan	Engineer	↓
10.	Bonnie McNeill	Chemist	
	Cary Koger Bruce van Etten	Risk Assessor FIELD QA	

B. Submittals:

1. Review submittals and/or submittal register. Have all applicable submittals been approved?

Yes No

If No, what items have not been submitted?

- a. _____
- b. _____
- c. _____



 Quality Control Manager Signature

PREPARATORY PHASE INSPECTION CHECKLIST

Assessment Activity	Assessment Mechanism	Person(s) Responsible	Response Action	Completed by/Date
Have planning documents been prepared in accordance with the statement of work, regulatory requirements, and contract requirements?	Quality control review of document by Project Manager and QC reviewer.	Project Manager, QC Reviewer	Modify document as directed by reviewers	Adm 5/22/15
Prior to project activities: Have planning documents been read by appropriate project personnel (including subcontractors) before work is conducted.	Documentation (e.g., sign-off form, note to file, email acknowledgement) that document has been read and requirements are understood.	Subcontractors as required. Project Manager, Task Manager, and Project Chemist to check signoff and forms.	Direct project personnel to read relevant documents.	Adm 5/22/15
Prior to project activities: Has required preliminary work (e.g., clearance activities, permits, site access) been completed in accordance with project plan.	Comparison of information obtained from preliminary work completion assessment as specified in the project planning document(s).	Project Manager, Safety and Health Officer, QC Manger/Reviewer, Task Manager, Project Chemist, Field Staff	Delay startup if necessary preliminary work has not been completed. Implement corrective actions by directing appropriate personnel or subcontractors to complete necessary preliminary work.	Adm 5/22/15
Prior to project activities: Are staff and subcontractors prepared to implement project activities according to planning documents?	Review and discussion of planned activities prior to implementation.	Project Manager, Safety and Health Officer, Quality Control System Manager, Task Manager, Project Chemist, Field staff.	Delay startup if staff and subcontractors are not prepared to implement activities in accordance with specification.	Adm 5/22/15
Prior to project activities: Is necessary field equipment available and in acceptable working order?	Compare field equipment list with planned activities. Compare field equipment calibration documentation with project goals specified in the QAPP.	Project Manager, Quality Control System Manager, Task Manager, Project Chemist, Field staff.	Delay startup if equipment is unavailable or not in proper working order. Implement corrective actions to include use of alternate equipment, or recalibration of available equipment.	Adm 5/22/15

INITIAL PHASE INSPECTION COVER SHEET

Contract No.: W91238-14-C-0048
Task No.: 10
Location/Project: FPO MARINA, CA
MICHAELS, REI

Date: 3/27/15

Description and Location of Work





Inspected: SUB SLAB / INDOOR AIR SAMPLING
1 STATION @ MICHAELS, 3 STATIONS @ REI

A. Key Personnel Present:

	<u>Name</u>	<u>Position</u>	<u>Company</u>
1.	<u>MARK FISLER</u>	<u>FIELD SUPERVISOR</u>	<u>REI</u>
2.	<u>ANDREW MARK</u>	<u>FIELD TECH</u>	<u>REI</u>
3.	<u>STEVE LABRUCHE</u>	<u>CONTRACTOR</u>	
4.	<u>TOM GAIGLIONE</u>	<u>QA</u>	<u>CITENGA</u>
5.	<u>BRUCE VAN ETEN</u>	<u>QA</u>	<u>USACE</u>
6.			
7.			
8.			
9.			
10.			


Quality Control Manager Signature

INITIAL PHASE INSPECTION CHECKLIST

Assessment Activity	Assessment Mechanism	Person(s) Responsible	Response Action	Completed by/Date
Beginning of project activity: Is work being performed according to project plans?	Conduct field and laboratory audits.	Project Manager, Quality Control System Manager, Task Manager, Project Chemist, Field staff.	Stop work if audits indicate significant deviation from project plan. Implement immediate or long-term corrective actions. Communicate deficiencies to USACE Project Manager.	 5/27/15
Early phase of project: Have necessary audits been performed?	Review project phase and check to see if required audits have been satisfactorily completed.	Project Manager, Quality Control Systems Manager	Stop work if reviewer decides that absence of audit jeopardizes successful implementation of project plans. Immediately schedule necessary audits.	 5/27/15
Ongoing throughout project: Are daily Contractor Quality Control Reports (CQCRs) being prepared according to contract requirements?	Review daily CQCRs from field supervisors.	Project Manager, Task Manager, Project Chemist, Project Staff	Correct deficiencies in reports or reporting delays.	 5/27/15
Ongoing throughout project: Do project plans adequately address any changes in project activities or goals?	Compare data gathered to assess conformance to the project plan and conceptual site model, data quality objectives, and project plan.	Project Manager, Safety and Health Officer, Quality Control System Manager, Task Manager, Project Chemist, Field staff.	Stop work if assessor decides that project plan deficiencies are significant. Implement corrective action to include modification of project plans. Notify USACE Project Manager. Identify data gaps.	 5/27/15

CONSTRUCTION FOLLOW-UP PHASE INSPECTION

Contract No.: W91238-14-C-0048
Task No.: 16
Location/Project: FPO, MARINA, CA
SITE 12

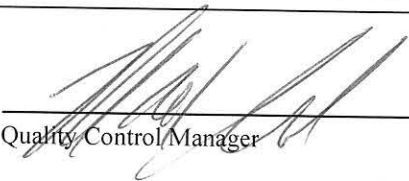
Date: 5/27/15

Project/Area of Inspection: SUB-SLAB SAMPLING @ MICHAELS & RET
IN THE DUNES SHOPPING CENTER @ SITE 12.

A. Definable Features of Work:

Status of Inspection:

SUB-SLAB & INDOOR AIR SAMPLING @ MICHAELS AND
RET (SS-12-26, SS-12-27, SS-12-29, IA-12-26, IA-12-27,
IA-12-29): SAMPLING OCCURRED AT THE THREE
STATIONS (ONE IN MICHAELS & TWO IN RET) ACCORDING
TO SECTION 3.0 OF THE DRAFT FINAL WORK PLAN
SUPPLEMENT No. 1, RIFS ADDENDUM. THERE WAS NO
DISRUPTION TO RETAIL BUSINESS OBSERVED.



Quality Control Manager

FOLLOW-UP PHASE INSPECTION CHECKLIST

Assessment Activity	Assessment Mechanism	Person(s) Responsible	Response Action	Completed by/Date
Reporting phase of project: Have data reports been prepared in accordance with project plans?	Compare data reports to specifications detailed in planning documents.	Project Manager, Quality Control Manager, Task Manager, Project Chemist, data users and evaluators.	Revise documents and reports as appropriate.	K. S. 5/29/15
After draft report submittal or project completion: Are reports adequate to meet client and regulatory agency requirements?	Review client and agency comments. Prepare responses to comments.	Project Manager, Quality Control Manager, Task Manager, Project Chemist, data users and evaluators.	Revise documents and reports as appropriate.	K. S. 5/29/15
Have other definable features of work been completed in accordance to project requirements?	Compare definable features of work with project requirements.	Project Manager, Quality Control Manager	Complete definable feature of work as required.	K. S. 5/29/15

CONSTRUCTION FOLLOW-UP PHASE INSPECTION

Contract No.: W91238-14-C-0048
Task No.: 10
Location/Project: PFO, MARINA, CA
SITE 12

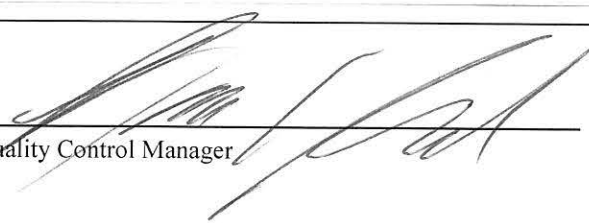
Date: 5/28/15

Project/Area of Inspection: SUB-SLAB SAMPLING @ REI IN THE
DUNES SHOPPING CENTER @ SITE 12.

A. Definable Features of Work:

Status of Inspection:

SUB-SLAB & INDOOR AIR SAMPLING @ REI (SS-12-28 &
IA-12-28). SAMPLING OCCURRED AT ONE STATION
IN THE CENTER OF THE RETAIL AREA ACCORDING
TO SECTION 3.0 OF THE DRAFT FINAL WORK PLAN
SUPPLEMENT No. 1, REI'S ADDENDUM. THERE WAS
NO DISRUPTION TO RETAIL BUSINESS OBSERVED.


Quality Control Manager

FOLLOW-UP PHASE INSPECTION CHECKLIST

Assessment Activity	Assessment Mechanism	Person(s) Responsible	Response Action	Completed by/Date
Reporting phase of project: Have data reports been prepared in accordance with project plans?	Compare data reports to specifications detailed in planning documents.	Project Manager, Quality Control Manager, Task Manager, Project Chemist, data users and evaluators.	Revise documents and reports as appropriate.	5/28/15
After draft report submittal or project completion: Are reports adequate to meet client and regulatory agency requirements?	Review client and agency comments. Prepare responses to comments.	Project Manager, Quality Control Manager, Task Manager, Project Chemist, data users and evaluators.	Revise documents and reports as appropriate.	5/28/15
Have other definable features of work been completed in accordance to project requirements?	Compare definable features of work with project requirements.	Project Manager, Quality Control Manager	Complete definable feature of work as required.	5/28/15

AHTNA DAILY SITE SAFETY TAILGATE / INSPECTION LOG

GENERAL DATA

Date: 5/27/15
 Site: SITE 12, FPO, MALINA, CA Site Location: MICHAELIS/PERI
 AHTNA Site Manager: DEREK LIEBERMAN AHTNA SSHO: ADRY DILLON

DOCUMENTATION OF WORKDAY SAFETY MEETING (List Topics of Discussion):

Other items to address as appropriate (check those discussed):

<input checked="" type="checkbox"/> Scope of day's work <input checked="" type="checkbox"/> Site SH&E Plan / Revisions <input checked="" type="checkbox"/> AHA's / PTSP's completed/reviewed? <input checked="" type="checkbox"/> Emergency SOPs (i.e. rally pt., tele #s) <input checked="" type="checkbox"/> Communications Check <input checked="" type="checkbox"/> PPE Requirements	<input type="checkbox"/> OSHA's Focus Four <input type="checkbox"/> Fall Hazards <input type="checkbox"/> Electrical Hazards <input type="checkbox"/> Struck-by Hazards <input type="checkbox"/> Caught in / between Hazards <input type="checkbox"/> Other Primary Hazards	<input type="checkbox"/> Recent near miss / injuries / lessons <input type="checkbox"/> Lifting Safety / Materials Handling <input type="checkbox"/> BBS Hazard Triggers ¹ <input type="checkbox"/> BBS Trigger Controls ² <input type="checkbox"/> Other (heat, noise, trench, confine sp)
---	--	---

MEETING ATTENDEES: (place * next to subcontractor safety representatives)

NAME / COMPANY	NAME / COMPANY
<u>MARK FISHER / AET</u>	
<u>Steve LABRIC / AHTNA</u>	
<u>Tom Chigkhal / Chigkos A</u>	
<u>Steve Santilli / COE</u>	
<u>Andrew Mante / MES</u>	

SUBCONTRACTOR SAFETY REPs COMMENTS?

DAILY INSPECTIONS: (SSHO shall initial each completed applicable inspection item)

Y	N	N	Inspection Item	Y	N	N	Inspection Item	Y	N	N	INSPECTION ITEM OTHER (List)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Postings/Plans (APP) readily avail.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signs (No Smoking, Site Control)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Designated Parking / Traffic Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PPE(head/eye/foot/hand/ear/body)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Subcontractor Safety Rep Involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi-Vis, PFD's, Ring Buoys, Etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Subcontractor / Task AHA's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Excav./Trench/Spoils Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Subcontractor Equip. Inspections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Confined Spaces Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency Equip. (PFE's, FA Kits)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Physical Barriers / Covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eye Wash / Shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fall Hazards (Protected)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Communications Check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ladders	ISSUES TO FOLLOW-UP			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitation (Toilets, Hand Wash)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power & Portable Hand Tools	(Immediately Correct Deficiencies if able)			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water & Shade, Non-Pot Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Company Field Equipment				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Utilities Identified / Controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alarms / Seatbelts				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Material Storage Proper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GFCI's, Whip-Checks, Slings				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lay Down Areas Orderly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed Rebar Protected				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Waste Containers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety / Health Behaviors:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spill Control (Pads, Snakes, Drums)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Competent / Qualified Persons				

Immediately Correct any deficiencies. Note any uncorrected deficiencies on the APP Safety and Occupational Health Deficiency Tracking Log.

Comments/Field Notes:

I acknowledge that above elements performed (SSHO/Inspector signature):

Date:





¹ BBS Triggers: (e.g. Distractions, rushing, short-cuts, frustration, exhaustion, complacency, anger, multi-tasking, mind elsewhere)

² BBS Trigger Controls: (e.g. communicating, accountability, patience, relaxation techniques, healthy lifestyle, and adequate sleep).

AHTNA DAILY SITE SAFETY TAILGATE / INSPECTION LOG

GENERAL DATA

 Date: 5-28-15

 Site: PFO, MARINA, CA

 Site Location: SITE 12, SS-12-28

 AHTNA Site Manager: DEANEK LIEBERMAN

 AHTNA SSHO: HOLLY DILLON
DOCUMENTATION OF WORKDAY SAFETY MEETING (List Topics of Discussion):

Other items to address as appropriate (check those discussed):

<input type="checkbox"/> Scope of day's work <input type="checkbox"/> Site SH&E Plan / Revisions <input type="checkbox"/> AHA's / PTSP's completed/reviewed? <input type="checkbox"/> Emergency SOPs (i.e. rally pt., tele #s) <input type="checkbox"/> Communications Check <input type="checkbox"/> PPE Requirements	<input type="checkbox"/> OSHA's Focus Four <input type="checkbox"/> Fall Hazards <input type="checkbox"/> Electrical Hazards <input type="checkbox"/> Struck-by Hazards <input type="checkbox"/> Caught in / between Hazards <input type="checkbox"/> Other Primary Hazards	<input type="checkbox"/> Recent near miss / injuries / lessons <input type="checkbox"/> Lifting Safety / Materials Handling <input type="checkbox"/> BBS Hazard Triggers ¹ <input type="checkbox"/> BBS Trigger Controls ² <input type="checkbox"/> Other (heat, noise, trench, confine sp)
---	--	---

MEETING ATTENDEES: (place * next to subcontractor safety representatives)

NAME / COMPANY	NAME / COMPANY
<u>MARK FISLER / DET</u>	
<u>Andrew March / DET</u>	
<u>Tommy G... / ...</u>	
<u>...</u>	

SUBCONTRACTOR SAFETY REPs COMMENTS?

DAILY INSPECTIONS: (SSHO shall initial each completed applicable inspection item)

Y	N	N	Inspection Item	Y	N	N	Inspection Item	Y	N	N	INSPECTION ITEM OTHER (List)
		A				A				A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Postings/Plans (APP) readily avail.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signs (No Smoking, Site Control)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Designated Parking / Traffic Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PPE(head/eye/foot/hand/ear/body)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Subcontractor Safety Rep Involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi-Vis, PFD's, Ring Buoys, Etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Subcontractor / Task AHA's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Excav./Trench/Spoils Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Subcontractor Equip. Inspections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Confined Spaces Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency Equip. (PFE's, FA Kits)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Physical Barriers / Covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eye Wash / Shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fall Hazards (Protected)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Communications Check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ladders	ISSUES TO FOLLOW-UP (Immediately Correct Deficiencies if able)			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitation (Toilets, Hand Wash)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power & Portable Hand Tools				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water & Shade, Non-Pot Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Company Field Equipment				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Utilities Identified / Controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alarms / Seatbelts				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Material Storage Proper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GFCI's, Whip-Checks, Slings				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lay Down Areas Orderly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed Rebar Protected				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Waste Containers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety / Health Behaviors:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spill Control (Pads, Snakes, Drums)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Competent / Qualified Persons				

Immediately Correct any deficiencies. Note any uncorrected deficiencies on the APP Safety and Occupational Health Deficiency Tracking Log.

Comments/Field Notes:

I acknowledge that above elements performed (SSHO/Inspector signature):

Date:

5/28/15

¹ BBS Triggers: (e.g. Distractions, rushing, short-cuts, frustration, exhaustion, complacency, anger, multi-tasking, mind elsewhere)

² BBS Trigger Controls: (e.g. communicating, accountability, patience, relaxation techniques, healthy lifestyle, and adequate sleep).

121540
37886
40.
40.
40.
40.
40.
40.
40.
40.
40.
40.

5/27/15 (WED)

WEATHER: N/A FOR INDOOR SAMPLING BUT CLEA, 530
PROJECT: INDOOR AIR/SUB SLAB SAMPLING @ MICHAELS
AND REI @ SITE 12.
PROJECT # 05055.0109
TASK: SAMPLE ONE SUB SLAB & ON INDOOR AIR
AT MICHAELS AND SAMPLE TWO SUB SLABS AND
TWO INDOOR AIRS AT REI.
SAMPLER: MARK FISLEN
LOCATION: SS-12-26, SS-12-27, SS-12-29 + I.A.
COL #: 1547

5/27/15

0445: ARRIVE @ THE OUR GWIP TO MOBE
TRUCK FOR SAMPLING.
0500: SHUT-IN TEST ON CAN # 6L1294
(AA-? : 1522M212201F)
0515: END SHUT-IN TEST ON AMBIENT AIR PASS
0520: MOBE TO SITE 12. DEPLOY AMBIENT AIR
SUMMA WEST OF MICHAELS.
0525: MEET ACOE REP (BRUCE VAN ETTEN),
TOM GAMBRIOTTO (CHENGA), STEVE LA BROUQUET
(CONTRACTOR FOR FLOOR), & ANDREW MAUIK (REI).
H&S TAILGATE. INITIAL INSP.
0535: ENTER MICHAELS. SET UP ON SS-12-26.
INSTALL PROBE.
0615: SHUT-IN TEST ON CANS 35138 & 6L0006
(IA-12-26 + DUP: 1522M212204F 1522M212205D.)
0630: END SHUT-IN TESTS ON IA SUMMAS. PASS
START SHUT-IN TEST ON CANS 3049 & 1L1517
(SS-12-26 + DUP: 1522M212202F & 1522M212203D).
0645: END SHUT-IN TEST. PASS.



5/27/5 (cont)

0700: START He⁺ TEST ON SG-12-26.

0715: END He⁺ TEST / START SAMPLING SG-12-26.

0726: END SAMPLING SG 12-26. REPAIR FLOOR.

0740: DEPART MICHAELS.

0750: ARRIVE @ REI.

0800: ENTER REI. SET-UP ON SS-12-27.

0830: START SHUT-IN TEST ON CAN # 35633
(SS-12-27, 1522M212206F).

START SHUT-IN TEST ON CAN # 37423
(SS-12-29, 1522M212207F)

0835: START SHUT-IN TEST ON CAN # 5437229
(IA-12-27: ~~1522M212207~~ 1522M212208F).

START SHUT-IN TEST ON CAN # 921
(IA-12-29: 1522M212209F).

0845: END SHUT-IN TESTS ON SS-27 & SS-29. PWS

0850: END SHUT-IN TESTS ON IA-27 & IA-29. PWS

~~0913~~ 0858: START He⁺ TEST ON SS-12-27.

0913: He⁺ TEST COMPLETE / START SAMPLING SS-12-27.

0920: END SAMPLING SS-12-27. REPAIR FLOOR

0937: START INDOOR AIR @ SS-12-27.

LATE (0927): START He⁺ TEST ON SS-12-29.

~~0942~~ 0942: END He⁺ TEST / START SAMPLING
SS-12-29.

0950: END SAMPLING SS-12-29. REPAIR FLOOR.

START INDOOR AIR - 12-29.

1000: DEPART REI.

5/28/15 (THUR)

~~WEATHER~~: CLOUDY, 53°, CALM

PROJECT: SITE 12 INDOOR AIR SAMPLING

PROJECT #: 05055.01.09

TASK: INDOOR AIR/SUB-SLAB SAMPLING @ SS-12-28

SAMPLER: MARK FISLER

LOCATION: CENTER OF REI

COE #: 1547

56-12-26.
AIR

56-12-27.
35633

423

5H34229
(208F)

SS-29 PAS

IA-29 PAS

27.

LINE SS-12-27.

AIR FLOOR

7.

2-29.

SAMPLING

AIR FLOOR

0700: ARRIVE @ THE OUR GWIP. MOVE TRUCK FOR SS SAMPLING.

0715: START SHUT-IN TEST ON CAN # 61122 (AA: 1522M212210F)

0730: SHUT-IN TEST COMPLETE. MOVE TO SITE.

0735: DEPLOY AA SUMMA.

0740: ARRIVE @ REI

0800: ENTER STORE. DRILL HOLE.

0815: SET PROBE.

0820: START SHUT-IN TEST ON CAN # 36499 (SS-12-28: 1522M212211F)

0825: START SHUT-IN TEST ON CAN # 31591 (IA-12-28: 1522M212212F)

0835: END SHUT-IN TEST ON SS-12-28. PAS

0840: END SHUT-IN TEST ON IA-12-28. PAS / SET UP SHROUD.

0905: START He+ TEST ON SS-12-29.

0920: END He+ TEST. START SAMPLING SS-12-29

0926: END SAMPLING REPAIR FLOOR.

0930: START IA-12-28 SAMPLING (8 HRS).

1535: COLLECT AA SAMPLE (STOP SAMPLING).

1730: COLLECT IA-12-28.

SUMMA Sample Train Shut-In Test Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Canister ID	Sample ID	Date	Start:	End:	Pass/Fail*
			Time/Inch, Hg	Time/Inch, Hg	
6L1294	1522M212201F	5/27/15	0539/-30"	0542/-30"	PASS
35138	1522M212203F		0615/-29"	0630/-29"	PASS
6L0006	1522M212208F		0615/-30"	0630/-30"	PASS
3049	1522M212202F		0630/-29.5	0645/-29.5	PASS
1L1517	1522M212203D		0630/-29.5	0645/-29.5	PASS
35633	1522M212206F		0830/-27.0	0845/-27.0	PASS
37473	1522M212207F		0830/-30.0	0845/-30.0	PASS
5H39229	1522M212208F		0835/-30.0	0850/-30.0	PASS
921	1522M212209F		0835/-30.0	0850/-30.0	PASS
6L1252	1522M212210F	5/28/15	0741/-30.0	0730/-30.0	PASS
36499	1522M212211F		0820/-30.0	0835/-30.0	PASS
1591	1522M212212F		0825/-31.0	0840/-30.0	PASS

Notes:

Hg = mercury

The vacuum at the start and the end of the shut-in test shall be read by the same field person from the same perspective to assure comparibility.

*Passing of the shut-in test is a maximum drop in vacuum of 1 inch Hg after 15 minutes of observation with Summa canister connected to the sample train (with inlet closed).

Page 1 of 1

Field Personnel Signature



Date

5/27/15

Soil Gas Probe Integrity Testing Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Probe ID ¹	Date	Time (min): Start Time	0*		5		10		15		End Time	Pass/Fail ²
			Detector: Shroud	Inline	Shroud	Inline	Shroud	Inline	Shroud	Inline		
AA	5/27											
SS-12-26	5/27/15	0700	28.3	0.6	40.4	0.6	35.9	0.6	29.5	0.6	0715	PASS
SS-12-27	↓	0858	56.1	0.6	58.1	0.6	45.6	0.6	33.6	0.6	0913	PASS
SS-12-29	↓	0927	55.5	0.7	48.7	0.7	38.1	0.6	30.8	0.6	0942	PASS
SS-12-28	5/28/15	0905	51.8	0.6	47.6	0.6	40.2	0.6	33.7	0.6	0920	PASS

Notes:

% = percent (by volume) min = minutes
 He = helium ID = identification

¹ All probe depths in a nested soil gas probe cluster shall be integrity (leak) tested.

² DTSC's *Advisory, Active Soil Gas Investigations* provides the opinion that a 5% ambient air dilution is inconsequential to sample integrity. When sampling under a 20% helium in air atmosphere, 1% helium detected in the purge gas represents a 5% ambient air sample dilution. If the concentration of helium in the purge sample is greater than or equal to 5% of the helium concentration in the shroud, corrective action is necessary to remedy the leak.

* Inline detector reading at time =0 is baseline reading with the detector disconnected from sampling assembly.

Field Personnel Signature:  Date 5/27/15





Ambient Air Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/29/15 Sampler: M. FISLER Weather: N/A

Associated Soil Gas Probes/Samples IDs: SS-12-26, FA-12-26, SS-12-

Ambient Sample Location Description: ~ 100' W OF REAR OF MICHAELS

Ambient Air Sample Inlet Height: ~ 5.0' approx. ft ags (height should be approx. 6 ft ags)

AMBIENT AIR SAMPLE INFORMATION:

Sample Container: 6-L SUMMA Canister _____ Other: _____

Canister ID: 641294 Sample Manifold ID: FC00697

Equipment (Shut-In) Test (Pass/Fail): PASS

Sample ID: 1522M212201F Collection start time: 0820

Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)

Collection end time: 1320 Sample duration: 8 hrs (up to 8 hrs)

Final Canister Pressure/Vacuum (inches Hg): -5.0" (vacuum between - 4" to - 8" Hg)

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE _____ other (list): _____

By method: EPA TO-15 Low Level _____ Other: _____

Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature:  Date: 5/27/15

Reviewer Signature:  Date: 5/29/15

Notes:

"Hg = inches mercury ft ags = feet above ground surface L = liter hrs = hours ID = identification



Ambient Air Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/28/15 Sampler: M FISLER Weather: N/A (100%, 53°, calm)

Associated Soil Gas Probes/Samples IDs: SS-12-28, IA-12-28,

Ambient Sample Location Description: ~100' NORTH OF BACK OF REI

Ambient Air Sample Inlet Height: 5.0' approx. ft ags (height should be approx. 6 ft ags)

AMBIENT AIR SAMPLE INFORMATION:

Sample Container: 6-L SUMMA Canister _____ Other: _____

Canister ID: 6L1252 Sample Manifold ID: FC00354

Equipment (Shut-In) Test (Pass/Fail): PASS

Sample ID: 1582m212210F Collection start time: 0735

Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)

Collection end time: 1535 Sample duration: 8 hrs (up to 8 hrs)

Final Canister Pressure/Vacuum (inches Hg): -6.5" (vacuum between - 4" to - 8" Hg)

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE _____ other (list): _____

By method: EPA TO-15 Low Level _____ Other: _____

Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature:  Date: 5/28/15

Reviewer Signature:  Date: 5/29/15

Notes: "Hg = inches mercury ft ags = feet above ground surface L = liter hrs = hours ID = identification



Indoor Air Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/27/15 Sampler: M. FISLER Weather: N/A

Indoor Air Location ID: IA-12-26 Store: Michaels

Indoor Air Sample Location Description: SE CORNER OF STORE

Associated Sub-Slab Sample ID: SS-12-26

Indoor Air Sample Inlet Height: 4 approx. ft ags (height should be approx. 3-5 ft ags)

INDOOR AIR SAMPLE INFORMATION:

Sample Container: 6-L SUMMA Canister _____ Other: _____

Canister ID: 35138 Equipment (Shut-In) Test (Pass/Fail): PASS

Sample Manifold ID: FC00287 Regulator Duration: 8 hr _____ 24 hr _____ Other: _____

Sample ID: 1522M212203F Collection start time: 0716⁴ 0736¹² 0735

Initial Canister Pressure/Vacuum (inches Hg): -30" (vacuum of at least - 25" Hg)

Collection end time: 1500 Sample duration: 8 hrs (up to 24 hrs)

Final Canister Pressure/Vacuum (inches Hg): -7.0" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: _____ Not applicable

Canister ID: 640006 Equipment (Shut-In) Test (Pass/Fail): PASS

Sample ID: 1522M212203D Collection start time: 0736

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE _____ other (list): _____

By method: EPA TO-15 Low Level _____ Other: _____ Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature: [Signature] Date: 5/27/15

Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury ft ags = feet above ground surface L = liter hrs = hours ID = identification



Indoor Air Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/27/15 Sampler: M. F. SLAR Weather: MA

Indoor Air Location ID: SS-12-27 Store: REI

Indoor Air Sample Location Description: NEAR CASH REGISTERS

Associated Sub-Slab Sample ID: SS-12-27

Indoor Air Sample Inlet Height: 4' approx. ft ags (height should be approx. 3-5 ft ags)

INDOOR AIR SAMPLE INFORMATION:

Sample Container: 6-L SUMMA Canister _____ Other: _____

Canister ID: SH34229 Equipment (Shut-In) Test (Pass/Fail): PASS

Sample Manifold ID: FC00670 Regulator Duration: 8 hr _____ 24 hr _____ Other: _____

Sample ID: 1522M212208F Collection start time: 0938

Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)

Collection end time: 1743 Sample duration: 8 hrs (up to 24 hrs)

Final Canister Pressure/Vacuum (inches Hg): -6.0" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: Not applicable

Canister ID: _____ Equipment (Shut-In) Test (Pass/Fail): _____

Sample ID: _____ Collection start time: _____

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE _____ other (list): _____

By method: EPA TO-15 Low Level _____ Other: _____ Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature: [Signature] Date: 5/27/15

Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury ft ags = feet above ground surface L = liter hrs = hours ID = identification



Indoor Air Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/28/15 Sampler: M. FISLER Weather: N/A

Indoor Air Location ID: IA-12-28 Store: RFI

Indoor Air Sample Location Description: CENTER OF RETAIL AREA

Associated Sub-Slab Sample ID: SS-12-28

Indoor Air Sample Inlet Height: 4.0' approx. ft ags (height should be approx. 3-5 ft ags)

INDOOR AIR SAMPLE INFORMATION:

Sample Container: 6-L SUMMA Canister _____ Other: _____

Canister ID: 1591 Equipment (Shut-In) Test (Pass/Fail): PASS

Sample Manifold ID: FC00986 Regulator Duration: 8 hr _____ 24 hr _____ Other: _____

Sample ID: 1522M212212F Collection start time: 0930

Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)

Collection end time: 1730 Sample duration: 7.0^h hrs (up to 24 hrs)
NO 5/29/15

Final Canister Pressure/Vacuum (inches Hg): -7.0" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: Not applicable

Canister ID: _____ Equipment (Shut-In) Test (Pass/Fail): _____

Sample ID: _____ Collection start time: _____

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE _____ other (list): _____

By method: EPA TO-15 Low Level _____ Other: _____ Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature: [Signature] Date: 5/28/15

Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury ft ags = feet above ground surface L = liter hrs = hours ID = identification



Indoor Air Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/27/15 Sampler: M. EISEN Weather: N/A

Indoor Air Location ID: IA-12-29 Store: REF

Indoor Air Sample Location Description: OFFICES

Associated Sub-Slab Sample ID: SS-12-29

Indoor Air Sample Inlet Height: 40" approx. ft ags (height should be approx. 3-5 ft ags)

INDOOR AIR SAMPLE INFORMATION:

Sample Container: 6-L SUMMA Canister _____ Other: _____

Canister ID: 921 Equipment (Shut-In) Test (Pass/Fail): PASS

Sample Manifold ID: K00739 Regulator Duration: 8 hr _____ 24 hr _____ Other: _____

Sample ID: 1572M212209F Collection start time: 0930

Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)

Collection end time: 1747 Sample duration: 8 hrs (up to 24 hrs)

Final Canister Pressure/Vacuum (inches Hg): -7.5" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: Not applicable

Canister ID: _____ Equipment (Shut-In) Test (Pass/Fail): _____

Sample ID: _____ Collection start time: _____

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE _____ other (list): _____

By method: EPA TO-15 Low Level _____ Other: _____ Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature: [Signature] Date: 5/27/15

Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury ft ags = feet above ground surface L = liter hrs = hours ID = identification



Sub-Slab Soil Gas Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/27/15 Sampler: M. FISHER Weather: N/A
 Sub-Slab Location ID: SS-12-26 Store: MICHAELS
 Location Description: SE CORNER OF STORE
 Probe Installation Complete Date/Time: 5/27/15/0550 Probe Leak Test (Pass/Fail): PASS

SUB-SLAB SOIL GAS SAMPLE INFORMATION:

Sample Container: 1.0-L SUMMA Canister Other: _____
 Canister ID: 3045 Sample Manifold ID: 30746
 Equipment (Shut-In) Test (Pass/Fail): PASS Sample ID: 1522M212202F
 Collection start time: 0715 Collection end time: 0726
 Initial Canister Pressure/Vacuum (inches Hg): -29.5
-30" (vacuum of at least - 25" Hg)
 Final Canister Pressure/Vacuum (inches Hg): -8.0" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: _____ Not applicable

Sample Container: 1.0-L SUMMA Canister Other: _____ Canister ID: 141517
 Equipment (Shut-In) Test (Pass/Fail): PASS Sample ID: 1522M212203D

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE other (list): _____
 By method: EPA TO-15 Other: _____ Laboratory: Eurofins Air Toxics, Inc.
 Comments: _____

Sampler Signature: [Signature] Date: 5/27/15
 Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury

L = liter

ID = identification



Sub-Slab Soil Gas Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/27/15 Sampler: M. FISLER Weather: N/A

Sub-Slab Location ID: SS-12-27 Store: REI

Location Description: CASH REGISTER AREA

Probe Installation Complete Date/Time: 5/23/15 0815 Probe Leak Test (Pass/Fail): PASS

SUB-SLAB SOIL GAS SAMPLE INFORMATION:

Sample Container: 1.0-L SUMMA Canister Other: _____

Canister ID: 35633 Sample Manifold ID: 30508

Equipment (Shut-In) Test (Pass/Fail): PASS Sample ID: 1572M212206F

Collection start time: 0913 Collection end time: 0919

Initial Canister Pressure/Vacuum (inches Hg): -27.1 (vacuum of at least - 25" Hg)

Final Canister Pressure/Vacuum (inches Hg): -7.0" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: Not applicable

Sample Container: 1.0-L SUMMA Canister Other: _____ Canister ID: _____

Equipment (Shut-In) Test (Pass/Fail): _____ Sample ID: _____

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE other (list): _____

By method: EPA TO-15 Other: _____ Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature: [Signature] Date: 5/28/15

Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury

L = liter

ID = identification



Sub-Slab Soil Gas Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/28/15 Sampler: M. FASLER Weather: N/A
 Sub-Slab Location ID: SS-12-28 Store: RET
 Location Description: CENTER OF RETAIL AREA
 Probe Installation Complete Date/Time: 5/28/15 0813 Probe Leak Test (Pass/Fail): PASS

SUB-SLAB SOIL GAS SAMPLE INFORMATION:

Sample Container: 1.0-L SUMMA Canister Other: _____
 Canister ID: 36499 Sample Manifold ID: 30521
 Equipment (Shut-In) Test (Pass/Fail): PASS Sample ID: 1522M212211F
 Collection start time: 0920 Collection end time: 0926
 Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)
 Final Canister Pressure/Vacuum (inches Hg): -6.5" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: Not applicable

Sample Container: 1.0-L SUMMA Canister Other: _____ Canister ID: _____
 Equipment (Shut-In) Test (Pass/Fail): _____ Sample ID: _____

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE other (list): _____
 By method: EPA TO-15 Other: _____ Laboratory: Eurofins Air Toxics, Inc.
 Comments: _____

Sampler Signature: [Signature] Date: 5/28/15
 Reviewer Signature: [Signature] Date: 5/29/15

Notes:

"Hg = inches mercury

L = liter

ID = identification



Sub-Slab Soil Gas Sample Collection Log

Soil Gas Monitoring

Site 12, Former Fort Ord, California

Date: 5/27/15 Sampler: M. FISLER Weather: N/A

Sub-Slab Location ID: SS-12-29 Store: REI

Location Description: OFFICES

Probe Installation Complete Date/Time: 5/29/15 0840 Probe Leak Test (Pass/Fail): PASS

SUB-SLAB SOIL GAS SAMPLE INFORMATION:

Sample Container: 1.0-L SUMMA Canister Other: _____

Canister ID: 37423 Sample Manifold ID: 30680

Equipment (Shut-In) Test (Pass/Fail): PASS Sample ID: 1522M212207F

Collection start time: 0942 Collection end time: 0950

Initial Canister Pressure/Vacuum (inches Hg): -30.0" (vacuum of at least - 25" Hg)

Final Canister Pressure/Vacuum (inches Hg): -7.0" (vacuum between - 4" to - 8" Hg)

DUPLICATE SAMPLE INFORMATION: Not applicable

Sample Container: 1.0-L SUMMA Canister Other: _____ Canister ID: _____

Equipment (Shut-In) Test (Pass/Fail): _____ Sample ID: _____

ANALYSES AND REVIEW:

Analytes Requested: TCE and PCE other (list): _____

By method: EPA TO-15 Other: _____ Laboratory: Eurofins Air Toxics, Inc.

Comments: _____

Sampler Signature:  Date: 5/27/15

Reviewer Signature:  Date: 5/29/15

Notes:
"Hg = inches mercury L = liter ID = identification



296 12th St
Marina, CA 93933
(831) 384-3735

CHAIN OF CUSTODY

SOIL GAS / AIR

Chain of Custody #: 1547
Carbon Copies: White - Laboratory Yellow - Ahtna

Project Information:		Analysis Requested				Lab Sample Receipt	
Project Location: <u>SITE 12, MARINA CA</u>	Sampler/s: <u>MARK FISLER</u>	TO-15 TO-15 LOW LEVEL					Laboratory Sample Delivery
Project Name: <u>SITE 12 RIFS</u>	Report To: <u>DEREK LIEBERMAN</u>						Group #: _____
Project Number: <u>05055.01-09</u>	E-Mail: <u>d.lieberman@ahtna.net</u>						Custody Seal: _____
Sampling Event: <u>INDOOR AIR SAMPLING</u>	Laboratory: <u>EUROFINS</u>						

Lab Number	Sample Number/Description	Sample Collection		Matrix			SUMMA Canister Collection			TO-15	Notes
		Date	Time	Soil Gas	Ambient Air	Other	Canister ID	Regulator ID	Final Vacuum ("Hg)		
	1522M212201F	5/27/15	0520		X		661299	FC00857	-50"	X	AA
	1522M212202F		0715	X			3049	30746	-9.0"	X	SS-12-26
	1522M212203D		0716	X			141517	30746	-9.0"	X	SS-12-26 (DUP)
	1522M212204F		0735			X	35138	FC00287	-7.5"	X	IA-12-26
	1522M212205D		0736			X	660006	FC00	-70"	X	IA-12-26 (DUP)
	1522M212206F		0913	X			35633	30508	-70"	X	SS-12-27
	1522M212207F		0942	X			37413	30508	-70"	X	SS-12-29
	1522M212208F		0937			X	SH3429	FC00670	-6.8"	X	IA-12-27
	1522M212209F		0950			X	.921	FC00735	-7.0"	X	IA-12-29
	1522M212210F	5/28/15	0735		X		661299	FC00857	-6.5"	X	AA
	1522M212211F		0720				36499	30521	-6.5"	X	SS-12-28
	1522M212212F		0930			X	1591	FC00866	-7.0"	X	IA-12-28

Turnaround Time: _____ : Standard _____ : 3-5 Day Rush _____ : 48 Hour Rush _____ : 24 Hour Rush

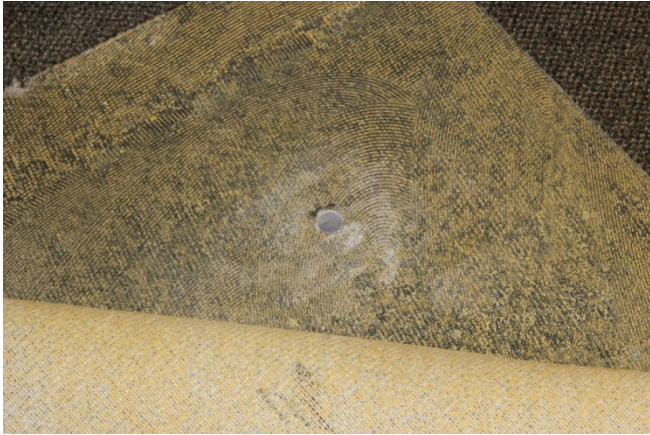
Shipment: _____ Method: _____ Tracking ID: _____

Comments: OTHER SAMPLES = INDOOR AIR SOIL GAS = SUB-SLAB
(MF) * 1ST CANISTER / MANIFOLD FAILED. NEW CAN = 661252, NEW REG = FC00354

Chain of Custody Tracking:			
Relinquished By Sampler:	Date/Time: 5/29/15 11:15	Received By: For Mark	Date/Time: 5-29-15 11:45
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By Laboratory:	Date/Time:

ATTACHMENT 3

PHOTOGRAPHIC RECORD



Picture 1. Sub-slab borehole installed for soil gas probe SS-12-29 in the REI northwest backroom



Picture 2. Installing soil gas probe SG-12-27 in the REI southwest checkout area



Picture 3. Collecting soil gas sample SG-12-26 and duplicate in Michaels



Picture 4. Sub-slab borehole patched for soil gas probe SG-12-28 in the REI center retail area



Picture 5. Products near indoor air sample IA-12-26 in Michaels southeast corner

Picture 6. Products near indoor air sample IA-12-27 in REI southwest checkout area



ATTACHMENT 4

LABORATORY ANALYTICAL DATA



eurofins

Air Toxics

Electronic Comprehensive Validation Package (eCVP)

COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15

INVENTORY SHEET

Work Order #: 1506011A

Page Nos.

	From	To
1. Work Order Cover Page & Laboratory Narrative	1	5
a. <u>Lumen Validation Report</u>	--	--
2. Sample Results and Raw Data (Organized by Sample)	6	63
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)	64	76
b. Surrogate Recover Summary Form (If Applicable)	77	77
c. Internal Standard Summary Form (If Applicable)	78	79
d. Duplicate Results Summary Sheet	80	83
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data)	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	84	251
g. MDL Study (If Applicable)	252	267
h. Continuing Calibration Verification Data (Summary Sheet	268	297
i. Second Source LCS(Summary + Raw Data)	298	349
j. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	350	352
l. GC/MS Tune (Results + Raw Data)	353	377
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	378	379
b. Chain-of-Custody Records	380	386
c. Sample Log-In Sheet	387	388
d. Misc Shipping/Receiving Records (list of individual records)		
<u>Sample Receipt Discrepancy Report</u>	--	--
5. Other Records (describe or list)		
a. <u>Manual Spectral Defense</u>	--	--
b. <u>Manual Integrations</u>	--	--
c. <u>Manual Calculations</u>	--	--
d. <u>Canister Dilution Factors</u>	389	391
e. <u>Laboratory Corrective Action Request</u>	--	--
f. <u>CAS Number Reference</u>	392	392
g. <u>Variance Table</u>	393	394
h. <u>Canister Certification</u>	395	401
i. <u>Data Review Check Sheet</u>	402	403

Comments:

Completed by:

Kara McKiernan

Kara McKiernan / Document Control

6/12/15

(Signature)

(Print Name & Title)

(Date)

CONFIDENTIALITY NOTICE: This communication and any accompanying documents are confidential and privileged. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If you received this transmission in error, you are advised that any disclosure, copying, distribution, or the taking of any action in reliance upon the communication is strictly prohibited. If you have received this communication in error, please contact Eurofins Air Toxics, Inc. at (916)-985-1000.

WORK ORDER #: 1506011A

Work Order Summary

CLIENT:	Ms. Holly Dillon AHTNA 296 12th Street Marina, CA 93933	BILL TO:	Accounts Payable AHTNA 110 West 38th Ave Suite 200A Anchorage, AK 99503
PHONE:	831-384-3735	P.O. #	PO0500288
FAX:		PROJECT #	05055.01.09 SITE 12 RIFS
DATE RECEIVED:	05/29/2015	CONTACT:	Kyle Vagadori
DATE COMPLETED:	06/11/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	1522M212201F	Modified TO-15	3.9 "Hg	5.1 psi
04A	1522M212204F	Modified TO-15	4.9 "Hg	5 psi
05A	1522M212205D	Modified TO-15	5.7 "Hg	5.2 psi
05AA	1522M212205D Lab Duplicate	Modified TO-15	5.7 "Hg	5.2 psi
08A	1522M212208F	Modified TO-15	4.1 "Hg	5.2 psi
09A	1522M212209F	Modified TO-15	5.5 "Hg	5.1 psi
10A	1522M212210F	Modified TO-15	4.9 "Hg	5.4 psi
10AA	1522M212210F Lab Duplicate	Modified TO-15	4.9 "Hg	5.4 psi
12A	1522M212212F	Modified TO-15	5.1 "Hg	5.1 psi
13A	Lab Blank	Modified TO-15	NA	NA
13B	Lab Blank	Modified TO-15	NA	NA
14A	CCV	Modified TO-15	NA	NA
14B	CCV	Modified TO-15	NA	NA
15A	LCS	Modified TO-15	NA	NA
15AA	LCSD	Modified TO-15	NA	NA
15B	LCS	Modified TO-15	NA	NA
15BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 06/11/15

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
DoD QSM 5.0 TO-15 LL/SIM
AHTNA
Workorder# 1506011A

Seven 6 Liter Summa Canister (100% Certified) samples were received on May 29, 2015. Seven 6 Liter Summa Canister (100% Certified) samples were received on May 29, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liter 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.

Method modifications and DoD QSM 5.0 modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the modifications.

<i>Requirement</i>	<i>TO-15 LL/SIM DoD QS</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	UHP Nitrogen provides a higher purity gas matrix than zero air
Daily Calibration	+/- 30% Difference	For Std. Full Scan: $\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers For SIM: Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
DoD QSM 5.0 Module 4 (1.7.1.1.j, 1.5.2.1.b, 1.5.2.2.c) Surrogates	Quantification of surrogates requires a multi-point calibration and determination of DL and LOQ.	Quantification achieved using a multipoint calibration at a single concentration, analogous to internal standards. DLs and LOQs are not established.
DoD QSM 5.0 Section 2.2.1 PT Requirement	Two PT samples per year for each analyte-matrix-method combination are required.	Not all analyte-matrix-method combinations on the scope of accreditation are available from the current PT providers.
DoD QSM 5.0 Section 1.7.4.1 Lab Blank	No analytes detected at >1/2 LOQ	No analytes detected at >=LOQ.
Initial Calibration	$\leq 30\%$RSD with 2 compounds out up to 40%RSD	(Full Scan): $\leq 30\%$RSD with 4 compounds out up to 40%RSD SIM: Default criterion is $\leq 30\%$RSD with 10% VOCs out up to 40%RSD.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Limit of Detection (LOD). All The canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

Surrogate recoveries for 1,2-Dichloroethane-d4 did not meet in-house generated control limits in both sets LCS/Lab Blank analyzed On June 05, 2015 and the following samples 1522M212201F, 1522M212205D and 1522M212205D Lab Duplicate, but were within laboratory acceptance limits of 70-130%.

Surrogate recoveries for 1,2-Dichloroethane-d4 did not meet in-house generated control limits in Lab Blank analyzed On June 08, 2015 and the following sample 1522M212209F, but were within laboratory acceptance limits of 70-130%.

Surrogate recoveries for 4-Bromofluorobenzene did not meet in-house generated control limits in Lab Blank analyzed On June 08, 2015, but were within laboratory acceptance limits of 70-130%.

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	Sample Extract		
					Holding Time (Days)	Date Analyzed	Holding Time (Days)	Sample Condition
1522M212201F	1506011A-01A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212204F	1506011A-04A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212205D	1506011A-05A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212205D Lab Dup	1506011A-05AA	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212208F	1506011A-08A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212209F	1506011A-09A	5/27/2015	5/29/2015	NA	12	6/ 8/2015	NA	Good
1522M212210F	1506011A-10A	5/28/2015	5/29/2015	NA	11	6/ 8/2015	NA	Good
1522M212210F Lab Dup	1506011A-10AA	5/28/2015	5/29/2015	NA	11	6/ 8/2015	NA	Good
1522M212212F	1506011A-12A	5/28/2015	5/29/2015	NA	11	6/ 8/2015	NA	Good
Lab Blank	1506011A-13A	NA	NA	NA	NA	6/ 5/2015	NA	Good
Lab Blank	1506011A-13B	NA	NA	NA	NA	6/ 8/2015	NA	Good
CCV	1506011A-14A	NA	NA	NA	NA	6/ 5/2015	NA	Good
CCV	1506011A-14B	NA	NA	NA	NA	6/ 8/2015	NA	Good
LCS	1506011A-15A	NA	NA	NA	NA	6/ 5/2015	NA	Good
LCSD	1506011A-15AA	NA	NA	NA	NA	6/ 5/2015	NA	Good
LCS	1506011A-15B	NA	NA	NA	NA	6/ 8/2015	NA	Good
LCSD	1506011A-15BB	NA	NA	NA	NA	6/ 8/2015	NA	Good

Sample Results and Raw Data

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212201F	Date/Time Analyzed:	6/5/15 06:05 PM
Lab ID:	1506011A-01A	Dilution Factor:	1.55
Date/Time Collecte	5/27/15 05:20 AM	Instrument/Filename:	msde.i / e060511
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.13	0.52	1.0	Not Detected U
Trichloroethene	79-01-6	0.063	0.42	0.83	Not Detected U

U = The analyte was not detected above the LOD.

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	128 Q
4-Bromofluorobenzene	460-00-4	83-116	88
Toluene-d8	2037-26-5	90-108	101

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060511.d
 Lab Smp Id: 1506011A-01A
 Inj Date : 05-JUN-2015 18:05
 Operator : EA Inst ID: msde.i
 Smp Info : 250mL#6L1294
 Misc Info : 3.9"Hg-5.1psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.55000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.55000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	101737 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	83049			46.94- 106.94	81.63
15.611	15.611 (1.000)	49	177357			103.66- 163.66	174.33
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	415010 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	50573			0.00- 43.53	12.19
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	390686 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	180051			13.25- 73.25	46.09
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.409	16.433 (1.051)	65	205312 6.42400	6.424		80.00- 120.00	100.00(R)
16.409	16.433 (1.051)	67	88114			24.87- 84.87	42.92

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		TARGET RANGE		RATIO	
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
\$ 67	Toluene-d8					CAS #:	2037-26-5		
19.601	19.601	(1.156)	98	360850	5.06164	5.062	80.00-	120.00	100.00
19.601	19.601	(1.156)	70	43475			0.00-	40.24	12.05
19.601	19.601	(1.156)	100	245484			39.39-	99.39	68.03

\$ 87	Bromofluorobenzene					CAS #:	460-00-4		
24.043	24.042	(1.074)	174	174977	4.42373	4.424	80.00-	120.00	100.00
24.043	24.042	(1.074)	95	255802			88.06-	148.06	146.19
24.043	24.042	(1.074)	176	163770			66.20-	126.20	93.60

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060511.d
Lab Smp Id: 1506011A-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: EA
Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m
Misc Info: 3.9"Hg-5.lpsi

Calibration Date: 05-JUN-2015
Calibration Time: 10:08
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	101737	-28.22
58 1,4-Difluorobenze	538789	323273	754305	415010	-22.97
75 Chlorobenzene-d5	499778	299867	699689	390686	-21.83

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-01A
Level: LOW Operator: EA
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
Misc Info: 3.9"Hg-5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.424	128.48*	80-125
\$ 67 Toluene-d8	5.000	5.062	101.23	90-108
\$ 87 Bromofluorobenzene	5.000	4.424	88.47	83-116

Date : 05-JUN-2015 18:05

Client ID:

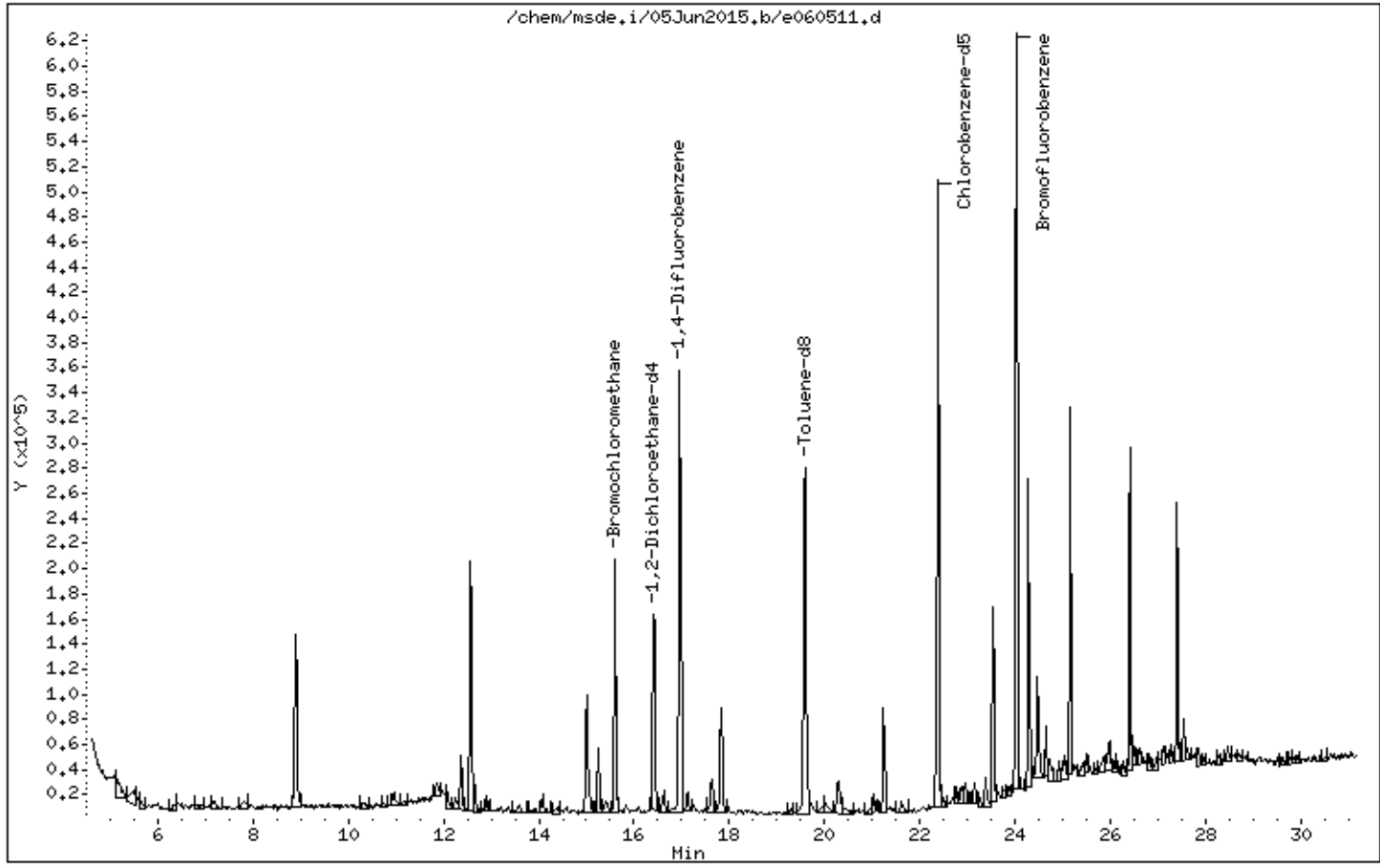
Instrument: msde.i

Sample Info: 250mL#6L1294

Operator: EA

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212204F	Date/Time Analyzed:	6/5/15 07:10 PM
Lab ID:	1506011A-04A	Dilution Factor:	1.60
Date/Time Collecte	5/27/15 07:35 AM	Instrument/Filename:	msde.i / e060512
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.13	0.54	1.1	1.9
Trichloroethene	79-01-6	0.065	0.43	0.86	Not Detected U

U = The analyte was not detected above the LOD.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	119
4-Bromofluorobenzene	460-00-4	83-116	94
Toluene-d8	2037-26-5	90-108	100

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060512.d
 Lab Smp Id: 1506011A-04A
 Inj Date : 05-JUN-2015 19:10
 Operator : EA Inst ID: msde.i
 Smp Info : 250mL#35138
 Misc Info : 4.9"Hg-5.0psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.60000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.60000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	107977 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	80112			46.94- 106.94	74.19
15.611	15.611 (1.000)	49	172045			103.66- 163.66	159.34
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	433073 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	61342			0.00- 43.53	14.16
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	397040 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	188103			13.25- 73.25	47.38
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	201474 5.93962	5.940		80.00- 120.00	100.00
16.409	16.433 (1.051)	67	92186			24.87- 84.87	45.76

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	371097	4.98826	4.988	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	43829			0.00- 40.24	11.81
19.601	19.601	(1.156)	100	248401			39.39- 99.39	66.94

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	188156	4.68081	4.681	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	304215			88.06- 148.06	161.68
24.042	24.042	(1.074)	176	179352			66.20- 126.20	95.32

71 Tetrachloroethene						CAS #: 127-18-4		
20.881	20.881	(0.933)	166	10486	0.17806	0.2849	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	11418			54.11- 114.11	108.89
20.881	20.881	(0.933)	131	13582			55.30- 115.30	129.53

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060512.d
Lab Smp Id: 1506011A-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: EA
Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m
Misc Info: 4.9"Hg-5.0psi

Calibration Date: 05-JUN-2015
Calibration Time: 10:08
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	107977	-23.82
58 1,4-Difluorobenze	538789	323273	754305	433073	-19.62
75 Chlorobenzene-d5	499778	299867	699689	397040	-20.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-04A
Level: LOW Operator: EA
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
Misc Info: 4.9"Hg-5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	5.940	118.79	80-125
\$ 67 Toluene-d8	5.000	4.988	99.77	90-108
\$ 87 Bromofluorobenzene	5.000	4.681	93.62	83-116

Date : 05-JUN-2015 19:10

Client ID:

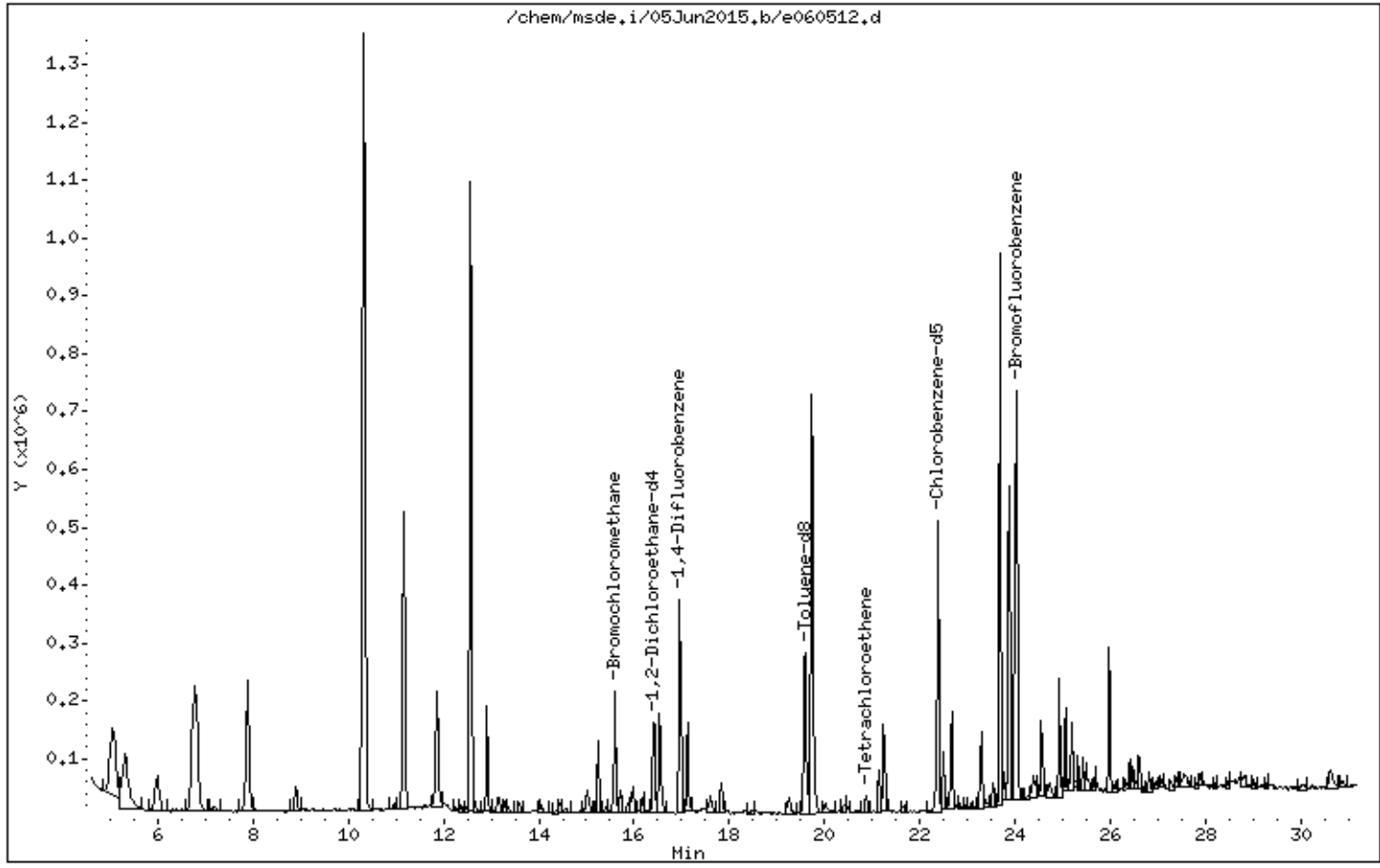
Instrument: msde.i

Sample Info: 250mL#35138

Operator: EA

Column phase: RTX-624

Column diameter: 0.32



Date : 05-JUN-2015 19:10

Client ID:

Instrument: msde.i

Sample Info: 250mL#35138

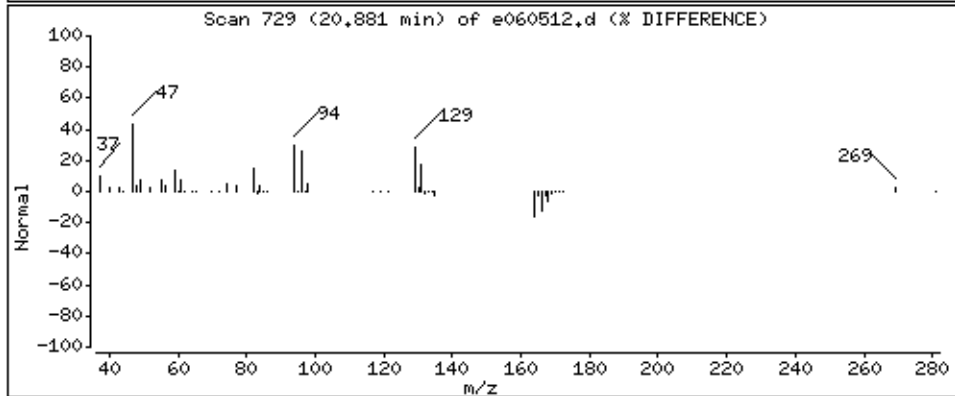
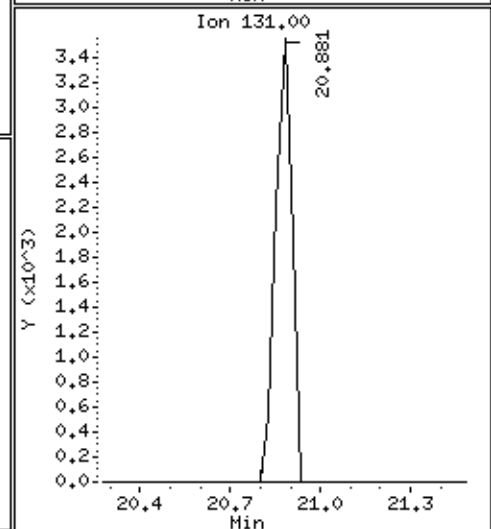
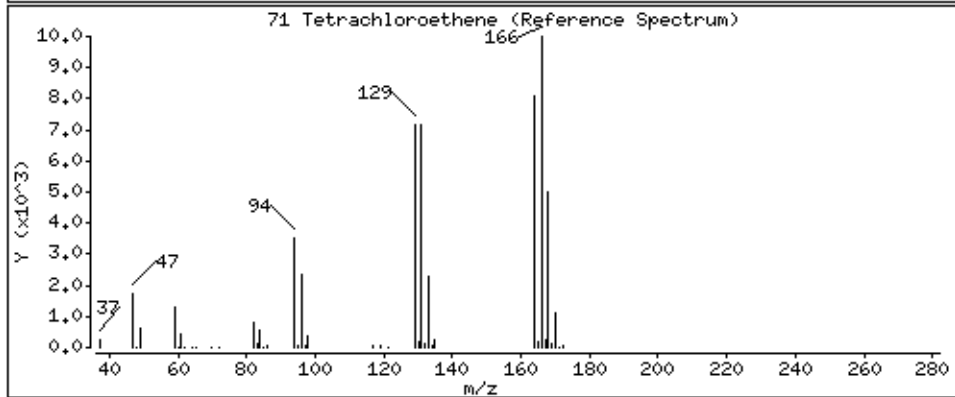
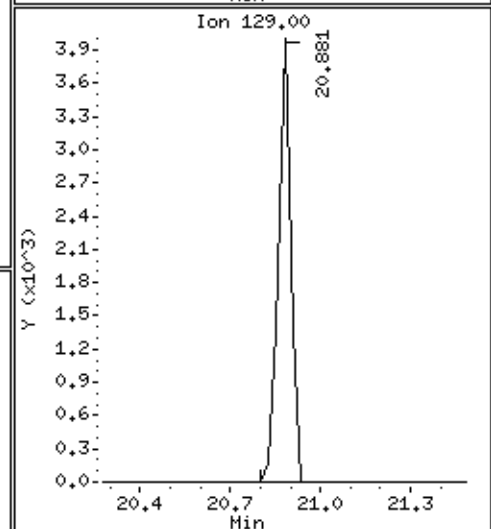
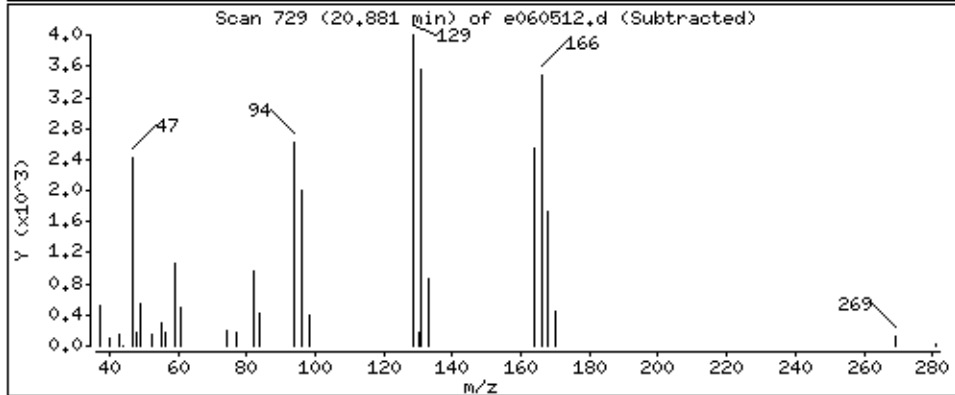
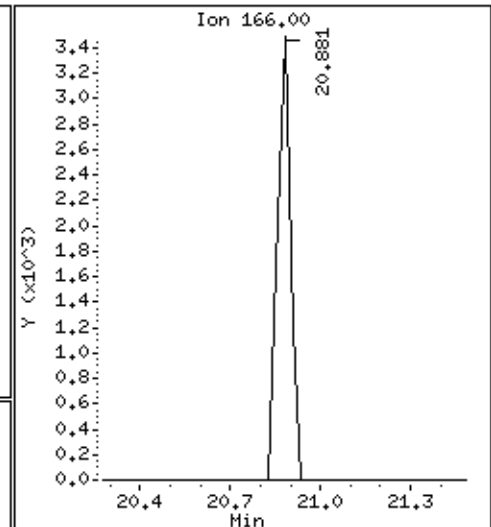
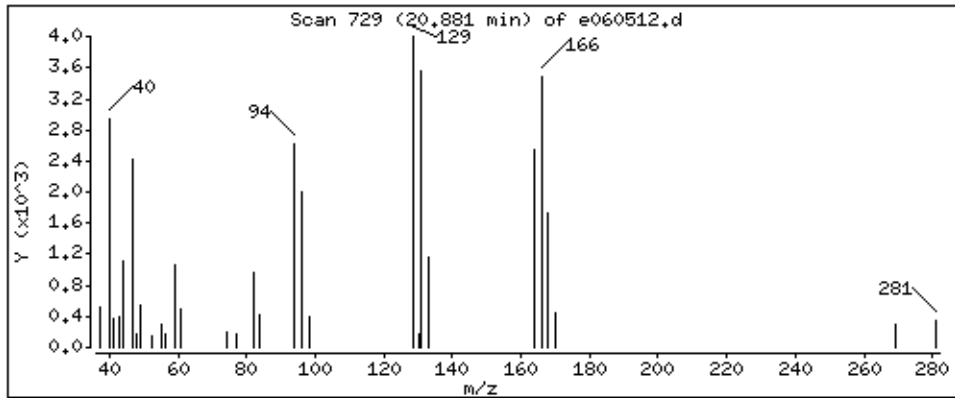
Operator: EA

Column phase: RTX-624

Column diameter: 0.32

71 Tetrachloroethene

Concentration: 0.2849 PPBV



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212205D	Date/Time Analyzed:	6/5/15 08:37 PM
Lab ID:	1506011A-05A	Dilution Factor:	1.67
Date/Time Collecte	5/27/15 07:36 AM	Instrument/Filename:	msde.i / e060513
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.14	0.57	1.1	2.0
Trichloroethene	79-01-6	0.068	0.45	0.90	Not Detected U

U = The analyte was not detected above the LOD.

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	127 Q
4-Bromofluorobenzene	460-00-4	83-116	89
Toluene-d8	2037-26-5	90-108	104

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060513.d
 Lab Smp Id: 1506011A-05A
 Inj Date : 05-JUN-2015 20:37
 Operator : EA Inst ID: msde.i
 Smp Info : 250mL#6L006
 Misc Info : 5.7"Hg-5.2psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.67000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.67000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.610	15.611 (1.000)	130	104341 5.00000			80.00- 120.00	100.00
15.610	15.611 (1.000)	128	85795			46.94- 106.94	82.23
15.610	15.611 (1.000)	49	176822			103.66- 163.66	169.47
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	440575 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	60528			0.00- 43.53	13.74
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	408598 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	192261			13.25- 73.25	47.05
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	208363 6.35674	6.357		80.00- 120.00	100.00(R)
16.433	16.433 (1.053)	67	93679			24.87- 84.87	44.96

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		CONCENTRATIONS		TARGET RANGE	RATIO
				(PPBV)	(PPBV)	ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====	=====

\$ 67	Toluene-d8				CAS #: 2037-26-5				
19.601	19.601	(1.156)	98	392672	5.18839	5.188	80.00-	120.00	100.00
19.601	19.601	(1.156)	70	45860			0.00-	40.24	11.68
19.601	19.601	(1.156)	100	265489			39.39-	99.39	67.61

\$ 87	Bromofluorobenzene				CAS #: 460-00-4				
24.042	24.042	(1.074)	174	184389	4.45735	4.457	80.00-	120.00	100.00
24.042	24.042	(1.074)	95	300325			88.06-	148.06	162.88
24.042	24.042	(1.074)	176	181257			66.20-	126.20	98.30

71	Tetrachloroethene				CAS #: 127-18-4				
20.881	20.881	(0.933)	166	10740	0.17722	0.2960	80.00-	120.00	100.00
20.881	20.881	(0.933)	129	12460			54.11-	114.11	116.02
20.881	20.881	(0.933)	131	12340			55.30-	115.30	114.90

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-05A
Level: LOW Operator: EA
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
Misc Info: 5.7"Hg-5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.357	127.13*	80-125
\$ 67 Toluene-d8	5.000	5.188	103.77	90-108
\$ 87 Bromofluorobenzene	5.000	4.457	89.15	83-116

Date : 05-JUN-2015 20:37

Client ID:

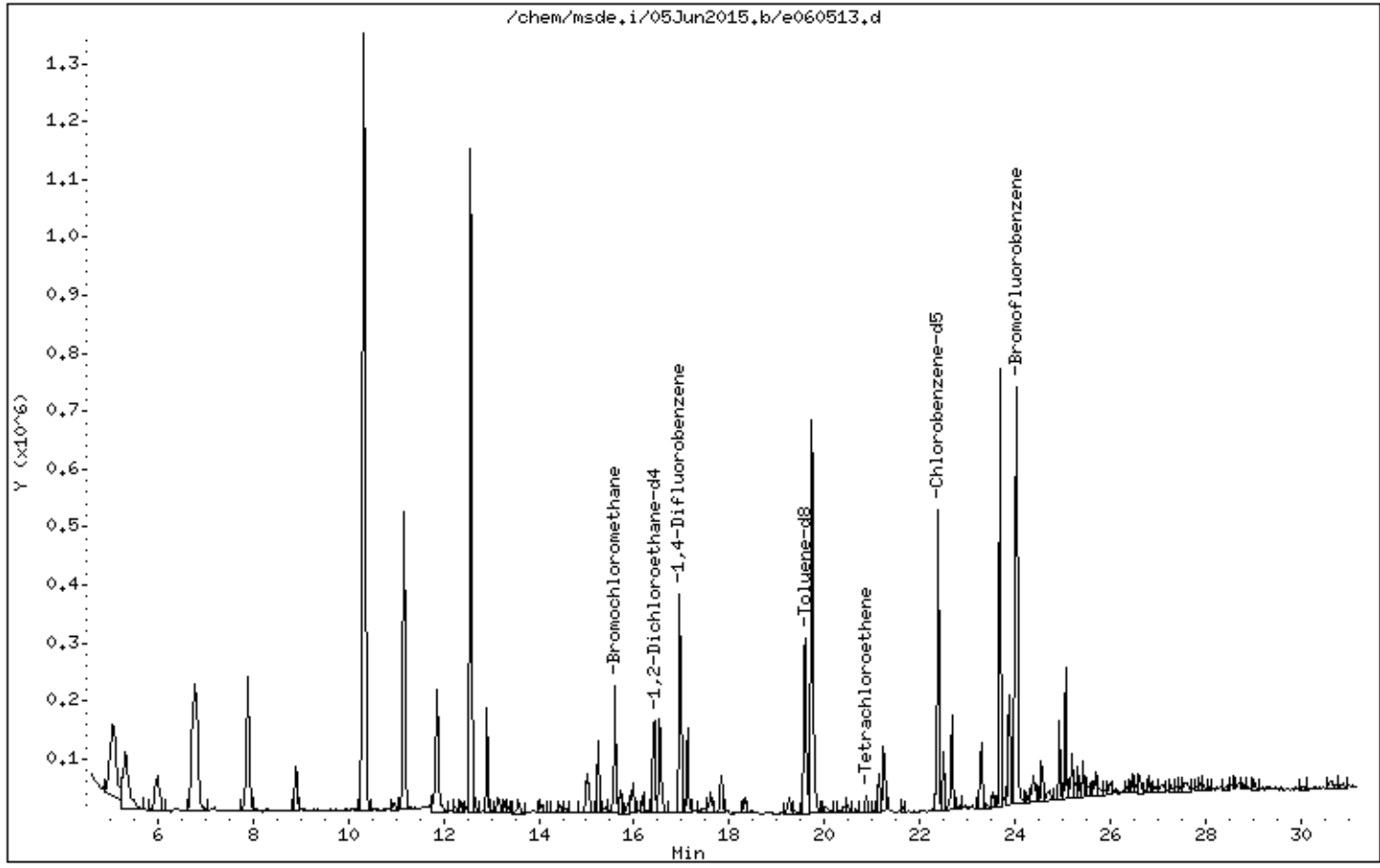
Instrument: msde.i

Sample Info: 250mL#6L006

Operator: EA

Column phase: RTX-624

Column diameter: 0.32



Date : 05-JUN-2015 20:37

Client ID:

Instrument: msde.i

Sample Info: 250mL#6L006

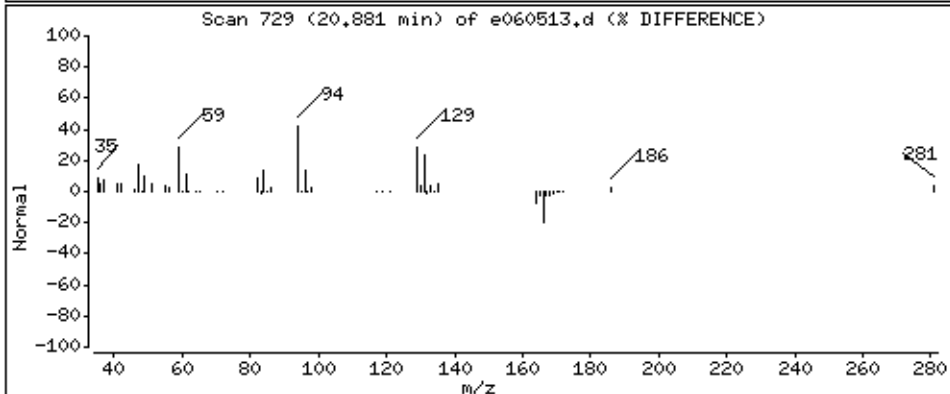
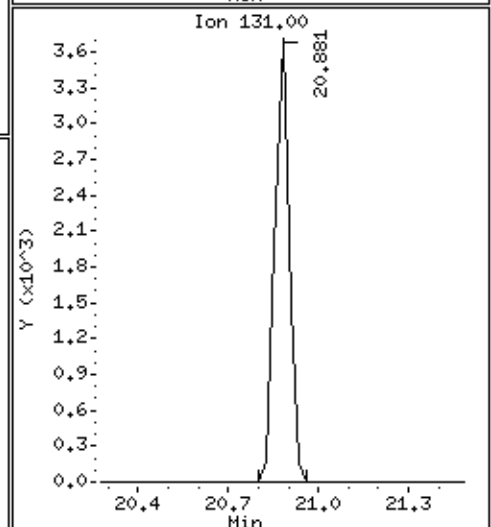
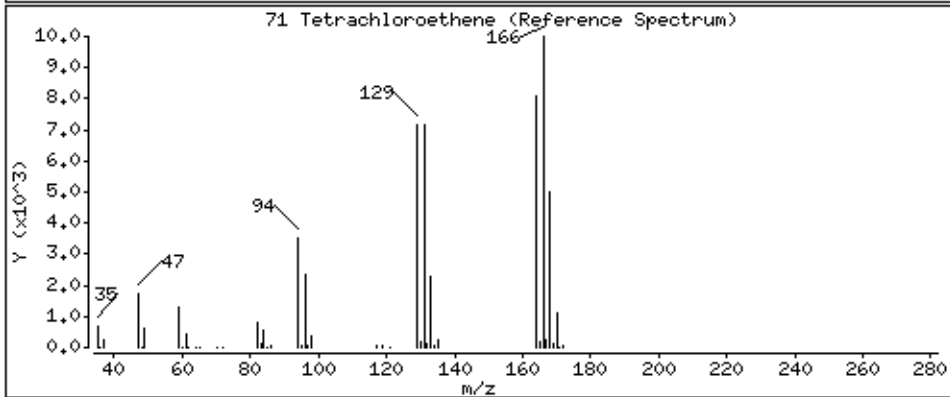
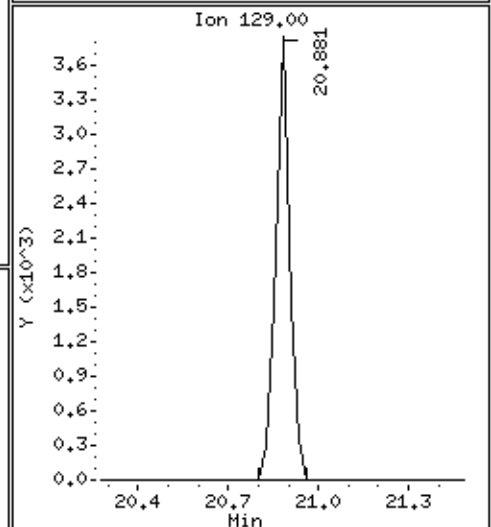
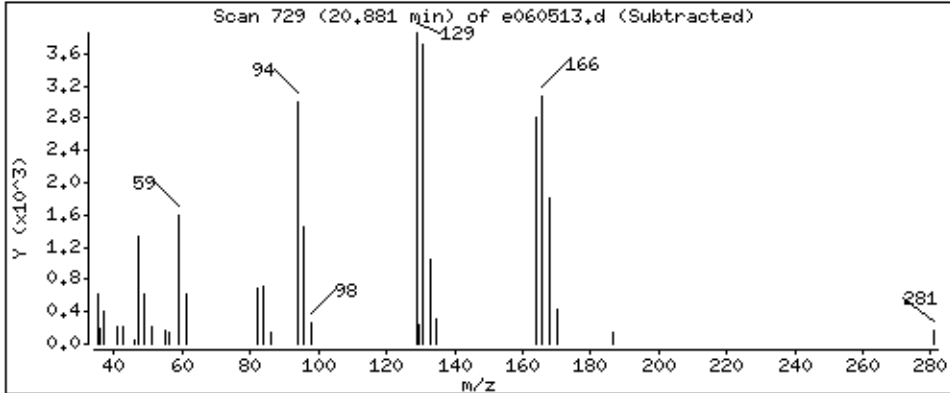
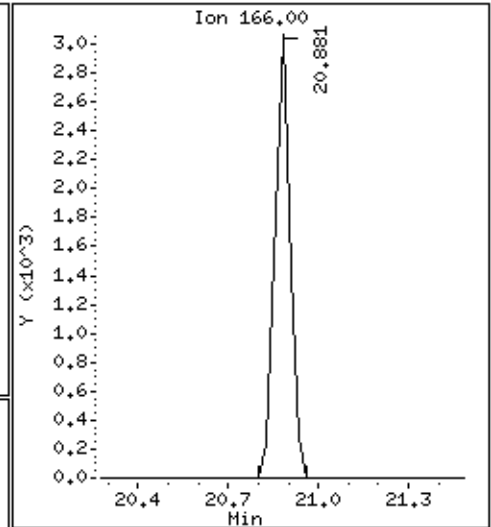
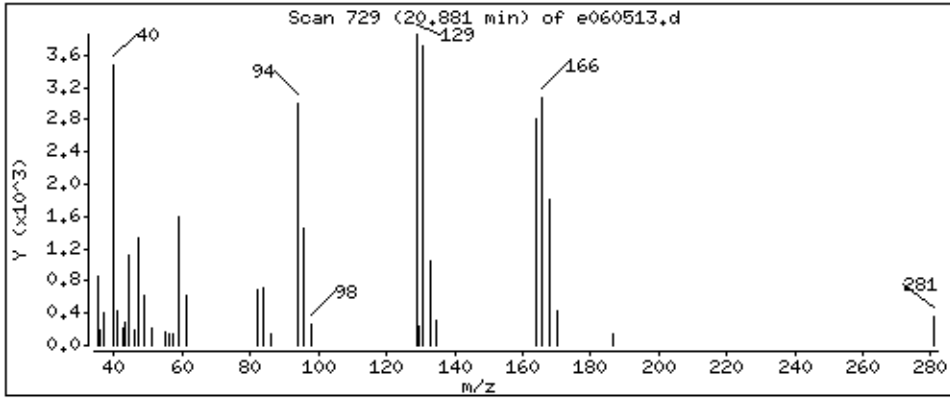
Operator: EA

Column phase: RTX-624

Column diameter: 0.32

71 Tetrachloroethene

Concentration: 0.2960 PPBV



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212205D Lab Duplicate	Date/Time Analyzed:	6/5/15 09:27 PM
Lab ID:	1506011A-05AA	Dilution Factor:	1.67
Date/Time Collecte	5/27/15 07:36 AM	Instrument/Filename:	msde.i / e060514
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.14	0.57	1.1	2.1
Trichloroethene	79-01-6	0.068	0.45	0.90	Not Detected U

U = The analyte was not detected above the LOD.

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	129 Q
4-Bromofluorobenzene	460-00-4	83-116	91
Toluene-d8	2037-26-5	90-108	104

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060514.d
 Lab Smp Id: 1506011A-05AA
 Inj Date : 05-JUN-2015 21:27
 Operator : EA Inst ID: msde.i
 Smp Info : 250mL#6L006
 Misc Info : 5.7"Hg-5.2psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.67000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.67000	Dilution Factor

CONCENTRATIONS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5									
15.611	15.611	(1.000)	130	105130	5.00000			80.00- 120.00	100.00
15.611	15.611	(1.000)	128	83008				46.94- 106.94	78.96
15.611	15.611	(1.000)	49	160440				103.66- 163.66	152.61
* 58 1,4-Difluorobenzene CAS #: 540-36-3									
16.963	16.963	(1.000)	114	424964	5.00000			80.00- 120.00	100.00
16.963	16.963	(1.000)	88	57422				0.00- 43.53	13.51
* 75 Chlorobenzene-d5 CAS #: 3114-55-4									
22.386	22.386	(1.000)	117	398027	5.00000			80.00- 120.00	100.00
22.386	22.386	(1.000)	82	186408				13.25- 73.25	46.83
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0									
16.433	16.433	(1.053)	65	212469	6.43334	6.433		80.00- 120.00	100.00(R)
16.433	16.433	(1.053)	67	85435				24.87- 84.87	40.21

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		CONCENTRATIONS		TARGET RANGE	RATIO
				(PPBV)	(PPBV)	ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====	=====

\$ 67	Toluene-d8				CAS #: 2037-26-5				
19.601	19.601	(1.156)	98	378122	5.17967	5.180	80.00-	120.00	100.00
19.601	19.601	(1.156)	70	45405			0.00-	40.24	12.01
19.601	19.601	(1.156)	100	251679			39.39-	99.39	66.56

\$ 87	Bromofluorobenzene				CAS #: 460-00-4				
24.042	24.042	(1.074)	174	183435	4.55204	4.552	80.00-	120.00	100.00
24.042	24.042	(1.074)	95	302834			88.06-	148.06	165.09
24.042	24.042	(1.074)	176	179003			66.20-	126.20	97.58

71	Tetrachloroethene				CAS #: 127-18-4				
20.881	20.881	(0.933)	166	11122	0.18840	0.3146	80.00-	120.00	100.00
20.881	20.881	(0.933)	129	12465			54.11-	114.11	112.08
20.881	20.881	(0.933)	131	11130			55.30-	115.30	100.07

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060514.d
Lab Smp Id: 1506011A-05AA
Analysis Type: VOA
Quant Type: ISTD
Operator: EA
Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m
Misc Info: 5.7"Hg-5.2psi

Calibration Date: 05-JUN-2015
Calibration Time: 10:08
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	105130	-25.83
58 1,4-Difluorobenze	538789	323273	754305	424964	-21.13
75 Chlorobenzene-d5	499778	299867	699689	398027	-20.36

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-05AA
Level: LOW Operator: EA
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
Misc Info: 5.7"Hg-5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.433	128.67*	80-125
\$ 67 Toluene-d8	5.000	5.180	103.59	90-108
\$ 87 Bromofluorobenzene	5.000	4.552	91.04	83-116

Date : 05-JUN-2015 21:27

Client ID:

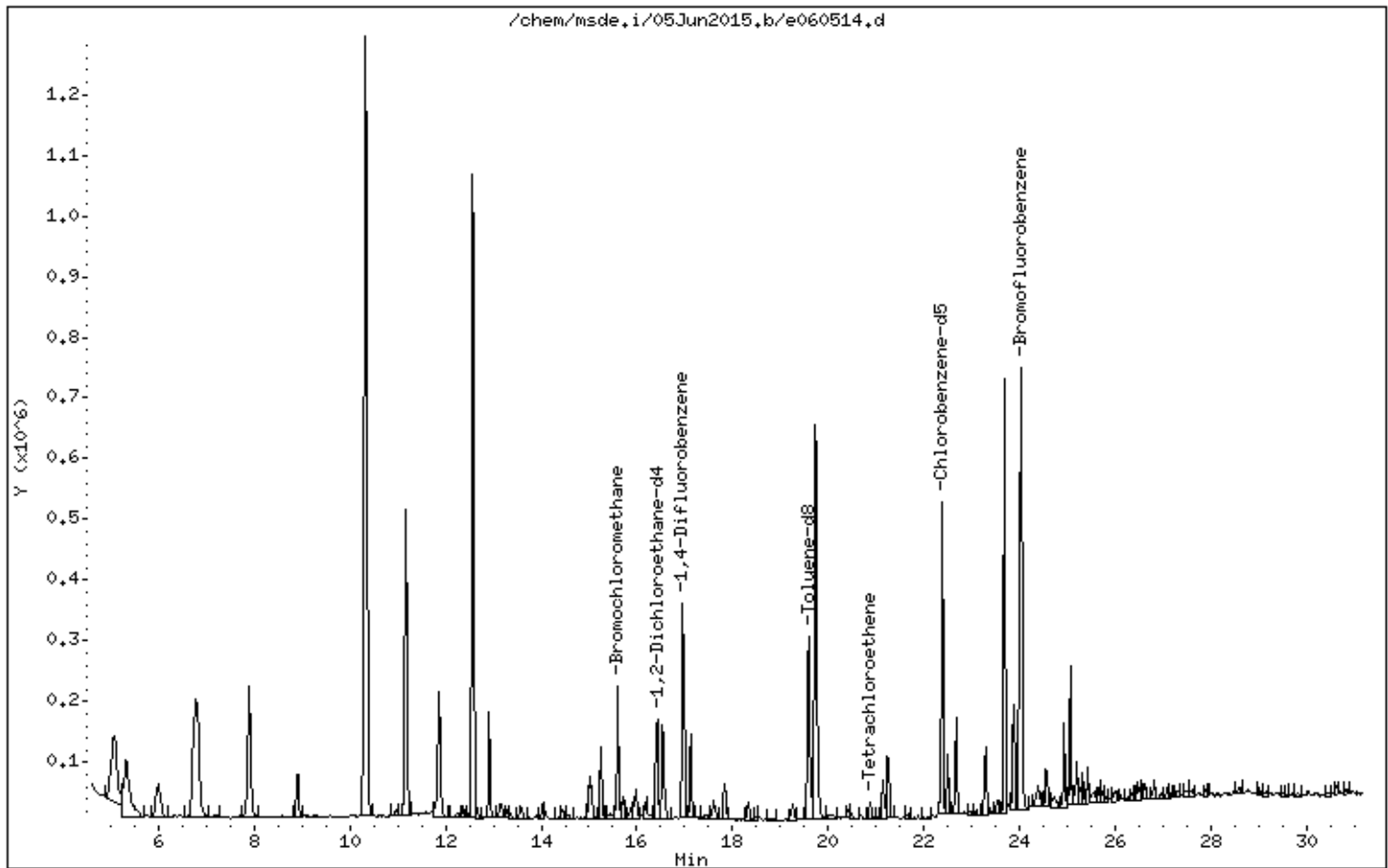
Instrument: msde.i

Sample Info: 250mL#6L006

Operator: EA

Column phase: RTX-624

Column diameter: 0.32



Date : 05-JUN-2015 21:27

Client ID:

Instrument: msde.i

Sample Info: 250mL#6L006

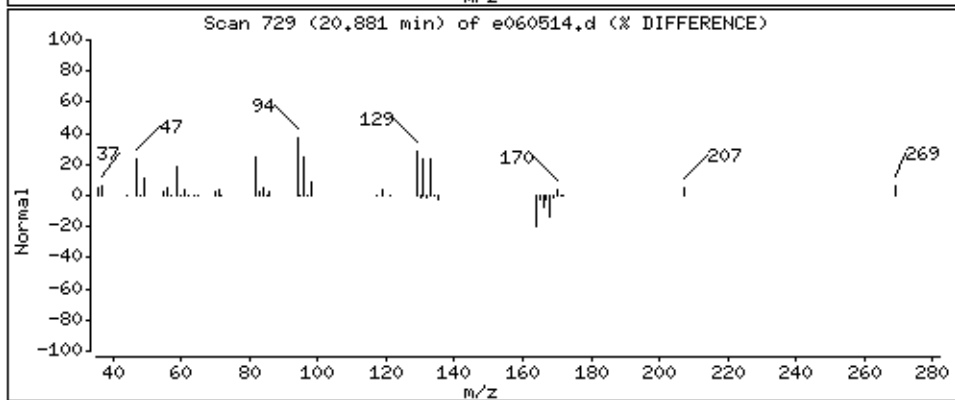
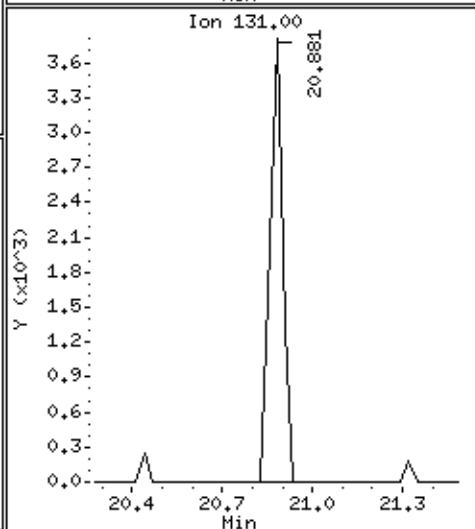
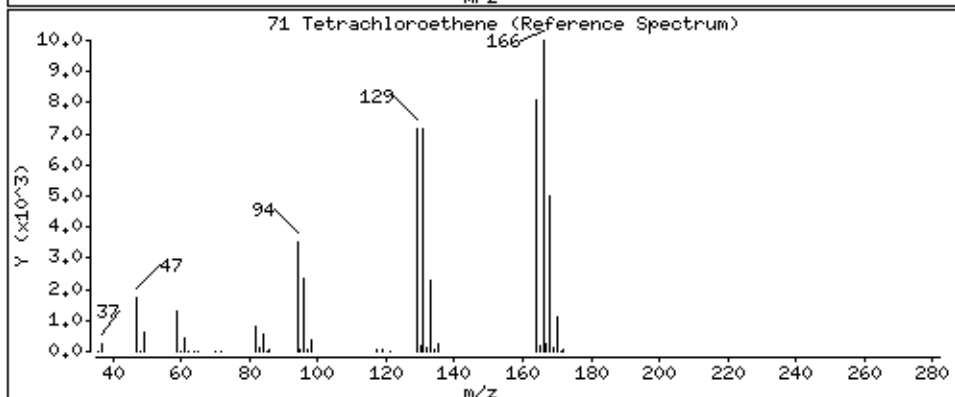
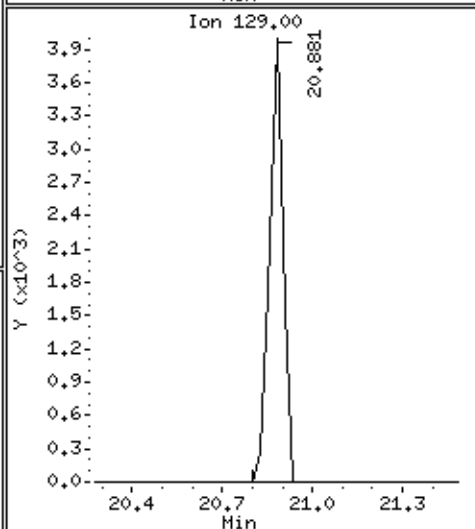
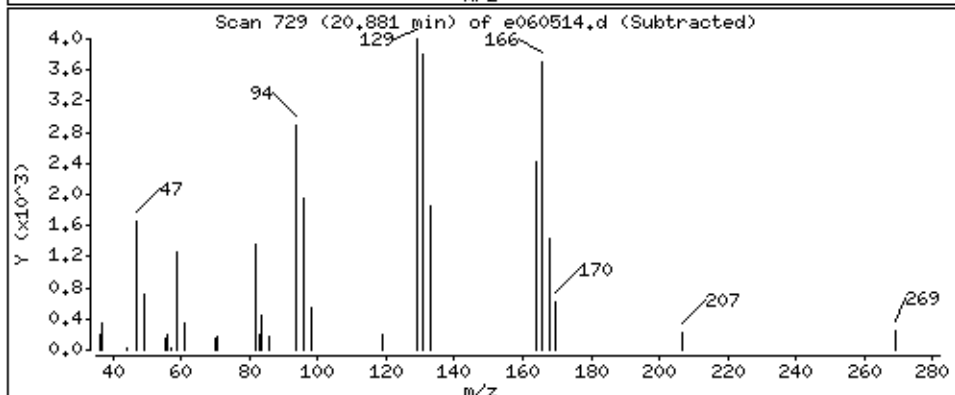
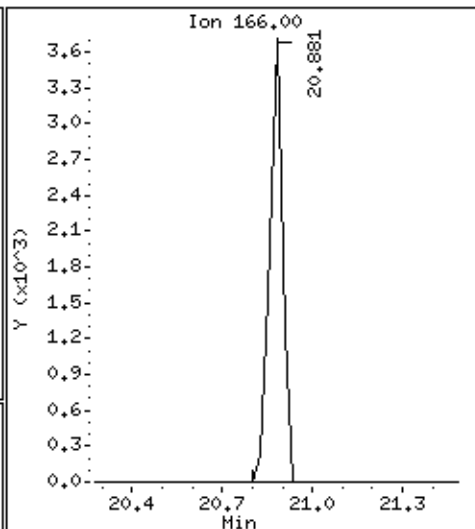
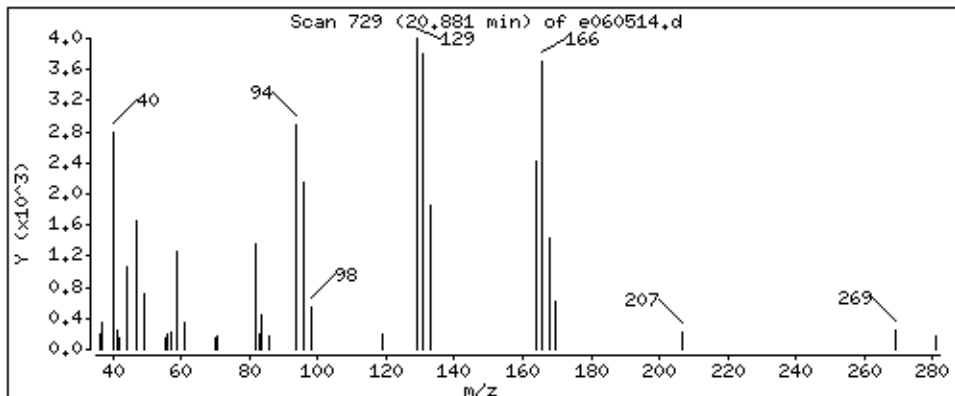
Operator: EA

Column phase: RTX-624

Column diameter: 0.32

71 Tetrachloroethene

Concentration: 0.3146 PPBV



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212208F	Date/Time Analyzed:	6/5/15 10:15 PM
Lab ID:	1506011A-08A	Dilution Factor:	1.57
Date/Time Collecte	5/27/15 09:37 AM	Instrument/Filename:	msde.i / e060515
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.13	0.53	1.1	Not Detected U
Trichloroethene	79-01-6	0.064	0.42	0.84	Not Detected U

U = The analyte was not detected above the LOD.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	114
4-Bromofluorobenzene	460-00-4	83-116	87
Toluene-d8	2037-26-5	90-108	108

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060515.d
 Lab Smp Id: 1506011A-08A
 Inj Date : 05-JUN-2015 22:15
 Operator : EA Inst ID: msde.i
 Smp Info : 250mL#34229
 Misc Info : 4.1"Hg-5.2psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.57000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.57000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	109451 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	82353			46.94- 106.94	75.24
15.611	15.611 (1.000)	49	168398			103.66- 163.66	153.86
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	410957 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	56576			0.00- 43.53	13.77
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	388547 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	182611			13.25- 73.25	47.00
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	195635 5.68978	5.690		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	83471			24.87- 84.87	42.67

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	379623	5.37748	5.377	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	49808			0.00- 40.24	13.12
19.601	19.601	(1.156)	100	255531			39.39- 99.39	67.31

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.043	24.042	(1.074)	174	171316	4.35503	4.355	80.00- 120.00	100.00
24.043	24.042	(1.074)	95	274041			88.06- 148.06	159.96
24.043	24.042	(1.074)	176	176382			66.20- 126.20	102.96

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i
 Lab File ID: e060515.d
 Lab Smp Id: 1506011A-08A
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: EA
 Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m
 Misc Info: 4.1"Hg-5.2psi

Calibration Date: 05-JUN-2015
 Calibration Time: 10:08
 Level: LOW
 Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	109451	-22.78
58 1,4-Difluorobenze	538789	323273	754305	410957	-23.73
75 Chlorobenzene-d5	499778	299867	699689	388547	-22.26

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-08A
Level: LOW Operator: EA
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
Misc Info: 4.1"Hg-5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	5.690	113.80	80-125
\$ 67 Toluene-d8	5.000	5.377	107.55	90-108
\$ 87 Bromofluorobenzene	5.000	4.355	87.10	83-116

Date : 05-JUN-2015 22:15

Client ID:

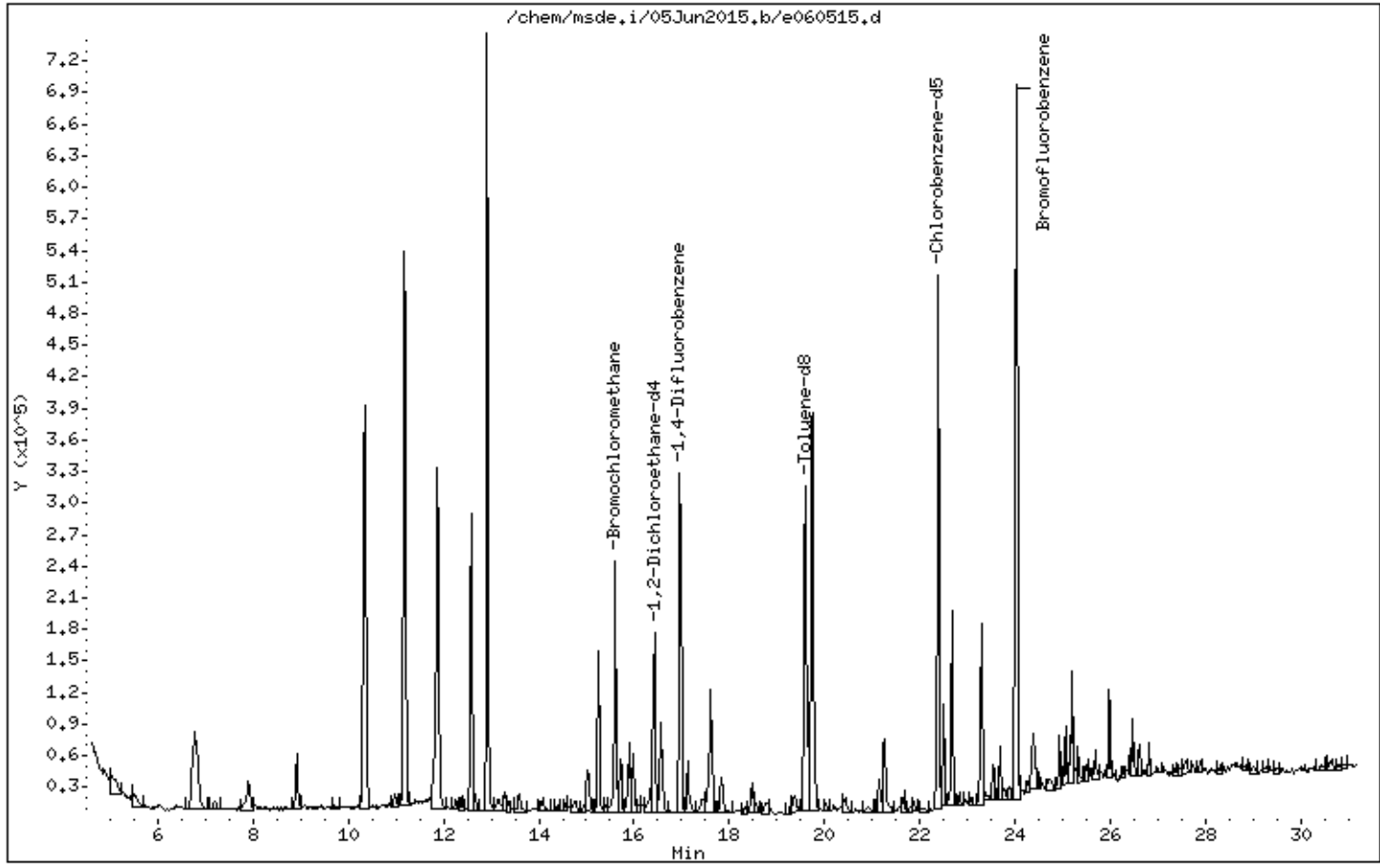
Instrument: msde.i

Sample Info: 250mL#34229

Operator: EA

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212209F	Date/Time Analyzed:	6/8/15 08:03 PM
Lab ID:	1506011A-09A	Dilution Factor:	1.65
Date/Time Collecte	5/27/15 09:50 AM	Instrument/Filename:	msde.i / e060807
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.14	0.56	1.1	Not Detected U
Trichloroethene	79-01-6	0.067	0.44	0.89	Not Detected U

U = The analyte was not detected above the LOD.

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	128 Q
4-Bromofluorobenzene	460-00-4	83-116	88
Toluene-d8	2037-26-5	90-108	108

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060807.d
 Lab Smp Id: 1506011A-09A
 Inj Date : 08-JUN-2015 20:03
 Operator : ea Inst ID: msde.i
 Smp Info : 250mL# 921
 Misc Info : 5.5"Hg-5.1psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.65000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.65000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.610	15.611 (1.000)	130	102068 5.00000			80.00- 120.00	100.00
15.610	15.611 (1.000)	128	79183			46.94- 106.94	77.58
15.580	15.611 (1.000)	49	165593			103.66- 163.66	162.24
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	406122 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	57129			0.00- 43.53	14.07
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	402641 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	188521			13.25- 73.25	46.82
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.409	16.433 (1.051)	65	205249 6.40118	6.401		80.00- 120.00	100.00(R)
16.409	16.433 (1.051)	67	87856			24.87- 84.87	42.80

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	CONCENTRATIONS		TARGET RANGE	RATIO		
				ON-COL	FINAL				
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
\$ 67	Toluene-d8				CAS #: 2037-26-5				
19.579	19.601	(1.154)	98	375003	5.37528	5.375	80.00-	120.00	100.00
19.579	19.601	(1.154)	70	51433			0.00-	40.24	13.72
19.579	19.601	(1.154)	100	253572			39.39-	99.39	67.62

\$ 87	Bromofluorobenzene				CAS #: 460-00-4				
24.042	24.042	(1.074)	174	179480	4.40285	4.403	80.00-	120.00	100.00
24.042	24.042	(1.074)	95	279300			88.06-	148.06	155.62
24.042	24.042	(1.074)	176	169523			66.20-	126.20	94.45

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060807.d
Lab Smp Id: 1506011A-09A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
Misc Info: 5.5"Hg-5.lpsi

Calibration Date: 08-JUN-2015
Calibration Time: 14:59
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	102068	-29.87
58 1,4-Difluorobenze	530478	318287	742669	406122	-23.44
75 Chlorobenzene-d5	509716	305830	713602	402641	-21.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-09A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/08Jun2015.b/e1510515b.m
Misc Info: 5.5"Hg-5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.401	128.02*	80-125
\$ 67 Toluene-d8	5.000	5.375	107.51	90-108
\$ 87 Bromofluorobenzene	5.000	4.403	88.06	83-116

Date : 08-JUN-2015 20:03

Client ID:

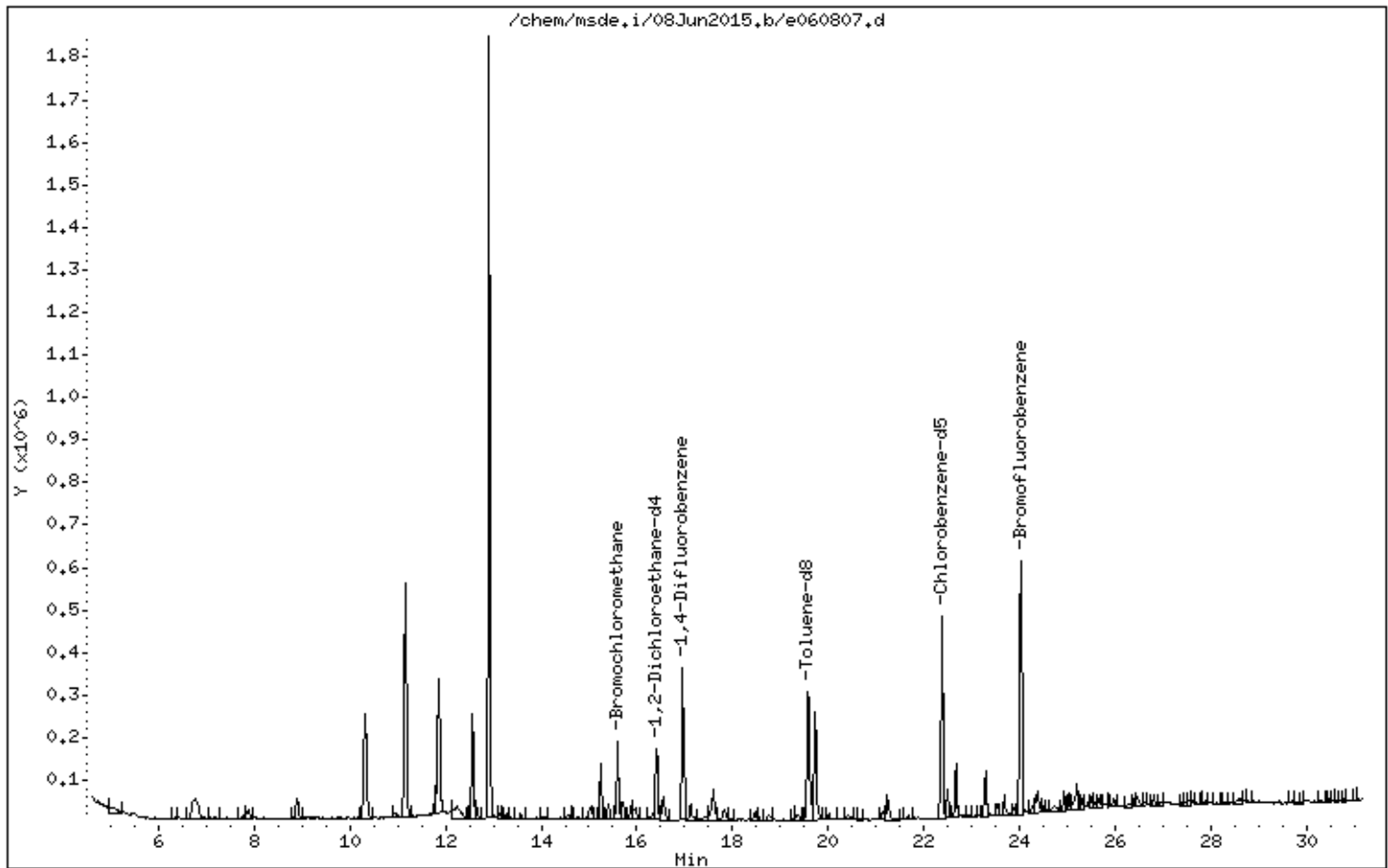
Instrument: msde.i

Sample Info: 250mL# 921

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212210F	Date/Time Analyzed:	6/8/15 08:54 PM
Lab ID:	1506011A-10A	Dilution Factor:	1.63
Date/Time Collecte	5/28/15 07:35 AM	Instrument/Filename:	msde.i / e060808
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.13	0.55	1.1	Not Detected U
Trichloroethene	79-01-6	0.066	0.44	0.88	Not Detected U

U = The analyte was not detected above the LOD.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	125
4-Bromofluorobenzene	460-00-4	83-116	85
Toluene-d8	2037-26-5	90-108	102

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060808.d
 Lab Smp Id: 1506011A-10A
 Inj Date : 08-JUN-2015 20:54
 Operator : ea Inst ID: msde.i
 Smp Info : 250mL# 6L1252
 Misc Info : 4.9"Hg-5.4psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.63000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.63000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	100734 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	76909			46.94- 106.94	76.35
15.611	15.611 (1.000)	49	171960			103.66- 163.66	170.71
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	397523 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	56095			0.00- 43.53	14.11
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	389144 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	176783			13.25- 73.25	45.43
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.409	16.433 (1.051)	65	197146 6.22986	6.230		80.00- 120.00	100.00
16.409	16.433 (1.051)	67	83767			24.87- 84.87	42.49

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	350134	5.12738	5.127	80.00- 120.00	100.00
19.579	19.601	(1.154)	70	45490			0.00- 40.24	12.99
19.601	19.601	(1.156)	100	250227			39.39- 99.39	71.47

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	167142	4.24241	4.242	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	263764			88.06- 148.06	157.81
24.042	24.042	(1.074)	176	161166			66.20- 126.20	96.42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060808.d
Lab Smp Id: 1506011A-10A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
Misc Info: 4.9"Hg-5.4psi

Calibration Date: 08-JUN-2015
Calibration Time: 14:59
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	100734	-30.79
58 1,4-Difluorobenze	530478	318287	742669	397523	-25.06
75 Chlorobenzene-d5	509716	305830	713602	389144	-23.65

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-10A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/08Jun2015.b/e1510515b.m
Misc Info: 4.9"Hg-5.4psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.230	124.60	80-125
\$ 67 Toluene-d8	5.000	5.127	102.55	90-108
\$ 87 Bromofluorobenzene	5.000	4.242	84.85	83-116

Date : 08-JUN-2015 20:54

Client ID:

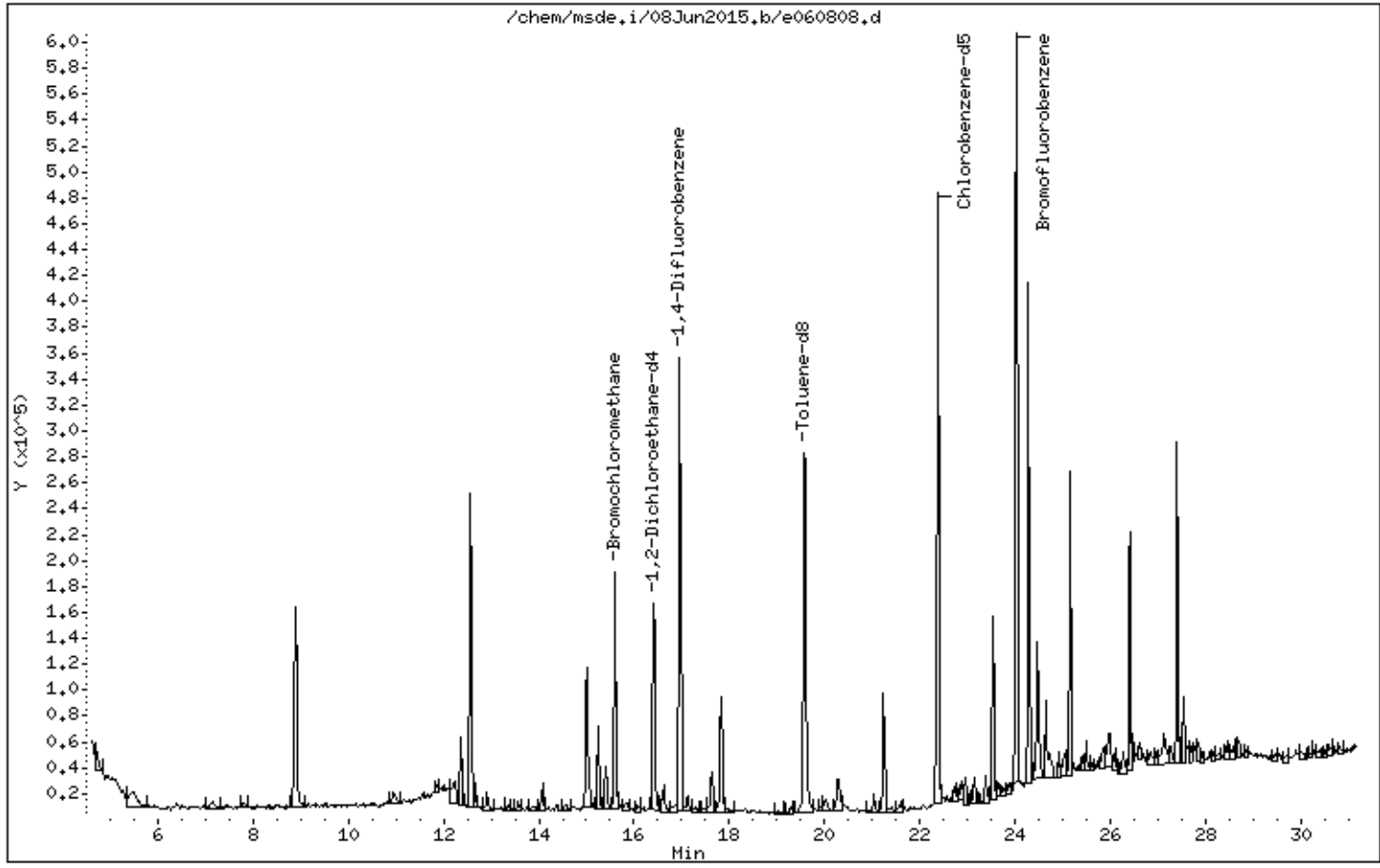
Instrument: msde.i

Sample Info: 250mL# 6L1252

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212210F Lab Duplicate	Date/Time Analyzed:	6/8/15 09:42 PM
Lab ID:	1506011A-10AA	Dilution Factor:	1.63
Date/Time Collecte	5/28/15 07:35 AM	Instrument/Filename:	msde.i / e060809
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.13	0.55	1.1	Not Detected U
Trichloroethene	79-01-6	0.066	0.44	0.88	Not Detected U

U = The analyte was not detected above the LOD.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	118
4-Bromofluorobenzene	460-00-4	83-116	85
Toluene-d8	2037-26-5	90-108	104

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060809.d
 Lab Smp Id: 1506011A-10AA
 Inj Date : 08-JUN-2015 21:42
 Operator : ea Inst ID: msde.i
 Smp Info : 250mL#6L1252
 Misc Info : 4.9"Hg-5.4psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.63000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.63000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	106384 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	84417			46.94- 106.94	79.35
15.611	15.611 (1.000)	49	170821			103.66- 163.66	160.57
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	405444 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	55343			0.00- 43.53	13.65
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	393810 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	181896			13.25- 73.25	46.19
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	196596 5.88255	5.882		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	84622			24.87- 84.87	43.04

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	360959	5.18262	5.183	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	44484			0.00- 40.24	12.32
19.601	19.601	(1.156)	100	239906			39.39- 99.39	66.46

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	168848	4.23494	4.235	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	263069			88.06- 148.06	155.80
24.042	24.042	(1.074)	176	167769			66.20- 126.20	99.36

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060809.d
Lab Smp Id: 1506011A-10AA
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
Misc Info: 4.9"Hg-5.4psi

Calibration Date: 08-JUN-2015
Calibration Time: 14:59
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	106384	-26.91
58 1,4-Difluorobenze	530478	318287	742669	405444	-23.57
75 Chlorobenzene-d5	509716	305830	713602	393810	-22.74

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-10AA
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/08Jun2015.b/e1510515b.m
Misc Info: 4.9"Hg-5.4psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	5.882	117.65	80-125
\$ 67 Toluene-d8	5.000	5.183	103.65	90-108
\$ 87 Bromofluorobenzene	5.000	4.235	84.70	83-116

Date : 08-JUN-2015 21:42

Client ID:

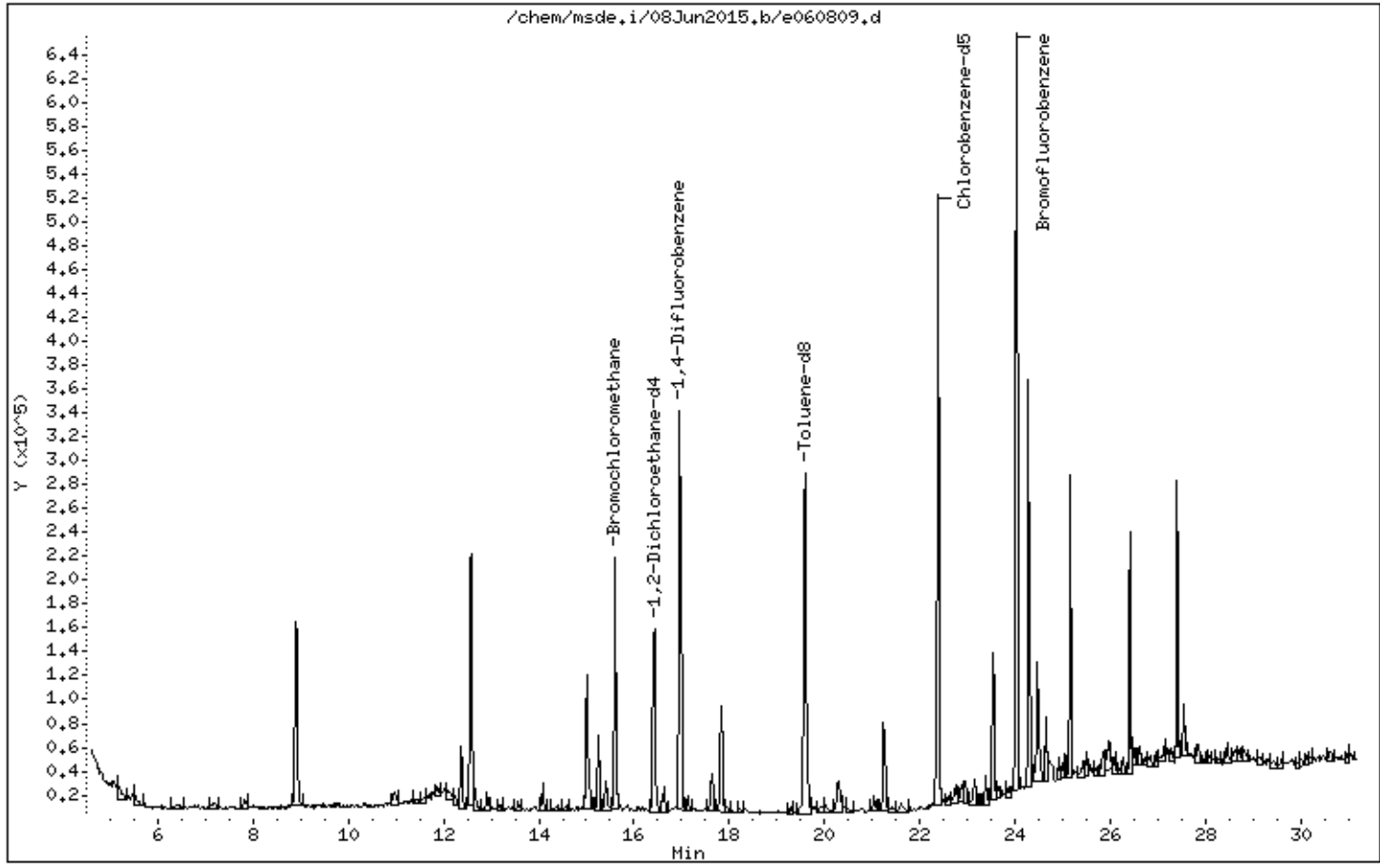
Instrument: msde.i

Sample Info: 250mL#6L1252

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	1522M212212F	Date/Time Analyzed:	6/8/15 10:28 PM
Lab ID:	1506011A-12A	Dilution Factor:	1.62
Date/Time Collecte	5/28/15 09:30 AM	Instrument/Filename:	msde.i / e060810
Media:	6 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.13	0.55	1.1	Not Detected U
Trichloroethene	79-01-6	0.066	0.44	0.87	Not Detected U

U = The analyte was not detected above the LOD.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	124
4-Bromofluorobenzene	460-00-4	83-116	91
Toluene-d8	2037-26-5	90-108	106

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060810.d
 Lab Smp Id: 1506011A-12A
 Inj Date : 08-JUN-2015 22:28
 Operator : ea Inst ID: msde.i
 Smp Info : 250mL#1591
 Misc Info : 5.1"Hg-5.1psi
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.62000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.62000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	102234 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	80043			46.94- 106.94	78.29
15.611	15.611 (1.000)	49	165286			103.66- 163.66	161.67
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	399020 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	57215			0.00- 43.53	14.34
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	388952 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	182523			13.25- 73.25	46.93
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	198453 6.17916	6.179		80.00- 120.00	100.00
16.409	16.433 (1.051)	67	86123			24.87- 84.87	43.40

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	361620	5.27572	5.276	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	50708			0.00- 40.24	14.02
19.601	19.601	(1.156)	100	248967			39.39- 99.39	68.85

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	179499	4.55828	4.558	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	290342			88.06- 148.06	161.75
24.042	24.042	(1.074)	176	164826			66.20- 126.20	91.83

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060810.d
Lab Smp Id: 1506011A-12A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
Misc Info: 5.1"Hg-5.lpsi

Calibration Date: 08-JUN-2015
Calibration Time: 14:59
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	102234	-29.76
58 1,4-Difluorobenze	530478	318287	742669	399020	-24.78
75 Chlorobenzene-d5	509716	305830	713602	388952	-23.69

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011A-12A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/08Jun2015.b/e1510515b.m
Misc Info: 5.1"Hg-5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.179	123.58	80-125
\$ 67 Toluene-d8	5.000	5.276	105.51	90-108
\$ 87 Bromofluorobenzene	5.000	4.558	91.17	83-116

Date : 08-JUN-2015 22:28

Client ID:

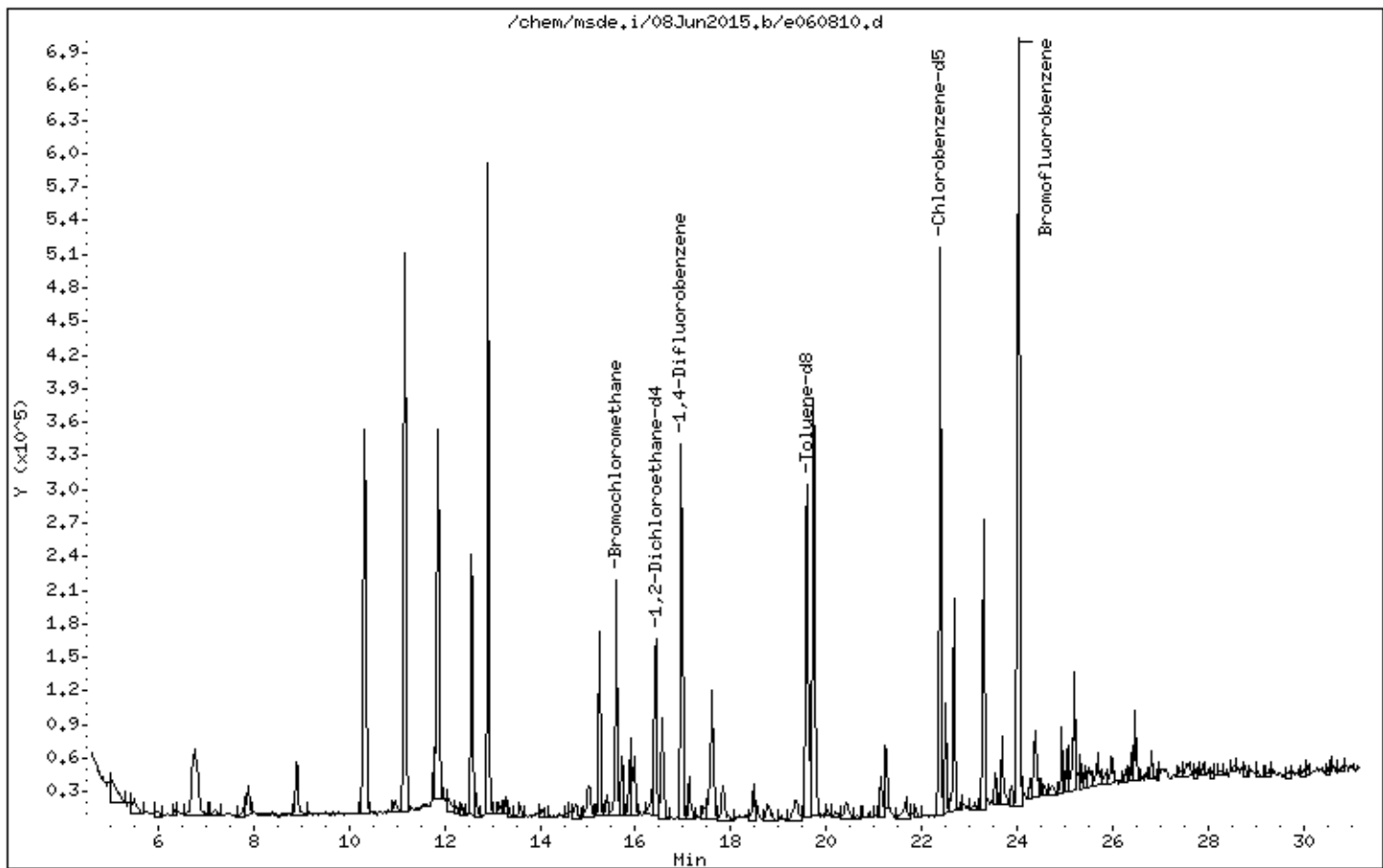
Instrument: msde.i

Sample Info: 250mL#1591

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



QC Results and Raw Data

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	Lab Blank	Date/Time Analyzed:	6/5/15 01:36 PM
Lab ID:	1506011A-13A	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060507a
Media:	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.082	0.34	0.68	Not Detected U
Trichloroethene	79-01-6	0.041	0.27	0.54	Not Detected U

U = The analyte was not detected above the LOD.

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	130 Q
4-Bromofluorobenzene	460-00-4	83-116	83
Toluene-d8	2037-26-5	90-108	104

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060507a.d
 Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
 Inj Date : 05-JUN-2015 13:36
 Operator : ef Inst ID: msde.i
 Smp Info : 250mL# 34764
 Misc Info : Humid
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	104737 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	81564			46.94- 106.94	77.88
15.611	15.611 (1.000)	49	175626			103.66- 163.66	167.68
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	423430 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	60231			0.00- 43.53	14.22
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	403167 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	194917			13.25- 73.25	48.35
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	214451 6.51775	6.518		80.00- 120.00	100.00(R)
16.433	16.433 (1.053)	67	89780			24.87- 84.87	41.87

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		CONCENTRATIONS		TARGET RANGE	RATIO
				(PPBV)	(PPBV)	ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====	=====

\$ 67	Toluene-d8				CAS #: 2037-26-5				
19.601	19.601	(1.156)	98	378132	5.19858	5.198	80.00-	120.00	100.00
19.579	19.601	(1.154)	70	46650			0.00-	40.24	12.34
19.601	19.601	(1.156)	100	259936			39.39-	99.39	68.74

\$ 87	Bromofluorobenzene				CAS #: 460-00-4				
24.042	24.042	(1.074)	174	169892	4.16221	4.162	80.00-	120.00	100.00
24.042	24.042	(1.074)	95	266719			88.06-	148.06	156.99
24.042	24.042	(1.074)	176	166342			66.20-	126.20	97.91

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.518	130.35*	80-125
\$ 67 Toluene-d8	5.000	5.198	103.97	90-108
\$ 87 Bromofluorobenzene	5.000	4.162	83.24	83-116

Date : 05-JUN-2015 13:36

Client ID: Lab Blank

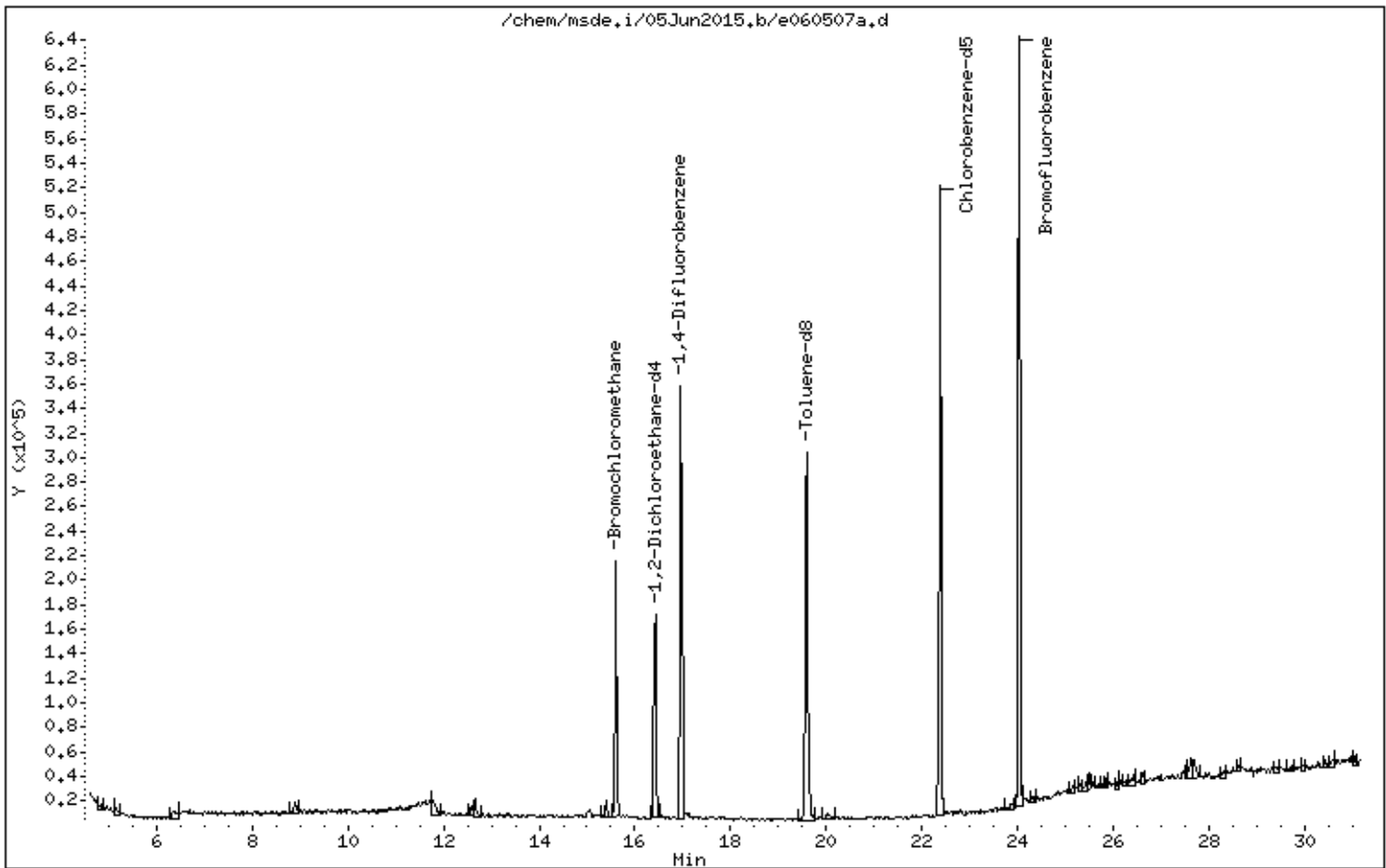
Instrument: msde.i

Sample Info: 250mL# 34764

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	Lab Blank	Date/Time Analyzed:	6/8/15 06:06 PM
Lab ID:	1506011A-13B	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060805
Media:	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	0.082	0.34	0.68	Not Detected U
Trichloroethene	79-01-6	0.041	0.27	0.54	Not Detected U

U = The analyte was not detected above the LOD.

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	127 Q
4-Bromofluorobenzene	460-00-4	83-116	81 Q
Toluene-d8	2037-26-5	90-108	104

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060805.d
 Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
 Inj Date : 08-JUN-2015 18:06
 Operator : ea Inst ID: msde.i
 Smp Info : 250mL# 35248
 Misc Info : Humid
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AHT20154.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.610	15.611 (1.000)	130	105767 5.00000			80.00- 120.00	100.00
15.610	15.611 (1.000)	128	82490			46.94- 106.94	77.99
15.580	15.611 (1.000)	49	171603			103.66- 163.66	162.25
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	413898 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	55903			0.00- 43.53	13.51
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	400060 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	185568			13.25- 73.25	46.39
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.409	16.433 (1.051)	65	211351 6.36098	6.361		80.00- 120.00	100.00(R)
16.409	16.433 (1.051)	67	90348			24.87- 84.87	42.75

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	CONCENTRATIONS		RESPONSE (PPBV)	TARGET RANGE	RATIO	
				ON-COL	FINAL				
==	=====	=====	====	=====	=====	=====	=====	=====	=====

\$ 67	Toluene-d8				CAS #: 2037-26-5				
19.579	19.601	(1.154)	98	368002	5.17583	5.176	80.00- 120.00	100.00	
19.579	19.601	(1.154)	70	43854			0.00- 40.24	11.92	
19.579	19.601	(1.154)	100	245288			39.39- 99.39	66.65	

\$ 87	Bromofluorobenzene				CAS #: 460-00-4				
24.042	24.042	(1.074)	174	163895	4.04648	4.046	80.00- 120.00	100.00(R)	
24.042	24.042	(1.074)	95	249398			88.06- 148.06	152.17	
24.042	24.042	(1.074)	176	163540			66.20- 126.20	99.78	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 08-JUN-2015
Lab File ID: e060805.d	Calibration Time: 14:59
Lab Smp Id: Lab Blank	Client Smp ID: Lab Blank
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ea	
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m	
Misc Info: Humid	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	105767	-27.33
58 1,4-Difluorobenze	530478	318287	742669	413898	-21.98
75 Chlorobenzene-d5	509716	305830	713602	400060	-21.51

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: AHT20154.sub
Method File: /chem/msde.i/08Jun2015.b/e1510515b.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.361	127.22*	80-125
\$ 67 Toluene-d8	5.000	5.176	103.52	90-108
\$ 87 Bromofluorobenzene	5.000	4.046	80.93*	83-116

Date : 08-JUN-2015 18:06

Client ID: Lab Blank

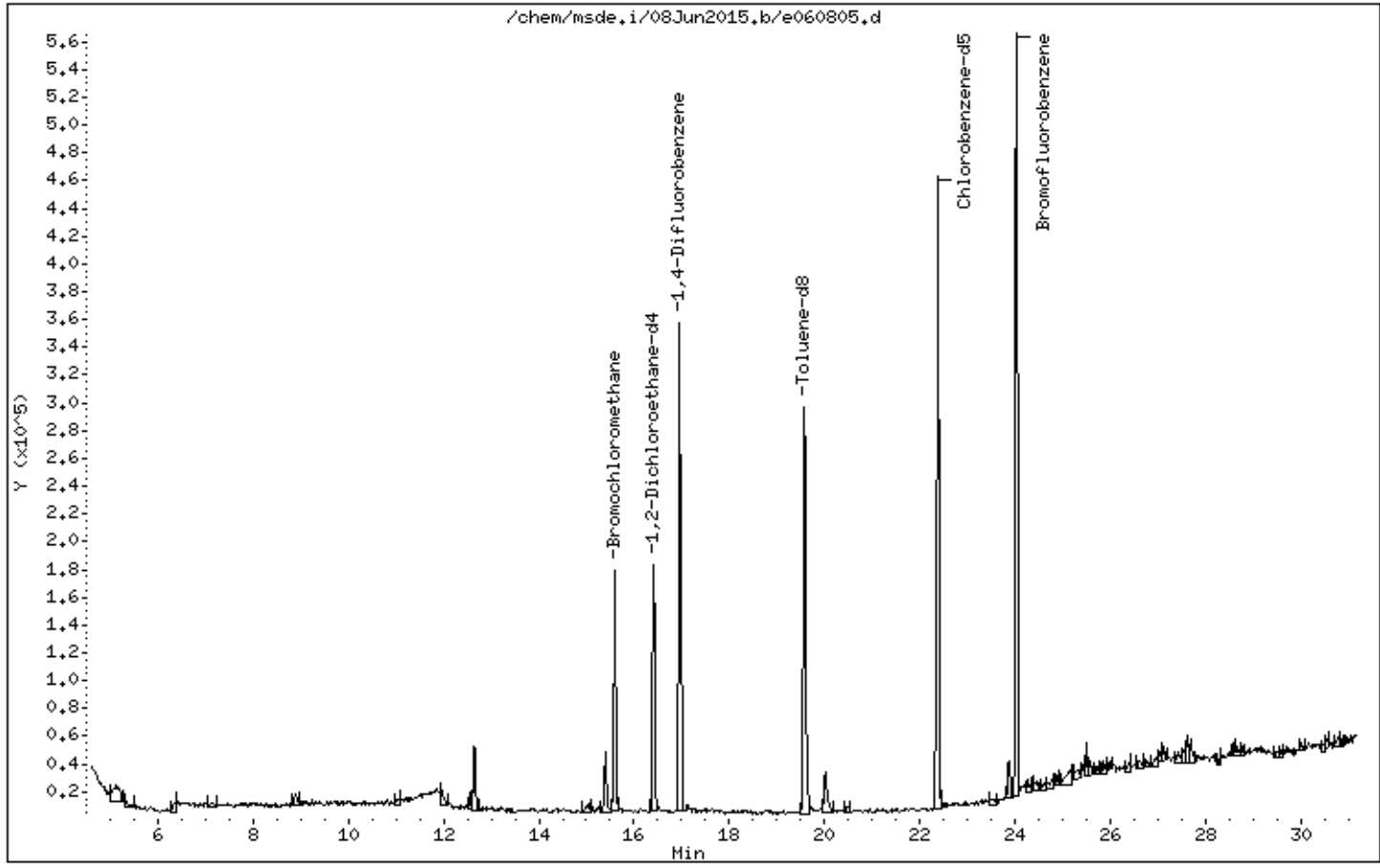
Instrument: msde.i

Sample Info: 250mL# 35248

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED.

SDG No.: 1506011A

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY						TOTAL OUT
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#	
01	1522M212201F	128	*	101		88		1
02	1522M212204F	119		100		94		0
03	1522M212205D	127	*	104		89		1
04	1522M212205D Lab Duplicate	129	*	104		91		1
05	1522M212208F	114		108		87		0
06	1522M212209F	128	*	108		88		1
07	1522M212210F	125		102		85		0
08	1522M212210F Lab Duplicate	118		104		85		0
09	1522M212212F	124		106		91		0
10	Lab Blank	130	*	104		83		1
11	Lab Blank	127	*	104		81	*	2
12	CCV	125		97		84		0
13	CCV	122		104		92		0
14	LCS	126	*	100		85		1
15	LCSD	119		96		87		0
16	LCS	119		99		85		0
17	LCSD	124		96		86		0
18								0
19								0
20								0
21								0
22								0
23								0
24								0

Surrogate Recovery Limits
 1,2-Dichloroethane-d4 80 - 125
 Toluene-d8 90 - 108
 4-Bromofluorobenzene 83 - 116

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS Full Scan
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AIR TOXICS, LTD
 Lab File ID: e060503a.d
 Instrument ID: msde.i

SDG No: 1506011A
 Date Analyzed: 06/05/2015
 Time Analyzed: 10:08 AM

		Chlorobenzene-d5			1,4-Difluorobenzene			Bromochloromethane		
		Area	#	RT	Area	#	RT	Area	#	RT
24-HOUR STD		499778		22.39	538789		16.96	141734		15.61
UPPER LIMIT		699689		22.72	754305		17.29	198428		15.94
LOWER LIMIT		299867		22.06	323273		16.63	85040		15.28
CLIENT SAMPLE NO										
01	1522M212201F	390686		22.39	415010		16.96	101737		15.61
02	1522M212204F	397040		22.39	433073		16.96	107977		15.61
03	1522M212205D	408598		22.39	440575		16.96	104341		15.61
04	1522M212205D Lab Duplicate	398027		22.39	424964		16.96	105130		15.61
05	1522M212208F	388547		22.39	410957		16.96	109451		15.61
06	Lab Blank	403167		22.39	423430		16.96	104737		15.61
07	CCV	499778		22.39	538789		16.96	141734		15.61
08	LCS	506837		22.39	532101		16.96	142378		15.61
09	LCSD	496796		22.39	553879		16.96	147940		15.61
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

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AIR TOXICS, LTD
 Lab File ID: e060802a.d
 Instrument ID: msde.i

SDG No: 1506011A
 Date Analyzed: 06/08/2015
 Time Analyzed: 02:59 PM

		Chlorobenzene-d5			1,4-Difluorobenzene			Bromochloromethane		
		Area	#	RT	Area	#	RT	Area	#	RT
24-HOUR STD		509716		22.39	530478		16.96	145549		15.61
UPPER LIMIT		713602		22.72	742669		17.29	203769		15.94
LOWER LIMIT		305830		22.06	318287		16.63	87329		15.28
CLIENT SAMPLE NO										
01	1522M212209F	402641		22.39	406122		16.96	102068		15.61
02	1522M212210F	389144		22.39	397523		16.96	100734		15.61
03	1522M212210F Lab Duplicate	393810		22.39	405444		16.96	106384		15.61
04	1522M212212F	388952		22.39	399020		16.96	102234		15.61
05	Lab Blank	400060		22.39	413898		16.96	105767		15.61
06	CCV	509716		22.39	530478		16.96	145549		15.61
07	LCS	503183		22.39	537097		16.96	142191		15.61
08	LCSD	508808		22.39	543903		16.96	138015		15.61
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

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e060514.d & e060513.d

Lab Sample ID: 05A & 05AA

Dilution: 1.67 & 1.67

Client Sample ID: &

Date Analyzed: 6/5/15 & 6/5/15

CAS Number	Compound	Original		Duplicate		RPD	Result Less Than 5X RL
		Amount	Flags	Amount	Flags		
127-18-4	Tetrachloroethene	0.296		0.3146		6.1	Y
79-01-6	Trichloroethene	ND	U	ND	U	0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e060809.d & e060808.d

Lab Sample ID: 10A & 10AA

Dilution: 1.63 & 1.63

Client Sample ID: &

Date Analyzed: 6/8/15 & 6/8/15

CAS Number	Compound	Original		Duplicate		RPD	Result Less Than 5X RL
		Amount	Flags	Amount	Flags		
127-18-4	Tetrachloroethene	ND	U	ND	U	0	
79-01-6	Trichloroethene	ND	U	ND	U	0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e060505a.d & e060504a.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 6/5/15 & 6/5/15

CAS Number	Compound	Original		Duplicate		RPD	Result Less Than 5X RL
		Amount	Flags	Amount	Flags		
127-18-4	Tetrachloroethene	74		78		5.3	
79-01-6	Trichloroethene	78		76		2.6	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e060804a.d & e060803a.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 6/8/15 & 6/8/15

CAS Number	Compound	Original		Duplicate		RPD	Result Less Than 5X RL
		Amount	Flags	Amount	Flags		
127-18-4	Tetrachloroethene	72		73		1.4	
79-01-6	Trichloroethene	76		77		1.3	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e1510515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Calibration File Names:

- Level 5: /chem/msde.i/15May2015.b/e051507.d
- Level 6: /chem/msde.i/15May2015.b/e051508.d
- Level 7: /chem/msde.i/27May2015.b/e052706.d
- Level 8: /chem/msde.i/27May2015.b/e052707.d
- Level 9: /chem/msde.i/27May2015.b/e052708.d
- Level 10: /chem/msde.i/15May2015.b/e051512.d
- Level 11: /chem/msde.i/15May2015.b/e051514.d
- Level 12: /chem/msde.i/15May2015.b/e051515.d
- Level 13: /chem/msde.i/18May2015.b/e051810.d
- Level 15: /chem/msde.i/18May2015.b/e051811.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
1 Freon 134a	+++++	+++++	+++++	1.86325	1.61623	+++++	1.73974	10.040
207 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
205 1-Propanol	+++++	+++++	0.31068	0.24445	0.23322	+++++	0.26278	15.929
204 2-Chloroethyl Vinyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Propylene	+++++	+++++	1.26355	1.09081	1.06629	1.01128	1.05845	10.852
3 Freon 152A	+++++	+++++	0.63493	0.70618	0.56685	+++++	0.63599	10.954

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
4 Dichlorodifluoromethane/Fr12	3.92873 4.02669	5.56245 4.12729	4.67754 +++++	4.41461 +++++	4.43450	4.31771	4.43619	11.626
5 Freon 22	+++++	+++++	2.99452 +++++	2.39751 +++++	2.19372	+++++	2.52858	16.459
6 Freon 114	3.25142 3.14533	4.47559 3.24689	3.23056 +++++	2.99985 +++++	3.52284	3.27331	3.39322	13.582
7 Chloromethane	+++++ 1.11139	1.83761 1.14127	1.32940 +++++	1.19339 +++++	1.25913	1.21489	1.29815	19.153
8 Isobutylene	+++++ +++++	+++++ +++++	1.72510 1.18843	1.22570 1.14005	1.16988	+++++	1.28983	19.018
9 Butane	+++++ 0.20659	+++++ 0.22165	0.15979 +++++	0.24066 +++++	0.20292	0.19519	0.20447	13.293
10 Vinyl Chloride	+++++ 0.95935	1.18980 1.03007	1.07518 +++++	0.88573 +++++	1.02498	0.99013	1.02218	9.330
11 1,3-Butadiene	+++++ 0.93236	0.91860 1.01393	0.82909 +++++	0.86794 +++++	0.91743	0.90999	0.91276	6.276
12 Bromomethane	+++++ 0.85811	+++++ 0.86109	1.09579 +++++	1.03067 +++++	0.91889	0.88872	0.94221	10.450
13 Chloroethane	+++++ 0.42604	+++++ 0.46257	0.49727 +++++	0.48278 +++++	0.45273	0.43795	0.45989	5.840

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
14 Isopentane	0.83664	0.91219	0.94175	0.87765	0.77649	0.77788	0.85377	8.072
15 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
17 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
16 Trichlorofluoromethane/Fr11	4.76975	4.92468	5.09106	4.83254	4.65495	4.30000	4.97999	11.639
18 Ethanol	0.43154	0.44076	0.66106	0.40950	0.41282		0.47113	22.702
20 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Freon 113	2.41197	2.43818	2.58909	2.40356	2.43261	2.27949	2.43281	6.348
190 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 1,1-Dichloroethene	0.71667	0.73873	0.71725	0.67284	0.69457	0.68560	0.70218	3.251
22 Acetone	0.53627	0.52624	0.61938	0.56676	0.52521	0.51954	0.61022	27.201

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
23 Carbon Disulfide	2.69529	2.65678	3.95939	2.97294	2.77945	2.67664	2.95675	17.071
184 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2-Propanol	2.18022	2.29375	2.31722	2.15821	1.96777	1.97842	2.14926	6.971
27 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 3-Chloroprene	0.40480	0.40267	0.45630	0.34100	0.38945	0.37866	0.39548	9.545
24 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
28 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Methylene Chloride	0.78844	1.18153 0.78428	0.92984	0.91219	0.84859	0.80716	0.89315	15.640
30 tert-butyl alcohol	3.38963	3.63845	2.98315	2.81133	3.01073	2.97829	3.13526	9.945
31 MTBE	3.40215	2.40481 3.44885	2.52332	2.47514	3.06178	3.22966	2.93510	15.534

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
32 trans-1,2-Dichloroethene	0.79176	0.70363	0.60985	0.69944	0.84719	0.81275	0.75262	11.158
33 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 Hexane	1.79330	1.43660	1.49987	1.21761	1.79833	1.80697	1.62253	14.692
191 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
36 Isopropyl ether	4.63011	4.65676	3.53618	3.08607	4.51609	4.50338	4.15477	16.163
37 1,1-Dichloroethane	2.20076	2.29898	2.30876	2.12190	2.40593	2.30784	2.25951	4.341
38 Vinyl Acetate	0.32950	0.34232	0.17367	0.29518	0.33419	0.32669	0.30026	21.338
39 Chlorprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
40 Ethyl-tert-butyl ether	4.15121	4.24404	3.19369	3.08491	4.10138	4.06163	3.80614	13.695

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
51 Carbon Tetrachloride	5.13988 4.60873	4.74141 4.39252	4.26944 +++++	4.24145 +++++	5.08465	4.63647	4.63932	7.361
52 2,2,4-Trimethylpentane	+++++ 2.81668	2.84468 2.76927	2.54352 +++++	2.16472 +++++	2.96298	2.88566	2.71250	10.129
53 Benzene	+++++ 0.92792	1.32068 0.91394	0.96414 +++++	0.91349 +++++	1.11121	1.00325	1.02209	14.576
55 tert-amyl methyl ether	+++++ 0.29871	+++++ 0.29900	0.25188 +++++	0.26974 +++++	0.33615	0.31427	0.29496	10.274
56 1,2-Dichloroethane	+++++ 0.70699	0.80952 0.68460	0.74427 +++++	0.70597 +++++	0.81858	0.74923	0.74559	6.971
57 Heptane	+++++ 0.33565	0.36838 0.33961	0.27601 +++++	0.33516 +++++	0.38450	0.36005	0.34276	10.157
50 Thiophene	+++++ +++++	+++++ +++++	+++++ +++++	+++++ +++++	+++++	+++++	+++++	+++++
59 Trichloroethene	0.63035 0.66473	1.01791 0.66021	0.74226 +++++	0.67616 +++++	0.74641	0.69181	0.72873	16.943
60 Methylcyclohexane	+++++ 0.56084	+++++ 0.55955	0.42716 +++++	0.45855 +++++	0.59024	0.55946	0.52597	12.584
61 1,2-Dichloropropane	+++++ 0.32886	0.59737 0.33226	0.38550 +++++	0.32010 +++++	0.36525	0.32987	0.37989	25.991

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
62 1,4-Dioxane	0.25669	0.34663	0.22220	0.20800	0.25816	0.24831	0.25660	17.226
63 Bromodichloromethane	0.91878	1.03915	0.89960	0.86729	0.93983	0.91110	0.96253	11.439
64 cis-1,3-Dichloropropene	0.49459	0.68258	0.50784	0.44400	0.48903	0.48728	0.51703	14.774
65 4-Methyl-2-pentanone	0.87427	0.88833	0.69033	0.70469	0.82804	0.81619	0.82041	11.396
66 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
68 Toluene	1.25131	1.44963	1.12594	1.17403	1.37469	1.31848	1.27744	8.809
194 Ethyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
69 trans-1,3-Dichloropropene	0.59095	0.58365	0.52637	0.54568	0.60606	0.59011	0.57803	5.233
70 1,1,2-Trichloroethane	0.47693	0.65245	0.41235	0.50563	0.52394	0.49406	0.48807	17.232
71 Tetrachloroethene	0.73609	0.89379	0.63229	0.72815	0.83579	0.79617	0.74161	13.738

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	— RRF	% RSD
72 2-Hexanone	0.45762	0.45788	0.29415	0.29845	0.46945	0.45734	0.40581	20.937
73 Dibromochloromethane	1.31757	1.31615	1.28393	1.20410	1.46202	1.36196	1.29031	10.753
74 1,2-Dibromoethane	0.85021	0.85775	0.77582	0.74677	0.92971	0.88997	0.85370	10.306
76 Chlorobenzene	1.29245	1.28421	1.33810	1.36870	1.47350	1.38877	1.38026	6.348
78 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
77 Ethyl Benzene	0.61850	0.61241	0.58435	0.53447	0.68233	0.65917	0.62385	8.549
79 1,1,1,2-Tetrachloroethane	+++++	+++++	0.86519	0.77863	0.77292	+++++	0.80558	6.418
186 1,1-Dichloropropene	+++++	+++++	0.69080	0.67838	0.65163	+++++	0.67360	2.971
80 m,p-Xylene	0.76049	0.74162	0.61910	0.66510	0.81219	0.80818	0.74448	10.192
81 o-Xylene	0.71319	0.70648	0.57232	0.55798	0.73124	0.73471	0.65270	13.241

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
83 Styrene	20.000 Level 11	40.000 Level 12	2.000 Level 13	4.000 Level 15				
	1.23745	1.24198	+++++	+++++			1.15374	16.888
84 Bromoform	0.99266	1.14569	0.86225	0.87378	1.06395	1.03832		
	0.99051	0.99889	+++++	+++++			0.99576	9.428
85 Cumene	+++++	1.53110	1.68085	1.76731	2.40645	2.41093		
	2.38214	2.34924	+++++	+++++			2.07543	19.052
82 alpha-pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
203 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
89 1,1,2,2-Tetrachloroethane	1.34590	0.94516	0.92194	0.90465	1.01238	0.92990		
	0.88128	0.85798	+++++	+++++			0.97490	16.085
90 Propylbenzene	+++++	2.58638	2.16236	2.19144	2.61624	2.54989		
	2.42330	2.37068	+++++	+++++			2.41433	7.636
185 Bromobenzene	+++++	+++++	0.56801	0.57680	0.56998	+++++		
	+++++	+++++	+++++	+++++			0.57160	0.807
91 1,2,3-Trichloropropane	+++++	+++++	0.40749	0.35239	0.34266	+++++		
	+++++	+++++	+++++	+++++			0.36751	9.512
92 4-Ethyltoluene	+++++	2.03134	1.77321	1.72130	2.41113	2.34245		
	2.22242	2.19590	+++++	+++++			2.09968	12.819

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
94 1,3,5-Trimethylbenzene	1.55993 1.92016	1.84289 1.88713	1.44018 +++++	1.55271 +++++	2.09711	2.04537	1.79319	13.664
93 2-Chlorotoluene	+++++	+++++	0.55995 +++++	0.45466 +++++	0.49677	+++++	0.50379	10.519
96 4-Chlorotoluene	+++++	+++++	0.50968 +++++	0.46916 +++++	0.48869	+++++	0.48918	4.142
86 1,3-Dichloropropane	+++++	+++++	0.50289 +++++	0.41883 +++++	0.40678	+++++	0.44283	11.824
97 tert-Butylbenzene	+++++	+++++	1.43829 +++++	1.31745 +++++	1.50784	+++++	1.42119	6.779
98 1,2,4-Trimethylbenzene	1.20451 1.54758	1.30591 1.54100	1.25369 +++++	1.25639 +++++	1.54494	1.53966	1.39921	11.179
88 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
188 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
189 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 sec-Butylbenzene	+++++	+++++	1.97684 +++++	1.69420 +++++	1.92954	+++++	1.86686	8.109

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
100 p-Cymene	+++++	+++++	1.58966	1.45281	1.74398	+++++	1.59548	9.130
101 1,3-Dichlorobenzene	1.26698	1.50504	1.34282	1.24861	1.47121	1.41539	1.36451	6.736
103 1,2,3-trimethylbenzene	+++++	+++++	0.59495	0.54456	0.59684	+++++	0.57878	5.123
104 1,4-Dichlorobenzene	1.28877	1.12293	1.18923	1.16672	1.49092	1.44782	1.29226	10.139
105 alpha-chlorotoluene	1.24785	1.46651	1.27236	1.30968	1.66910	1.64620	1.46753	11.591
195 trans-1,4-dichloro-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
95 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 Butylbenzene	+++++	+++++	0.44234	0.39203	0.39018	+++++	0.40819	7.250
108 1,2-Dichlorobenzene	1.19265	1.08745	1.13824	1.12391	1.36813	1.32546	1.20678	8.067

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
106 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 1,2-dibromo-3-chloropropane	+++++	+++++	0.47393	0.37608	0.43302	+++++	0.42768	11.490
109 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
112 1,2,4-Trichlorobenzene	0.79921	0.51512	0.57352	0.53054	0.48758	0.51732	0.57069	17.593
113 Hexachlorobutadiene	0.65007	0.49884	0.42783	0.47520	0.40274	0.42091	0.48263	16.186
114 Naphthalene	+++++	+++++	+++++	1.43741	1.15420	1.38550	1.42343	12.918
111 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
115 1,2,3-trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
187 2,3-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
201 2,2-Dichloropropane	+++++	+++++	2.93846	2.61214	2.64176	+++++	2.73079	6.608

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
197 1-Methoxy-2-Propyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
198 2-Heptanone	+++++	+++++	0.50425	0.43384	0.51546	+++++	0.48452	9.132
199 Butyl Acetate	+++++	+++++	0.11661	0.11307	0.10988	+++++	0.11319	2.975
200 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
202 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
206 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 208 Total Xylenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
209 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
210 Freon 142b	+++++	+++++	3.55271	3.41982	3.18978	+++++	3.38744	5.421
211 Freon 21	+++++	+++++	2.67204	2.23099	2.13706	+++++	2.34670	12.172

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
212 1,2-Dichlorotrifluoroethane	+++++	+++++	2.61094	2.67155	2.49558	+++++	2.59269	3.448
213 Freon 123	+++++	+++++	3.04860	2.45983	2.62984	+++++	2.71276	11.170
214 Cyclopentene	+++++	+++++	1.69340	1.54406	1.49639	+++++	1.57795	6.514
215 Pentachloroethane	+++++	+++++	0.47035	0.41304	0.43743	+++++	0.44027	6.532
216 Cyclohexanone	+++++	+++++	0.49863	0.46338	0.48308	+++++	0.48170	3.668
217 Diisobutyl Ketone	+++++	+++++	0.93367	0.87918	1.12493	+++++	0.97926	13.179
218 Isobutanol	+++++	+++++	0.92325	0.75326	0.75400	+++++	0.81017	12.087
219 1-Butanol	+++++	+++++	1.92220	1.78757	1.73395	+++++	1.81457	5.345
\$ 54 1,2-Dichloroethane-d4	1.57534	1.51456	1.57878	1.53581	1.49912	1.56605	1.57073	3.550
\$ 67 Toluene-d8	0.85941	0.87769	0.85233	0.84210	0.79614	0.83722	0.85891	4.573

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e15l0515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
	20.000 Level 11	40.000 Level 12	2.000 Level 13	4.000 Level 15				
\$ 87 Bromofluorobenzene	0.47898	0.51075	0.49926	0.51106	0.50666	0.52209		
	0.50719	0.51373	+++++	+++++			0.50621	2.525

Calibration History

Method : /chem/msde.i/27May2015.b/e1510515b.m
 Start Cal Date: 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
15-MAY-2015 13:24	Level05	/chem/msde.i/15May2015.b/e051507.d
Cal Level: 6 , Cal Amount: 0.10000		
15-MAY-2015 14:07	Level#1	/chem/msde.i/15May2015.b/e051508.d
Cal Level: 7 , Cal Amount: 0.50000		
27-MAY-2015 09:51	AT1ICAL	/chem/msde.i/27May2015.b/e052706.d
18-MAY-2015 14:18	IsobutyleneICAL	/chem/msde.i/18May2015.b/e051808.d
15-MAY-2015 14:53	HILOcrvFULL	/chem/msde.i/15May2015.b/e051509.d
Cal Level: 8 , Cal Amount: 1.00000		
27-MAY-2015 10:36	AT1ICAL	/chem/msde.i/27May2015.b/e052707.d
18-MAY-2015 15:04	IsobutyleneICAL	/chem/msde.i/18May2015.b/e051809.d
15-MAY-2015 15:37	HILOcrvFULL	/chem/msde.i/15May2015.b/e051510.d
Cal Level: 9 , Cal Amount: 5.00000		
27-MAY-2015 11:25	AT1ICAL	/chem/msde.i/27May2015.b/e052708.d
18-MAY-2015 17:22	IsobutyleneICAL	/chem/msde.i/18May2015.b/e051812.d
15-MAY-2015 16:23	AT09	/chem/msde.i/15May2015.b/e051511.d
Cal Level: 10, Cal Amount: 10.00000		
15-MAY-2015 17:04	AT09	/chem/msde.i/15May2015.b/e051512.d
Cal Level: 11, Cal Amount: 20.00000		

```

|15-MAY-2015 19:22 |AT09                |/chem/msde.i/15May2015.b/e051514.d  |
+-----+-----+-----+-----+
| Cal Level: 12, Cal Amount: 40.00000 |
+=====+
|15-MAY-2015 20:07 |AT09                |/chem/msde.i/15May2015.b/e051515.d  |
+-----+-----+-----+-----+
| Cal Level: 13, Cal Amount: 2.00000 |
+=====+
|18-MAY-2015 15:50 |IsobutyleneICAL   |/chem/msde.i/18May2015.b/e051810.d  |
+-----+-----+-----+-----+
| Cal Level: 15, Cal Amount: 4.00000 |
+=====+
|18-MAY-2015 16:40 |IsobutyleneICAL   |/chem/msde.i/18May2015.b/e051811.d  |
+-----+-----+-----+-----+

```

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 9

```

| Ccal Level: 9 , Ccal Amount: 5.000 |
+=====+
|27-MAY-2015 06:30 |AT09                |/chem/msde.i/27May2015.b/e052702.d  |
+-----+-----+-----+-----+
| Ccal Level: 8 , Ccal Amount: 1.000 |
+=====+
|27-MAY-2015 10:36 |AT1CCV             |/chem/msde.i/27May2015.b/e052707a.d  |
+-----+-----+-----+-----+
| Ccal Level: 9 , Ccal Amount: 5.000 |
+=====+
|27-MAY-2015 11:25 |AT1ICAL            |/chem/msde.i/27May2015.b/e052708.d  |
+-----+-----+-----+-----+

```

Curve Name: E15_L0515B

Initial Calibration Narrative

An initial calibration curve was analyzed on 05/15/15 on MSD-E.

The ICV was run on 5/18/15 prior to sample analysis.

The instrument was set up to do Full Scan and Selective Ion Monitoring (SIM) simultaneously.

ICAL: Zero (0) out.

ICV: Zero (0) out: File E051806.

In House Controls Limits: Zero (0) out.

DOD control limits 5.0: Zero (0) out.

The reporting limit for Ethanol has been raised from 0.5ppbv to 1.0ppbv due to non-linear response at the RL.

Naphthalene was calibrated from 0.1ppbv to 4.0ppbv.

The following compounds are good for special RL of 0.05ppbv:

- Freon 12
- Freon 114
- Freon 11
- Freon 113
- 1,1,1-Trichloroethane
- Trichloroethene
- Bromodichloromethane
- Carbon Tetrachloride
- 1,1,2-Trichloroethane
- Tetrachloroethene
- Dibromochloromethane
- 1,2-Dibromoethane
- Bromoform
- 1,1,2,2-Tetrachloroethane
- 1,2,4-Trimethylbenzene
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 1,2,4-Trichlorobenzene
- Hexachlorobutadiene
- 1,3,5-Trimethylbenzene
- alpha-Chlorotoluene

The signal/noise ratio for 1,3-Butadiene at the RL was verified, see included report.

The signal/ noise ratio for Napthalene at the special RL of 0.1ppbv was verified, see included report.

A five (5) point initial calibration for Isobutylene was done on 5/18/15 and included in the "A" curve. ICAL was run at 0.5ppbv, 1.0ppbv, 2.0ppbv, 4.0ppbv, and 5.0ppbv.

A Three (3) point initial calibration for the AT-1 specials was done on 5/27/15 at levels 0.5ppbv, 1.0ppbv, and 5.0ppbv. The 0.5ppbv point for Freon 134a was dropped due to poor peak quality. No Freon 143a.

Tune Files:

- A) E051501 (ICAL), E051801 (ICV only).
- B) E052701.

MDL was run 10/15/14-10/17/14.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAY-2015 13:24
 End Cal Date : 27-MAY-2015 11:25
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msde.i/27May2015.b/e1510515b.m
 Cal Date : 27-May-2015 14:48 efinn
 Curve Type : Average

Calibration File Names:

- Level 5: /chem/msde.i/15May2015.b/e051507.d
- Level 6: /chem/msde.i/15May2015.b/e051508.d
- Level 7: /chem/msde.i/27May2015.b/e052706.d
- Level 8: /chem/msde.i/27May2015.b/e052707.d
- Level 9: /chem/msde.i/27May2015.b/e052708.d
- Level 10: /chem/msde.i/15May2015.b/e051512.d
- Level 11: /chem/msde.i/15May2015.b/e051514.d
- Level 12: /chem/msde.i/15May2015.b/e051515.d
- Level 13: /chem/msde.i/18May2015.b/e051810.d
- Level 15: /chem/msde.i/18May2015.b/e051811.d

EF 5/27/15
83 5/28/15

Please see Calibration History page(s)
 for all the calibration files.

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 9	10.000 Level 10	RRF	% RSD
1 Freon 134a	++++	++++	++++	1.86325	1.61623	++++	1.73974	10.040
207 Iodomethane	++++	++++	++++	++++	++++	++++	++++	++++
205 1-Propanol	++++	++++	0.31068	0.24445	0.23322	++++	0.26278	15.929
204 2-Chloroethyl Vinyl Ether	++++	++++	++++	++++	++++	++++	++++	++++
2 Propylene	0.93774	0.98102	++++	++++	1.06629	1.01128	1.05845	10.852
3 Freon 152A	++++	++++	0.63493	0.70618	0.56685	++++	0.63599	10.954

BFB Verification of 176/174 m/z Ratio: (905830/93653) X 100 = 96.81%

Tekmar Purge Flow: NA

Vacuum: 9.14 X 10⁻⁶

IS/Std. #: 2716-236	Exp. Date: 7/14/15
BCM LL: 166617	Sim: 169000
1,4-DFB 585674	644918
CB-D5 536752	604819

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

File ID: E062702

Compound: TO-148

Initials: ES

Calculation Check:

$$\text{ppbv of compound} = \frac{\text{Area}_{\text{Sample}} \times \text{Conc}_{\text{IS}}}{\text{Area}_{\text{IS}} \times \text{RRF}} = \frac{486946 \times 5.000}{585674 \times 0.85891} = 4.840$$

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

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

Reported Result: 4.840

Method Name: E150515A/E150515A

Sl. #	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓ E052701	BFB Tank Check	2299-791	5.0 mg	2.0 ml	1.00	AK	5/27/15	0611	AK	
2	✓ 02	CCV (Sopbu)	2716-238	5.0 ppm	2.5 ml	1.00	AK		0630	AK	Exp 8/7/15 Sim: Boot
3	✓ 03	LCS	2716-220			1.00	AK		0732	ES	Exp 7/8/15
4	✓ 04	LCS				1.00	AK		0812	ES	
5	✓ 05	TP-Hg can	2716-1352	125 ppm	1.00 ml	1.00	ES		0858	ES	Exp 6/24/15
6	✓ 06	ICAL Label 7	2716-227	0.5 ppm	2.5 ml	1.00	ES		0957	ES	Exp 5/21/15
7	✓ 07			1.0 ppm	5.0 ml	1.00	ES		1036	ES	
8	✓ 08			5.0 ppm	2.80 ml	1.00	ES		1125	ES	
9	✓ 09	LAB Bunsen	34744	Horrid	2.80 ml	1.00	ES		1246	ES	
10	✓ 10	LAB Bunsen	34744	Horrid	2.80 ml	1.00	ES		1335	ES	
11	✓ 11	1505329-03A	36033	2.64, 5.0 ppm	2.5 ml	1.47	ES		1432	ES	
12	✓ 12	-03A	36033	2.64, 5.0 ppm	2.80 ml	1.47	ES				
13											
14											

Reviewed: [Signature] Date: 5/27/15

577772

BFB Verification of 176/174 m/z Ratio: (20757/24402) x 9794
Tekmar Purge Flow: <u>MF</u>
Vacuum: <u>9.622e-5</u>

IS/S Std. #: 2710-280e	Exp. Date: 7/1/15
BCM <u>1410306</u>	<u>172550e</u>
1.4-DFB <u>587158</u>	<u>60980e</u>
CB-d5 <u>587158</u>	<u>622205</u>

Verified CCV IS vs ICAL mid-point (-40%D): 78

File ID: <u>201512</u>
Compound: <u>Toluene-18</u>
Initials: <u>EA</u>

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \text{Conc}_{\text{IS}} = \left(\frac{491578}{587158} \right) \times (5.000) = 4.574$

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

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

Reported Result: 4.574

Method Name:

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
X	20151201	BFB Stone Creek	2710-280	50.0g	2µL	1.00	EA	5/15/15	0712	EA	
/	02	100A	2710-300	0.005 ppbv	15µL	1.00	EA	0937	1026	EA	Went to Lab
/	03	100A	2710-300	0.002 ppbv	15µL	1.00	EA	1110	1153	EA	Exp. 7/1/15
/	04			0.005 ppbv	25µL	1.00	EA	1153	1236	EA	
/	05			0.01 ppbv	25µL	1.00	EA	1324	1407	EA	Exp. 5/1/15
/	06			0.02 ppbv	100µL	1.00	EA	1453	1537	EA	
/	07		2730-1	0.1 ppbv	25µL	1.00	EA	1623	1704	EA	Exp. 8/7/15
/	08			0.5 ppbv	125µL	1.00	EA			EA	
/	09			1.0 ppbv	250µL	1.00	EA			EA	
/	10			5.0 ppbv	25µL	1.00	EA			EA	
/	11		2710-358	10 ppbv	50µL	1.00	EA			EA	
/	12			20 ppbv	100µL	1.00	EA			EA	
/	13			70 ppbv	200µL	1.00	EA			EA	
/	14										

Reviewed EA Date 5/14/15

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	EDS1513	System Blank	24034	Humid	250ml	1.00	DS	5/15/15	1834	DS	
✓	14	Leak Level 11	2116-288	20 ppbv	100ml	1.00	DS		1922	DS	Pre-expire expiration exp 8/7/15
✓	15	↓	↓	40 ppbv	200ml	1.00	DS		2007	DS	↓
X	16	system blank	24034	Humid	250ml	1.00	DS		2053	DS	
✓	17	System blank	24034	Humid	250ml	1.00	DS		2150	DS	
✓	18	LCV	2116-288 2116-288 2116-288	S.D. ppbv	25ml	1.00	DS		2206	SS	Exp 7/8/15 low detection, possible artifact exp.

Reviewed DS

Date 5/15/15

DS 5/15/15

BFB Verification of 176/174 m/z Ratio: $(\text{Calc } 8.112 / 0.85888) \times 100 = 94.9\%$

Tekmar Purge Flow: N/A

Vacuum: 0.102 in Hg

File ID: F051803

Compound: Toluene-X2

Initials: SP

IS/S Std. #:	<u>27100-2302</u>	Exp. Date:	<u>7/11/15</u>
BCM	<u>180559</u>	Qual. Review:	<u>7/24/15</u>
1,4-DFB	<u>603550</u>		<u>7/24/15</u>
CB-d5	<u>603457</u>		<u>7/25/15</u>

Verified CCV IS vs ICAI mid-point (-40%D): 15

Calculation Check:

ppbv of compound = $\frac{\text{Area Sample}}{\text{Area IS}} \times \text{Conc}_{IS} \times \text{RRF}$

$(\frac{529727}{668550}) \times (5.000) = 3.947$

$(\frac{668550}{0.85871})$

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

Method Name: 251.0515A / 150515A

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

Reported Result: 4.647

Use	File	Lab ID#	Can#	Pressure	Amnt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	F051801	388 TUNE CHECK	2299-271	5.0ppb	2 µL	1.00	SP	7/18/15	0702	SP	
X	02	CO2 (50ppm)	2710-248	5.0ppb	25 µL	1.00	SP		0928	SP	10/14/15
✓	03	CO2 (50ppm)	2710-248	5.0ppb	25 µL	1.00	SP		1015	SP	10/14/15
X	04	H2S (50ppm)	2710-120	5.0ppb	25 µL	1.00	SP		N/A	N/A	10/14/15
✓	05	System Blank	34084	4ppb	25 µL	1.00	SP		1125	SP	
✓	06	Ac 105 (50ppm)	2710-220	5.0ppb	25 µL	1.00	SP		1242	SP	10/14/15
✓	07	105D (50ppm)	2710-220	5.0ppb	25 µL	1.00	SP		1254	SP	10/14/15
✓	08	105L (50ppm)	2380-8	0.5ppb	25 µL	1.00	SP		1418	SP	10/14/15
✓	09	105L (50ppm)	2380-8	0.5ppb	25 µL	1.00	SP		1504	SP	10/14/15
✓	10	105L (50ppm)	2380-8	0.5ppb	25 µL	1.00	SP		1550	SP	10/14/15
✓	11	105L (50ppm)	2380-8	0.5ppb	25 µL	1.00	SP		1640	SP	10/14/15
✓	12	105L (50ppm)	2380-8	0.5ppb	25 µL	1.00	SP		1722	SP	10/14/15
✓	13	Lab Blank	34434	Humid	25 µL	1.00	SP		1803	SP	
✓	14	1505095A-018	24415	Humid	25 µL	1.00	SP		1943	SP	T Blanking

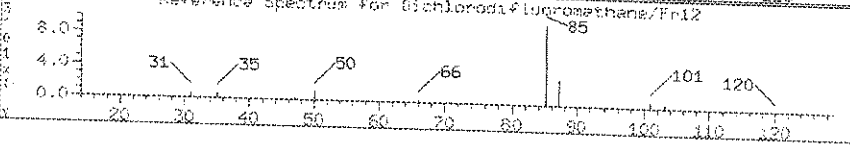
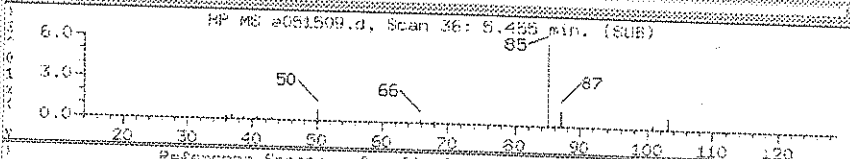
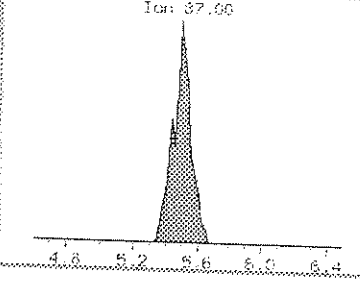
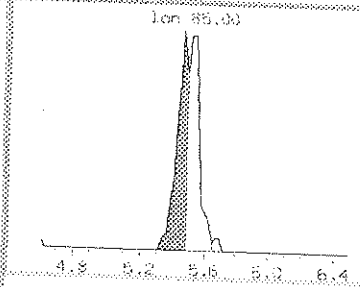
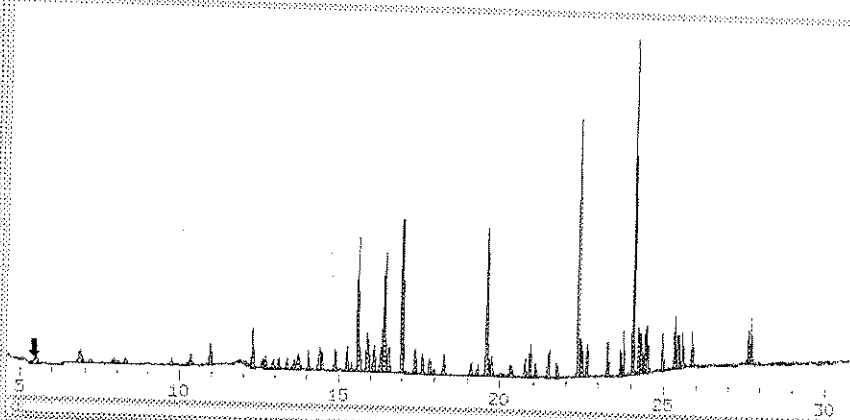
Reviewed

Date

5/18/15

Sample: ICAL Type: SAMPLE Inj.Date: 15-MAY-2015 14:53

- ** 46 Bromochlorometh
- ** 58 1,4-Difluoroben
- ** 75 Chlorobenzene-
- ** 54 1,2-Dichloroeth
- ** 67 Toluene-d8
- ** 87 Bromofluoroben
- + 2 Propylene
- + 4 Dichlorodifluor**
- + 6 Freon 114
- + 7 Chloromethane
- + 9 Butane
- + 10 Vinyl Chloride
- + 11 1,3-Butadiene
- + 12 Bromomethane
- + 13 Chloroethane
- + 14 Isopentane
- + 16 Trichlorofluor
- + 18 Ethanol
- + 19 Freon 113
- + 21 1,1-Dichloroeth
- + 22 Acetone
- + 25 2-Propanol
- + 23 Carbon Disulfid
- + 26 3-Chloroprene
- + 29 Methylene Chlo

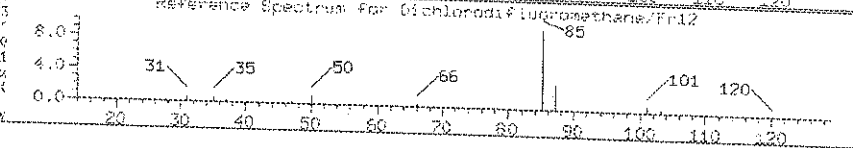
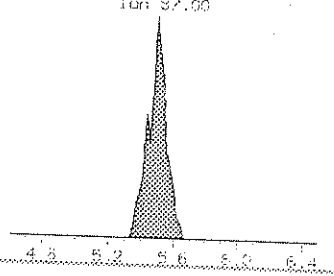
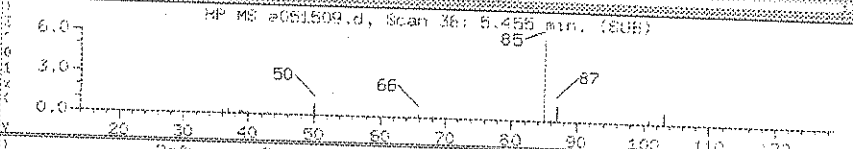
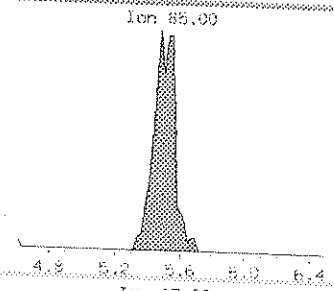
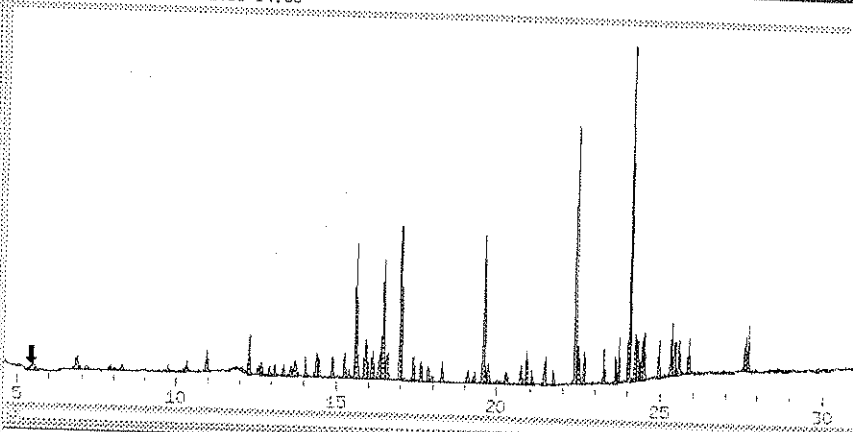


Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.455	28431	0.3425	0.3425	100	aH	
2	5.479	20544			72		
	5.504	34658	0.4175	0.4175	100	aH	
	5.479	20544			59		
3	5.672	1353	0.01630	0.01630	100	aH	
	5.479	20544			1518		

Handwritten signature

Sample: ICAL Type: SAMPLE Inj.Date: 15-MAY-2015 14:53

- ** 46 Bromochloromet
- ** 58 1,4-Difluorobe
- ** 75 Chlorobenzene-
- ** 54 1,2-Dichloroetl
- ** 67 Toluene-d8
- ** 87 Bromofluoroben
- * 2 Propylene
- * 4 Dichlorodiflur**
- + 6 Freon 114
- + 7 Chloromethane
- + 9 Butane
- + 10 Vinyl Chloride
- + 11 1,3-Butadiene
- + 12 Bromomethane
- + 13 Chloroethane
- + 14 Isopentane
- + 16 Trichlorofluor
- + 18 Ethanol
- + 19 Freon 113
- + 21 1,1-Dichloroetl
- + 22 Acetone
- + 25 2-Propanol
- + 23 Carbon Disulfu
- + 26 3-Chloroprene
- + 29 Methylene Chlo



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.455	56965	0.6862	0.6862	100	MF	
	5.479	20544			36		

- Mark Dichlorodifluoromethane/Fr12 Undetected.

Area.

S/18/15
ACT

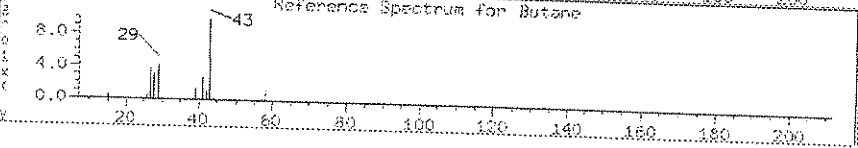
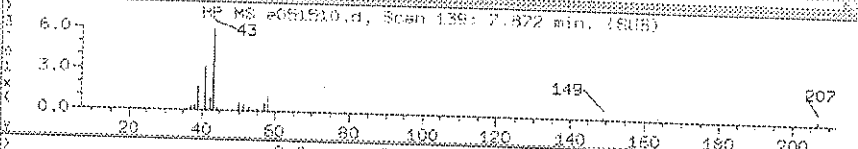
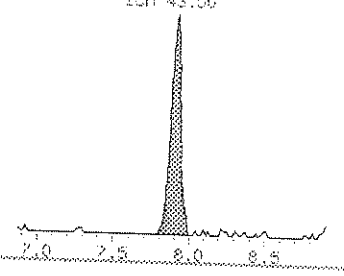
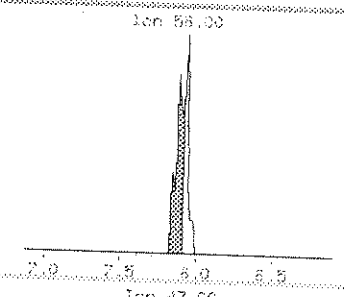
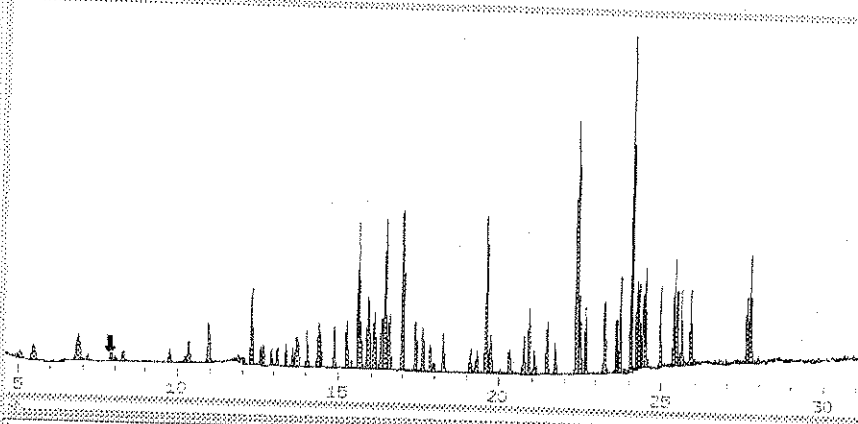
After

28 5/18/15

Correct Baseline	X
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Sample: ICAL Type: SAMPLE Inj.Date: 15-MAY-2015 15:37

- * 46 Bromochloromet
- * 58 1,4-Difluorobe
- * 75 Chlorobenzene-
- * 54 1,2-Dichloroeti
- * 67 Toluene-d8
- * 87 Bromofluoroben
- * 2 Propylene
- * 4 Dichlorodifluo
- * 6 Freon 114
- * 7 Chloroethane
- * 9 Butane
- * 10 Vinyl Chloride
- * 11 1,3-Butadiene
- * 12 Bromomethane
- * 13 Chloroethane
- * 14 Isopentane
- * 16 Trichlorofluor
- * 18 Ethanol
- * 21 1,1-Dichloroeti
- * 19 Freon 113
- * 22 Acetone
- * 23 Carbon Disulf
- * 26 3-Chloroprene
- * 25 2-Propanol
- * 29 Methylene Chlo



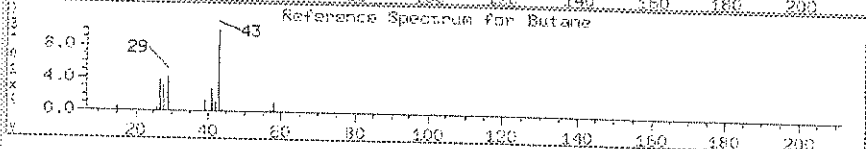
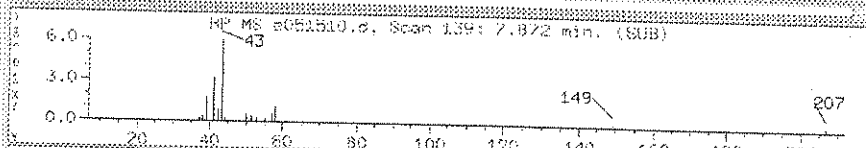
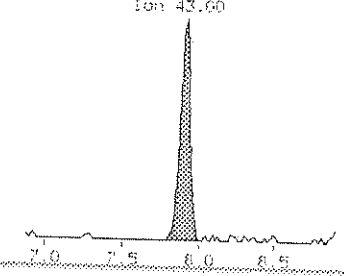
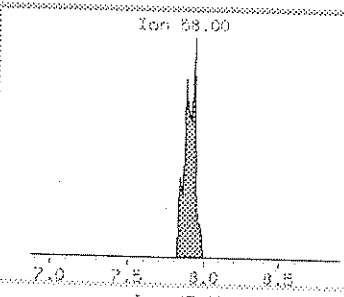
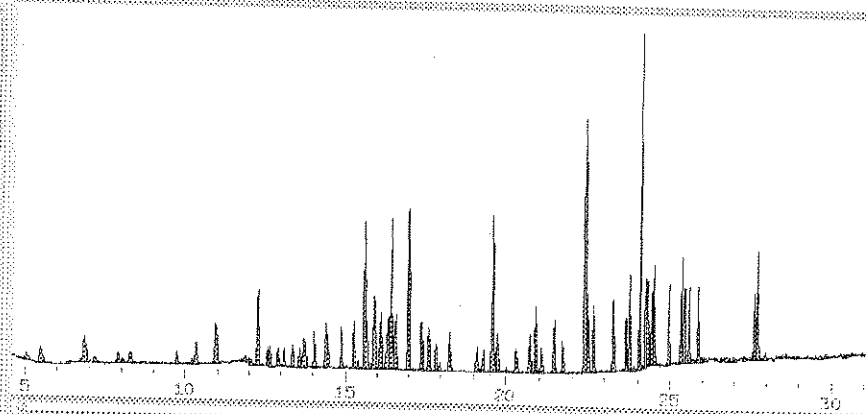
Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	7.872	3935	0.7180	0.7180	100		
	7.906	44130			1121		
2	7.924	3200	0.5839	0.5839	100		
	7.906	44130			1379		

- Mark Butane Undetected.

B5FOVE

Sample: ICAL Type: SAMPLE Inj.Date: 15-MAY-2015 15:37

- *+ 46 Bromochloromet
- *+ 58 1,4-Difluorobe
- *+ 75 Chlorobenzene-
- *+ 54 1,2-Dichlorost
- *+ 67 Toluene-d8
- *+ 87 Bromofluoroben
- * 2 Propylene
- * 4 Dichlorodifluo
- * 6 Freon 114
- * 7 Chloromethane
- *+ 9 Butane**
- * 10 Vinyl Chloride
- * 11 1,3-Butadiene
- * 12 Bromomethane
- * 13 Chloroethane
- * 14 Isopentane
- * 16 Trichlorofluor
- * 18 Ethanol
- * 21 1,1-Dichloroet
- * 19 Freon 113
- * 22 Acetone
- * 23 Carbon Disulfid
- * 26 3-Chloroprene
- * 25 2-Propanol
- * 29 Methylene Chlo



Hit# RT(min) Response Amount Conc Ratio Flags Report:

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	7.924	6250	1.140	1.140	100	H	
	7.906	44130					

- Mark Butane Undetected.

*5/18/15
ACI*

After

5/18/15

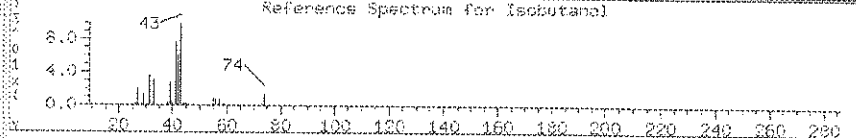
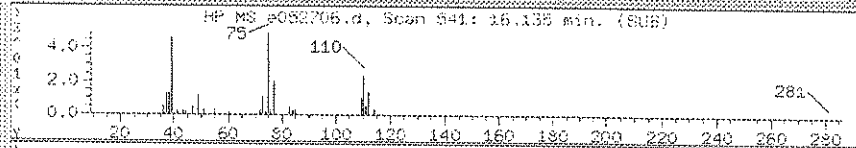
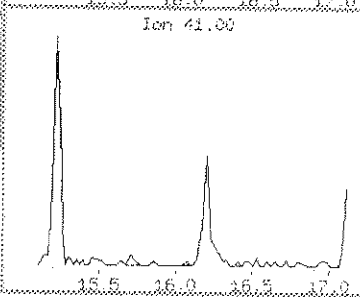
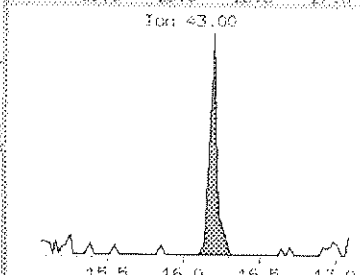
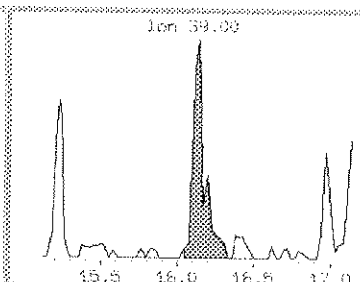
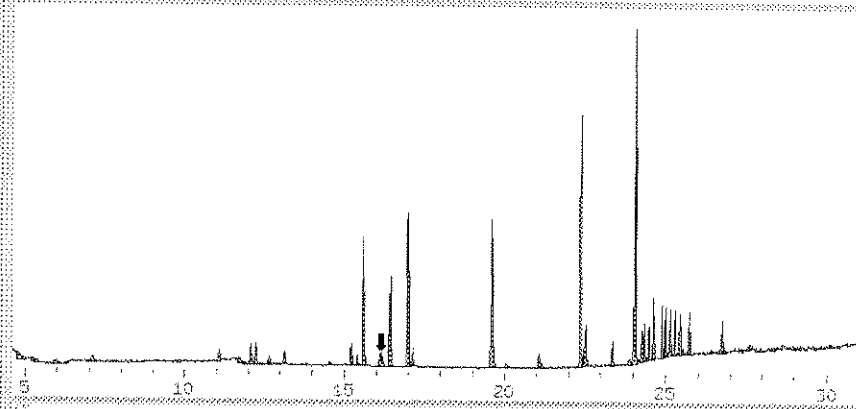
Correct Baseline	<input checked="" type="checkbox"/>
Split Peak	<input type="checkbox"/>
Merge Peak	<input type="checkbox"/>
Zoom In	<input type="checkbox"/>
Change Parameter	<input type="checkbox"/>
System Peak Subtraction	<input type="checkbox"/>
Peak Misidentified	<input type="checkbox"/>
Corrected Peak Integration	<input type="checkbox"/>

File: 12052705.d; 12052705.d; 12052705.d

Sample: ICAL Type: SAMPLE Inj.Date: 27-MAY-2015 09:51

- ** 46 Bromochloromethane
- ** 58 1,4-Difluorobenzene
- ** 75 Chlorobenzene
- 1209 Freon 143a
- + 1 Freon 134a
- + 3 Freon 152A
- + 5 Freon 22
- + 210 Freon 142b
- + 211 Freon 21
- + 212 1,2-Dichloroethane
- + 213 Freon 123
- + 214 Cyclopentane
- + 205 1-Propanol
- + 201 2,2-Dichloropropane
- + 186 1,1-Dichloroethane
- + 218 Isobutanol**
- + 219 1-Butanol
- + 86 1,3-Dichloropropane
- + 199 Butyl Acetate
- + 79 1,1,1,2-Tetrafluoroethane
- + 198 2-Heptanone
- + 216 Cyclohexanone
- + 185 Bromobenzene
- + 91 1,2,3-Trichlorobenzene
- + 93 2-Chlorotoluene

12052705.d

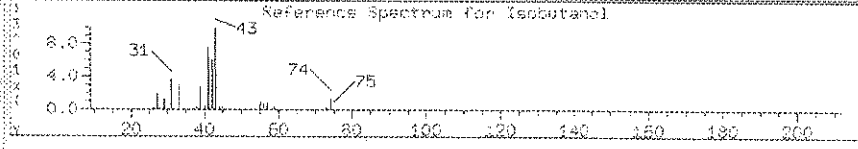
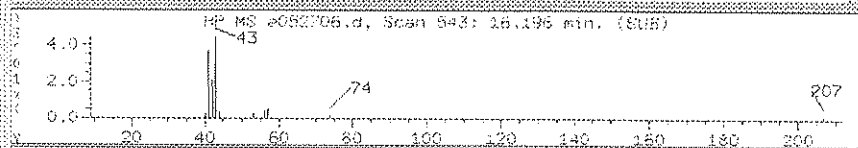
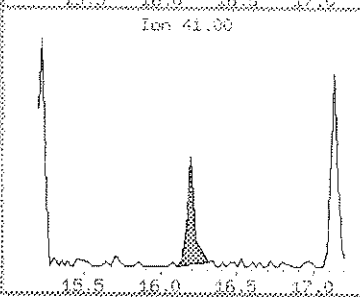
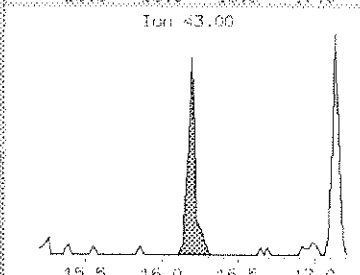
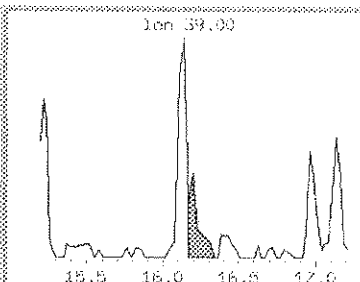
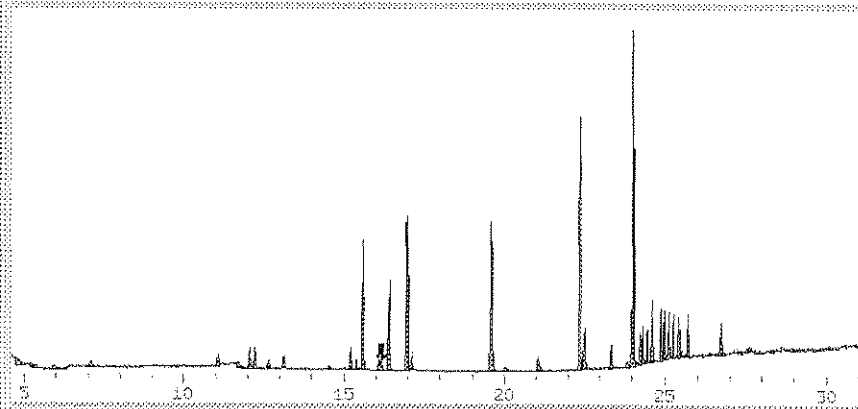


Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
	16.196	20001			5692		
	15.703	1028			293		
2	15.826	710	0.000	0.000	100	a	
	16.196	20001			2817		
	15.703	1028			145		
3	16.135	28393	0.000	0.000	100	a	

Handwritten signature

Sample: ICAL Type: CALIB_7 Inj.Date: 27-MAY-2015 09:51

- ** 46 Bromochlorometl
- ** 58 1,4-Difluorobe
- ** 75 Chlorobenzene-
- 1209 Freon 143a
- 1 1 Freon 134a
- 3 Freon 152A
- + 5 Freon 22
- + 210 Freon 142b
- + 211 Freon 21
- + 212 1,2-Dichlorotr
- + 213 Freon 123
- + 214 Cyclopentene
- + 205 1-Propanol
- + 201 2,2-Dichloropr
- 186 1,1-Dichloropr
- * 218 Isobutanol**
- + 219 1-Butanol
- + 86 1,3-Dichloropr
- + 199 Butyl Acetate
- + 79 1,1,1,2-Tetracl
- + 198 2-Heptanone
- + 216 Cyclohexanone
- + 185 Bromobenzene
- + 91 1,2,3-Trichlor
- + 93 2-Chlorotoluen



Hit# RT(min) Response Amount Conc Ratio Flags Report:

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	16.196	9866	0.5698	0.5698	100	M	
	16.196	20001			203		
	16.196	15138			153		

- Mark Isobutanol Undetected.

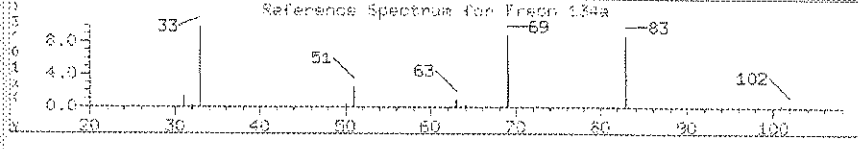
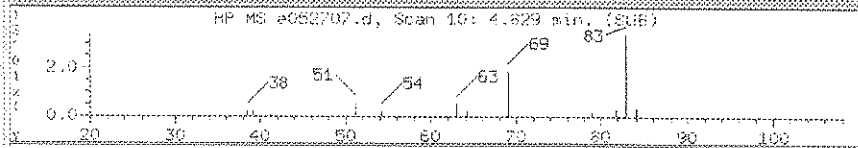
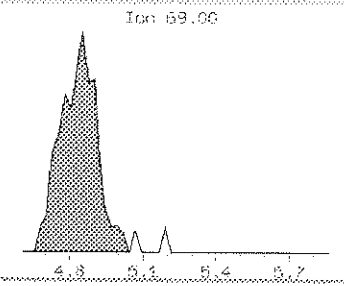
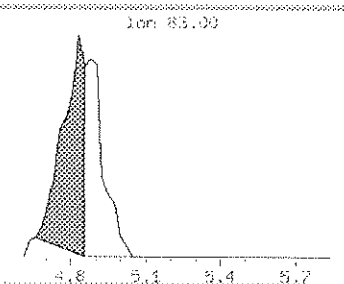
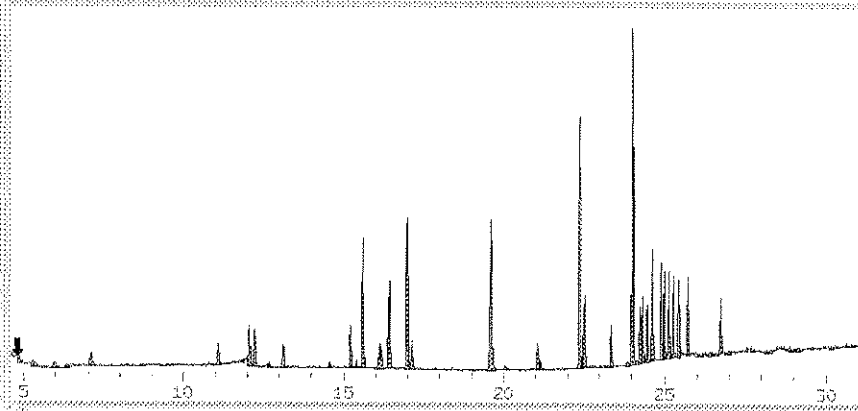
Handwritten: 45/2/10

After *5/ 6/27/15*

Correct Baseline	
Split Peak	
Merge Peak	<input checked="" type="checkbox"/>
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Sample: ICAL Type: SAMPLE Inj.Date: 27-MAY-2015 10:36

- * 46 Bromochlorometh
- * 58 1,4-Difluorobenz
- * 75 Chlorobenzene-
- 1209 Freon 143a
- * 1 Freon 134a
- + 3 Freon 152A
- + 5 Freon 22
- + 210 Freon 142b
- + 211 Freon 21
- + 212 1,2-Dichlorotr
- + 213 Freon 123
- + 214 Cyclopentene
- + 205 1-Propanol
- + 201 2,2-Dichloropr
- + 186 1,1-Dichloropr
- + 218 Isobutanol
- + 219 1-Butanol
- + 86 1,3-Dichloropr
- + 199 Butyl Acetate
- + 79 1,1,1,2-Tetracl
- + 198 2-Heptanone
- + 216 Cyclohexanone
- + 185 Bromobenzene
- + 91 1,2,3-Trichlor
- + 93 2-Chlorstoluen



0052707.d

Hit# RT(min) Response Amount Conc Ratio Flags Report:

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	4.829	22458	0.6536	0.6536	100		
	4.853	21997			98		
2	4.877	19259	0.5605	0.5605	100		
	4.853	21997			114		

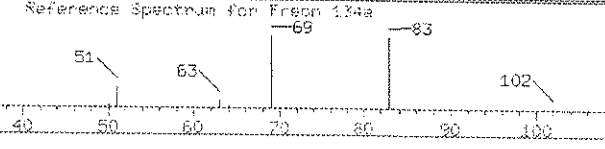
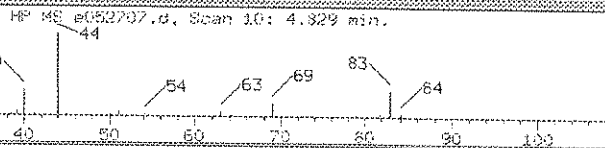
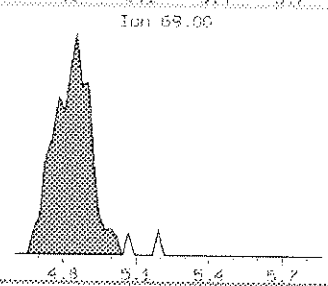
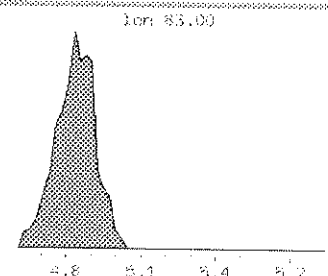
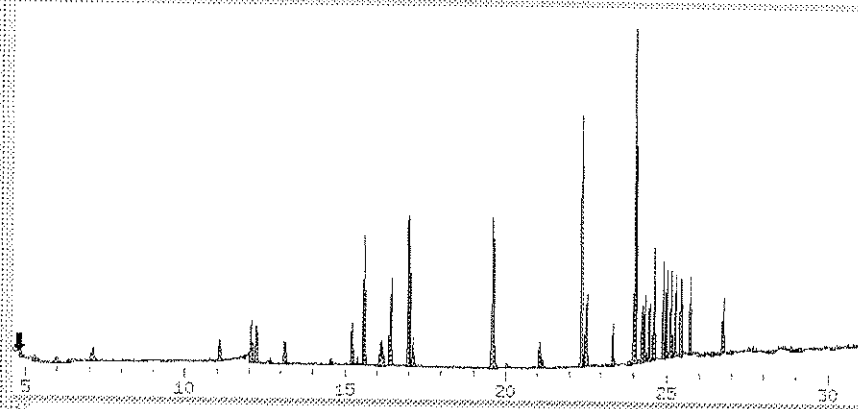
- Mark Freon 134a Undetected.

B. G. Li

File Settings Data Browser Process Spectra Help

Sample: ICAL Type: SAMPLE Inj.Date: 27-MAY-2015 10:36

- ** 46 Bromochlorometh
- ** 58 1,4-Difluoroben
- ** 75 Chlorobenzene-
- 1209 Freon 134a
- * 1 Freon 134a**
- + 3 Freon 152A
- + 5 Freon 22
- + 210 Freon 142b
- + 211 Freon 21
- + 212 1,2-Dichlorotr
- + 213 Freon 123
- + 214 Cyclopentene
- + 205 1-Propanol
- + 201 2,2-Dichloropr
- + 186 1,1-Dichloropr
- + 218 Isobutanol
- + 219 1-Butanol
- + 86 1,3-Dichloropr
- + 199 Butyl Acetate
- + 79 1,1,1,2-Tetracl
- + 198 2-Heptanone
- + 216 Cyclohexanone
- + 185 Bromobenzene
- + 91 1,2,3-Trichloro
- + 93 2-Chlorotoluen



0052707.d

Done
Help

Hit# RT(min) Response Amount Cone Ratio Flags Report:

Hit#	RT(min)	Response	Amount	Cone Ratio	Flags	Report:
1	4.829	39612	1.153	1.153	100	N
	4.853	21997			56	

- Mark Freon 134a Undetected.

45 5/27/15

After

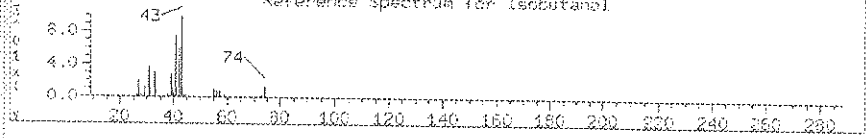
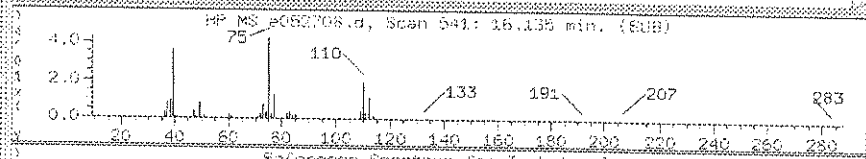
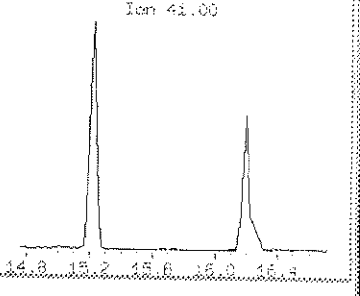
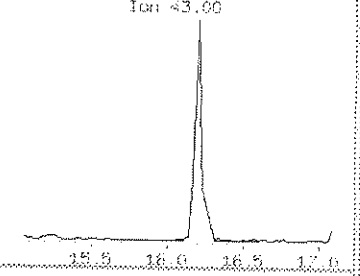
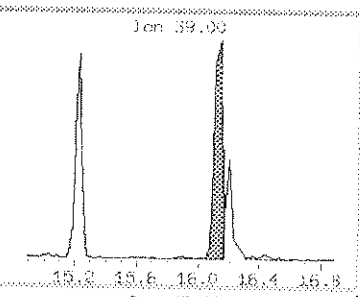
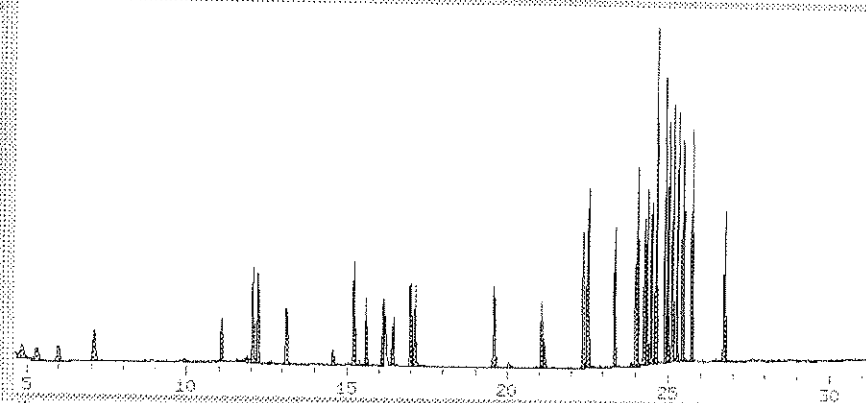
67 5/27/15

Correct Baseline	
Split Peak	X
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Sample: ICAL Type: CALIB_9 Inj.Date: 27-MAY-2015 11:25

- ** 46 Bromochloromet
- ** 58 1,4-Difluorobe
- ** 75 Chlorobenzene-
- 1209 Freon 143a
- + 1 Freon 134a
- + 3 Freon 152A
- + 5 Freon 22
- + 210 Freon 142b
- + 211 Freon 21
- + 212 1,2-Dichlorotr
- + 213 Freon 123
- + 214 Cyclopentene
- + 205 1-Propanol
- + 201 2,2-Dichloropn
- + 186 1,1-Dichloropn
- + 1218 Isobutanol**
- + 219 1-Butanol
- + 86 1,3-Dichloropn
- + 193 Butyl Acetate
- 79 1,1,1,2-Tetracl
- + 198 2-Heptanone
- + 216 Cyclohexanone
- + 185 Bromobenzene
- + 91 1,2,3-Trichlor
- + 93 2-Chlorotoluen

s052708.d



Done:
Help:

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
	16.073	835			160		
	15.672	599			114		
2	15.888	2250	0.07693	0.07693	100	TaH	
	16.073	835			37		
	15.734	850			38		
3	16.135	146232	5.000	5.000	100	H	

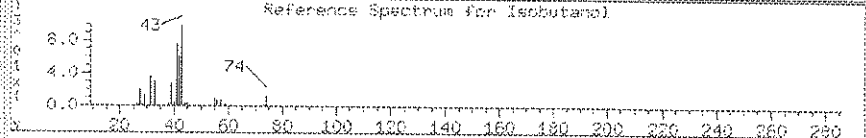
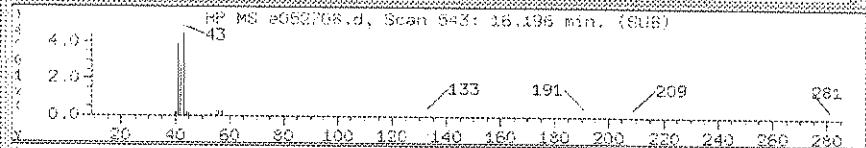
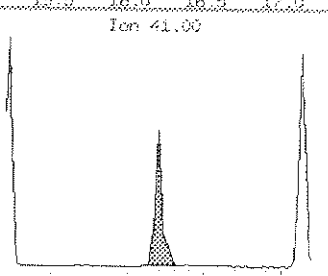
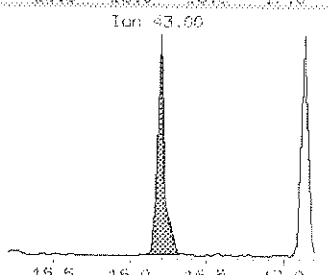
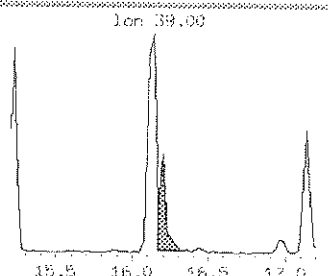
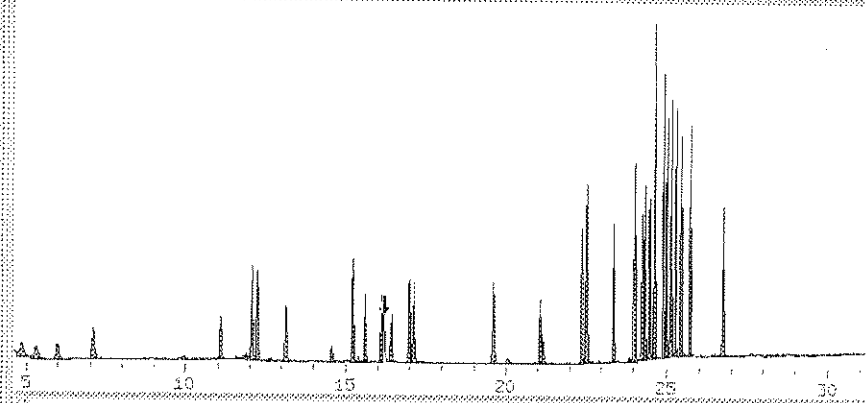
Handwritten signature

File Edit View Data Processing System Help

Sample: ICA1 Type: CALIB_9 Inj.Date: 27-MAY-2015 11:25

- ** 46 Bromochlorometh
- ** 58 1,4-Difluorobenz
- ** 75 Chlorobenzene
- 1209 Freon 143a
- + 1 Freon 134a
- + 3 Freon 152a
- + 5 Freon 22
- 210 Freon 142b
- 211 Freon 21
- + 212 1,2-Dichlorotr
- + 213 Freon 123
- + 214 Cyclopentene
- + 205 1-Propanol
- + 201 2,2-Dichloropr
- + 185 1,1-Dichloropr
- + 218 Isobutanol**
- + 219 1-Butanol
- + 85 1,3-Dichloropr
- + 199 Butyl Acetate
- + 79 1,1,1,2-Tetracl
- + 198 2-Heptanone
- + 216 Cyclohexanone
- + 185 Bromobenzene
- + 91 1,2,3-Trichlor
- + 93 2-Chlorotoluene

052708.d



Hit# RT(min) Response Amount Conc Ratio Flags Report:

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	16.196	77064	5.000	5.000	100	MH	
	16.196	169286			220		
	16.196	142629			185		

- Mark Isobutanol Undetected.

Done:
Help:

48 5/27/15

After

48 5/27/15

Correct Baseline	
Split Peak	
Merge Peak	
Zoom in	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	X
Corrected Peak Integration	

Air Toxics Ltd.
Modified EPA Methods TO-14A/TO-15 Low Level
Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Freon 12
Freon 114
Chloromethane
Vinyl Chloride
1,3-Butadiene
Bromomethane
Chloroethane
Freon 11
Ethanol
Freon 113
1,1-Dichloroethene
Acetone
2-Propanol
Carbon Disulfide
Methylene Chloride
Methyl tert-butyl ether
trans-1,2-Dichloroethene
Hexane
1,1-Dichloroethane
2-Butanone (Methyl Ethyl Ketone)
cis-1,2-Dichloroethene
Tetrahydrofuran
Chloroform
1,1,1-Trichloroethane
Cyclohexane
Carbon Tetrachloride
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Heptane
Trichloroethene
1,2-Dichloropropane
1,4-Dioxane
Bromodichloromethane
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethene
2-Hexanone
Dibromochloromethane
1,2-Dibromoethane (EDB)
Chlorobenzene
Ethyl Benzene
m,p-Xylene
o-Xylene
Styrene
Bromoform
Cumene
1,1,2,2-Tetrachloroethane
Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
alpha-Chlorotoluene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Surrogates:
Bromofluorobenzene

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/18May2015.b/e051806a.d
 Lab Smp Id: ICV Client Smp ID: ICV
 Inj Date : 18-MAY-2015 12:12
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2716-220
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/18May2015.b/e1510515a.m
 Meth Date : 18-May-2015 14:59 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 20:07 Cal File: e051515.d
 Als bottle: 1 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT09.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	178363 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	134517			46.94- 106.94	75.42
15.611	15.611 (1.000)	49	259417			103.66- 163.66	145.44
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.987 (1.000)	114	622291 5.00000			80.00- 120.00	100.00
16.963	16.987 (1.000)	88	85659			0.00- 43.53	13.77
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	591209 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	247330			13.25- 73.25	41.83
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	276353 4.93207	4.932		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	122103			24.87- 84.87	44.18

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	492424	4.60647	4.606	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	56538			0.00- 40.24	11.48
19.601	19.601	(1.156)	100	344887			39.39- 99.39	70.04

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	295034	4.92909	4.929	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	380253			88.06- 148.06	128.88
24.042	24.042	(1.074)	176	284291			66.20- 126.20	96.36

2 Propylene						CAS #: 115-07-1		
5.021	5.021	(0.322)	41	170820	4.52413	4.524	80.00- 120.00	100.00
5.021	5.021	(0.322)	42	114208			38.37- 98.37	66.86
5.046	5.021	(0.323)	39	131940			42.39- 102.39	77.24

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.479	5.528	(0.351)	85	777829	4.91518	4.915	80.00- 120.00	100.00
5.504	5.528	(0.353)	87	245212			2.12- 62.12	31.53

6 Freon 114						CAS #: 76-14-2		
6.829	6.853	(0.437)	135	594585	4.91209	4.912	80.00- 120.00	100.00
6.829	6.853	(0.437)	137	199132			1.87- 61.87	33.49

7 Chloromethane						CAS #: 74-87-3		
7.167	7.191	(0.459)	50	215909	4.66240	4.662	80.00- 120.00	100.00
7.167	7.191	(0.459)	52	66554			2.64- 62.64	30.83

9 Butane						CAS #: 106-97-8		
7.872	7.889	(0.504)	58	37689	5.16720	5.167	80.00- 120.00	100.00
7.872	7.889	(0.504)	43	336635			798.08- 858.08	893.19

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.045	(0.514)	62	178692	4.90054	4.900	80.00- 120.00	100.00
8.028	8.045	(0.514)	64	54988			1.55- 61.55	30.77

11 1,3-Butadiene						CAS #: 106-99-0		
8.236	8.271	(0.528)	54	164036	5.03787	5.038	80.00- 120.00	100.00
8.253	8.271	(0.529)	39	182974			68.70- 128.70	111.55

12 Bromomethane						CAS #: 74-83-9		
9.729	9.746	(0.623)	94	158390	4.71242	4.712	80.00- 120.00	100.00
9.729	9.746	(0.623)	96	144384			67.78- 127.78	91.16

13 Chloroethane						CAS #: 75-00-3		
10.195	10.233	(0.653)	64	73917	4.50563	4.506	80.00- 120.00	100.00
10.195	10.233	(0.653)	49	33370			0.00- 59.93	45.15

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		TARGET RANGE		RATIO	
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
13 Chloroethane (continued)									
10.214	10.233	(0.654)	66	22909		2.40-	62.40	30.99	

14 Isopentane CAS #: 78-78-4									
10.329	10.348	(0.662)	57	139337	4.57502	4.575	80.00-	120.00	100.00
10.329	10.348	(0.662)	43	222135			113.81-	173.81	159.42
10.329	10.348	(0.662)	42	192445			97.27-	157.27	138.11

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.976	(0.702)	101	803062	4.52050	4.520	80.00-	120.00	100.00
10.957	10.976	(0.702)	103	506231			34.06-	94.06	63.04

18 Ethanol CAS #: 64-17-5									
11.871	11.890	(0.760)	45	84182	5.00888	5.009	80.00-	120.00	100.00
11.852	11.890	(0.759)	46	32796			7.61-	67.61	38.96
11.852	11.890	(0.759)	43	25172			0.00-	55.64	29.90

21 1,1-Dichloroethene CAS #: 75-35-4									
12.290	12.309	(0.787)	98	123333	4.92378	4.924	80.00-	120.00	100.00
12.290	12.309	(0.787)	61	359749			208.58-	268.58	291.69
12.290	12.309	(0.787)	96	191378			127.45-	187.45	155.17

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	387755	4.46802	4.468	80.00-	120.00	100.00
12.271	12.290	(0.786)	153	247530			34.06-	94.06	63.84
12.271	12.290	(0.786)	101	468629			81.22-	141.22	120.86

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	91799	4.21715	4.217	80.00-	120.00	100.00
12.576	12.576	(0.806)	43	418517			294.37-	354.37	455.91

23 Carbon Disulfide CAS #: 75-15-0									
12.652	12.671	(0.810)	76	435635	4.13023	4.130	80.00-	120.00	100.00

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	58749	4.16428	4.164	80.00-	120.00	100.00
13.090	13.090	(0.839)	41	235217			276.20-	336.20	400.38

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	383303	4.99940	4.999	80.00-	120.00	100.00
12.918	12.918	(0.828)	43	99002			0.00-	55.86	25.83
12.899	12.918	(0.826)	59	12594			0.00-	34.14	3.29

29 Methylene Chloride CAS #: 75-09-2									
13.357	13.376	(0.856)	84	142389	4.46909	4.469	80.00-	120.00	100.00
13.357	13.376	(0.856)	49	257904			112.26-	172.26	181.13

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET	RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
29 Methylene Chloride (continued)									
13.357	13.376	(0.856)	51	73147			12.15-	72.15	51.37

31 MTBE CAS #: 1634-04-4									
13.701	13.701	(0.878)	73	504934	4.82255	4.822	80.00-	120.00	100.00
13.674	13.701	(0.876)	57	128511			0.00-	54.97	25.45
13.674	13.701	(0.876)	41	154607			0.00-	55.95	30.62

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.756	(0.879)	98	121469	4.52435	4.524	80.00-	120.00	100.00
13.729	13.756	(0.879)	61	284337			175.95-	235.95	234.08
13.729	13.756	(0.879)	96	190373			121.11-	181.11	156.73

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	321071	5.54720	5.547	80.00-	120.00	100.00
14.031	14.031	(0.899)	43	238202			35.27-	95.27	74.19
14.031	14.031	(0.899)	86	49988			0.00-	46.67	15.57

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	394447	4.89372	4.894	80.00-	120.00	100.00
14.442	14.442	(0.925)	65	118515			0.10-	60.10	30.05

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	56207	5.24763	5.248	80.00-	120.00	100.00
14.470	14.470	(0.927)	42	68530			58.55-	118.55	121.92
14.470	14.470	(0.927)	43	649294			1046.17-	1106.17	1155.18

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.278	(0.977)	98	167166	5.45127	5.451	80.00-	120.00	100.00
15.259	15.278	(0.977)	61	355917			155.56-	215.56	212.91
15.259	15.278	(0.977)	96	247606			124.76-	184.76	148.12

42 2-Butanone CAS #: 78-93-3									
15.259	15.259	(0.977)	72	84394	5.05056	5.050	80.00-	120.00	100.00
15.259	15.259	(0.977)	43	493557			419.99-	479.99	584.82
15.259	15.259	(0.977)	57	36187			5.97-	65.97	42.88

44 Tetrahydrofuran CAS #: 109-99-9									
15.580	15.611	(0.998)	42	255333	5.07506	5.075	80.00-	120.00	100.00
15.611	15.611	(1.000)	71	75120			4.62-	64.62	29.42
15.611	15.611	(1.000)	72	80636			8.51-	68.51	31.58

47 Chloroform CAS #: 67-66-3									
15.672	15.672	(1.004)	83	550860	4.81318	4.813	80.00-	120.00	100.00
15.672	15.672	(1.004)	85	375327			36.52-	96.52	68.13

CONCENTRATIONS								
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
					(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
48 Cyclohexane					CAS #: 110-82-7			
15.888	15.919	(1.018)	84	271203	5.28090	5.281	80.00- 120.00	100.00
15.888	15.919	(1.018)	56	347789			96.90- 156.90	128.24
15.888	15.919	(1.018)	41	248812			38.62- 98.62	91.74

49 1,1,1-Trichloroethane					CAS #: 71-55-6			
15.888	15.919	(1.018)	97	710225	4.83375	4.834	80.00- 120.00	100.00
15.888	15.919	(1.018)	99	468012			33.43- 93.43	65.90

51 Carbon Tetrachloride					CAS #: 56-23-5			
16.104	16.104	(1.032)	119	826537	4.99428	4.994	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	859307			74.78- 134.78	103.96

52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.337	16.337	(1.047)	56	474990	4.90885	4.909	80.00- 120.00	100.00
16.337	16.337	(1.047)	57	1368978			264.46- 324.46	288.21
16.337	16.337	(1.047)	41	520571			53.88- 113.88	109.60

53 Benzene					CAS #: 71-43-2			
16.433	16.433	(0.969)	78	612154	4.81225	4.812	80.00- 120.00	100.00
16.433	16.433	(0.969)	77	145482			0.00- 53.40	23.77

56 1,2-Dichloroethane					CAS #: 107-06-2			
16.530	16.554	(0.974)	62	471731	5.08356	5.084	80.00- 120.00	100.00
16.530	16.554	(0.974)	64	150962			2.90- 62.90	32.00

57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.977)	57	219645	5.14876	5.149	80.00- 120.00	100.00
16.578	16.578	(0.977)	100	95768			14.70- 74.70	43.60
16.578	16.578	(0.977)	43	466003			159.65- 219.65	212.16

59 Trichloroethene					CAS #: 79-01-6			
17.397	17.397	(1.026)	130	426789	4.70569	4.706	80.00- 120.00	100.00
17.397	17.397	(1.026)	95	335263			48.43- 108.43	78.55
17.397	17.397	(1.026)	97	219426			20.03- 80.03	51.41

60 Methylcyclohexane					CAS #: 108-87-2			
17.614	17.614	(1.038)	83	340937	5.20827	5.208	80.00- 120.00	100.00
17.614	17.614	(1.038)	55	346874			57.78- 117.78	101.74
17.614	17.614	(1.038)	56	102051			0.00- 58.27	29.93

61 1,2-Dichloropropane					CAS #: 78-87-5			
17.831	17.831	(1.051)	63	205624	4.34906	4.349	80.00- 120.00	100.00
17.831	17.831	(1.051)	62	145661			41.39- 101.39	70.84
17.831	17.831	(1.051)	41	192677			30.08- 90.08	93.70

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
62 1,4-Dioxane						CAS #: 123-91-1			
17.975	17.975	(1.060)	88	140700	4.40576	4.406		80.00- 120.00	100.00
17.975	17.975	(1.060)	58	104986				41.23- 101.23	74.62
17.975	17.975	(1.060)	57	39091				0.00- 53.84	27.78

63 Bromodichloromethane						CAS #: 75-27-4			
18.264	18.264	(1.077)	83	553284	4.61859	4.618		80.00- 120.00	100.00
18.264	18.264	(1.077)	85	379948				37.91- 97.91	68.67

64 cis-1,3-Dichloropropene						CAS #: 10061-01-5			
19.108	19.108	(1.126)	75	277623	4.31438	4.314		80.00- 120.00	100.00
19.108	19.108	(1.126)	77	90744				2.56- 62.56	32.69
19.108	19.108	(1.126)	39	211469				19.94- 79.94	76.17

65 4-Methyl-2-pentanone						CAS #: 108-10-1			
19.310	19.310	(1.138)	43	522955	5.12166	5.122		80.00- 120.00	100.00
19.310	19.310	(1.138)	58	162844				7.11- 67.11	31.14
19.310	19.310	(1.138)	85	70156				0.00- 46.29	13.42

68 Toluene						CAS #: 108-88-3			
19.758	19.758	(1.165)	91	786617	4.94766	4.948		80.00- 120.00	100.00
19.758	19.758	(1.165)	92	448139				28.99- 88.99	56.97

69 trans-1,3-Dichloropropene						CAS #: 10061-02-6			
20.331	20.331	(0.908)	75	350716	5.13135	5.131		80.00- 120.00	100.00
20.331	20.331	(0.908)	77	112726				3.77- 63.77	32.14
20.331	20.331	(0.908)	39	227590				18.43- 78.43	64.89

70 1,1,2-Trichloroethane						CAS #: 79-00-5			
20.716	20.716	(0.925)	97	265937	4.60818	4.608		80.00- 120.00	100.00
20.716	20.716	(0.925)	99	172164				34.78- 94.78	64.74
20.716	20.716	(0.925)	83	199824				49.45- 109.45	75.14

71 Tetrachloroethene						CAS #: 127-18-4			
20.881	20.881	(0.933)	166	444978	5.07449	5.074		80.00- 120.00	100.00
20.881	20.881	(0.933)	129	428182				54.11- 114.11	96.23
20.881	20.881	(0.933)	131	419283				55.30- 115.30	94.23

72 2-Hexanone						CAS #: 591-78-6			
21.046	21.045	(0.940)	58	246280	5.13252	5.132		80.00- 120.00	100.00
21.046	21.045	(0.940)	43	595531				162.06- 222.06	241.81
21.046	21.045	(0.940)	100	56391				0.00- 52.96	22.90

73 Dibromochloromethane						CAS #: 124-48-1			
21.458	21.457	(0.958)	129	792639	5.19530	5.195		80.00- 120.00	100.00
21.458	21.457	(0.958)	127	593731				46.93- 106.93	74.91

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
74 1,2-Dibromoethane									
							CAS #: 106-93-4		
21.705	21.705	(0.970)	107	506761	5.02027	5.020	80.00-	120.00	100.00
21.705	21.705	(0.970)	109	505052			68.26-	128.26	99.66

76 Chlorobenzene									
							CAS #: 108-90-7		
22.428	22.448	(1.002)	112	777366	4.76313	4.763	80.00-	120.00	100.00
22.428	22.448	(1.002)	114	254777			1.73-	61.73	32.77
22.428	22.448	(1.002)	77	365146			16.56-	76.56	46.97

77 Ethyl Benzene									
							CAS #: 100-41-4		
22.511	22.511	(1.006)	106	363671	4.93013	4.930	80.00-	120.00	100.00
22.511	22.511	(1.006)	91	1068773			261.70-	321.70	293.88

80 m,p-Xylene									
							CAS #: 108-38-3		
22.677	22.697	(1.013)	106	444614	5.05081	5.051	80.00-	120.00	100.00
22.677	22.697	(1.013)	91	857607			150.71-	210.71	192.89

81 o-Xylene									
							CAS #: 95-47-6		
23.278	23.278	(1.040)	106	413682	5.36018	5.360	80.00-	120.00	100.00
23.278	23.278	(1.040)	91	821573			165.12-	225.12	198.60

83 Styrene									
							CAS #: 100-42-5		
23.319	23.319	(1.042)	104	740752	5.42995	5.430	80.00-	120.00	100.00
23.319	23.319	(1.042)	78	370547			12.29-	72.29	50.02

84 Bromoform									
							CAS #: 75-25-2		
23.661	23.661	(1.057)	173	568727	4.83036	4.830	80.00-	120.00	100.00
23.661	23.661	(1.057)	171	311497			23.53-	83.53	54.77

85 Cumene									
							CAS #: 98-82-8		
23.751	23.751	(1.061)	105	1273601	5.18984	5.190	80.00-	120.00	100.00
23.751	23.751	(1.061)	120	369878			0.00-	58.84	29.04

89 1,1,2,2-Tetrachloroethane									
							CAS #: 79-34-5		
24.222	24.222	(1.082)	83	550447	4.77513	4.775	80.00-	120.00	100.00
24.222	24.222	(1.082)	85	385951			37.40-	97.40	70.12

90 Propylbenzene									
							CAS #: 103-65-1		
24.289	24.289	(1.085)	91	1457623	5.10597	5.106	80.00-	120.00	100.00
24.289	24.289	(1.085)	120	415867			0.00-	58.05	28.53

92 4-Ethyltoluene									
							CAS #: 622-96-8		
24.424	24.424	(1.091)	105	1313514	5.29067	5.291	80.00-	120.00	100.00
24.424	24.424	(1.091)	120	424882			2.80-	62.80	32.35

94 1,3,5-Trimethylbenzene									
							CAS #: 108-67-8		
24.491	24.491	(1.094)	105	1146224	5.40596	5.406	80.00-	120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====
94 1,3,5-Trimethylbenzene (continued)								
24.491	24.491	(1.094)	120	577633			23.16- 83.16	50.39

98 1,2,4-Trimethylbenzene					CAS #: 95-63-6			
24.940	24.962	(1.114)	105	876863	5.30003	5.300	80.00- 120.00	100.00
24.940	24.962	(1.114)	120	435810			19.74- 79.74	49.70

101 1,3-Dichlorobenzene					CAS #: 541-73-1			
25.343	25.343	(1.132)	146	814034	5.04538	5.045	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	486665			31.66- 91.66	59.78
25.343	25.343	(1.132)	111	305590			6.44- 66.44	37.54

104 1,4-Dichlorobenzene					CAS #: 106-46-7			
25.455	25.455	(1.137)	146	805788	5.27351	5.274	80.00- 120.00	100.00
25.455	25.455	(1.137)	148	489360			32.25- 92.25	60.73
25.455	25.455	(1.137)	111	300638			4.82- 64.82	37.31

105 alpha-chlorotoluene					CAS #: 100-44-7			
25.590	25.590	(1.143)	91	931186	5.36634	5.366	80.00- 120.00	100.00
25.590	25.590	(1.143)	126	249883			0.00- 57.25	26.83

108 1,2-Dichlorobenzene					CAS #: 95-50-1			
25.881	25.881	(1.156)	146	737117	5.16581	5.166	80.00- 120.00	100.00
25.881	25.881	(1.156)	148	449790			31.25- 91.25	61.02
25.881	25.881	(1.156)	111	305330			7.65- 67.65	41.42

112 1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	292583	4.33592	4.336	80.00- 120.00	100.00
27.630	27.630	(1.234)	182	276394			66.40- 126.40	94.47

113 Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	232519	4.07446	4.074	80.00- 120.00	100.00
27.719	27.719	(1.238)	223	151444			31.93- 91.93	65.13

114 Naphthalene					CAS #: 91-20-3			
27.966	27.966	(1.249)	128	53957	0.32058	0.3206	80.00- 120.00	100.00(a)
27.966	27.966	(1.249)	127	7857			0.00- 47.34	14.56

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 18-MAY-2015
Lab File ID: e051806a.d	Calibration Time: 10:13
Lab Smp Id: ICV	Client Smp ID: ICV
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/18May2015.b/e15l0515a.m	
Misc Info: 5.0ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	180559	108335	252783	178363	-1.22
58 1,4-Difluorobenze	663550	398130	928970	622291	-6.22
75 Chlorobenzene-d5	634456	380674	888238	591209	-6.82

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.96	-0.14
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 18May2015
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: ICV Client Smp ID: ICV
 Level: LOW Operator: ef
 Data Type: MS DATA SampleType: LCS
 SpikeList File: AT09.spk Quant Type: ISTD
 Sublist File: AT09.sub
 Method File: /chem/msde.i/18May2015.b/e1510515a.m
 Misc Info: 5.0ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
4 Dichlorodifluorome	5.000	4.915	98.30	70-130
2 Propylene	5.000	4.524	90.48	60-140
6 Freon 114	5.000	4.912	98.24	70-130
7 Chloromethane	5.000	4.662	93.25	70-130
10 Vinyl Chloride	5.000	4.900	98.01	70-130
11 1,3-Butadiene	5.000	5.038	100.76	70-130
12 Bromomethane	5.000	4.712	94.25	70-130
13 Chloroethane	5.000	4.506	90.11	70-130
16 Trichlorofluoromet	5.000	4.520	90.41	70-130
18 Ethanol	5.000	5.009	100.18	70-130
19 Freon 113	5.000	4.468	89.36	70-130
21 1,1-Dichloroethene	5.000	4.924	98.48	70-130
22 Acetone	5.000	4.217	84.34	70-130
23 Carbon Disulfide	5.000	4.130	82.60	70-130
25 2-Propanol	5.000	4.999	99.99	70-130
26 3-Chloroprene	5.000	4.164	83.29	70-130
29 Methylene Chloride	5.000	4.469	89.38	70-130
31 MTBE	5.000	4.822	96.45	70-130
32 trans-1,2-Dichloro	5.000	4.524	90.49	70-130
35 Hexane	5.000	5.547	110.94	70-130
37 1,1-Dichloroethane	5.000	4.894	97.87	70-130
38 Vinyl Acetate	5.000	5.248	104.95	60-140
41 cis-1,2-Dichloroet	5.000	5.451	109.03	70-130
42 2-Butanone	5.000	5.050	101.01	70-130
44 Tetrahydrofuran	5.000	5.075	101.50	70-130
47 Chloroform	5.000	4.813	96.26	70-130
48 Cyclohexane	5.000	5.281	105.62	70-130
49 1,1,1-Trichloroeth	5.000	4.834	96.68	70-130
51 Carbon Tetrachlori	5.000	4.994	99.89	70-130
52 2,2,4-Trimethylpen	5.000	4.909	98.18	70-130
53 Benzene	5.000	4.812	96.25	70-130
57 Heptane	5.000	5.149	102.98	70-130
56 1,2-Dichloroethane	5.000	5.084	101.67	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
59 Trichloroethene	5.000	4.706	94.11	70-130
61 1,2-Dichloropropan	5.000	4.349	86.98	70-130
62 1,4-Dioxane	5.000	4.406	88.12	70-130
63 Bromodichlorometha	5.000	4.618	92.37	70-130
64 cis-1,3-Dichloropr	5.000	4.314	86.29	70-130
65 4-Methyl-2-pentano	5.000	5.122	102.43	70-130
68 Toluene	5.000	4.948	98.95	70-130
69 trans-1,3-Dichloro	5.000	5.131	102.63	70-130
70 1,1,2-Trichloroeth	5.000	4.608	92.16	70-130
72 2-Hexanone	5.000	5.132	102.65	70-130
71 Tetrachloroethene	5.000	5.074	101.49	70-130
73 Dibromochlorometha	5.000	5.195	103.91	70-130
74 1,2-Dibromoethane	5.000	5.020	100.41	70-130
76 Chlorobenzene	5.000	4.763	95.26	70-130
77 Ethyl Benzene	5.000	4.930	98.60	70-130
80 m,p-Xylene	5.000	5.051	101.02	70-130
81 o-Xylene	5.000	5.360	107.20	70-130
83 Styrene	5.000	5.430	108.60	70-130
84 Bromoform	5.000	4.830	96.61	70-130
85 Cumene	5.000	5.190	103.80	70-130
89 1,1,2,2-Tetrachlor	5.000	4.775	95.50	70-130
90 Propylbenzene	5.000	5.106	102.12	70-130
92 4-Ethyltoluene	5.000	5.291	105.81	70-130
94 1,3,5-Trimethylben	5.000	5.406	108.12	70-130
98 1,2,4-Trimethylben	5.000	5.300	106.00	70-130
101 1,3-Dichlorobenzen	5.000	5.045	100.91	70-130
104 1,4-Dichlorobenzen	5.000	5.274	105.47	70-130
105 alpha-chlorotoluen	5.000	5.366	107.33	70-130
108 1,2-Dichlorobenzen	5.000	5.166	103.32	70-130
112 1,2,4-Trichloroben	5.000	4.336	86.72	70-130
113 Hexachlorobutadien	5.000	4.074	81.49	70-130
114 Naphthalene	0.5000	0.3206	64.12	60-140
14 Isopentane	5.000	4.575	91.50	60-140
9 Butane	5.000	5.167	103.34	60-140
60 Methylcyclohexane	5.000	5.208	104.17	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	4.932	98.64	70-130
\$ 67 Toluene-d8	5.000	4.606	92.13	70-130
\$ 87 Bromofluorobenzene	5.000	4.929	98.58	70-130

Date : 18-MAY-2015 12:12

Client ID: ICV

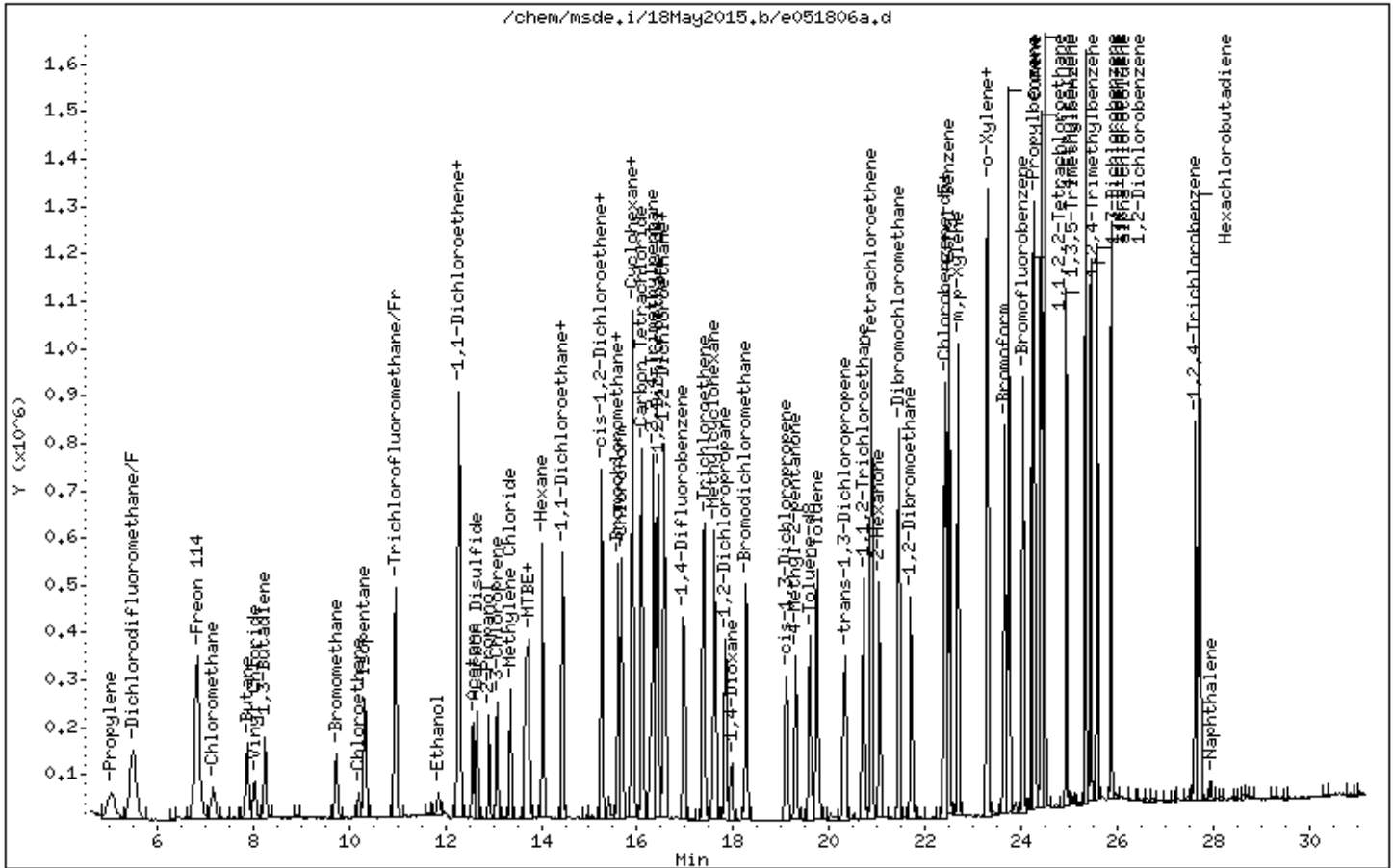
Instrument: msde.i

Sample Info: 25mL# 2716-220

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051507.d
 Lab Smp Id: ICAL Client Smp ID: Level 5
 Inj Date : 15-MAY-2015 13:24
 Operator : ef Inst ID: msde.i
 Smp Info : 250mL# 2716-300
 Misc Info : 0.05ppbv (0.05ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 13:24 Cal File: e051507.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Level05.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT	ON-COL	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5								
15.611	15.611	(1.000)	130	119886	5.00000		80.00- 120.00	100.00
15.611	15.611	(1.000)	128	93977			46.94- 106.94	78.39
15.611	15.611	(1.000)	49	150213			103.66- 163.66	125.30
* 58 1,4-Difluorobenzene CAS #: 540-36-3								
16.963	16.963	(1.000)	114	414216	5.00000		80.00- 120.00	100.00
16.963	16.963	(1.000)	88	54021			0.00- 43.53	13.04
* 75 Chlorobenzene-d5 CAS #: 3114-55-4								
22.386	22.386	(1.000)	117	413031	5.00000		80.00- 120.00	100.00
22.386	22.386	(1.000)	82	161147			13.25- 73.25	39.02
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0								
16.433	16.433	(1.053)	65	188861	5.00000	5.015	80.00- 120.00	100.00
16.433	16.433	(1.053)	67	78660			24.87- 84.87	41.65

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	355983	5.00000	5.003	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	37891			0.00- 40.24	10.64
19.601	19.601	(1.156)	100	234825			39.39- 99.39	65.97

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.043	24.043	(1.074)	174	197833	5.00000	4.731	80.00- 120.00	100.00
24.043	24.043	(1.074)	95	243634			88.06- 148.06	123.15
24.043	24.043	(1.074)	176	196113			66.20- 126.20	99.13

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.480	5.480	(0.351)	85	4710	0.05000	0.04428	80.00- 120.00	100.00(a)
5.504	5.504	(0.353)	87	1976			2.12- 62.12	41.95

6 Freon 114						CAS #: 76-14-2		
6.853	6.853	(0.439)	135	3898	0.05000	0.04791	80.00- 120.00	100.00(a)
6.829	6.829	(0.437)	137	1076			1.87- 61.87	27.60

16 Trichlorofluoromethane/Fr11						CAS #: 75-69-4		
10.957	10.957	(0.702)	101	5973	0.05000	0.05002	80.00- 120.00	100.00
10.957	10.957	(0.702)	103	5962			34.06- 94.06	99.82

19 Freon 113						CAS #: 76-13-1		
12.271	12.271	(0.786)	151	2652	0.05000	0.04546	80.00- 120.00	100.00(a)
12.271	12.271	(0.786)	153	1380			34.06- 94.06	52.04
12.271	12.271	(0.786)	101	3810			81.22- 141.22	143.67

49 1,1,1-Trichloroethane						CAS #: 71-55-6		
15.888	15.888	(1.018)	97	4343	0.05000	0.04398	80.00- 120.00	100.00(a)
15.888	15.888	(1.018)	99	2907			33.43- 93.43	66.94

51 Carbon Tetrachloride						CAS #: 56-23-5		
16.104	16.104	(1.032)	119	6162	0.05000	0.05539	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	4958			74.78- 134.78	80.46

59 Trichloroethene						CAS #: 79-01-6		
17.397	17.397	(1.026)	130	2611	0.05000	0.04325	80.00- 120.00	100.00(a)
17.373	17.373	(1.024)	95	2212			48.43- 108.43	84.72
17.373	17.373	(1.024)	97	1236			20.03- 80.03	47.34

63 Bromodichloromethane						CAS #: 75-27-4		
18.264	18.264	(1.077)	83	4993	0.05000	0.06262	80.00- 120.00	100.00
18.289	18.289	(1.078)	85	2511			37.91- 97.91	50.29

70 1,1,2-Trichloroethane						CAS #: 79-00-5		
20.716	20.716	(0.925)	97	1514	0.05000	0.03755	80.00- 120.00	100.00(a)

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane (continued)								
20.716	20.716	(0.925)	99	1242			34.78- 94.78	82.03
20.716	20.716	(0.925)	83	1865			49.45- 109.45	123.18

71 Tetrachloroethene CAS #: 127-18-4								
20.881	20.881	(0.933)	166	2406	0.05000	0.03927	80.00- 120.00	100.00(a)
20.881	20.881	(0.933)	129	3154			54.11- 114.11	131.09
20.881	20.881	(0.933)	131	2099			55.30- 115.30	87.24

73 Dibromochloromethane CAS #: 124-48-1								
21.430	21.430	(0.957)	129	4133	0.05000	0.03878	80.00- 120.00	100.00(a)
21.458	21.458	(0.958)	127	4690			46.93- 106.93	113.48

74 1,2-Dibromoethane CAS #: 106-93-4								
21.705	21.705	(0.970)	107	3195	0.05000	0.04530	80.00- 120.00	100.00(a)
21.705	21.705	(0.970)	109	3303			68.26- 128.26	103.38

84 Bromoform CAS #: 75-25-2								
23.661	23.661	(1.057)	173	4100	0.05000	0.04984	80.00- 120.00	100.00(a)
23.661	23.661	(1.057)	171	1776			23.53- 83.53	43.32

89 1,1,2,2-Tetrachloroethane CAS #: 79-34-5								
24.222	24.222	(1.082)	83	5559	0.05000	0.06903	80.00- 120.00	100.00
24.222	24.222	(1.082)	85	1905			37.40- 97.40	34.27

94 1,3,5-Trimethylbenzene CAS #: 108-67-8								
24.491	24.491	(1.094)	105	6443	0.05000	0.04350	80.00- 120.00	100.00(a)
24.491	24.491	(1.094)	120	2897			23.16- 83.16	44.96

98 1,2,4-Trimethylbenzene CAS #: 95-63-6								
24.940	24.940	(1.114)	105	4975	0.05000	0.04304	80.00- 120.00	100.00(a)
24.940	24.940	(1.114)	120	2812			19.74- 79.74	56.52

101 1,3-Dichlorobenzene CAS #: 541-73-1								
25.343	25.343	(1.132)	146	5233	0.05000	0.04642	80.00- 120.00	100.00(a)
25.343	25.343	(1.132)	148	4211			31.66- 91.66	80.47
25.343	25.343	(1.132)	111	2614			6.44- 66.44	49.95

104 1,4-Dichlorobenzene CAS #: 106-46-7								
25.455	25.455	(1.137)	146	5323	0.05000	0.04986	80.00- 120.00	100.00(a)
25.455	25.455	(1.137)	148	4208			32.25- 92.25	79.05
25.455	25.455	(1.137)	111	1944			4.82- 64.82	36.52

112 1,2,4-Trichlorobenzene CAS #: 120-82-1								
27.630	27.630	(1.234)	180	3301	0.05000	0.07002	80.00- 120.00	100.00
27.630	27.630	(1.234)	182	2977			66.40- 126.40	90.18

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
108 1,2-Dichlorobenzene					CAS #: 95-50-1				
25.881	25.881	(1.156)	146	4926	0.05000	0.04941	80.00- 120.00	100.00(a)	
25.881	25.881	(1.156)	148	2301			31.25- 91.25	46.71	
25.881	25.881	(1.156)	111	1861			7.65- 67.65	37.78	

105 alpha-chlorotoluene					CAS #: 100-44-7				
25.590	25.590	(1.143)	91	5154	0.05000	0.04252	80.00- 120.00	100.00(a)	
25.590	25.590	(1.143)	126	2912			0.00- 57.25	56.50	

113 Hexachlorobutadiene					CAS #: 87-68-3				
27.719	27.719	(1.238)	225	2685	0.05000	0.06735	80.00- 120.00	100.00(a)	
27.719	27.719	(1.238)	223	3801			31.93- 91.93	141.56	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051507.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 5
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 0.05ppbv (0.05ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	119886	-29.20
58 1,4-Difluorobenze	587158	352295	822021	414216	-29.45
75 Chlorobenzene-d5	557421	334453	780389	413031	-25.90

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.96	-0.14
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 13:24

Client ID: Level 5

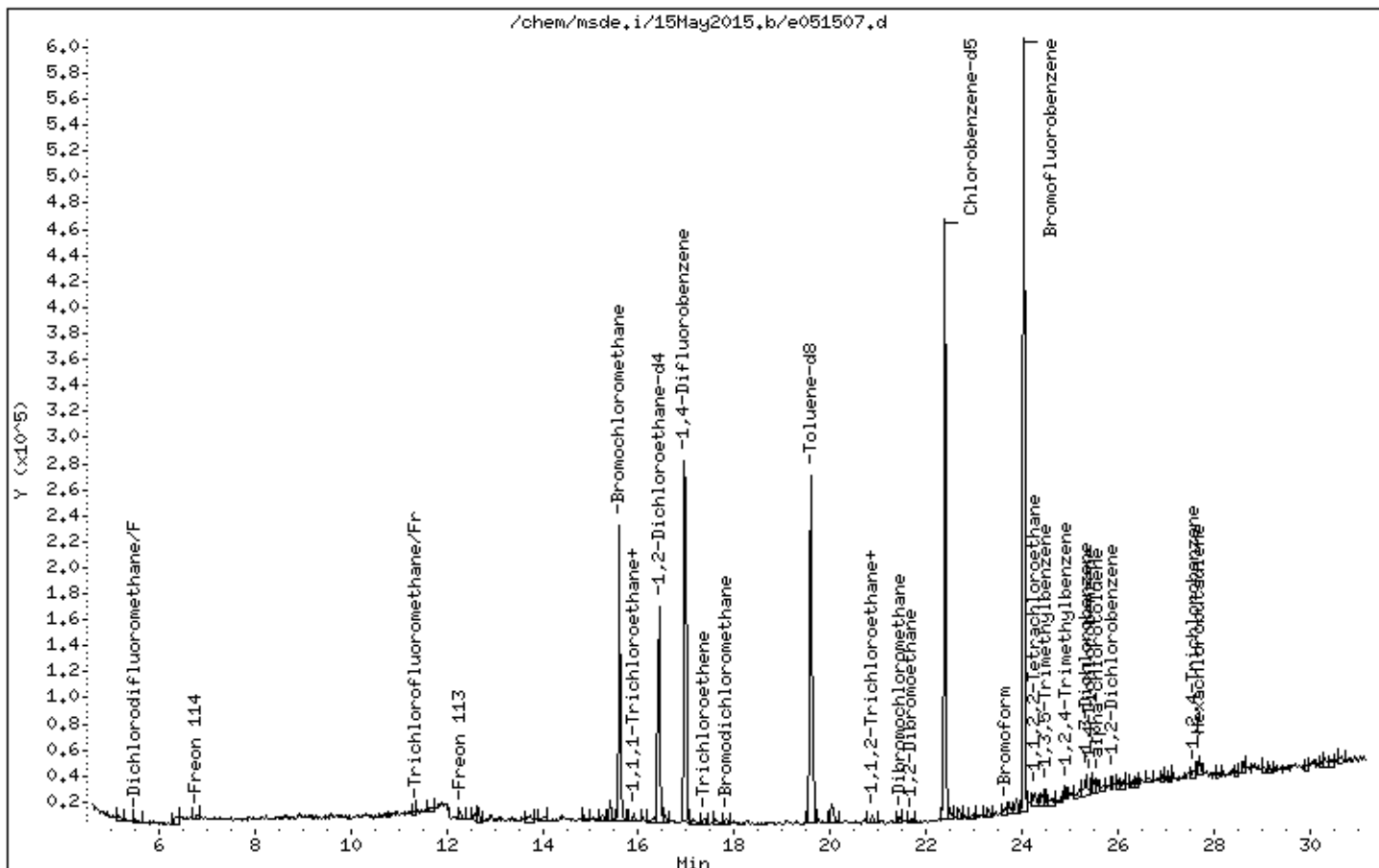
Instrument: msde.i

Sample Info: 250mL# 2716-300

Operator: ef

Column phase: RTx-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051508.d
 Lab Smp Id: ICAL Client Smp ID: Level 6
 Inj Date : 15-MAY-2015 14:07
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2736-1
 Misc Info : 0.1ppbv (1.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 14:07 Cal File: e051508.d
 Als bottle: 1 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Level#1.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	120945 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	90907			46.94- 106.94	75.16
15.611	15.611 (1.000)	49	141460			103.66- 163.66	116.96
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	397826 5.00000			80.00- 120.00	100.00
16.987	16.987 (1.000)	88	51469			0.00- 43.53	12.94
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	393213 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	168599			13.25- 73.25	42.88
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	183179 5.00000	4.821		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	79697			24.87- 84.87	43.51

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.154)	98	349167	5.00000	5.109	80.00- 120.00	100.00
19.601	19.601	(1.154)	70	37422			0.00- 40.24	10.72
19.601	19.601	(1.154)	100	243301			39.39- 99.39	69.68

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.043	24.043	(1.074)	174	200833	5.00000	5.045	80.00- 120.00	100.00
24.043	24.043	(1.074)	95	226611			88.06- 148.06	112.84
24.043	24.043	(1.074)	176	191012			66.20- 126.20	95.11

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.479	5.479	(0.351)	85	13455	0.10000	0.1254	80.00- 120.00	100.00
5.455	5.455	(0.349)	87	1696			2.12- 62.12	12.60

6 Freon 114						CAS #: 76-14-2		
6.853	6.853	(0.439)	135	10826	0.10000	0.1319	80.00- 120.00	100.00
6.829	6.829	(0.437)	137	1452			1.87- 61.87	13.41

7 Chloromethane						CAS #: 74-87-3		
7.191	7.191	(0.461)	50	4445	0.10000	0.1416	80.00- 120.00	100.00
7.191	7.191	(0.461)	52	1856			2.64- 62.64	41.75

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	2878	0.10000	0.1164	80.00- 120.00	100.00
8.010	8.010	(0.513)	64	1037			1.55- 61.55	36.03

11 1,3-Butadiene						CAS #: 106-99-0		
8.271	8.271	(0.530)	54	2222	0.10000	0.1006	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	4428			68.70- 128.70	199.28

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	3560	0.10000	0.1562	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	3893			67.78- 127.78	109.35

16 Trichlorofluoromethane/Fr11						CAS #: 75-69-4		
10.976	10.976	(0.703)	101	15202	0.10000	0.1262	80.00- 120.00	100.00
10.957	10.957	(0.702)	103	9087			34.06- 94.06	59.78

19 Freon 113						CAS #: 76-13-1		
12.290	12.290	(0.787)	151	6520	0.10000	0.1108	80.00- 120.00	100.00
12.290	12.290	(0.787)	153	4049			34.06- 94.06	62.10
12.271	12.271	(0.786)	101	8426			81.22- 141.22	129.23

21 1,1-Dichloroethene						CAS #: 75-35-4		
12.290	12.290	(0.787)	98	1668	0.10000	0.09820	80.00- 120.00	100.00(a)
12.309	12.309	(0.788)	61	6053			208.58- 268.58	362.89

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
21 1,1-Dichloroethene (continued)									
12.309	12.309	(0.788)	96	3469			127.45- 187.45	207.97	

22 Acetone CAS #: 67-64-1									
12.595	12.595	(0.807)	58	2366	0.10000	0.1603	80.00- 120.00	100.00(a)	
12.576	12.576	(0.806)	43	10528			294.37- 354.37	444.97	

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	2858	0.10000	0.1323	80.00- 120.00	100.00	
13.376	13.376	(0.857)	49	5112			112.26- 172.26	178.87	
13.357	13.357	(0.856)	51	1494			12.15- 72.15	52.27	

31 MTBE CAS #: 1634-04-4									
13.701	13.701	(0.878)	73	5817	0.10000	0.08193	80.00- 120.00	100.00(a)	
13.701	13.701	(0.878)	57	2067			0.00- 54.97	35.53	
13.701	13.701	(0.878)	41	1103			0.00- 55.95	18.96	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.756	13.756	(0.881)	98	1702	0.10000	0.09349	80.00- 120.00	100.00(a)	
13.756	13.756	(0.881)	61	4843			175.95- 235.95	284.55	
13.756	13.756	(0.881)	96	3005			121.11- 181.11	176.56	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	3475	0.10000	0.08854	80.00- 120.00	100.00(a)	
14.031	14.031	(0.899)	43	2976			35.27- 95.27	85.64	
14.031	14.031	(0.899)	86	619			0.00- 46.67	17.81	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	5561	0.10000	0.1017	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	2520			0.10- 60.10	45.32	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.278	15.278	(0.979)	98	2408	0.10000	0.1158	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	4517			155.56- 215.56	187.58	
15.278	15.278	(0.979)	96	4897			124.76- 184.76	203.36	

47 Chloroform CAS #: 67-66-3									
15.672	15.672	(1.004)	83	8990	0.10000	0.1158	80.00- 120.00	100.00	
15.672	15.672	(1.004)	85	5879			36.52- 96.52	65.39	

49 1,1,1-Trichloroethane CAS #: 71-55-6									
15.919	15.919	(1.020)	97	12185	0.10000	0.1223	80.00- 120.00	100.00	
15.919	15.919	(1.020)	99	7751			33.43- 93.43	63.61	

48 Cyclohexane CAS #: 110-82-7									
15.888	15.888	(1.018)	84	3669	0.10000	0.1054	80.00- 120.00	100.00	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
48 Cyclohexane (continued)								
15.888	15.888	(1.018)	56	3593			96.90- 156.90	97.93
15.919	15.919	(1.020)	41	3095			38.62- 98.62	84.36

51 Carbon Tetrachloride					CAS #: 56-23-5			
16.104	16.104	(1.032)	119	11469	0.10000	0.1022	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	13752			74.78- 134.78	119.91

52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.361	16.361	(1.048)	56	6881	0.10000	0.1049	80.00- 120.00	100.00
16.337	16.337	(1.047)	57	15066			264.46- 324.46	218.95
16.337	16.337	(1.047)	41	7566			53.88- 113.88	109.95

53 Benzene					CAS #: 71-43-2			
16.433	16.433	(0.967)	78	10508	0.10000	0.1292	80.00- 120.00	100.00
16.433	16.433	(0.967)	77	2569			0.00- 53.40	24.45

56 1,2-Dichloroethane					CAS #: 107-06-2			
16.554	16.554	(0.974)	62	6441	0.10000	0.1086	80.00- 120.00	100.00
16.554	16.554	(0.974)	64	2866			2.90- 62.90	44.50

57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.976)	57	2931	0.10000	0.1075	80.00- 120.00	100.00
16.578	16.578	(0.976)	100	434			14.70- 74.70	14.81
16.578	16.578	(0.976)	43	6103			159.65- 219.65	208.22

59 Trichloroethene					CAS #: 79-01-6			
17.397	17.397	(1.024)	130	8099	0.10000	0.1397	80.00- 120.00	100.00
17.397	17.397	(1.024)	95	5242			48.43- 108.43	64.72
17.397	17.397	(1.024)	97	2446			20.03- 80.03	30.20

61 1,2-Dichloropropane					CAS #: 78-87-5			
17.831	17.831	(1.050)	63	4753	0.10000	0.1572	80.00- 120.00	100.00
17.831	17.831	(1.050)	62	1195			41.39- 101.39	25.14
17.831	17.831	(1.050)	41	4046			30.08- 90.08	85.13

62 1,4-Dioxane					CAS #: 123-91-1			
17.975	17.975	(1.058)	88	2758	0.10000	0.1351	80.00- 120.00	100.00
17.975	17.975	(1.058)	58	2060			41.23- 101.23	74.69
17.734	17.734	(1.044)	57	640			0.00- 53.84	23.21

63 Bromodichloromethane					CAS #: 75-27-4			
18.264	18.264	(1.075)	83	8268	0.10000	0.1080	80.00- 120.00	100.00
18.264	18.264	(1.075)	85	6835			37.91- 97.91	82.67

64 cis-1,3-Dichloropropene					CAS #: 10061-01-5			
19.108	19.108	(1.125)	75	5431	0.10000	0.1320	80.00- 120.00	100.00

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT	ON-COL	TARGET	RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====
64 cis-1,3-Dichloropropene (continued)									
19.086	19.086	(1.124)	77	1555			2.56-	62.56	28.63
19.108	19.108	(1.125)	39	3622			19.94-	79.94	66.69

65 4-Methyl-2-pentanone CAS #: 108-10-1									
19.310	19.310	(1.137)	43	7068	0.10000	0.1083	80.00-	120.00	100.00
19.332	19.332	(1.138)	58	2586			7.11-	67.11	36.59
19.310	19.310	(1.137)	85	500			0.00-	46.29	7.07

68 Toluene CAS #: 108-88-3									
19.758	19.758	(1.163)	91	11534	0.10000	0.1135	80.00-	120.00	100.00
19.736	19.736	(1.162)	92	6130			28.99-	88.99	53.15

69 trans-1,3-Dichloropropene CAS #: 10061-02-6									
20.331	20.331	(0.908)	75	4590	0.10000	0.1010	80.00-	120.00	100.00
20.331	20.331	(0.908)	77	3858			3.77-	63.77	84.05
20.331	20.331	(0.908)	39	3940			18.43-	78.43	85.84

70 1,1,2-Trichloroethane CAS #: 79-00-5									
20.716	20.716	(0.925)	97	5131	0.10000	0.1337	80.00-	120.00	100.00
20.716	20.716	(0.925)	99	3246			34.78-	94.78	63.26
20.716	20.716	(0.925)	83	3111			49.45-	109.45	60.63

71 Tetrachloroethene CAS #: 127-18-4									
20.881	20.881	(0.933)	166	7029	0.10000	0.1205	80.00-	120.00	100.00
20.881	20.881	(0.933)	129	4923			54.11-	114.11	70.04
20.881	20.881	(0.933)	131	7140			55.30-	115.30	101.58

73 Dibromochloromethane CAS #: 124-48-1									
21.458	21.458	(0.958)	129	10822	0.10000	0.1066	80.00-	120.00	100.00
21.458	21.458	(0.958)	127	8696			46.93-	106.93	80.35

74 1,2-Dibromoethane CAS #: 106-93-4									
21.705	21.705	(0.970)	107	7910	0.10000	0.1178	80.00-	120.00	100.00
21.705	21.705	(0.970)	109	6886			68.26-	128.26	87.05

76 Chlorobenzene CAS #: 108-90-7									
22.428	22.428	(1.002)	112	11923	0.10000	0.1098	80.00-	120.00	100.00
22.428	22.428	(1.002)	114	4428			1.73-	61.73	37.14
22.428	22.428	(1.002)	77	10524			16.56-	76.56	88.27

77 Ethyl Benzene CAS #: 100-41-4									
22.511	22.511	(1.006)	106	5314	0.10000	0.1083	80.00-	120.00	100.00
22.511	22.511	(1.006)	91	14743			261.70-	321.70	277.44

80 m,p-Xylene CAS #: 108-38-3									
22.677	22.677	(1.013)	106	6328	0.10000	0.1081	80.00-	120.00	100.00

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
80 m,p-Xylene (continued)									
22.677	22.677	(1.013)	91	11545			150.71- 210.71	182.44	

81 o-Xylene CAS #: 95-47-6									
23.278	23.278	(1.040)	106	4349	0.10000	0.08472	80.00- 120.00	100.00(a)	
23.278	23.278	(1.040)	91	11463			165.12- 225.12	263.58	

83 Styrene CAS #: 100-42-5									
23.319	23.319	(1.042)	104	7914	0.10000	0.08722	80.00- 120.00	100.00(a)	
23.299	23.299	(1.041)	78	4052			12.29- 72.29	51.20	

84 Bromoform CAS #: 75-25-2									
23.661	23.661	(1.057)	173	9010	0.10000	0.11150	80.00- 120.00	100.00	
23.661	23.661	(1.057)	171	4714			23.53- 83.53	52.32	

85 Cumene CAS #: 98-82-8									
23.751	23.751	(1.061)	105	12041	0.10000	0.07377	80.00- 120.00	100.00(a)	
23.751	23.751	(1.061)	120	4480			0.00- 58.84	37.21	

89 1,1,2,2-Tetrachloroethane CAS #: 79-34-5									
24.222	24.222	(1.082)	83	7433	0.10000	0.09695	80.00- 120.00	100.00(a)	
24.222	24.222	(1.082)	85	6186			37.40- 97.40	83.22	

90 Propylbenzene CAS #: 103-65-1									
24.289	24.289	(1.085)	91	20340	0.10000	0.1071	80.00- 120.00	100.00	
24.289	24.289	(1.085)	120	5345			0.00- 58.05	26.28	

92 4-Ethyltoluene CAS #: 622-96-8									
24.424	24.424	(1.091)	105	15975	0.10000	0.09674	80.00- 120.00	100.00(a)	
24.424	24.424	(1.091)	120	6275			2.80- 62.80	39.28	

94 1,3,5-Trimethylbenzene CAS #: 108-67-8									
24.491	24.491	(1.094)	105	14493	0.10000	0.1028	80.00- 120.00	100.00	
24.491	24.491	(1.094)	120	6015			23.16- 83.16	41.50	

98 1,2,4-Trimethylbenzene CAS #: 95-63-6									
24.940	24.940	(1.114)	105	10270	0.10000	0.09333	80.00- 120.00	100.00(a)	
24.940	24.940	(1.114)	120	5799			19.74- 79.74	56.47	

101 1,3-Dichlorobenzene CAS #: 541-73-1									
25.343	25.343	(1.132)	146	11836	0.10000	0.1103	80.00- 120.00	100.00	
25.343	25.343	(1.132)	148	8248			31.66- 91.66	69.69	
25.343	25.343	(1.132)	111	4213			6.44- 66.44	35.59	

104 1,4-Dichlorobenzene CAS #: 106-46-7									
25.455	25.455	(1.137)	146	8831	0.10000	0.08690	80.00- 120.00	100.00(a)	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		TARGET RANGE	RATIO		
				(PPBV)	(PPBV)			CAL-AMT	ON-COL
==	=====	=====	====	=====	=====	=====	=====	=====	=====
104 1,4-Dichlorobenzene (continued)									
25.455	25.455	(1.137)	148	7392		32.25- 92.25	83.71		
25.455	25.455	(1.137)	111	4520		4.82- 64.82	51.18		

105 alpha-chlorotoluene					CAS #: 100-44-7				
25.590	25.590	(1.143)	91	11533	0.10000	0.09993	80.00- 120.00	100.00(a)	
25.590	25.590	(1.143)	126	3946			0.00- 57.25	34.21	

108 1,2-Dichlorobenzene					CAS #: 95-50-1				
25.881	25.881	(1.156)	146	8552	0.10000	0.09011	80.00- 120.00	100.00(a)	
25.881	25.881	(1.156)	148	6249			31.25- 91.25	73.07	
25.881	25.881	(1.156)	111	3279			7.65- 67.65	38.34	

112 1,2,4-Trichlorobenzene					CAS #: 120-82-1				
27.630	27.630	(1.234)	180	4051	0.10000	0.09026	80.00- 120.00	100.00(a)	
27.630	27.630	(1.234)	182	4864			66.40- 126.40	120.07	

113 Hexachlorobutadiene					CAS #: 87-68-3				
27.719	27.719	(1.238)	225	3923	0.10000	0.1034	80.00- 120.00	100.00(a)	
27.719	27.719	(1.238)	223	3046			31.93- 91.93	77.64	

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051508.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 6
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 0.1ppbv (1.0ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	120945	-28.58
58 1,4-Difluorobenze	587158	352295	822021	397826	-32.25
75 Chlorobenzene-d5	557421	334453	780389	393213	-29.46

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 14:07

Client ID: Level 6

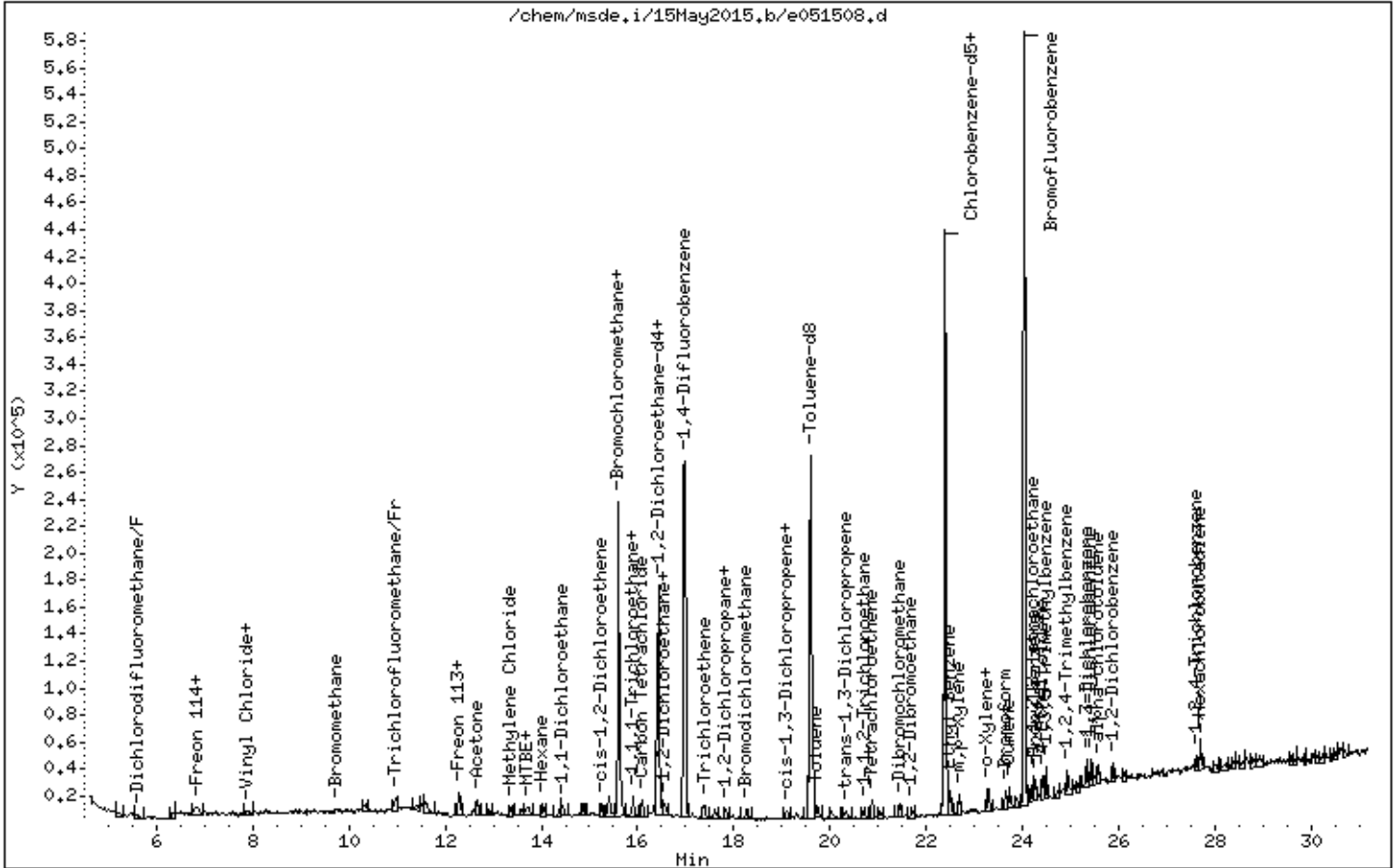
Instrument: msde.i

Sample Info: 25mL# 2736-1

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/27May2015.b/e052706.d
 Lab Smp Id: ICAL Client Smp ID: Level 7
 Inj Date : 27-MAY-2015 09:51
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2736-27
 Misc Info : 0.5ppbv (5.0ppbv) AT-1
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/27May2015.b/e1510515b.m
 Meth Date : 27-May-2015 14:47 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 09:51 Cal File: e052706.d
 Als bottle: 1 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT1ICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	106862 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	82675			46.94- 106.94	77.37
15.611	15.611 (1.000)	49	153914			103.66- 163.66	144.03
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	369086 5.00000			80.00- 120.00	100.00
16.987	16.987 (1.000)	88	51101			0.00- 43.53	13.85
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	357460 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	161563			13.25- 73.25	45.20
3 Freon 152A CAS #: 75-37-6							
5.311	5.311 (0.340)	65	6785 0.50000	0.4992		0.00- 0.00	100.00(a)
5.287	5.287 (0.339)	51	13896			0.00- 0.00	204.80

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
5 Freon 22					CAS #: 75-45-6			
5.986	5.986	(0.383)	51	32000	0.50000	0.5921	0.00- 0.00	100.00
5.986	5.986	(0.383)	67	3838			0.00- 0.00	11.99
210 Freon 142b					CAS #: 75-68-3			
7.094	7.094	(0.454)	65	37965	0.50000	0.5244	0.00- 0.00	100.00
7.070	7.070	(0.453)	45	12312			0.00- 0.00	32.43
211 Freon 21					CAS #: 75-43-4			
11.090	11.090	(0.710)	67	28554	0.50000	0.5693	0.00- 0.00	100.00
11.090	11.090	(0.710)	69	8503			0.00- 0.00	29.78
11.071	11.071	(0.709)	35	1379			0.00- 0.00	4.83
212 1,2-Dichlorotrifluoroethane					CAS #: 354-23-4			
12.061	12.061	(0.773)	117	27901	0.50000	0.5035	0.00- 0.00	100.00
12.061	12.061	(0.773)	67	31350			0.00- 0.00	112.36
213 Freon 123					CAS #: 306-83-2			
12.233	12.233	(0.784)	83	32578	0.50000	0.5619	0.00- 0.00	100.00
12.233	12.233	(0.784)	133	9427			0.00- 0.00	28.94
12.233	12.233	(0.784)	85	17669			0.00- 0.00	54.24
214 Cyclopentene					CAS #: 142-29-0			
13.109	13.109	(0.840)	67	18096	0.50000	0.5366	0.00- 0.00	100.00
13.109	13.109	(0.840)	68	7788			0.00- 0.00	43.04
13.128	13.128	(0.841)	53	5901			0.00- 0.00	32.61
205 1-Propanol					CAS #: 71-23-8			
14.580	14.580	(0.934)	59	3320	0.50000	0.5911	0.00- 0.00	100.00
14.580	14.580	(0.934)	42	3488			0.00- 0.00	105.06
14.580	14.580	(0.934)	41	3202			0.00- 0.00	96.45
201 2,2-Dichloropropane					CAS #: 594-20-7			
15.221	15.221	(0.975)	77	31401	0.50000	0.5380	80.00- 120.00	100.00
15.221	15.221	(0.975)	79	9547			0.00- 30.00	30.40
15.221	15.221	(0.975)	97	6261			0.00- 30.00	19.94
186 1,1-Dichloropropene					CAS #: 563-58-6			
16.135	16.135	(1.034)	110	7382	0.50000	0.5128	80.00- 120.00	100.00
16.135	16.135	(1.034)	75	18024			0.00- 30.00	244.16
218 Isobutanol					CAS #: 78-83-1			
16.196	16.196	(1.038)	39	9866	0.50000	0.5698	0.00- 0.00	100.00(M)
16.196	16.196	(1.038)	43	20001			0.00- 0.00	202.73
16.196	16.196	(1.038)	41	15138			0.00- 0.00	153.44

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
219 1-Butanol					CAS #: 71-36-3			
17.132	17.132	(1.097)	41	20541	0.50000	0.5296	0.00- 0.00	100.00
17.132	17.132	(1.097)	56	22205			0.00- 0.00	108.10
17.132	17.132	(1.097)	43	14720			0.00- 0.00	71.66
-----					-----			
86 1,3-Dichloropropane					CAS #: 142-28-9			
21.073	21.073	(1.241)	76	18561	0.50000	0.5678	80.00- 120.00	100.00
21.073	21.073	(1.241)	41	23165			0.00- 30.00	124.80
21.073	21.073	(1.241)	78	6099			0.00- 30.00	32.86
-----					-----			
199 Butyl Acetate					CAS #: 123-86-4			
21.155	21.155	(1.245)	56	4304	0.50000	0.5151	80.00- 120.00	100.00
21.155	21.155	(1.245)	73	1957			0.00- 30.00	45.47
21.155	21.155	(1.245)	43	14968			0.00- 30.00	347.77
-----					-----			
79 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6			
22.552	22.552	(1.007)	131	30927	0.50000	0.5370	80.00- 120.00	100.00
22.552	22.552	(1.007)	117	19749			0.00- 30.00	63.86
22.552	22.552	(1.007)	95	12039			0.00- 30.00	38.93
-----					-----			
198 2-Heptanone					CAS #: 110-43-0			
23.402	23.402	(1.045)	58	18025	0.50000	0.5204	0.00- 0.00	100.00
23.402	23.402	(1.045)	43	35083			0.00- 0.00	194.64
-----					-----			
216 Cyclohexanone					CAS #: 108-94-1			
23.998	23.998	(1.072)	55	17824	0.50000	0.5176	80.00- 120.00	100.00
23.998	23.998	(1.072)	98	5941			0.00- 30.00	33.33
23.998	23.998	(1.072)	42	13635			0.00- 30.00	76.50
-----					-----			
185 Bromobenzene					CAS #: 108-86-1			
24.267	24.267	(1.084)	156	20304	0.50000	0.4969	80.00- 120.00	100.00(a)
24.267	24.267	(1.084)	158	20832			0.00- 30.00	102.60
24.244	24.244	(1.083)	77	36912			0.00- 30.00	181.80
-----					-----			
91 1,2,3-Trichloropropane					CAS #: 96-18-4			
24.312	24.312	(1.086)	110	14566	0.50000	0.5544	80.00- 120.00	100.00
24.312	24.312	(1.086)	75	31684			0.00- 30.00	217.52
24.312	24.312	(1.086)	61	9868			0.00- 30.00	67.75
-----					-----			
93 2-Chlorotoluene					CAS #: 95-49-8			
24.469	24.469	(1.093)	126	20016	0.50000	0.5557	80.00- 120.00	100.00
24.469	24.469	(1.093)	91	44132			0.00- 30.00	220.48
24.446	24.446	(1.092)	65	5008			0.00- 30.00	25.02
-----					-----			
96 4-Chlorotoluene					CAS #: 106-43-4			
24.603	24.603	(1.099)	126	18219	0.50000	0.5210	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
96 4-Chlorotoluene (continued)								
24.603	24.603	(1.099)	91	43963			0.00- 30.00	241.30
24.603	24.603	(1.099)	57	33375			0.00- 30.00	183.19

217 Diisobutyl Ketone					CAS #: 108-83-8			
24.603	24.603	(1.099)	57	33375	0.50000	0.4767	0.00- 0.00	100.00(a)
24.603	24.603	(1.099)	85	25329			0.00- 0.00	75.89

97 tert-Butylbenzene					CAS #: 98-06-6			
24.872	24.872	(1.111)	119	51413	0.50000	0.5060	80.00- 120.00	100.00
24.872	24.872	(1.111)	134	13550			0.00- 30.00	26.36
24.872	24.872	(1.111)	91	35043			0.00- 30.00	68.16

215 Pentachloroethane					CAS #: 76-01-7			
24.984	24.984	(1.116)	167	16813	0.50000	0.5342	0.00- 0.00	100.00
24.984	24.984	(1.116)	117	22904			0.00- 0.00	136.23
24.984	24.984	(1.116)	169	7571			0.00- 0.00	45.03

99 sec-Butylbenzene					CAS #: 135-98-8			
25.119	25.119	(1.122)	105	70664	0.50000	0.5294	80.00- 120.00	100.00
25.119	25.119	(1.122)	134	17425			0.00- 30.00	24.66
25.119	25.119	(1.122)	91	12591			0.00- 30.00	17.82

100 p-Cymene					CAS #: 99-87-6			
25.276	25.276	(1.129)	119	56824	0.50000	0.4982	80.00- 120.00	100.00(a)
25.276	25.276	(1.129)	134	18053			0.00- 30.00	31.77
25.276	25.276	(1.129)	91	13273			0.00- 30.00	23.36

103 1,2,3-trimethylbenzene					CAS #: 526-73-8			
25.433	25.433	(1.136)	120	21267	0.50000	0.5140	80.00- 120.00	100.00
25.433	25.433	(1.136)	105	47740			0.00- 30.00	224.48
25.433	25.433	(1.136)	77	7111			0.00- 30.00	33.44

107 Butylbenzene					CAS #: 104-51-8			
25.724	25.724	(1.149)	134	15812	0.50000	0.5418	80.00- 120.00	100.00
25.724	25.724	(1.149)	91	46082			0.00- 30.00	291.44
25.724	25.724	(1.149)	92	21205			0.00- 30.00	134.11

110 1,2-dibromo-3-chloropropane					CAS #: 96-12-8			
26.733	26.733	(1.194)	157	16941	0.50000	0.5541	80.00- 120.00	100.00
26.733	26.733	(1.194)	75	17791			0.00- 30.00	105.02
26.733	26.733	(1.194)	155	14610			0.00- 30.00	86.24

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 27-MAY-2015
Lab File ID: e052706.d	Calibration Time: 06:30
Lab Smp Id: ICAL	Client Smp ID: Level 7
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/27May2015.b/e15l0515b.m	
Misc Info: 0.5ppbv (5.0ppbv) AT-1	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	166617	99970	233264	106862	-35.86
58 1,4-Difluorobenze	585674	351404	819944	369086	-36.98
75 Chlorobenzene-d5	536752	322051	751453	357460	-33.40

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 27-MAY-2015 09:51

Client ID: Level 7

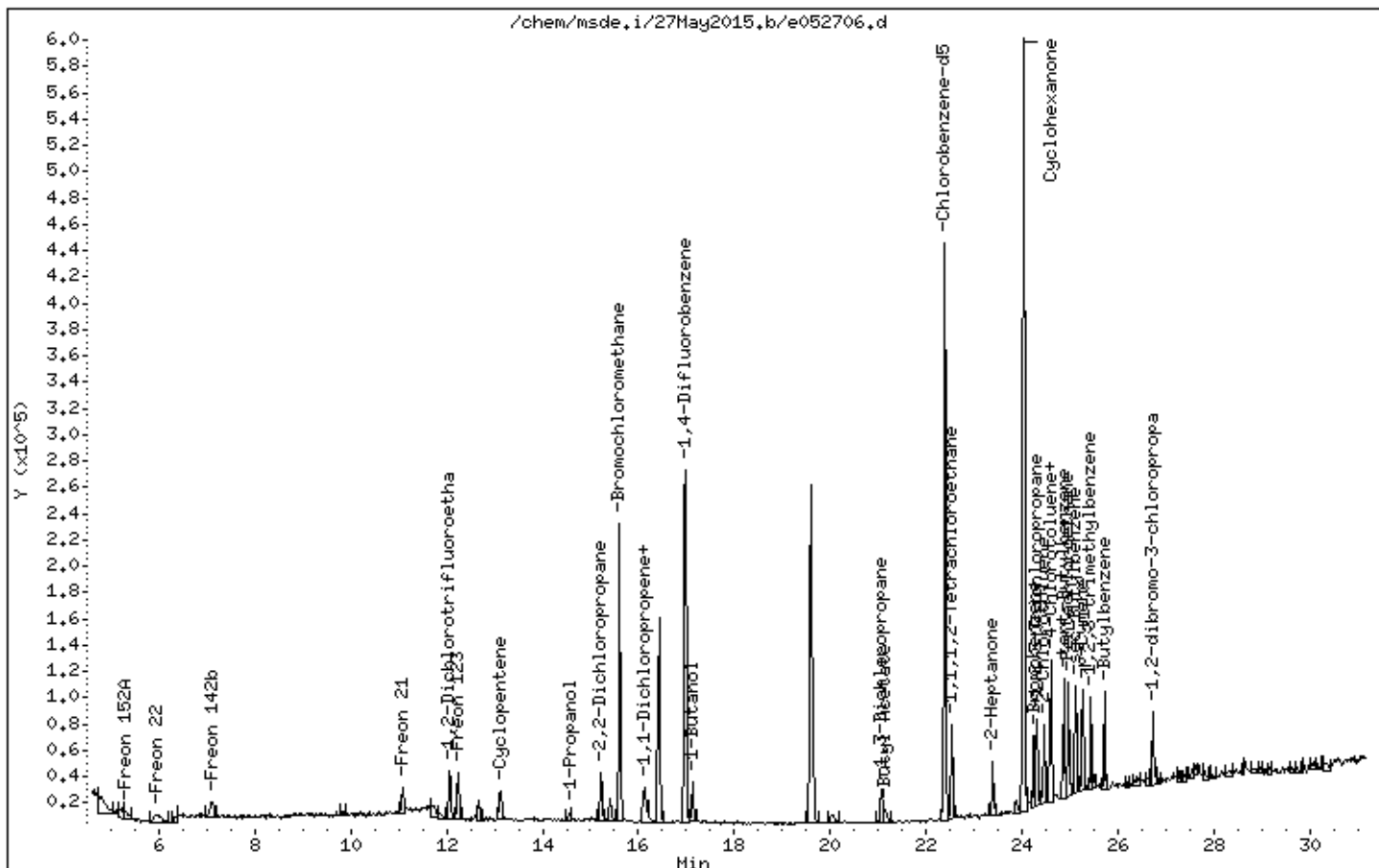
Instrument: msde.i

Sample Info: 25mL# 2736-27

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/18May2015.b/e051808.d
 Lab Smp Id: ICAL Client Smp ID: Level 7
 Inj Date : 18-MAY-2015 14:18
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2736-8
 Misc Info : 0.5ppbv (5.0ppbv) Isobutylene
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/18May2015.b/e1510515a.m
 Meth Date : 18-May-2015 18:20 ghehir Quant Type: ISTD
 Cal Date : 18-MAY-2015 14:18 Cal File: e051808.d
 Als bottle: 1 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: IsobutyleneICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	120184 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	93342			46.94- 106.94	77.67
15.611	15.611 (1.000)	49	150012			103.66- 163.66	124.82
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	442571 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	58185			0.00- 43.53	13.15
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	431065 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	185462			13.25- 73.25	43.02
8 Isobutylene CAS #: 115-11-7							
7.802	7.802 (0.500)	41	20733 0.50000	0.5846		0.00- 0.00	100.00(H)
7.785	7.785 (0.499)	56	10233			0.00- 0.00	49.36
7.785	7.785 (0.499)	39	13510			0.00- 0.00	65.16

QC Flag Legend

H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 18-MAY-2015
Lab File ID: e051808.d	Calibration Time: 10:13
Lab Smp Id: ICAL	Client Smp ID: Level 7
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/18May2015.b/e15l0515a.m	
Misc Info: 0.5ppbv (5.0ppbv) Isobutylene	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	180559	108335	252783	120184	-33.44
58 1,4-Difluorobenze	663550	398130	928970	442571	-33.30
75 Chlorobenzene-d5	634456	380674	888238	431065	-32.06

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 18-MAY-2015 14:18

Client ID: Level 7

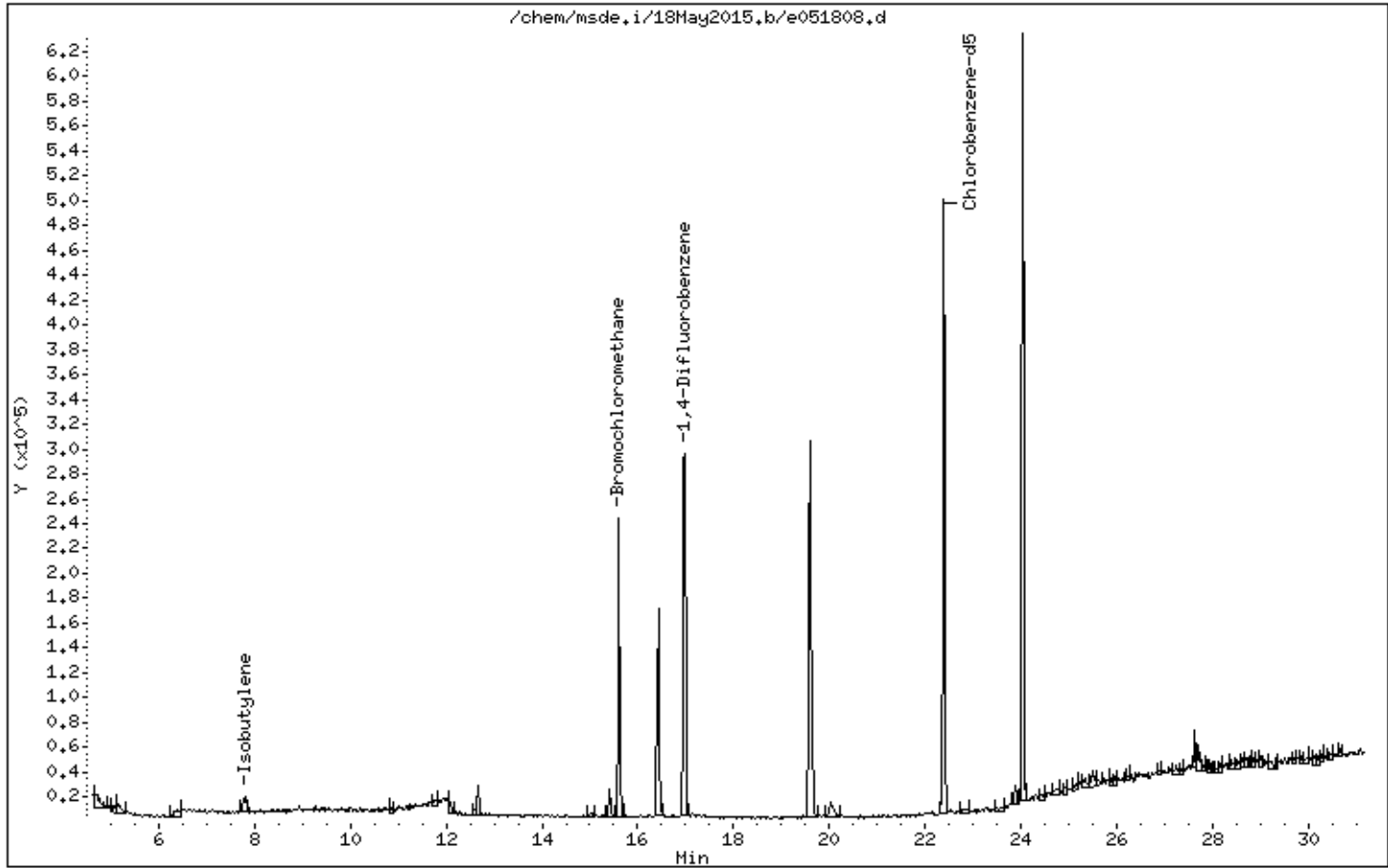
Instrument: msde.i

Sample Info: 25mL# 2736-8

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051509.d
 Lab Smp Id: ICAL Client Smp ID: Level 7
 Inj Date : 15-MAY-2015 14:53
 Operator : ef Inst ID: msde.i
 Smp Info : 125mL# 2736-1
 Misc Info : 0.5ppbv (1.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 14:53 Cal File: e051509.d
 Als bottle: 1 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: HIL0crvFULL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	121784	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	98272					46.94- 106.94	80.69
15.611	15.611	(1.000)	49	147630					103.66- 163.66	121.22
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	433070	5.00000				80.00- 120.00	100.00
16.963	16.963	(1.000)	88	53678					0.00- 43.53	12.39
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	406330	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	171211					13.25- 73.25	42.14
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0										
16.433	16.433	(1.053)	65	192270	5.00000			5.026	80.00- 120.00	100.00
16.433	16.433	(1.053)	67	81716					24.87- 84.87	42.50

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8					CAS #: 2037-26-5			
19.601	19.601	(1.154)	98	369120	5.00000	4.962	80.00- 120.00	100.00
19.601	19.601	(1.154)	70	37214			0.00- 40.24	10.08
19.601	19.601	(1.154)	100	240252			39.39- 99.39	65.09

\$ 87 Bromofluorobenzene					CAS #: 460-00-4			
24.042	24.042	(1.074)	174	202865	5.00000	4.931	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	247968			88.06- 148.06	122.23
24.042	24.042	(1.074)	176	188380			66.20- 126.20	92.86

2 Propylene					CAS #: 115-07-1			
5.021	5.021	(0.322)	41	15388	0.50000	0.5969	80.00- 120.00	100.00
5.046	5.046	(0.323)	42	10681			38.37- 98.37	69.41
5.021	5.021	(0.322)	39	10391			42.39- 102.39	67.53

4 Dichlorodifluoromethane/Fr12					CAS #: 75-71-8			
5.455	5.455	(0.349)	85	56965	0.50000	0.5272	80.00- 120.00	100.00(MH)
5.479	5.479	(0.351)	87	20544			2.12- 62.12	36.06

6 Freon 114					CAS #: 76-14-2			
6.853	6.853	(0.439)	135	39343	0.50000	0.4760	80.00- 120.00	100.00(a)
6.829	6.829	(0.437)	137	13950			1.87- 61.87	35.46

7 Chloromethane					CAS #: 74-87-3			
7.167	7.167	(0.459)	50	16190	0.50000	0.5120	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	4946			2.64- 62.64	30.55

9 Butane					CAS #: 106-97-8			
7.906	7.906	(0.506)	58	1946	0.50000	0.3907	80.00- 120.00	100.00(a)
7.872	7.872	(0.504)	43	23296			798.08- 858.08	1197.12

10 Vinyl Chloride					CAS #: 75-01-4			
8.028	8.028	(0.514)	62	13094	0.50000	0.5259	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	4021			1.55- 61.55	30.71

11 1,3-Butadiene					CAS #: 106-99-0			
8.253	8.253	(0.529)	54	10097	0.50000	0.4542	80.00- 120.00	100.00(a)
8.271	8.271	(0.530)	39	13138			68.70- 128.70	130.12

12 Bromomethane					CAS #: 74-83-9			
9.729	9.729	(0.623)	94	13345	0.50000	0.5815	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	13159			67.78- 127.78	98.61

13 Chloroethane					CAS #: 75-00-3			
10.214	10.214	(0.654)	64	6056	0.50000	0.5406	80.00- 120.00	100.00
10.233	10.233	(0.656)	49	3073			0.00- 59.93	50.74

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.176	10.176	(0.652)	66	2428			2.40- 62.40	40.09	

14 Isopentane CAS #: 78-78-4									
10.348	10.348	(0.663)	57	11469	0.50000	0.5515	80.00- 120.00	100.00	
10.329	10.329	(0.662)	43	17500			113.81- 173.81	152.59	
10.329	10.329	(0.662)	42	18198			97.27- 157.27	158.67	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	62001	0.50000	0.5112	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	43782			34.06- 94.06	70.61	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	31531	0.50000	0.5321	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	20984			34.06- 94.06	66.55	
12.271	12.271	(0.786)	101	38355			81.22- 141.22	121.64	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	8735	0.50000	0.5107	80.00- 120.00	100.00	
12.290	12.290	(0.787)	61	26841			208.58- 268.58	307.28	
12.290	12.290	(0.787)	96	14616			127.45- 187.45	167.33	

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	7543	0.50000	0.5075	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	34085			294.37- 354.37	451.88	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	28220	0.50000	0.5391	80.00- 120.00	100.00	
12.918	12.918	(0.828)	43	9957			0.00- 55.86	35.28	
12.938	12.938	(0.829)	59	1313			0.00- 34.14	4.65	

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	48219	0.50000	0.6696	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	5557	0.50000	0.5769	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	18819			276.20- 336.20	338.65	

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	11324	0.50000	0.5205	80.00- 120.00	100.00	
13.357	13.357	(0.856)	49	20908			112.26- 172.26	184.63	
13.357	13.357	(0.856)	51	6335			12.15- 72.15	55.94	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	36330	0.50000	0.4757	80.00- 120.00	100.00(a)	
13.564	13.564	(0.869)	41	12325			0.00- 54.99	33.93	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
30 tert-butyl alcohol (continued)									
13.564	13.564	(0.869)	57	3350			0.00- 41.32	9.22	

31 MTBE CAS #: 1634-04-4									
13.701	13.701	(0.878)	73	30730	0.50000	0.4298	80.00- 120.00	100.00(a)	
13.701	13.701	(0.878)	57	8237			0.00- 54.97	26.80	
13.674	13.674	(0.876)	41	12102			0.00- 55.95	39.38	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	7427	0.50000	0.4052	80.00- 120.00	100.00(a)	
13.729	13.729	(0.879)	61	19688			175.95- 235.95	265.09	
13.729	13.729	(0.879)	96	16152			121.11- 181.11	217.48	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	18266	0.50000	0.4622	80.00- 120.00	100.00(a)	
14.031	14.031	(0.899)	43	14763			35.27- 95.27	80.82	
14.031	14.031	(0.899)	86	2345			0.00- 46.67	12.84	

36 Isopropyl ether CAS #: 108-20-3									
14.387	14.387	(0.922)	45	43065	0.50000	0.4256	80.00- 120.00	100.00(a)	
14.387	14.387	(0.922)	87	9944			0.00- 55.94	23.09	
14.387	14.387	(0.922)	59	4880			0.00- 41.46	11.33	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	28117	0.50000	0.5109	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	7959			0.10- 60.10	28.31	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	2115	0.50000	0.2892	80.00- 120.00	100.00(a)	
14.470	14.470	(0.927)	42	6253			58.55- 118.55	295.65	
14.470	14.470	(0.927)	43	43647			1046.17-1106.17	2063.69	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	38894	0.50000	0.4195	80.00- 120.00	100.00(a)	
14.878	14.878	(0.953)	87	15150			11.70- 71.70	38.95	
14.897	14.897	(0.954)	41	12731			0.00- 52.35	32.73	

42 2-Butanone CAS #: 78-93-3									
15.259	15.259	(0.977)	72	5184	0.50000	0.4544	80.00- 120.00	100.00(a)	
15.259	15.259	(0.977)	43	31812			419.99- 479.99	613.66	
15.259	15.259	(0.977)	57	1679			5.97- 65.97	32.39	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	9500	0.50000	0.4537	80.00- 120.00	100.00(a)	
15.259	15.259	(0.977)	61	21736			155.56- 215.56	228.80	
15.259	15.259	(0.977)	96	15391			124.76- 184.76	162.01	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
44 Tetrahydrofuran					CAS #: 109-99-9				
15.580	15.580	(0.998)	42	15125	0.50000	0.4403	80.00- 120.00	100.00(a)	
15.611	15.611	(1.000)	71	4040			4.62- 64.62	26.71	
15.580	15.580	(0.998)	72	5544			8.51- 68.51	36.65	

47 Chloroform					CAS #: 67-66-3				
15.672	15.672	(1.004)	83	37983	0.50000	0.4861	80.00- 120.00	100.00(a)	
15.672	15.672	(1.004)	85	23784			36.52- 96.52	62.62	

49 1,1,1-Trichloroethane					CAS #: 71-55-6				
15.888	15.888	(1.018)	97	49116	0.50000	0.4896	80.00- 120.00	100.00(a)	
15.888	15.888	(1.018)	99	32223			33.43- 93.43	65.61	

48 Cyclohexane					CAS #: 110-82-7				
15.888	15.888	(1.018)	84	14907	0.50000	0.4251	80.00- 120.00	100.00(a)	
15.888	15.888	(1.018)	56	21148			96.90- 156.90	141.87	
15.888	15.888	(1.018)	41	13373			38.62- 98.62	89.71	

51 Carbon Tetrachloride					CAS #: 56-23-5				
16.104	16.104	(1.032)	119	51995	0.50000	0.4601	80.00- 120.00	100.00(a)	
16.104	16.104	(1.032)	117	51857			74.78- 134.78	99.73	

52 2,2,4-Trimethylpentane					CAS #: 540-84-1				
16.337	16.337	(1.047)	56	30976	0.50000	0.4688	80.00- 120.00	100.00(a)	
16.337	16.337	(1.047)	57	80461			264.46- 324.46	259.75	
16.337	16.337	(1.047)	41	32345			53.88- 113.88	104.42	

53 Benzene					CAS #: 71-43-2				
16.433	16.433	(0.967)	78	41754	0.50000	0.4716	80.00- 120.00	100.00(a)	
16.433	16.433	(0.967)	77	11122			0.00- 53.40	26.64	

55 tert-amyl methyl ether					CAS #: 994-05-8				
16.457	16.457	(0.969)	87	10908	0.50000	0.4270	80.00- 120.00	100.00(a)	
16.457	16.457	(0.969)	73	37971			351.86- 411.86	348.10	
16.433	16.433	(0.967)	55	16144			87.28- 147.28	148.00	

56 1,2-Dichloroethane					CAS #: 107-06-2				
16.554	16.554	(0.974)	62	32232	0.50000	0.4991	80.00- 120.00	100.00(a)	
16.530	16.530	(0.973)	64	11801			2.90- 62.90	36.61	

57 Heptane					CAS #: 142-82-5				
16.578	16.578	(0.976)	57	11953	0.50000	0.4026	80.00- 120.00	100.00(a)	
16.578	16.578	(0.976)	100	6067			14.70- 74.70	50.76	
16.578	16.578	(0.976)	43	24752			159.65- 219.65	207.08	

59 Trichloroethene					CAS #: 79-01-6				
17.397	17.397	(1.024)	130	32145	0.50000	0.5093	80.00- 120.00	100.00	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
59 Trichloroethene (continued)								
17.373	17.373	(1.023)	95	22311			48.43- 108.43	69.41
17.373	17.373	(1.023)	97	14031			20.03- 80.03	43.65

60 Methylcyclohexane CAS #: 108-87-2								
17.614	17.614	(1.037)	83	18499	0.50000	0.4061	80.00- 120.00	100.00(a)
17.614	17.614	(1.037)	55	19824			57.78- 117.78	107.16
17.614	17.614	(1.037)	56	5627			0.00- 58.27	30.42

61 1,2-Dichloropropane CAS #: 78-87-5								
17.831	17.831	(1.050)	63	16695	0.50000	0.5074	80.00- 120.00	100.00
17.831	17.831	(1.050)	62	8744			41.39- 101.39	52.37
17.831	17.831	(1.050)	41	15510			30.08- 90.08	92.90

62 1,4-Dioxane CAS #: 123-91-1								
17.975	17.975	(1.058)	88	9623	0.50000	0.4330	80.00- 120.00	100.00(a)
17.975	17.975	(1.058)	58	7762			41.23- 101.23	80.66
17.951	17.951	(1.057)	57	2755			0.00- 53.84	28.63

63 Bromodichloromethane CAS #: 75-27-4								
18.264	18.264	(1.075)	83	38959	0.50000	0.4673	80.00- 120.00	100.00(a)
18.264	18.264	(1.075)	85	27124			37.91- 97.91	69.62

64 cis-1,3-Dichloropropene CAS #: 10061-01-5								
19.108	19.108	(1.125)	75	21993	0.50000	0.4911	80.00- 120.00	100.00(a)
19.108	19.108	(1.125)	77	6721			2.56- 62.56	30.56
19.108	19.108	(1.125)	39	14503			19.94- 79.94	65.94

65 4-Methyl-2-pentanone CAS #: 108-10-1								
19.310	19.310	(1.137)	43	29896	0.50000	0.4207	80.00- 120.00	100.00(a)
19.310	19.310	(1.137)	58	9595			7.11- 67.11	32.09
19.310	19.310	(1.137)	85	3557			0.00- 46.29	11.90

68 Toluene CAS #: 108-88-3								
19.758	19.758	(1.163)	91	48761	0.50000	0.4407	80.00- 120.00	100.00(a)
19.758	19.758	(1.163)	92	29824			28.99- 88.99	61.16

69 trans-1,3-Dichloropropene CAS #: 10061-02-6								
20.331	20.331	(0.908)	75	21388	0.50000	0.4553	80.00- 120.00	100.00(a)
20.331	20.331	(0.908)	77	9835			3.77- 63.77	45.98
20.331	20.331	(0.908)	39	14038			18.43- 78.43	65.63

70 1,1,2-Trichloroethane CAS #: 79-00-5								
20.716	20.716	(0.925)	97	16755	0.50000	0.4224	80.00- 120.00	100.00(a)
20.716	20.716	(0.925)	99	12643			34.78- 94.78	75.46
20.716	20.716	(0.925)	83	14055			49.45- 109.45	83.89

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
71 Tetrachloroethene						CAS #: 127-18-4			
20.881	20.881	(0.933)	166	25692	0.50000	0.4263	80.00- 120.00	100.00(a)	
20.881	20.881	(0.933)	129	25482			54.11- 114.11	99.18	
20.881	20.881	(0.933)	131	26328			55.30- 115.30	102.48	

72 2-Hexanone						CAS #: 591-78-6			
21.046	21.046	(0.940)	58	11952	0.50000	0.3624	80.00- 120.00	100.00(a)	
21.046	21.046	(0.940)	43	28429			162.06- 222.06	237.86	
21.046	21.046	(0.940)	100	2620			0.00- 52.96	21.92	

73 Dibromochloromethane						CAS #: 124-48-1			
21.458	21.458	(0.958)	129	52170	0.50000	0.4975	80.00- 120.00	100.00(a)	
21.458	21.458	(0.958)	127	34454			46.93- 106.93	66.04	

74 1,2-Dibromoethane						CAS #: 106-93-4			
21.705	21.705	(0.970)	107	31524	0.50000	0.4544	80.00- 120.00	100.00(a)	
21.705	21.705	(0.970)	109	29022			68.26- 128.26	92.06	

76 Chlorobenzene						CAS #: 108-90-7			
22.428	22.428	(1.002)	112	54371	0.50000	0.4847	80.00- 120.00	100.00(a)	
22.428	22.428	(1.002)	114	17083			1.73- 61.73	31.42	
22.428	22.428	(1.002)	77	31580			16.56- 76.56	58.08	

77 Ethyl Benzene						CAS #: 100-41-4			
22.511	22.511	(1.006)	106	23744	0.50000	0.4683	80.00- 120.00	100.00(a)	
22.511	22.511	(1.006)	91	61619			261.70- 321.70	259.51	

80 m,p-Xylene						CAS #: 108-38-3			
22.677	22.677	(1.013)	106	25156	0.50000	0.4158	80.00- 120.00	100.00(a)	
22.677	22.677	(1.013)	91	47374			150.71- 210.71	188.32	

81 o-Xylene						CAS #: 95-47-6			
23.278	23.278	(1.040)	106	23255	0.50000	0.4384	80.00- 120.00	100.00(a)	
23.278	23.278	(1.040)	91	42684			165.12- 225.12	183.55	

83 Styrene						CAS #: 100-42-5			
23.319	23.319	(1.042)	104	36191	0.50000	0.3860	80.00- 120.00	100.00(a)	
23.319	23.319	(1.042)	78	17817			12.29- 72.29	49.23	

84 Bromoform						CAS #: 75-25-2			
23.661	23.661	(1.057)	173	35036	0.50000	0.4330	80.00- 120.00	100.00(a)	
23.661	23.661	(1.057)	171	19405			23.53- 83.53	55.39	

85 Cumene						CAS #: 98-82-8			
23.751	23.751	(1.061)	105	68298	0.50000	0.4049	80.00- 120.00	100.00(a)	
23.751	23.751	(1.061)	120	19079			0.00- 58.84	27.93	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
89 1,1,2,2-Tetrachloroethane CAS #: 79-34-5								
24.222	24.222	(1.082)	83	37461	0.50000	0.4728	80.00- 120.00	100.00(a)
24.222	24.222	(1.082)	85	29041			37.40- 97.40	77.52

90 Propylbenzene CAS #: 103-65-1								
24.267	24.267	(1.084)	91	87863	0.50000	0.4478	80.00- 120.00	100.00(a)
24.289	24.289	(1.085)	120	24049			0.00- 58.05	27.37

92 4-Ethyltoluene CAS #: 622-96-8								
24.424	24.424	(1.091)	105	72051	0.50000	0.4222	80.00- 120.00	100.00(a)
24.424	24.424	(1.091)	120	22328			2.80- 62.80	30.99

94 1,3,5-Trimethylbenzene CAS #: 108-67-8								
24.491	24.491	(1.094)	105	58519	0.50000	0.4016	80.00- 120.00	100.00(a)
24.491	24.491	(1.094)	120	31049			23.16- 83.16	53.06

98 1,2,4-Trimethylbenzene CAS #: 95-63-6								
24.940	24.940	(1.114)	105	50941	0.50000	0.4480	80.00- 120.00	100.00(a)
24.940	24.940	(1.114)	120	25087			19.74- 79.74	49.25

101 1,3-Dichlorobenzene CAS #: 541-73-1								
25.343	25.343	(1.132)	146	54563	0.50000	0.4920	80.00- 120.00	100.00(a)
25.343	25.343	(1.132)	148	29826			31.66- 91.66	54.66
25.343	25.343	(1.132)	111	21464			6.44- 66.44	39.34

104 1,4-Dichlorobenzene CAS #: 106-46-7								
25.455	25.455	(1.137)	146	48322	0.50000	0.4601	80.00- 120.00	100.00(a)
25.455	25.455	(1.137)	148	29042			32.25- 92.25	60.10
25.433	25.433	(1.136)	111	16466			4.82- 64.82	34.08

105 alpha-chlorotoluene CAS #: 100-44-7								
25.590	25.590	(1.143)	91	51700	0.50000	0.4335	80.00- 120.00	100.00(a)
25.590	25.590	(1.143)	126	13311			0.00- 57.25	25.75

108 1,2-Dichlorobenzene CAS #: 95-50-1								
25.881	25.881	(1.156)	146	46250	0.50000	0.4716	80.00- 120.00	100.00(a)
25.881	25.881	(1.156)	148	28082			31.25- 91.25	60.72
25.881	25.881	(1.156)	111	17405			7.65- 67.65	37.63

112 1,2,4-Trichlorobenzene CAS #: 120-82-1								
27.630	27.630	(1.234)	180	23304	0.50000	0.5025	80.00- 120.00	100.00
27.630	27.630	(1.234)	182	21856			66.40- 126.40	93.79

113 Hexachlorobutadiene CAS #: 87-68-3								
27.719	27.719	(1.238)	225	17384	0.50000	0.4432	80.00- 120.00	100.00(a)
27.719	27.719	(1.238)	223	11532			31.93- 91.93	66.34

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.
- H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051509.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 7
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 0.5ppbv (1.0ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	121784	-28.08
58 1,4-Difluorobenze	587158	352295	822021	433070	-26.24
75 Chlorobenzene-d5	557421	334453	780389	406330	-27.11

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 14:53

Client ID: Level 7

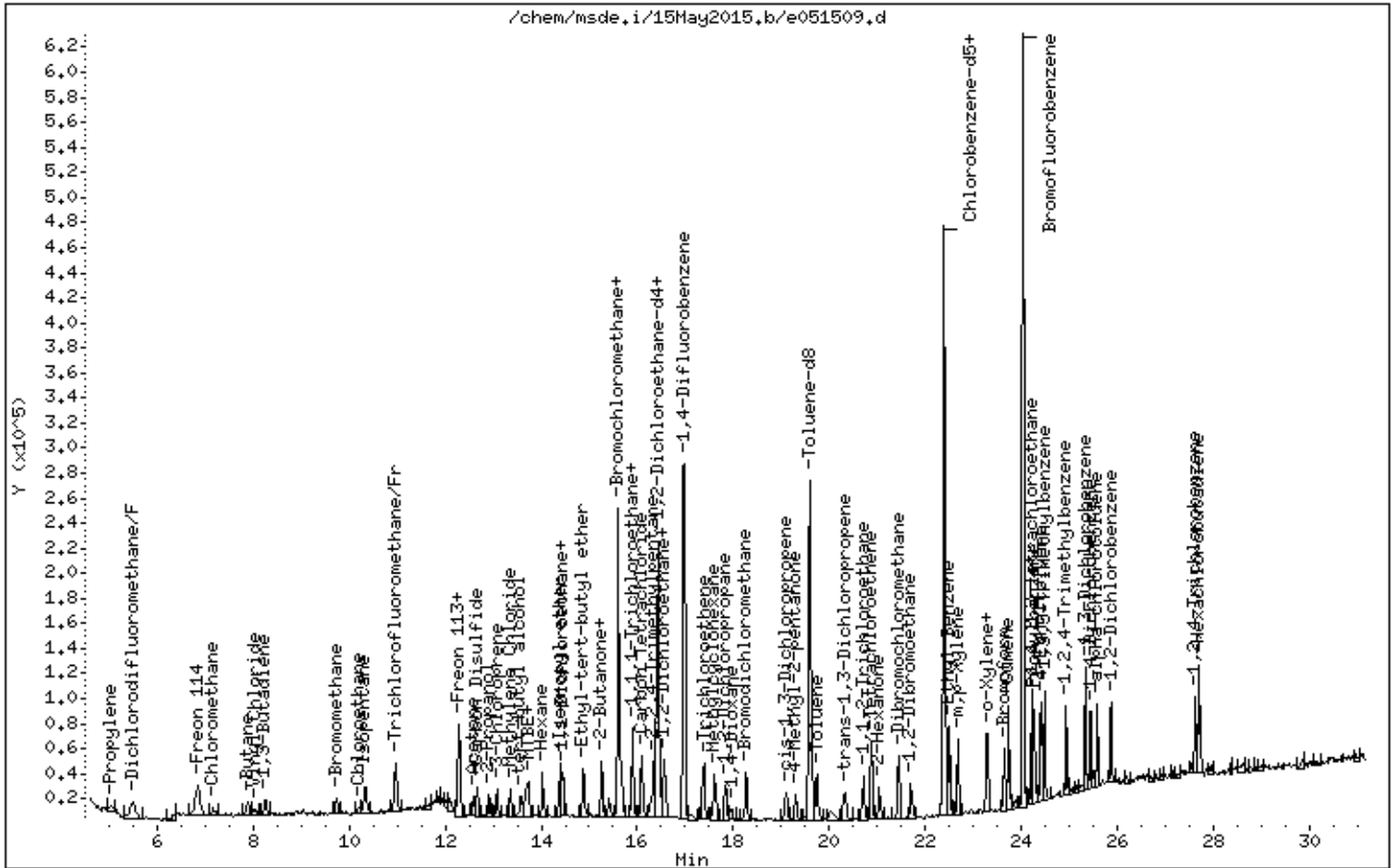
Instrument: msde.i

Sample Info: 125mL# 2736-1

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/27May2015.b/e052707.d
 Lab Smp Id: ICAL Client Smp ID: Level 8
 Inj Date : 27-MAY-2015 10:36
 Operator : ef Inst ID: msde.i
 Smp Info : 50mL# 2736-27
 Misc Info : 1.0ppbv (5.0ppbv) AT-1
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/27May2015.b/e1510515b.m
 Meth Date : 27-May-2015 14:47 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 10:36 Cal File: e052707.d
 Als bottle: 1 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT1ICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	106298	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	78438					46.94- 106.94	73.79
15.611	15.611	(1.000)	49	147208					103.66- 163.66	138.49
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	359730	5.00000				80.00- 120.00	100.00
16.987	16.987	(1.000)	88	55000					0.00- 43.53	15.29
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	364918	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	155529					13.25- 73.25	42.62
1 Freon 134a CAS #: 811-97-2										
4.829	4.829	(0.309)	83	39612	1.00000	1.071	0.00-	0.00	0.00	100.00(M)
4.853	4.853	(0.311)	69	21997			0.00-	0.00	0.00	55.53

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET	RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====
3 Freon 152A					CAS #: 75-37-6				
5.287	5.287	(0.339)	65	15013	1.00000	1.110	0.00-	0.00	100.00
5.287	5.287	(0.339)	51	37419			0.00-	0.00	249.24
5 Freon 22					CAS #: 75-45-6				
5.962	5.962	(0.382)	51	50970	1.00000	0.9482	0.00-	0.00	100.00
5.962	5.962	(0.382)	67	9171			0.00-	0.00	17.99
210 Freon 142b					CAS #: 75-68-3				
7.119	7.119	(0.456)	65	72704	1.00000	1.010	0.00-	0.00	100.00
7.119	7.119	(0.456)	45	18592			0.00-	0.00	25.57
211 Freon 21					CAS #: 75-43-4				
11.071	11.071	(0.709)	67	47430	1.00000	0.9507	0.00-	0.00	100.00
11.071	11.071	(0.709)	69	15951			0.00-	0.00	33.63
11.071	11.071	(0.709)	35	3447			0.00-	0.00	7.27
212 1,2-Dichlorotrifluoroethane					CAS #: 354-23-4				
12.061	12.061	(0.773)	117	56796	1.00000	1.030	0.00-	0.00	100.00
12.061	12.061	(0.773)	67	51985			0.00-	0.00	91.53
213 Freon 123					CAS #: 306-83-2				
12.233	12.233	(0.784)	83	52295	1.00000	0.9068	0.00-	0.00	100.00
12.233	12.233	(0.784)	133	22569			0.00-	0.00	43.16
12.233	12.233	(0.784)	85	40880			0.00-	0.00	78.17
214 Cyclopentene					CAS #: 142-29-0				
13.109	13.109	(0.840)	67	32826	1.00000	0.9785	0.00-	0.00	100.00
13.109	13.109	(0.840)	68	12877			0.00-	0.00	39.23
13.109	13.109	(0.840)	53	8854			0.00-	0.00	26.97
205 1-Propanol					CAS #: 71-23-8				
14.580	14.580	(0.934)	59	5197	1.00000	0.9302	0.00-	0.00	100.00
14.580	14.580	(0.934)	42	5844			0.00-	0.00	112.45
14.580	14.580	(0.934)	41	4085			0.00-	0.00	78.60
201 2,2-Dichloropropane					CAS #: 594-20-7				
15.221	15.221	(0.975)	77	55533	1.00000	0.9566	80.00-	120.00	100.00
15.221	15.221	(0.975)	79	18314			0.00-	30.00	32.98
15.221	15.221	(0.975)	97	10533			0.00-	30.00	18.97
186 1,1-Dichloropropene					CAS #: 563-58-6				
16.135	16.135	(1.034)	110	14422	1.00000	1.007	80.00-	120.00	100.00
16.135	16.135	(1.034)	75	30746			0.00-	30.00	213.19
218 Isobutanol					CAS #: 78-83-1				
16.196	16.196	(1.038)	39	16014	1.00000	0.9298	0.00-	0.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
218 Isobutanol (continued)								
16.196	16.196	(1.038)	43	34930			0.00- 0.00	218.12
16.196	16.196	(1.038)	41	27778			0.00- 0.00	173.46

219 1-Butanol					CAS #: 71-36-3			
17.132	17.132	(1.097)	41	38003	1.00000	0.9851	0.00- 0.00	100.00
17.132	17.132	(1.097)	56	36475			0.00- 0.00	95.98
17.132	17.132	(1.097)	43	27779			0.00- 0.00	73.10

86 1,3-Dichloropropane					CAS #: 142-28-9			
21.073	21.073	(1.241)	76	30133	1.00000	0.9458	80.00- 120.00	100.00
21.073	21.073	(1.241)	41	34115			0.00- 30.00	113.21
21.073	21.073	(1.241)	78	10267			0.00- 30.00	34.07

199 Butyl Acetate					CAS #: 123-86-4			
21.155	21.155	(1.245)	56	8135	1.00000	0.9990	80.00- 120.00	100.00
21.155	21.155	(1.245)	73	3341			0.00- 30.00	41.07
21.155	21.155	(1.245)	43	24084			0.00- 30.00	296.05

79 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6			
22.552	22.552	(1.007)	131	56827	1.00000	0.9665	80.00- 120.00	100.00
22.552	22.552	(1.007)	117	30644			0.00- 30.00	53.93
22.552	22.552	(1.007)	95	24379			0.00- 30.00	42.90

198 2-Heptanone					CAS #: 110-43-0			
23.402	23.402	(1.045)	58	31663	1.00000	0.8954	0.00- 0.00	100.00
23.402	23.402	(1.045)	43	63930			0.00- 0.00	201.91

216 Cyclohexanone					CAS #: 108-94-1			
23.998	23.998	(1.072)	55	33819	1.00000	0.9620	80.00- 120.00	100.00
23.998	23.998	(1.072)	98	13087			0.00- 30.00	38.70
23.998	23.998	(1.072)	42	24550			0.00- 30.00	72.59

185 Bromobenzene					CAS #: 108-86-1			
24.267	24.267	(1.084)	156	42097	1.00000	1.009	80.00- 120.00	100.00
24.267	24.267	(1.084)	158	38609			0.00- 30.00	91.71
24.244	24.244	(1.083)	77	64259			0.00- 30.00	152.65

91 1,2,3-Trichloropropane					CAS #: 96-18-4			
24.312	24.312	(1.086)	110	25719	1.00000	0.9588	80.00- 120.00	100.00
24.312	24.312	(1.086)	75	57680			0.00- 30.00	224.27
24.312	24.312	(1.086)	61	16683			0.00- 30.00	64.87

93 2-Chlorotoluene					CAS #: 95-49-8			
24.469	24.469	(1.093)	126	33183	1.00000	0.9025	80.00- 120.00	100.00
24.469	24.469	(1.093)	91	75654			0.00- 30.00	227.99

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
93 2-Chlorotoluene (continued)									
24.446	24.446	(1.092)	65	8832			0.00- 30.00	26.62	

96 4-Chlorotoluene CAS #: 106-43-4									
24.603	24.603	(1.099)	126	34241	1.00000	0.9591	80.00- 120.00	100.00	
24.603	24.603	(1.099)	91	77974			0.00- 30.00	227.72	
24.603	24.603	(1.099)	57	64166			0.00- 30.00	187.40	

217 Diisobutyl Ketone CAS #: 108-83-8									
24.603	24.603	(1.099)	57	64166	1.00000	0.8978	0.00- 0.00	100.00	
24.603	24.603	(1.099)	85	44556			0.00- 0.00	69.44	

97 tert-Butylbenzene CAS #: 98-06-6									
24.872	24.872	(1.111)	119	96152	1.00000	0.9270	80.00- 120.00	100.00	
24.872	24.872	(1.111)	134	22088			0.00- 30.00	22.97	
24.872	24.872	(1.111)	91	58233			0.00- 30.00	60.56	

215 Pentachloroethane CAS #: 76-01-7									
24.984	24.984	(1.116)	167	30145	1.00000	0.9381	0.00- 0.00	100.00	
24.984	24.984	(1.116)	117	33631			0.00- 0.00	111.56	
24.984	24.984	(1.116)	169	15120			0.00- 0.00	50.16	

99 sec-Butylbenzene CAS #: 135-98-8									
25.119	25.119	(1.122)	105	123649	1.00000	0.9075	80.00- 120.00	100.00	
25.119	25.119	(1.122)	134	26971			0.00- 30.00	21.81	
25.119	25.119	(1.122)	91	20680			0.00- 30.00	16.72	

100 p-Cymene CAS #: 99-87-6									
25.276	25.276	(1.129)	119	106031	1.00000	0.9106	80.00- 120.00	100.00	
25.276	25.276	(1.129)	134	30302			0.00- 30.00	28.58	
25.276	25.276	(1.129)	91	24671			0.00- 30.00	23.27	

103 1,2,3-trimethylbenzene CAS #: 526-73-8									
25.433	25.433	(1.136)	120	39744	1.00000	0.9409	80.00- 120.00	100.00	
25.433	25.433	(1.136)	105	90795			0.00- 30.00	228.45	
25.433	25.433	(1.136)	77	9858			0.00- 30.00	24.80	

107 Butylbenzene CAS #: 104-51-8									
25.724	25.724	(1.149)	134	28612	1.00000	0.9604	80.00- 120.00	100.00	
25.724	25.724	(1.149)	91	77555			0.00- 30.00	271.06	
25.724	25.724	(1.149)	92	40609			0.00- 30.00	141.93	

110 1,2-dibromo-3-chloropropane CAS #: 96-12-8									
26.733	26.733	(1.194)	157	27448	1.00000	0.8794	80.00- 120.00	100.00	
26.733	26.733	(1.194)	75	32992			0.00- 30.00	120.20	
26.733	26.733	(1.194)	155	25301			0.00- 30.00	92.18	

QC Flag Legend

M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 27-MAY-2015
Lab File ID: e052707.d	Calibration Time: 06:30
Lab Smp Id: ICAL	Client Smp ID: Level 8
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/27May2015.b/e15l0515b.m	
Misc Info: 1.0ppbv (5.0ppbv) AT-1	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	166617	99970	233264	106298	-36.20
58 1,4-Difluorobenze	585674	351404	819944	359730	-38.58
75 Chlorobenzene-d5	536752	322051	751453	364918	-32.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 27-MAY-2015 10:36

Client ID: Level 8

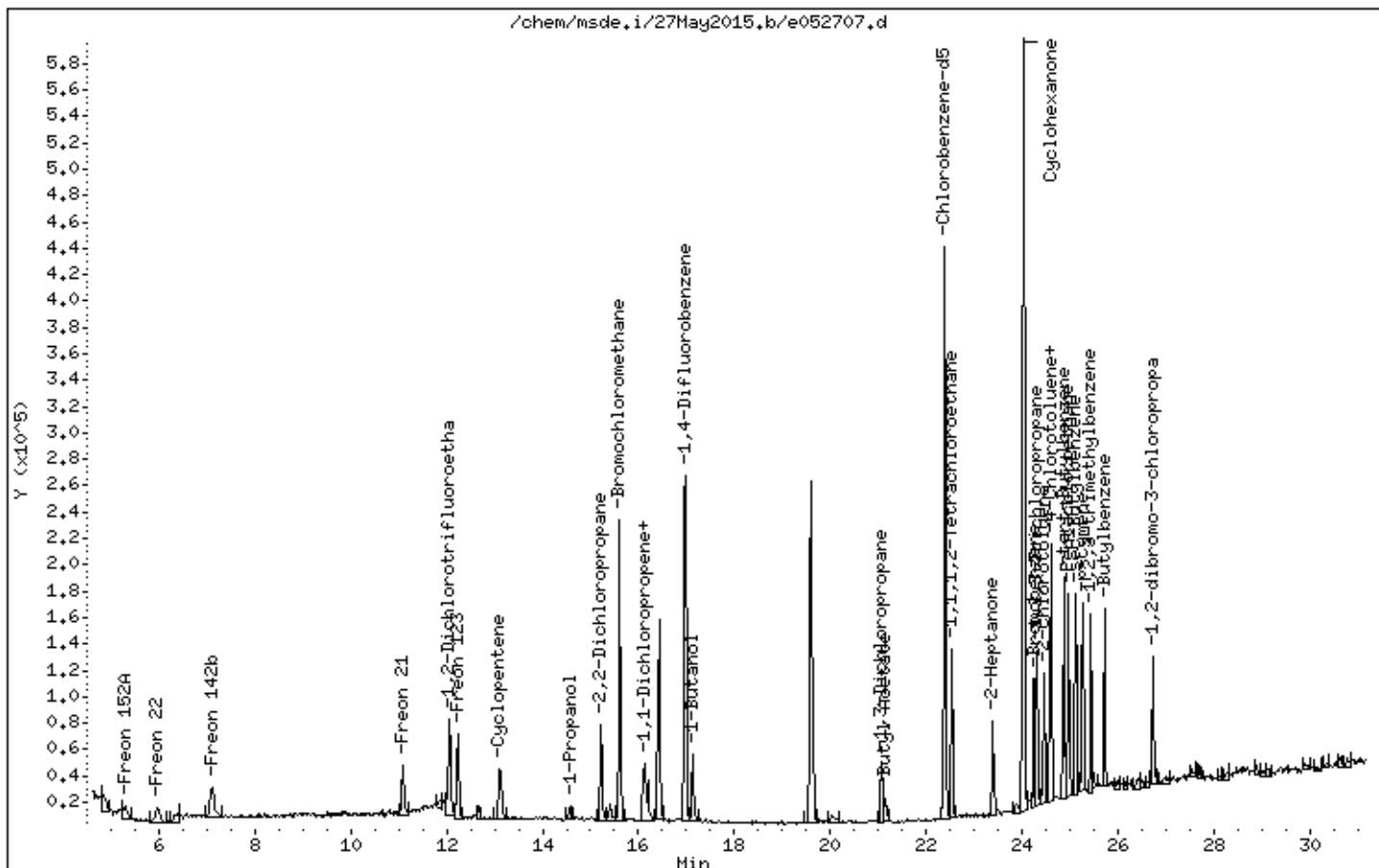
Instrument: msde.i

Sample Info: 50mL# 2736-27

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/18May2015.b/e051809.d
 Lab Smp Id: ICAL Client Smp ID: Level 8
 Inj Date : 18-MAY-2015 15:04
 Operator : ef Inst ID: msde.i
 Smp Info : 50mL# 2736-8
 Misc Info : 1.0ppbv (5.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/18May2015.b/e1510515a.m
 Meth Date : 18-May-2015 18:20 ghehir Quant Type: ISTD
 Cal Date : 18-MAY-2015 15:04 Cal File: e051809.d
 Als bottle: 1 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: IsobutyleneICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	125418	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	96750					46.94- 106.94	77.14
15.611	15.611	(1.000)	49	144068					103.66- 163.66	114.87
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	429958	5.00000				80.00- 120.00	100.00
16.987	16.987	(1.000)	88	57477					0.00- 43.53	13.37
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	420357	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	176114					13.25- 73.25	41.90
8 Isobutylene CAS #: 115-11-7										
7.820	7.820	(0.501)	41	30745	1.00000	1.000			0.00- 0.00	100.00(H)
7.802	7.802	(0.500)	56	16445					0.00- 0.00	53.49
7.802	7.802	(0.500)	39	20701					0.00- 0.00	67.33

QC Flag Legend

H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 18-MAY-2015
Lab File ID: e051809.d	Calibration Time: 10:13
Lab Smp Id: ICAL	Client Smp ID: Level 8
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/18May2015.b/e15l0515a.m	
Misc Info: 1.0ppbv (5.0ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	180559	108335	252783	125418	-30.54
58 1,4-Difluorobenze	663550	398130	928970	429958	-35.20
75 Chlorobenzene-d5	634456	380674	888238	420357	-33.75

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 18-MAY-2015 15:04

Client ID: Level 8

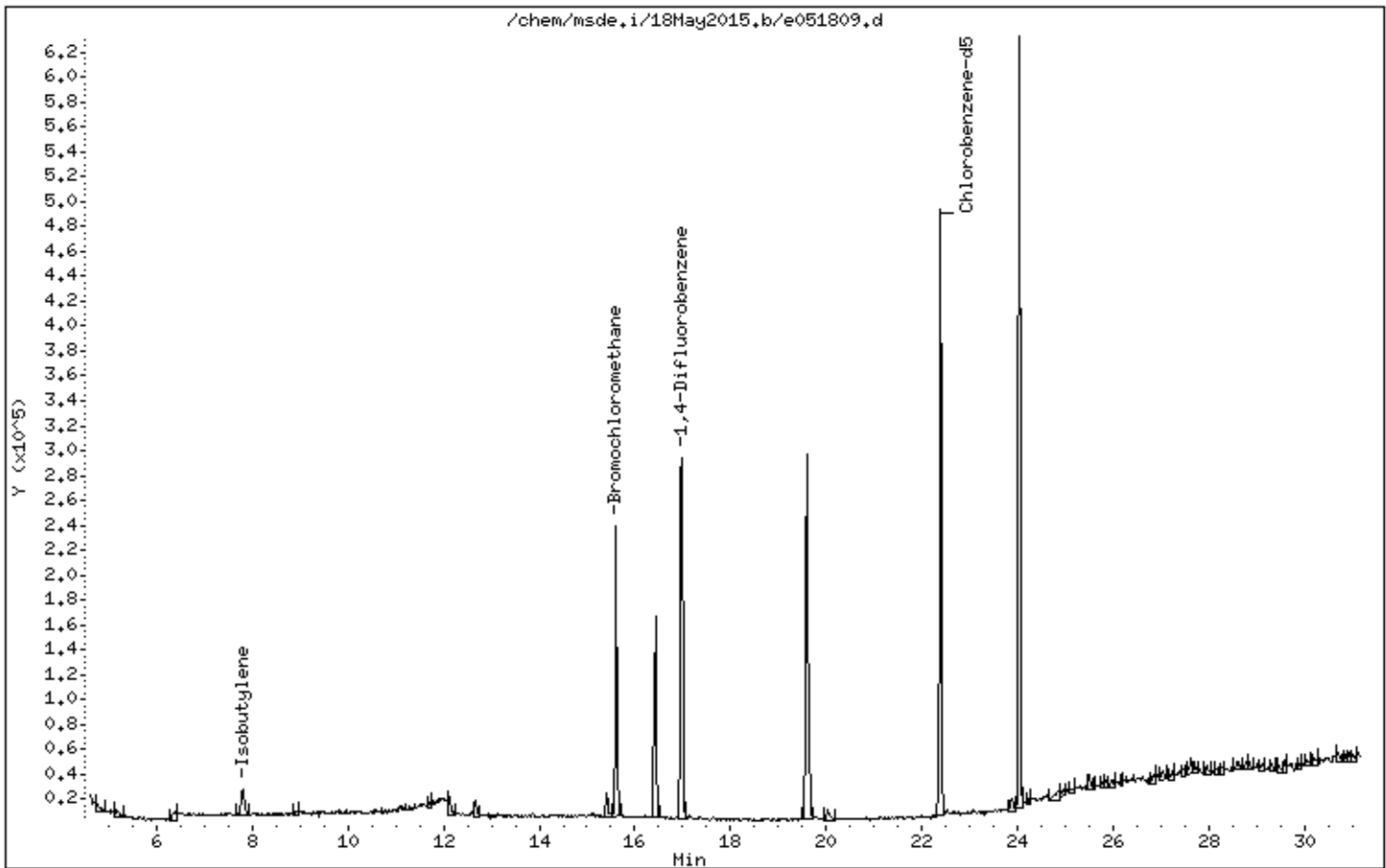
Instrument: msde.i

Sample Info: 50mL# 2736-8

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051510.d
 Lab Smp Id: ICAL Client Smp ID: Level 8
 Inj Date : 15-MAY-2015 15:37
 Operator : ef Inst ID: msde.i
 Smp Info : 125mL# 2736-1
 Misc Info : 1.0ppbv (1.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 15:37 Cal File: e051510.d
 Als bottle: 1 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	129853	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	94753					46.94- 106.94	72.97
15.611	15.611	(1.000)	49	137991					103.66- 163.66	106.27
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	439894	5.00000				80.00- 120.00	100.00
16.987	16.987	(1.000)	88	57150					0.00- 43.53	12.99
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	412409	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	171520					13.25- 73.25	41.59
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0										
16.433	16.433	(1.053)	65	199430	5.00000	4.889			80.00- 120.00	100.00
16.433	16.433	(1.053)	67	87838					24.87- 84.87	44.04

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.154)	98	370434	5.00000	4.902	80.00- 120.00	100.00
19.601	19.601	(1.154)	70	40792			0.00- 40.24	11.01
19.601	19.601	(1.154)	100	252854			39.39- 99.39	68.26

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	210766	5.00000	5.048	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	249898			88.06- 148.06	118.57
24.042	24.042	(1.074)	176	198222			66.20- 126.20	94.05

2 Propylene						CAS #: 115-07-1		
5.046	5.046	(0.323)	41	28329	1.00000	1.030	80.00- 120.00	100.00
5.046	5.046	(0.323)	42	19384			38.37- 98.37	68.42
5.046	5.046	(0.323)	39	27648			42.39- 102.39	97.60

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.479	5.479	(0.351)	85	114650	1.00000	0.9951	80.00- 120.00	100.00
5.504	5.504	(0.353)	87	39057			2.12- 62.12	34.07

6 Freon 114						CAS #: 76-14-2		
6.853	6.853	(0.439)	135	77908	1.00000	0.8841	80.00- 120.00	100.00
6.853	6.853	(0.439)	137	26310			1.87- 61.87	33.77

7 Chloromethane						CAS #: 74-87-3		
7.191	7.191	(0.461)	50	30993	1.00000	0.9193	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	10493			2.64- 62.64	33.86

9 Butane						CAS #: 106-97-8		
7.924	7.924	(0.508)	58	6250	1.00000	1.177	80.00- 120.00	100.00(M)
7.906	7.906	(0.506)	43	44130			798.08- 858.08	706.08

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	23003	1.00000	0.8665	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	7300			1.55- 61.55	31.73

11 1,3-Butadiene						CAS #: 106-99-0		
8.271	8.271	(0.530)	54	22541	1.00000	0.9509	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	24470			68.70- 128.70	108.56

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	26767	1.00000	1.094	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	24460			67.78- 127.78	91.38

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	12538	1.00000	1.050	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	5390			0.00- 59.93	42.99

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	4011			2.40- 62.40	31.99	

14 Isopentane CAS #: 78-78-4									
10.329	10.329	(0.662)	57	22793	1.00000	1.028	80.00- 120.00	100.00	
10.348	10.348	(0.663)	43	35773			113.81- 173.81	156.95	
10.329	10.329	(0.662)	42	30880			97.27- 157.27	135.48	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	125504	1.00000	0.9704	80.00- 120.00	100.00	
10.976	10.976	(0.703)	103	81030			34.06- 94.06	64.56	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	17168	1.00000	1.403	80.00- 120.00	100.00	
11.890	11.890	(0.762)	46	8640			7.61- 67.61	50.33	
11.871	11.871	(0.760)	43	6341			0.00- 55.64	36.93	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	62422	1.00000	0.9880	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	43458			34.06- 94.06	69.62	
12.290	12.290	(0.787)	101	75215			81.22- 141.22	120.49	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	17474	1.00000	0.9582	80.00- 120.00	100.00	
12.309	12.309	(0.788)	61	51293			208.58- 268.58	293.54	
12.309	12.309	(0.788)	96	25541			127.45- 187.45	146.17	

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	14719	1.00000	0.9288	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	63079			294.37- 354.37	428.55	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	56050	1.00000	1.004	80.00- 120.00	100.00	
12.918	12.918	(0.828)	43	20327			0.00- 55.86	36.27	
12.918	12.918	(0.828)	59	2070			0.00- 34.14	3.69	

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	77209	1.00000	1.005	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	8856	1.00000	0.8622	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	36242			276.20- 336.20	409.24	

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	23690	1.00000	1.021	80.00- 120.00	100.00	
13.376	13.376	(0.857)	49	38416			112.26- 172.26	162.16	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.357	13.357	(0.856)	51	12695			12.15- 72.15	53.59	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	73012	1.00000	0.8967	80.00- 120.00	100.00	
13.564	13.564	(0.869)	41	25000			0.00- 54.99	34.24	
13.564	13.564	(0.869)	57	8091			0.00- 41.32	11.08	

31 MTBE CAS #: 1634-04-4									
13.701	13.701	(0.878)	73	64281	1.00000	0.8433	80.00- 120.00	100.00	
13.701	13.701	(0.878)	57	15970			0.00- 54.97	24.84	
13.701	13.701	(0.878)	41	20954			0.00- 55.95	32.60	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	18165	1.00000	0.9293	80.00- 120.00	100.00	
13.729	13.729	(0.879)	61	39524			175.95- 235.95	217.58	
13.729	13.729	(0.879)	96	29040			121.11- 181.11	159.87	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	31622	1.00000	0.7504	80.00- 120.00	100.00	
14.031	14.031	(0.899)	43	25369			35.27- 95.27	80.23	
14.031	14.031	(0.899)	86	6979			0.00- 46.67	22.07	

36 Isopropyl ether CAS #: 108-20-3									
14.388	14.388	(0.922)	45	80147	1.00000	0.7428	80.00- 120.00	100.00	
14.388	14.388	(0.922)	87	22022			0.00- 55.94	27.48	
14.388	14.388	(0.922)	59	9109			0.00- 41.46	11.37	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	55107	1.00000	0.9391	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	17432			0.10- 60.10	31.63	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	7666	1.00000	0.9831	80.00- 120.00	100.00	
14.470	14.470	(0.927)	42	9921			58.55- 118.55	129.42	
14.470	14.470	(0.927)	43	82390			1046.17-1106.17	1074.75	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	80117	1.00000	0.8105	80.00- 120.00	100.00	
14.897	14.897	(0.954)	87	32334			11.70- 71.70	40.36	
14.878	14.878	(0.953)	41	24028			0.00- 52.35	29.99	

42 2-Butanone CAS #: 78-93-3									
15.259	15.259	(0.977)	72	10365	1.00000	0.8520	80.00- 120.00	100.00	
15.259	15.259	(0.977)	43	65085			419.99- 479.99	627.93	
15.259	15.259	(0.977)	57	4962			5.97- 65.97	47.87	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
41 cis-1,2-Dichloroethene						CAS #: 156-59-2			
15.259	15.259	(0.977)	98	20282	1.00000	0.9085	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	39572			155.56- 215.56	195.11	
15.259	15.259	(0.977)	96	30684			124.76- 184.76	151.29	

44 Tetrahydrofuran						CAS #: 109-99-9			
15.611	15.611	(1.000)	42	32238	1.00000	0.8801	80.00- 120.00	100.00	
15.611	15.611	(1.000)	71	10392			4.62- 64.62	32.24	
15.611	15.611	(1.000)	72	8948			8.51- 68.51	27.76	

47 Chloroform						CAS #: 67-66-3			
15.672	15.672	(1.004)	83	79702	1.00000	0.9566	80.00- 120.00	100.00	
15.672	15.672	(1.004)	85	51470			36.52- 96.52	64.58	

49 1,1,1-Trichloroethane						CAS #: 71-55-6			
15.919	15.919	(1.020)	97	102253	1.00000	0.9559	80.00- 120.00	100.00	
15.919	15.919	(1.020)	99	65306			33.43- 93.43	63.87	

48 Cyclohexane						CAS #: 110-82-7			
15.888	15.888	(1.018)	84	29007	1.00000	0.7758	80.00- 120.00	100.00	
15.888	15.888	(1.018)	56	39934			96.90- 156.90	137.67	
15.888	15.888	(1.018)	41	27768			38.62- 98.62	95.73	

51 Carbon Tetrachloride						CAS #: 56-23-5			
16.104	16.104	(1.032)	119	110153	1.00000	0.9142	80.00- 120.00	100.00	
16.104	16.104	(1.032)	117	111474			74.78- 134.78	101.20	

52 2,2,4-Trimethylpentane						CAS #: 540-84-1			
16.337	16.337	(1.047)	56	56219	1.00000	0.7980	80.00- 120.00	100.00	
16.337	16.337	(1.047)	57	161788			264.46- 324.46	287.78	
16.337	16.337	(1.047)	41	72142			53.88- 113.88	128.32	

53 Benzene						CAS #: 71-43-2			
16.433	16.433	(0.967)	78	80368	1.00000	0.8938	80.00- 120.00	100.00	
16.433	16.433	(0.967)	77	20075			0.00- 53.40	24.98	

55 tert-amyl methyl ether						CAS #: 994-05-8			
16.457	16.457	(0.969)	87	23731	1.00000	0.9145	80.00- 120.00	100.00	
16.457	16.457	(0.969)	73	75249			351.86- 411.86	317.09	
16.457	16.457	(0.969)	55	33337			87.28- 147.28	140.48	

56 1,2-Dichloroethane						CAS #: 107-06-2			
16.530	16.530	(0.973)	62	62110	1.00000	0.9468	80.00- 120.00	100.00	
16.554	16.554	(0.974)	64	21367			2.90- 62.90	34.40	

57 Heptane						CAS #: 142-82-5			
16.578	16.578	(0.976)	57	29487	1.00000	0.9778	80.00- 120.00	100.00	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
57 Heptane (continued)								
16.578	16.578	(0.976)	100	16136			14.70- 74.70	54.72
16.578	16.578	(0.976)	43	51771			159.65- 219.65	175.57

59 Trichloroethene								
						CAS #: 79-01-6		
17.397	17.397	(1.024)	130	59488	1.00000	0.9279	80.00- 120.00	100.00
17.373	17.373	(1.023)	95	45965			48.43- 108.43	77.27
17.397	17.397	(1.024)	97	31311			20.03- 80.03	52.63

60 Methylcyclohexane								
						CAS #: 108-87-2		
17.614	17.614	(1.037)	83	40343	1.00000	0.8718	80.00- 120.00	100.00
17.614	17.614	(1.037)	55	42090			57.78- 117.78	104.33
17.614	17.614	(1.037)	56	13094			0.00- 58.27	32.46

61 1,2-Dichloropropane								
						CAS #: 78-87-5		
17.831	17.831	(1.050)	63	28162	1.00000	0.8426	80.00- 120.00	100.00
17.831	17.831	(1.050)	62	19017			41.39- 101.39	67.53
17.831	17.831	(1.050)	41	28175			30.08- 90.08	100.05

62 1,4-Dioxane								
						CAS #: 123-91-1		
17.951	17.951	(1.057)	88	18300	1.00000	0.8106	80.00- 120.00	100.00
17.975	17.975	(1.058)	58	14314			41.23- 101.23	78.22
17.951	17.951	(1.057)	57	6293			0.00- 53.84	34.39

63 Bromodichloromethane								
						CAS #: 75-27-4		
18.264	18.264	(1.075)	83	76303	1.00000	0.9010	80.00- 120.00	100.00
18.264	18.264	(1.075)	85	50977			37.91- 97.91	66.81

64 cis-1,3-Dichloropropene								
						CAS #: 10061-01-5		
19.108	19.108	(1.125)	75	39063	1.00000	0.8588	80.00- 120.00	100.00
19.108	19.108	(1.125)	77	14524			2.56- 62.56	37.18
19.108	19.108	(1.125)	39	29772			19.94- 79.94	76.22

65 4-Methyl-2-pentanone								
						CAS #: 108-10-1		
19.310	19.310	(1.137)	43	61998	1.00000	0.8590	80.00- 120.00	100.00
19.310	19.310	(1.137)	58	17785			7.11- 67.11	28.69
19.310	19.310	(1.137)	85	9050			0.00- 46.29	14.60

68 Toluene								
						CAS #: 108-88-3		
19.758	19.758	(1.163)	91	103290	1.00000	0.9190	80.00- 120.00	100.00
19.758	19.758	(1.163)	92	58601			28.99- 88.99	56.73

69 trans-1,3-Dichloropropene								
						CAS #: 10061-02-6		
20.331	20.331	(0.908)	75	45009	1.00000	0.9440	80.00- 120.00	100.00
20.331	20.331	(0.908)	77	15383			3.77- 63.77	34.18
20.304	20.304	(0.907)	39	26990			18.43- 78.43	59.97

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	41705	1.00000	1.036	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	25490			34.78- 94.78	61.12
20.716	20.716	(0.925)	83	27667			49.45- 109.45	66.34

71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	60059	1.00000	0.9818	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	52206			54.11- 114.11	86.92
20.881	20.881	(0.933)	131	48620			55.30- 115.30	80.95

72 2-Hexanone					CAS #: 591-78-6			
21.046	21.046	(0.940)	58	24617	1.00000	0.7354	80.00- 120.00	100.00
21.046	21.046	(0.940)	43	57159			162.06- 222.06	232.19
21.046	21.046	(0.940)	100	6432			0.00- 52.96	26.13

73 Dibromochloromethane					CAS #: 124-48-1			
21.458	21.458	(0.958)	129	99316	1.00000	0.9332	80.00- 120.00	100.00
21.458	21.458	(0.958)	127	81018			46.93- 106.93	81.58

74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	61595	1.00000	0.8747	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	64087			68.26- 128.26	104.05

76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	112893	1.00000	0.9916	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	35078			1.73- 61.73	31.07
22.428	22.428	(1.002)	77	60830			16.56- 76.56	53.88

77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	44084	1.00000	0.8567	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	135525			261.70- 321.70	307.42

80 m,p-Xylene					CAS #: 108-38-3			
22.677	22.677	(1.013)	106	54859	1.00000	0.8934	80.00- 120.00	100.00
22.677	22.677	(1.013)	91	97069			150.71- 210.71	176.94

81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	46023	1.00000	0.8549	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	89247			165.12- 225.12	193.92

83 Styrene					CAS #: 100-42-5			
23.319	23.319	(1.042)	104	80259	1.00000	0.8434	80.00- 120.00	100.00
23.319	23.319	(1.042)	78	35045			12.29- 72.29	43.66

84 Bromoform					CAS #: 75-25-2			
23.661	23.661	(1.057)	173	72071	1.00000	0.8775	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
84 Bromoform (continued)								
23.661	23.661	(1.057)	171	37219			23.53- 83.53	51.64

85 Cumene								
23.751	23.751	(1.061)	105	145771	1.00000	0.8515	80.00- 120.00	100.00
23.751	23.751	(1.061)	120	44463			0.00- 58.84	30.50

89 1,1,2,2-Tetrachloroethane								
24.222	24.222	(1.082)	83	74617	1.00000	0.9279	80.00- 120.00	100.00
24.222	24.222	(1.082)	85	53487			37.40- 97.40	71.68

90 Propylbenzene								
24.289	24.289	(1.085)	91	180754	1.00000	0.9077	80.00- 120.00	100.00
24.289	24.289	(1.085)	120	50174			0.00- 58.05	27.76

92 4-Ethyltoluene								
24.424	24.424	(1.091)	105	141976	1.00000	0.8198	80.00- 120.00	100.00
24.424	24.424	(1.091)	120	49746			2.80- 62.80	35.04

94 1,3,5-Trimethylbenzene								
24.491	24.491	(1.094)	105	128070	1.00000	0.8659	80.00- 120.00	100.00
24.491	24.491	(1.094)	120	68619			23.16- 83.16	53.58

98 1,2,4-Trimethylbenzene								
24.940	24.940	(1.114)	105	103629	1.00000	0.8979	80.00- 120.00	100.00
24.940	24.940	(1.114)	120	52753			19.74- 79.74	50.91

101 1,3-Dichlorobenzene								
25.343	25.343	(1.132)	146	102988	1.00000	0.9151	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	62715			31.66- 91.66	60.90
25.343	25.343	(1.132)	111	38227			6.44- 66.44	37.12

104 1,4-Dichlorobenzene								
25.455	25.455	(1.137)	146	96233	1.00000	0.9028	80.00- 120.00	100.00
25.455	25.455	(1.137)	148	60950			32.25- 92.25	63.34
25.455	25.455	(1.137)	111	37809			4.82- 64.82	39.29

105 alpha-chlorotoluene								
25.590	25.590	(1.143)	91	108025	1.00000	0.8924	80.00- 120.00	100.00
25.590	25.590	(1.143)	126	28571			0.00- 57.25	26.45

108 1,2-Dichlorobenzene								
25.881	25.881	(1.156)	146	92702	1.00000	0.9313	80.00- 120.00	100.00
25.881	25.881	(1.156)	148	53738			31.25- 91.25	57.97
25.881	25.881	(1.156)	111	38440			7.65- 67.65	41.47

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	43760	1.00000	0.9296	80.00- 120.00	100.00	
27.630	27.630	(1.234)	182	42898			66.40- 126.40	98.03	

113	Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	39195	1.00000	0.9846	80.00- 120.00	100.00	
27.719	27.719	(1.238)	223	25747			31.93- 91.93	65.69	

114	Naphthalene					CAS #: 91-20-3			
27.944	27.944	(1.248)	128	11856	0.10000	0.1010	80.00- 120.00	100.00(a)	
27.944	27.944	(1.248)	127	2967			0.00- 47.34	25.03	

QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e051510.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef

Calibration Date: 15-MAY-2015
Calibration Time: 17:04
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

Method File: /chem/msde.i/15May2015.b/e15l0515a.m
Misc Info: 1.0ppbv (1.0ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	129853	-23.32
58 1,4-Difluorobenze	587158	352295	822021	439894	-25.08
75 Chlorobenzene-d5	557421	334453	780389	412409	-26.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 15:37

Client ID: Level 8

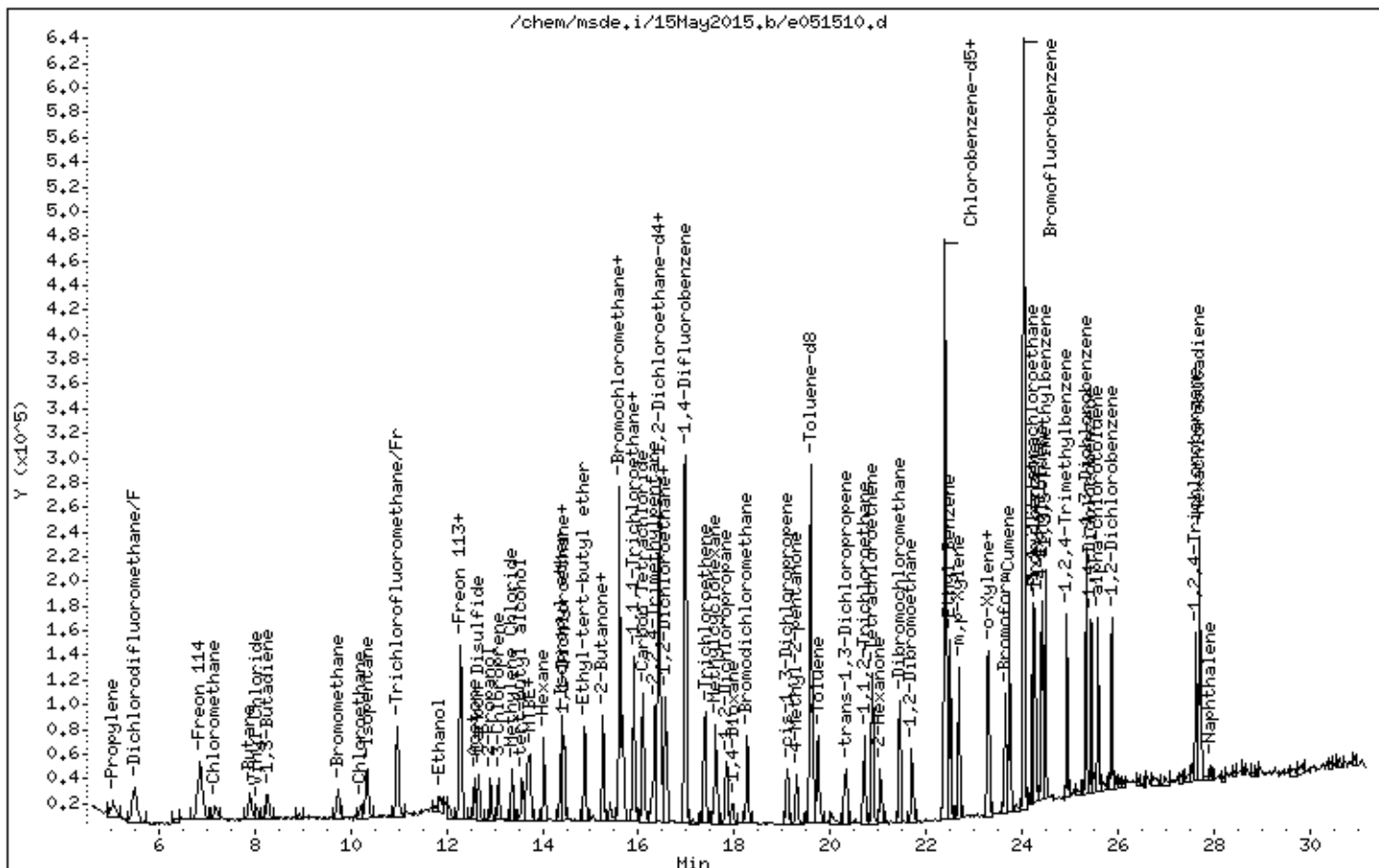
Instrument: msde.i

Sample Info: 125mL# 2736-1

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/27May2015.b/e052708.d
 Lab Smp Id: ICAL Client Smp ID: Level 9
 Inj Date : 27-MAY-2015 11:25
 Operator : ef Inst ID: msde.i
 Smp Info : 250mL# 2736-27
 Misc Info : 5.0ppbv (5.0ppbv) AT-1
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/27May2015.b/e1510515b.m
 Meth Date : 27-May-2015 14:47 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 Calibration Sample, Level: 9
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT1ICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	102205 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	80487			46.94- 106.94	78.75
15.611	15.611 (1.000)	49	148261			103.66- 163.66	145.06
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	370223 5.00000			80.00- 120.00	100.00
16.987	16.987 (1.000)	88	54316			0.00- 43.53	14.67
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	353868 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	154696			13.25- 73.25	43.72
1 Freon 134a CAS #: 811-97-2							
4.853	4.853 (0.311)	83	165187 5.00000	4.645		0.00- 0.00	100.00
4.877	4.877 (0.312)	69	91168			0.00- 0.00	55.19

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET	RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====
3 Freon 152A						CAS #: 75-37-6			
5.311	5.311	(0.340)	65	57935	5.00000	4.456	0.00-	0.00	100.00
5.311	5.311	(0.340)	51	144601			0.00-	0.00	249.59
5 Freon 22						CAS #: 75-45-6			
5.986	5.986	(0.383)	51	224209	5.00000	4.338	0.00-	0.00	100.00
5.986	5.986	(0.383)	67	39473			0.00-	0.00	17.61
210 Freon 142b						CAS #: 75-68-3			
7.094	7.094	(0.454)	65	326011	5.00000	4.708	0.00-	0.00	100.00
7.094	7.094	(0.454)	45	84752			0.00-	0.00	26.00
211 Freon 21						CAS #: 75-43-4			
11.071	11.071	(0.709)	67	218418	5.00000	4.553	0.00-	0.00	100.00
11.071	11.071	(0.709)	69	73924			0.00-	0.00	33.85
10.633	10.633	(0.681)	35	395			0.00-	0.00	0.18
212 1,2-Dichlorotrifluoroethane						CAS #: 354-23-4			
12.061	12.061	(0.773)	117	255061	5.00000	4.813	0.00-	0.00	100.00
12.061	12.061	(0.773)	67	246024			0.00-	0.00	96.46
213 Freon 123						CAS #: 306-83-2			
12.233	12.233	(0.784)	83	268783	5.00000	4.847	0.00-	0.00	100.00
12.233	12.233	(0.784)	133	98135			0.00-	0.00	36.51
12.233	12.233	(0.784)	85	185425			0.00-	0.00	68.99
214 Cyclopentene						CAS #: 142-29-0			
13.109	13.109	(0.840)	67	152939	5.00000	4.742	0.00-	0.00	100.00
13.109	13.109	(0.840)	68	58639			0.00-	0.00	38.34
13.109	13.109	(0.840)	53	47866			0.00-	0.00	31.30
205 1-Propanol						CAS #: 71-23-8			
14.580	14.580	(0.934)	59	23836	5.00000	4.437	0.00-	0.00	100.00
14.580	14.580	(0.934)	42	28909			0.00-	0.00	121.28
14.580	14.580	(0.934)	41	19987			0.00-	0.00	83.85
201 2,2-Dichloropropane						CAS #: 594-20-7			
15.221	15.221	(0.975)	77	270001	5.00000	4.837	80.00-	120.00	100.00
15.221	15.221	(0.975)	79	84793			0.00-	30.00	31.40
15.221	15.221	(0.975)	97	46613			0.00-	30.00	17.26
186 1,1-Dichloropropene						CAS #: 563-58-6			
16.135	16.135	(1.034)	110	66600	5.00000	4.837	80.00-	120.00	100.00
16.135	16.135	(1.034)	75	152751			0.00-	30.00	229.36
218 Isobutanol						CAS #: 78-83-1			
16.196	16.196	(1.038)	39	77063	5.00000	4.653	0.00-	0.00	100.00(MH)

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
218 Isobutanol (continued)								
16.196	16.196	(1.038)	43	169285			0.00- 0.00	219.67
16.196	16.196	(1.038)	41	142629			0.00- 0.00	185.08

219 1-Butanol						CAS #: 71-36-3		
17.132	17.132	(1.097)	41	177218	5.00000	4.778	0.00- 0.00	100.00
17.132	17.132	(1.097)	56	189399			0.00- 0.00	106.87
17.132	17.132	(1.097)	43	135270			0.00- 0.00	76.33

86 1,3-Dichloropropane						CAS #: 142-28-9		
21.073	21.073	(1.241)	76	150600	5.00000	4.593	80.00- 120.00	100.00
21.073	21.073	(1.241)	41	157367			0.00- 30.00	104.49
21.073	21.073	(1.241)	78	50985			0.00- 30.00	33.85

199 Butyl Acetate						CAS #: 123-86-4		
21.155	21.155	(1.245)	56	40680	5.00000	4.854	80.00- 120.00	100.00
21.155	21.155	(1.245)	73	16905			0.00- 30.00	41.56
21.155	21.155	(1.245)	43	125414			0.00- 30.00	308.29

79 1,1,1,2-Tetrachloroethane						CAS #: 630-20-6		
22.552	22.552	(1.007)	131	273510	5.00000	4.797	80.00- 120.00	100.00
22.552	22.552	(1.007)	117	150133			0.00- 30.00	54.89
22.552	22.552	(1.007)	95	106661			0.00- 30.00	39.00

198 2-Heptanone						CAS #: 110-43-0		
23.402	23.402	(1.045)	58	182406	5.00000	5.319	0.00- 0.00	100.00
23.402	23.402	(1.045)	43	384523			0.00- 0.00	210.81

216 Cyclohexanone						CAS #: 108-94-1		
23.998	23.998	(1.072)	55	170947	5.00000	5.014	80.00- 120.00	100.00
23.998	23.998	(1.072)	98	64134			0.00- 30.00	37.52
23.998	23.998	(1.072)	42	143662			0.00- 30.00	84.04

185 Bromobenzene						CAS #: 108-86-1		
24.267	24.267	(1.084)	156	201697	5.00000	4.986	80.00- 120.00	100.00
24.267	24.267	(1.084)	158	191559			0.00- 30.00	94.97
24.244	24.244	(1.083)	77	313711			0.00- 30.00	155.54

91 1,2,3-Trichloropropane						CAS #: 96-18-4		
24.312	24.312	(1.086)	110	121258	5.00000	4.662	80.00- 120.00	100.00
24.312	24.312	(1.086)	75	276114			0.00- 30.00	227.71
24.312	24.312	(1.086)	61	88351			0.00- 30.00	72.86

93 2-Chlorotoluene						CAS #: 95-49-8		
24.469	24.469	(1.093)	126	175791	5.00000	4.930	80.00- 120.00	100.00
24.469	24.469	(1.093)	91	402364			0.00- 30.00	228.89

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
93 2-Chlorotoluene (continued)									
24.469	24.469	(1.093)	65	46308			0.00- 30.00	26.34	

96 4-Chlorotoluene CAS #: 106-43-4									
24.603	24.603	(1.099)	126	172931	5.00000	4.995	80.00- 120.00	100.00	
24.603	24.603	(1.099)	91	411446			0.00- 30.00	237.92	
24.603	24.603	(1.099)	57	398076			0.00- 30.00	230.19	

217 Diisobutyl Ketone CAS #: 108-83-8									
24.603	24.603	(1.099)	57	398076	5.00000	5.744	0.00- 0.00	100.00	
24.603	24.603	(1.099)	85	282705			0.00- 0.00	71.02	

97 tert-Butylbenzene CAS #: 98-06-6									
24.872	24.872	(1.111)	119	533578	5.00000	5.305	80.00- 120.00	100.00	
24.872	24.872	(1.111)	134	128185			0.00- 30.00	24.02	
24.872	24.872	(1.111)	91	352407			0.00- 30.00	66.05	

215 Pentachloroethane CAS #: 76-01-7									
24.984	24.984	(1.116)	167	154792	5.00000	4.968	0.00- 0.00	100.00	
24.984	24.984	(1.116)	117	188563			0.00- 0.00	121.82	
24.984	24.984	(1.116)	169	74120			0.00- 0.00	47.88	

99 sec-Butylbenzene CAS #: 135-98-8									
25.119	25.119	(1.122)	105	682804	5.00000	5.168	80.00- 120.00	100.00	
25.119	25.119	(1.122)	134	158718			0.00- 30.00	23.25	
25.119	25.119	(1.122)	91	117987			0.00- 30.00	17.28	

100 p-Cymene CAS #: 99-87-6									
25.276	25.276	(1.129)	119	617137	5.00000	5.465	80.00- 120.00	100.00	
25.276	25.276	(1.129)	134	165570			0.00- 30.00	26.83	
25.276	25.276	(1.129)	91	139707			0.00- 30.00	22.64	

103 1,2,3-trimethylbenzene CAS #: 526-73-8									
25.433	25.433	(1.136)	120	211202	5.00000	5.156	80.00- 120.00	100.00	
25.433	25.433	(1.136)	105	484333			0.00- 30.00	229.32	
25.433	25.433	(1.136)	77	61906			0.00- 30.00	29.31	

107 Butylbenzene CAS #: 104-51-8									
25.724	25.724	(1.149)	134	138073	5.00000	4.779	80.00- 120.00	100.00	
25.724	25.724	(1.149)	91	454507			0.00- 30.00	329.18	
25.724	25.724	(1.149)	92	232541			0.00- 30.00	168.42	

110 1,2-dibromo-3-chloropropane CAS #: 96-12-8									
26.733	26.733	(1.194)	157	153233	5.00000	5.062	80.00- 120.00	100.00	
26.733	26.733	(1.194)	75	169211			0.00- 30.00	110.43	
26.733	26.733	(1.194)	155	127363			0.00- 30.00	83.12	

QC Flag Legend

- M - Compound response manually integrated.
- H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 27-MAY-2015
Lab File ID: e052708.d	Calibration Time: 06:30
Lab Smp Id: ICAL	Client Smp ID: Level 9
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/27May2015.b/e15l0515b.m	
Misc Info: 5.0ppbv (5.0ppbv) AT-1	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	166617	99970	233264	102205	-38.66
58 1,4-Difluorobenze	585674	351404	819944	370223	-36.79
75 Chlorobenzene-d5	536752	322051	751453	353868	-34.07

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 27-MAY-2015 11:25

Client ID: Level 9

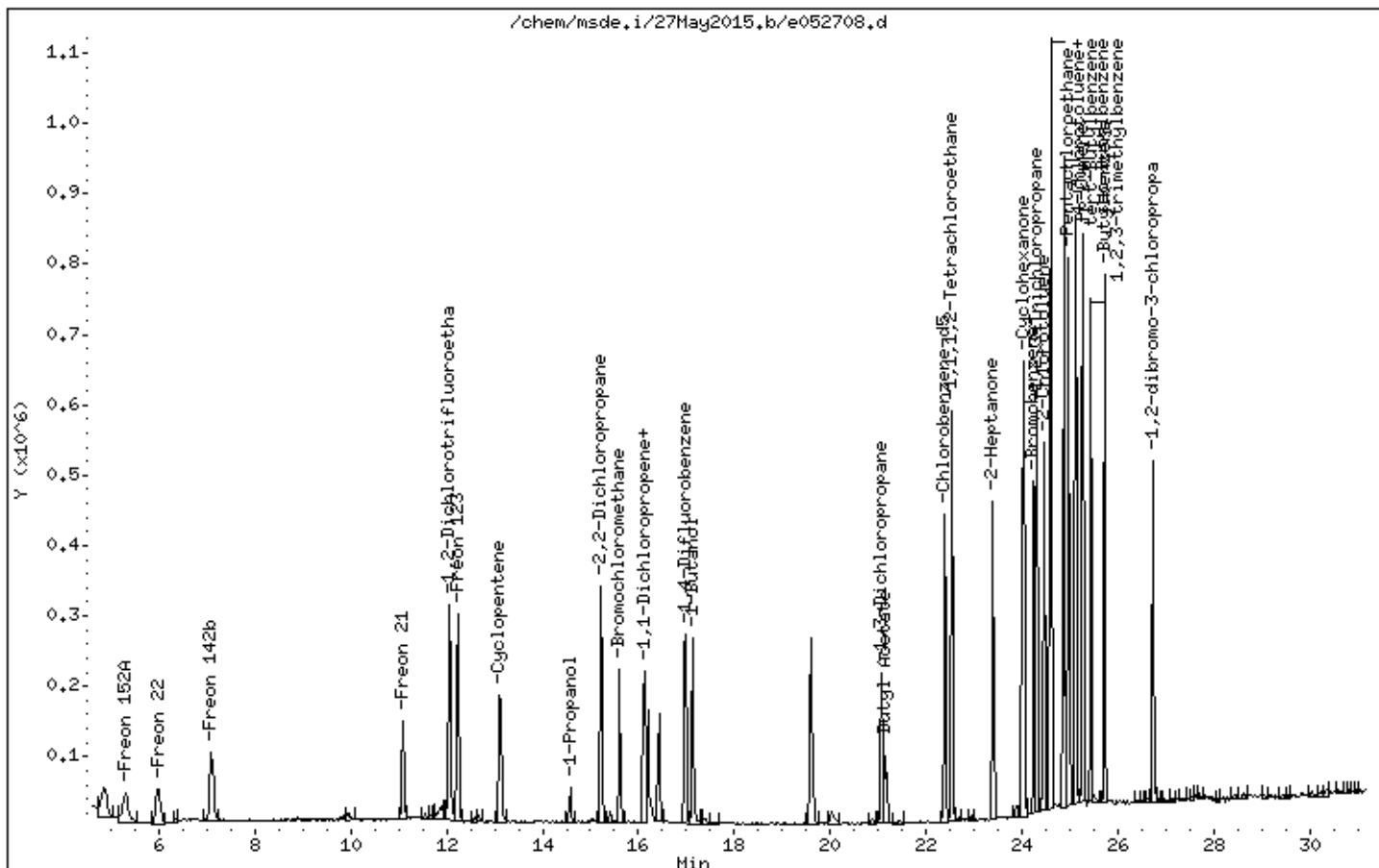
Instrument: msde.i

Sample Info: 250mL# 2736-27

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/18May2015.b/e051812.d
 Lab Smp Id: ICAL Client Smp ID: Level 9
 Inj Date : 18-MAY-2015 17:22
 Operator : gh Inst ID: msde.i
 Smp Info : 250mL# 2736-8
 Misc Info : 5.0ppbv (5.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/18May2015.b/e1510515a.m
 Meth Date : 18-May-2015 18:20 ghehir Quant Type: ISTD
 Cal Date : 18-MAY-2015 17:22 Cal File: e051812.d
 Als bottle: 2 Calibration Sample, Level: 9
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: IsobutyleneICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	114660	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	93738					46.94- 106.94	81.75
15.611	15.611	(1.000)	49	139518					103.66- 163.66	121.68
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	415806	5.00000				80.00- 120.00	100.00
16.987	16.987	(1.000)	88	51246					0.00- 43.53	12.32
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	400520	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	168729					13.25- 73.25	42.13
8 Isobutylene CAS #: 115-11-7										
7.819	7.819	(0.501)	41	134139	5.00000	4.535			0.00- 0.00	100.00
7.819	7.819	(0.501)	56	67276					0.00- 0.00	50.15
7.819	7.819	(0.501)	39	84937					0.00- 0.00	63.32

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 18-MAY-2015
Lab File ID: e051812.d	Calibration Time: 17:22
Lab Smp Id: ICAL	Client Smp ID: Level 9
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: gh	
Method File: /chem/msde.i/18May2015.b/e15l0515a.m	
Misc Info: 5.0ppbv (5.0ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	114660	68796	160524	114660	0.00
58 1,4-Difluorobenze	415806	249484	582128	415806	0.00
75 Chlorobenzene-d5	400520	240312	560728	400520	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 18-MAY-2015 17:22

Client ID: Level 9

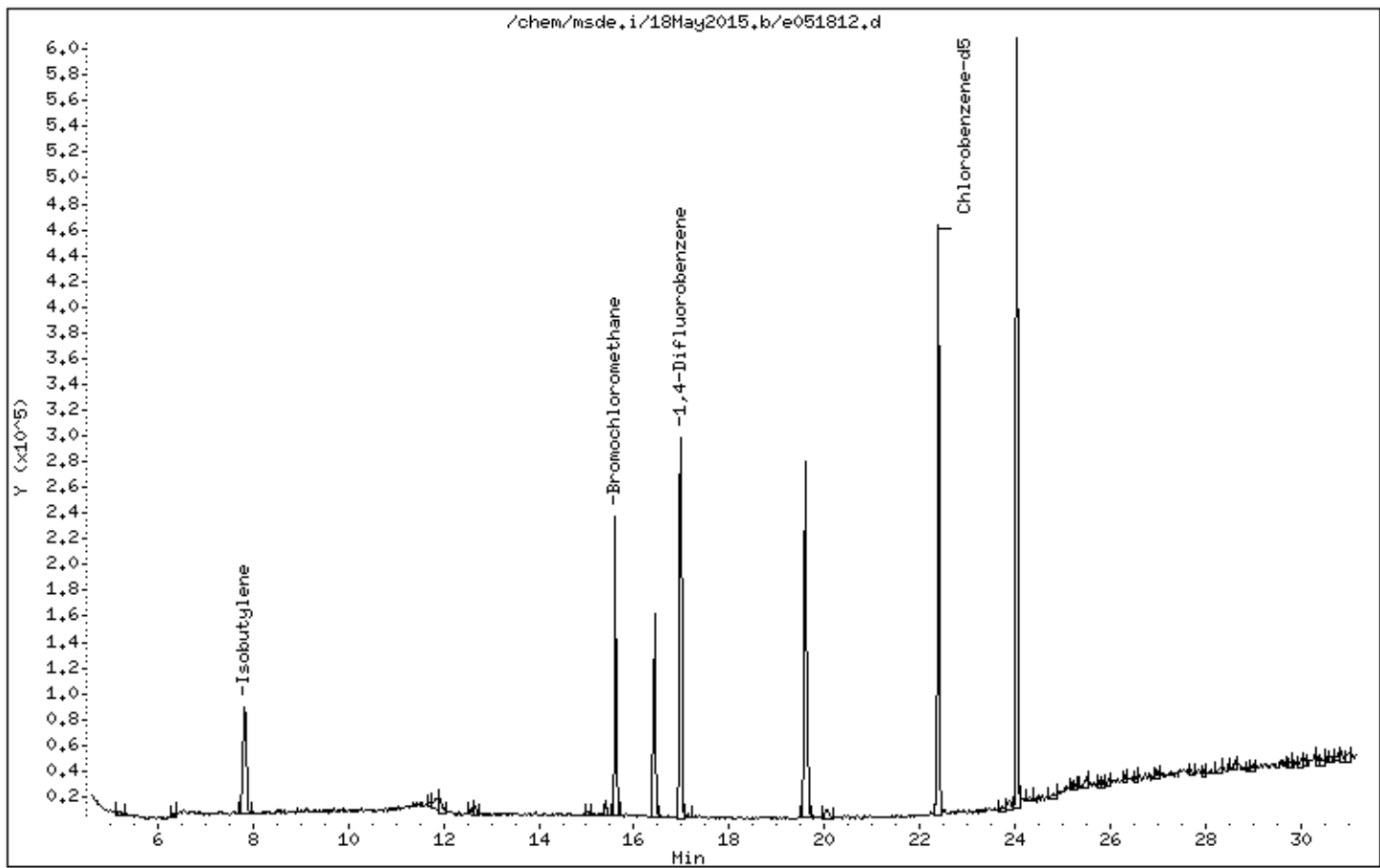
Instrument: msde.i

Sample Info: 250mL# 2736-8

Operator: gh

Column phase: RTx-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051511.d
 Lab Smp Id: ICAL Client Smp ID: Level 9
 Inj Date : 15-MAY-2015 16:23
 Operator : md Inst ID: msde.i
 Smp Info : 25mL# 2716-288
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 16:23 Cal File: e051511.d
 Als bottle: 1 Calibration Sample, Level: 9
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT09.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.610	15.610 (1.000)	130	165278 5.00000			80.00- 120.00	100.00
15.610	15.610 (1.000)	128	120967			46.94- 106.94	73.19
15.610	15.610 (1.000)	49	246623			103.66- 163.66	149.22
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	563687 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	67671			0.00- 43.53	12.01
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	532759 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	221652			13.25- 73.25	41.60
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	247772 5.00000	4.772		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	117828			24.87- 84.87	47.56

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	448774	5.00000	4.635	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	50893			0.00- 40.24	11.34
19.601	19.601	(1.156)	100	307842			39.39- 99.39	68.60

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	269927	5.00000	5.004	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	337431			88.06- 148.06	125.01
24.042	24.042	(1.074)	176	254565			66.20- 126.20	94.31

2 Propylene						CAS #: 115-07-1		
5.045	5.045	(0.323)	41	176234	5.00000	5.037	80.00- 120.00	100.00
4.997	4.997	(0.320)	42	119749			38.37- 98.37	67.95
5.045	5.045	(0.323)	39	138330			42.39- 102.39	78.49

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.479	5.479	(0.351)	85	732925	5.00000	4.998	80.00- 120.00	100.00
5.503	5.503	(0.353)	87	240296			2.12- 62.12	32.79

6 Freon 114						CAS #: 76-14-2		
6.829	6.829	(0.437)	135	582248	5.00000	5.191	80.00- 120.00	100.00
6.829	6.829	(0.437)	137	183704			1.87- 61.87	31.55

7 Chloromethane						CAS #: 74-87-3		
7.167	7.167	(0.459)	50	208106	5.00000	4.850	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	68024			2.64- 62.64	32.69

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	33539	5.00000	4.962	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	294623			798.08- 858.08	878.45

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	169407	5.00000	5.014	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	51440			1.55- 61.55	30.36

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	151631	5.00000	5.026	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	164069			68.70- 128.70	108.20

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	151873	5.00000	4.876	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	142050			67.78- 127.78	93.53

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	74827	5.00000	4.922	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	29429			0.00- 59.93	39.33

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	21279			2.40- 62.40	28.44	

14 Isopentane CAS #: 78-78-4									
10.328	10.328	(0.662)	57	128336	5.00000	4.547	80.00- 120.00	100.00	
10.347	10.347	(0.663)	43	210943			113.81- 173.81	164.37	
10.347	10.347	(0.663)	42	180728			97.27- 157.27	140.82	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	769360	5.00000	4.674	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	485804			34.06- 94.06	63.14	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	67681	5.00000	4.346	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	27101			7.61- 67.61	40.04	
11.871	11.871	(0.760)	43	18620			0.00- 55.64	27.51	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	114797	5.00000	4.946	80.00- 120.00	100.00	
12.309	12.309	(0.788)	61	326398			208.58- 268.58	284.33	
12.309	12.309	(0.788)	96	180880			127.45- 187.45	157.57	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	402057	5.00000	5.000	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	254799			34.06- 94.06	63.37	
12.290	12.290	(0.787)	101	477270			81.22- 141.22	118.71	

22 Acetone CAS #: 67-64-1									
12.575	12.575	(0.806)	58	86805	5.00000	4.303	80.00- 120.00	100.00	
12.575	12.575	(0.806)	43	369651			294.37- 354.37	425.84	

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	459382	5.00000	4.700	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	64368	5.00000	4.924	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	231433			276.20- 336.20	359.55	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	325229	5.00000	4.578	80.00- 120.00	100.00	
12.918	12.918	(0.828)	43	92280			0.00- 55.86	28.37	
12.918	12.918	(0.828)	59	12062			0.00- 34.14	3.71	

29 Methylene Chloride CAS #: 75-09-2									
13.375	13.375	(0.857)	84	140254	5.00000	4.750	80.00- 120.00	100.00	
13.375	13.375	(0.857)	49	257589			112.26- 172.26	183.66	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.375	13.375	(0.857)	51	75644			12.15- 72.15	53.93	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	497608	5.00000	4.801	80.00- 120.00	100.00	
13.564	13.564	(0.869)	41	142481			0.00- 54.99	28.63	
13.564	13.564	(0.869)	57	56391			0.00- 41.32	11.33	

31 MTBE CAS #: 1634-04-4									
13.701	13.701	(0.878)	73	506045	5.00000	5.216	80.00- 120.00	100.00	
13.701	13.701	(0.878)	57	122544			0.00- 54.97	24.22	
13.674	13.674	(0.876)	41	159827			0.00- 55.95	31.58	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.728	13.728	(0.879)	98	140022	5.00000	5.628	80.00- 120.00	100.00	
13.728	13.728	(0.879)	61	326285			175.95- 235.95	233.02	
13.728	13.728	(0.879)	96	226130			121.11- 181.11	161.50	

35 Hexane CAS #: 110-54-3									
14.030	14.030	(0.899)	57	297225	5.00000	5.542	80.00- 120.00	100.00	
14.030	14.030	(0.899)	43	230631			35.27- 95.27	77.59	
14.030	14.030	(0.899)	86	52838			0.00- 46.67	17.78	

36 Isopropyl ether CAS #: 108-20-3									
14.387	14.387	(0.922)	45	746411	5.00000	5.435	80.00- 120.00	100.00	
14.387	14.387	(0.922)	87	174256			0.00- 55.94	23.35	
14.387	14.387	(0.922)	59	74333			0.00- 41.46	9.96	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	397648	5.00000	5.324	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	115265			0.10- 60.10	28.99	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	55234	5.00000	5.565	80.00- 120.00	100.00	
14.470	14.470	(0.927)	42	72887			58.55- 118.55	131.96	
14.442	14.442	(0.925)	43	740657			1046.17-1106.17	1340.94	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	677868	5.00000	5.388	80.00- 120.00	100.00	
14.878	14.878	(0.953)	87	273287			11.70- 71.70	40.32	
14.878	14.878	(0.953)	41	174730			0.00- 52.35	25.78	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	148370	5.00000	5.221	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	313236			155.56- 215.56	211.12	
15.259	15.259	(0.977)	96	229315			124.76- 184.76	154.56	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
42 2-Butanone						CAS #: 78-93-3			
15.259	15.259	(0.977)	72	80615	5.00000	5.206	80.00- 120.00	100.00	
15.259	15.259	(0.977)	43	475616			419.99- 479.99	589.98	
15.259	15.259	(0.977)	57	32898			5.97- 65.97	40.81	

44 Tetrahydrofuran						CAS #: 109-99-9			
15.580	15.580	(0.998)	42	244364	5.00000	5.242	80.00- 120.00	100.00	
15.580	15.580	(0.998)	71	73263			4.62- 64.62	29.98	
15.580	15.580	(0.998)	72	78035			8.51- 68.51	31.93	

47 Chloroform						CAS #: 67-66-3			
15.672	15.672	(1.004)	83	563825	5.00000	5.316	80.00- 120.00	100.00	
15.672	15.672	(1.004)	85	376460			36.52- 96.52	66.77	

48 Cyclohexane						CAS #: 110-82-7			
15.888	15.888	(1.018)	84	265014	5.00000	5.569	80.00- 120.00	100.00	
15.888	15.888	(1.018)	56	343254			96.90- 156.90	129.52	
15.888	15.888	(1.018)	41	234928			38.62- 98.62	88.65	

49 1,1,1-Trichloroethane						CAS #: 71-55-6			
15.888	15.888	(1.018)	97	720428	5.00000	5.291	80.00- 120.00	100.00	
15.888	15.888	(1.018)	99	467160			33.43- 93.43	64.84	

51 Carbon Tetrachloride						CAS #: 56-23-5			
16.104	16.104	(1.032)	119	840381	5.00000	5.480	80.00- 120.00	100.00	
16.104	16.104	(1.032)	117	873391			74.78- 134.78	103.93	

52 2,2,4-Trimethylpentane						CAS #: 540-84-1			
16.337	16.337	(1.047)	56	489716	5.00000	5.462	80.00- 120.00	100.00	
16.337	16.337	(1.047)	57	1430309			264.46- 324.46	292.07	
16.337	16.337	(1.047)	41	527263			53.88- 113.88	107.67	

53 Benzene						CAS #: 71-43-2			
16.433	16.433	(0.969)	78	626375	5.00000	5.436	80.00- 120.00	100.00	
16.433	16.433	(0.969)	77	152347			0.00- 53.40	24.32	

55 tert-amyl methyl ether						CAS #: 994-05-8			
16.457	16.457	(0.970)	87	189481	5.00000	5.698	80.00- 120.00	100.00	
16.457	16.457	(0.970)	73	637795			351.86- 411.86	336.60	
16.457	16.457	(0.970)	55	231496			87.28- 147.28	122.17	

56 1,2-Dichloroethane						CAS #: 107-06-2			
16.529	16.529	(0.974)	62	461424	5.00000	5.489	80.00- 120.00	100.00	
16.529	16.529	(0.974)	64	147645			2.90- 62.90	32.00	

57 Heptane						CAS #: 142-82-5			
16.578	16.578	(0.977)	57	216740	5.00000	5.609	80.00- 120.00	100.00	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
57 Heptane (continued)								
16.578	16.578	(0.977)	100	103249			14.70- 74.70	47.64
16.578	16.578	(0.977)	43	460853			159.65- 219.65	212.63

59 Trichloroethene								
						CAS #:	79-01-6	
17.397	17.397	(1.026)	130	420740	5.00000	5.121	80.00- 120.00	100.00
17.373	17.373	(1.024)	95	337317			48.43- 108.43	80.17
17.373	17.373	(1.024)	97	210331			20.03- 80.03	49.99

60 Methylcyclohexane								
						CAS #:	108-87-2	
17.614	17.614	(1.038)	83	332710	5.00000	5.611	80.00- 120.00	100.00
17.614	17.614	(1.038)	55	339650			57.78- 117.78	102.09
17.614	17.614	(1.038)	56	98660			0.00- 58.27	29.65

61 1,2-Dichloropropane								
						CAS #:	78-87-5	
17.830	17.830	(1.051)	63	205884	5.00000	4.807	80.00- 120.00	100.00
17.830	17.830	(1.051)	62	146141			41.39- 101.39	70.98
17.830	17.830	(1.051)	41	184998			30.08- 90.08	89.86

62 1,4-Dioxane								
						CAS #:	123-91-1	
17.951	17.951	(1.058)	88	145519	5.00000	5.030	80.00- 120.00	100.00
17.951	17.951	(1.058)	58	110250			41.23- 101.23	75.76
17.951	17.951	(1.058)	57	38592			0.00- 53.84	26.52

63 Bromodichloromethane								
						CAS #:	75-27-4	
18.264	18.264	(1.077)	83	529772	5.00000	4.882	80.00- 120.00	100.00
18.264	18.264	(1.077)	85	359289			37.91- 97.91	67.82

64 cis-1,3-Dichloropropene								
						CAS #:	10061-01-5	
19.108	19.108	(1.126)	75	275662	5.00000	4.729	80.00- 120.00	100.00
19.108	19.108	(1.126)	77	93462			2.56- 62.56	33.90
19.108	19.108	(1.126)	39	205863			19.94- 79.94	74.68

65 4-Methyl-2-pentanone								
						CAS #:	108-10-1	
19.310	19.310	(1.138)	43	466755	5.00000	5.046	80.00- 120.00	100.00
19.310	19.310	(1.138)	58	148222			7.11- 67.11	31.76
19.310	19.310	(1.138)	85	64612			0.00- 46.29	13.84

68 Toluene								
						CAS #:	108-88-3	
19.758	19.758	(1.165)	91	774894	5.00000	5.381	80.00- 120.00	100.00
19.758	19.758	(1.165)	92	458743			28.99- 88.99	59.20

69 trans-1,3-Dichloropropene								
						CAS #:	10061-02-6	
20.331	20.331	(0.908)	75	322884	5.00000	5.242	80.00- 120.00	100.00
20.331	20.331	(0.908)	77	112708			3.77- 63.77	34.91
20.331	20.331	(0.908)	39	203952			18.43- 78.43	63.17

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	279136	5.00000	5.368	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	175322			34.78- 94.78	62.81
20.716	20.716	(0.925)	83	200464			49.45- 109.45	71.82
71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	445272	5.00000	5.635	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	418141			54.11- 114.11	93.91
20.881	20.881	(0.933)	131	399424			55.30- 115.30	89.70
72 2-Hexanone					CAS #: 591-78-6			
21.045	21.045	(0.940)	58	250105	5.00000	5.784	80.00- 120.00	100.00
21.045	21.045	(0.940)	43	559282			162.06- 222.06	223.62
21.045	21.045	(0.940)	100	59561			0.00- 52.96	23.81
73 Dibromochloromethane					CAS #: 124-48-1			
21.457	21.457	(0.958)	129	778902	5.00000	5.665	80.00- 120.00	100.00
21.457	21.457	(0.958)	127	591427			46.93- 106.93	75.93
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	495313	5.00000	5.445	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	506376			68.26- 128.26	102.23
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	785023	5.00000	5.338	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	249613			1.73- 61.73	31.80
22.428	22.428	(1.002)	77	378351			16.56- 76.56	48.20
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	363516	5.00000	5.469	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	1069143			261.70- 321.70	294.11
80 m,p-Xylene					CAS #: 108-38-3			
22.676	22.676	(1.013)	106	432700	5.00000	5.455	80.00- 120.00	100.00
22.676	22.676	(1.013)	91	847187			150.71- 210.71	195.79
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	389576	5.00000	5.602	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	772235			165.12- 225.12	198.22
83 Styrene					CAS #: 100-42-5			
23.319	23.319	(1.042)	104	741199	5.00000	6.029	80.00- 120.00	100.00
23.319	23.319	(1.042)	78	359869			12.29- 72.29	48.55
84 Bromoform					CAS #: 75-25-2			
23.661	23.661	(1.057)	173	566828	5.00000	5.342	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
84 Bromoform (continued)								
23.661	23.661	(1.057)	171	302996			23.53- 83.53	53.45

85 Cumene								
23.751	23.751	(1.061)	105	1282056	5.00000	5.797	80.00- 120.00	100.00
23.751	23.751	(1.061)	120	369540			0.00- 58.84	28.82

89 1,1,2,2-Tetrachloroethane								
24.222	24.222	(1.082)	83	539353	5.00000	5.192	80.00- 120.00	100.00
24.222	24.222	(1.082)	85	369190			37.40- 97.40	68.45

90 Propylbenzene								
24.289	24.289	(1.085)	91	1393824	5.00000	5.418	80.00- 120.00	100.00
24.289	24.289	(1.085)	120	392532			0.00- 58.05	28.16

92 4-Ethyltoluene								
24.424	24.424	(1.091)	105	1284553	5.00000	5.742	80.00- 120.00	100.00
24.424	24.424	(1.091)	120	418035			2.80- 62.80	32.54

94 1,3,5-Trimethylbenzene								
24.491	24.491	(1.094)	105	1117252	5.00000	5.847	80.00- 120.00	100.00
24.491	24.491	(1.094)	120	575168			23.16- 83.16	51.48

98 1,2,4-Trimethylbenzene								
24.939	24.939	(1.114)	105	823080	5.00000	5.521	80.00- 120.00	100.00
24.939	24.939	(1.114)	120	404030			19.74- 79.74	49.09

101 1,3-Dichlorobenzene								
25.343	25.343	(1.132)	146	783801	5.00000	5.391	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	480820			31.66- 91.66	61.34
25.343	25.343	(1.132)	111	306112			6.44- 66.44	39.05

104 1,4-Dichlorobenzene								
25.455	25.455	(1.137)	146	794300	5.00000	5.769	80.00- 120.00	100.00
25.455	25.455	(1.137)	148	470107			32.25- 92.25	59.19
25.433	25.433	(1.136)	111	298801			4.82- 64.82	37.62

105 alpha-chlorotoluene								
25.589	25.589	(1.143)	91	889227	5.00000	5.687	80.00- 120.00	100.00
25.589	25.589	(1.143)	126	233185			0.00- 57.25	26.22

108 1,2-Dichlorobenzene								
25.881	25.881	(1.156)	146	728885	5.00000	5.668	80.00- 120.00	100.00
25.881	25.881	(1.156)	148	445259			31.25- 91.25	61.09
25.881	25.881	(1.156)	111	296097			7.65- 67.65	40.62

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.629	27.629	(1.234)	180	259761	5.00000	4.272	80.00- 120.00	100.00	
27.629	27.629	(1.234)	182	248078			66.40- 126.40	95.50	

113	Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	214565	5.00000	4.172	80.00- 120.00	100.00	
27.719	27.719	(1.238)	223	140369			31.93- 91.93	65.42	

114	Naphthalene					CAS #: 91-20-3			
27.943	27.943	(1.248)	128	61491	0.50000	0.4054	80.00- 120.00	100.00(a)	
27.943	27.943	(1.248)	127	11429			0.00- 47.34	18.59	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051511.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 9
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: md	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 5.0ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	165278	-2.40
58 1,4-Difluorobenze	587158	352295	822021	563687	-4.00
75 Chlorobenzene-d5	557421	334453	780389	532759	-4.42

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.96	-0.14
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 16:23

Client ID: Level 9

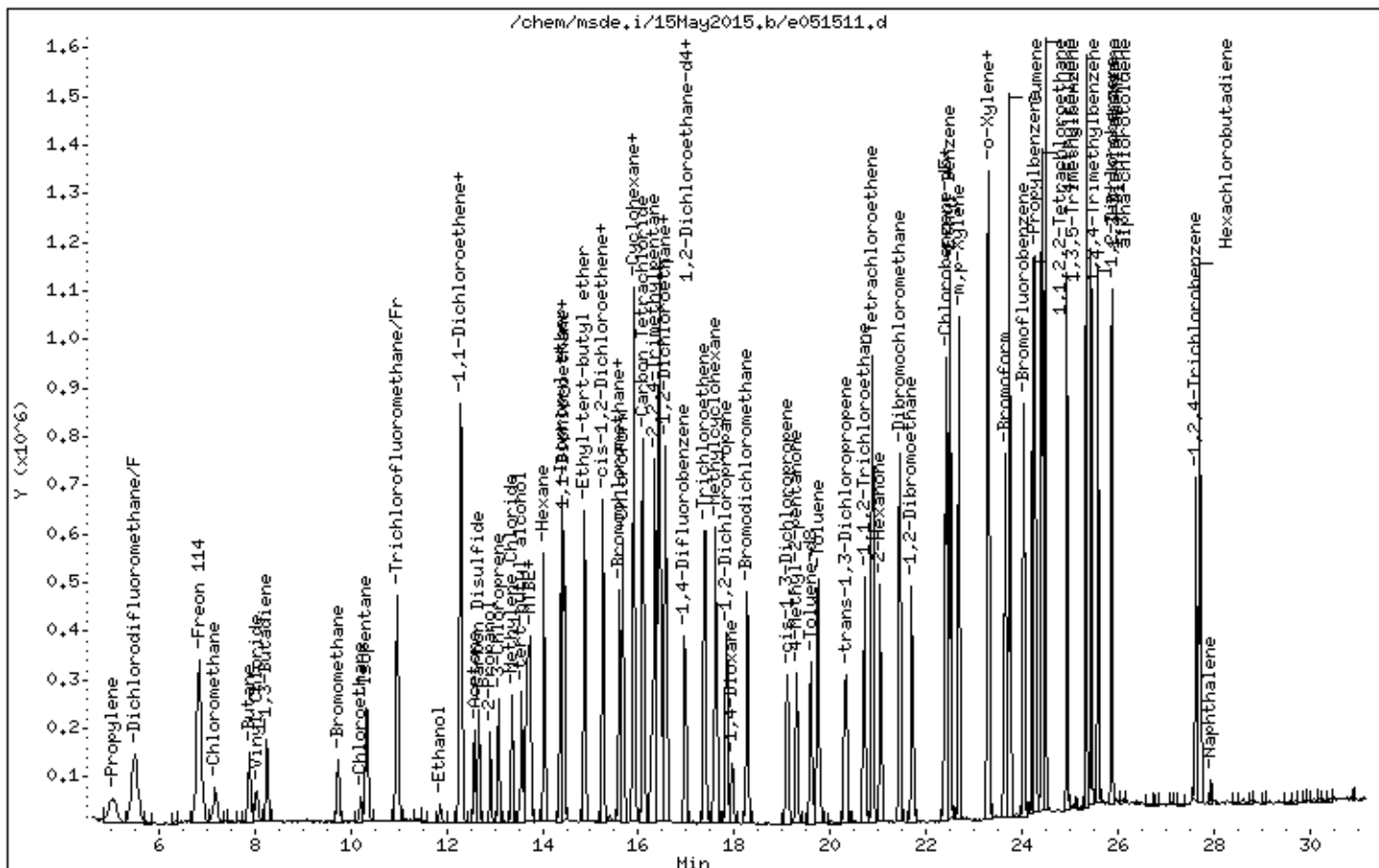
Instrument: msde.i

Sample Info: 25mL# 2716-288

Operator: md

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051512.d
 Lab Smp Id: ICAL Client Smp ID: Level 10
 Inj Date : 15-MAY-2015 17:04
 Operator : md Inst ID: msde.i
 Smp Info : 50mL# 2716-288
 Misc Info : 10ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 17:04 Cal File: e051512.d
 Als bottle: 1 Calibration Sample, Level: 10
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT09.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	169336 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	136121			46.94- 106.94	80.39
15.611	15.611 (1.000)	49	314822			103.66- 163.66	185.92
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	587158 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	77175			0.00- 43.53	13.14
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	557421 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	240207			13.25- 73.25	43.09
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	265189 5.00000	4.985		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	116039			24.87- 84.87	43.76

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.154)	98	491578	5.00000	4.874	80.00- 120.00	100.00
19.601	19.601	(1.154)	70	51273			0.00- 40.24	10.43
19.601	19.601	(1.154)	100	319826			39.39- 99.39	65.06

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.043	24.043	(1.074)	174	291025	5.00000	5.157	80.00- 120.00	100.00
24.043	24.043	(1.074)	95	360236			88.06- 148.06	123.78
24.043	24.043	(1.074)	176	280514			66.20- 126.20	96.39

2 Propylene						CAS #: 115-07-1		
5.046	5.046	(0.323)	41	342491	10.0000	9.554	80.00- 120.00	100.00
5.022	5.022	(0.322)	42	219938			38.37- 98.37	64.22
5.046	5.046	(0.323)	39	262119			42.39- 102.39	76.53

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.480	5.480	(0.351)	85	1462288	10.0000	9.733	80.00- 120.00	100.00
5.480	5.480	(0.351)	87	464525			2.12- 62.12	31.77

6 Freon 114						CAS #: 76-14-2		
6.829	6.829	(0.437)	135	1108579	10.0000	9.647	80.00- 120.00	100.00
6.853	6.853	(0.439)	137	352151			1.87- 61.87	31.77

7 Chloromethane						CAS #: 74-87-3		
7.191	7.191	(0.461)	50	411449	10.0000	9.358	80.00- 120.00	100.00
7.191	7.191	(0.461)	52	131446			2.64- 62.64	31.95

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	66107	10.0000	9.546	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	581781			798.08- 858.08	880.06

10 Vinyl Chloride						CAS #: 75-01-4		
8.045	8.045	(0.515)	62	335330	10.0000	9.686	80.00- 120.00	100.00
8.045	8.045	(0.515)	64	105107			1.55- 61.55	31.34

11 1,3-Butadiene						CAS #: 106-99-0		
8.271	8.271	(0.530)	54	308187	10.0000	9.970	80.00- 120.00	100.00
8.254	8.254	(0.529)	39	349940			68.70- 128.70	113.55

12 Bromomethane						CAS #: 74-83-9		
9.746	9.746	(0.624)	94	300985	10.0000	9.432	80.00- 120.00	100.00
9.746	9.746	(0.624)	96	280337			67.78- 127.78	93.14

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	148321	10.0000	9.523	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	58050			0.00- 59.93	39.14

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	44140			2.40- 62.40	29.76	

14 Isopentane CAS #: 78-78-4									
10.348	10.348	(0.663)	57	263446	10.0000	9.111	80.00- 120.00	100.00	
10.348	10.348	(0.663)	43	417708			113.81- 173.81	158.56	
10.348	10.348	(0.663)	42	358342			97.27- 157.27	136.02	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.976	10.976	(0.703)	101	1456289	10.0000	8.634	80.00- 120.00	100.00	
10.976	10.976	(0.703)	103	943370			34.06- 94.06	64.78	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	139811	10.0000	8.762	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	54131			7.61- 67.61	38.72	
11.871	11.871	(0.760)	43	35749			0.00- 55.64	25.57	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	232194	10.0000	9.764	80.00- 120.00	100.00	
12.309	12.309	(0.788)	61	693323			208.58- 268.58	298.60	
12.309	12.309	(0.788)	96	371542			127.45- 187.45	160.01	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	772000	10.0000	9.370	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	497011			34.06- 94.06	64.38	
12.290	12.290	(0.787)	101	900435			81.22- 141.22	116.64	

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	175955	10.0000	8.514	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	772870			294.37- 354.37	439.24	

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	906503	10.0000	9.053	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	128241	10.0000	9.575	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	481273			276.20- 336.20	375.29	

25 2-Propanol CAS #: 67-63-0									
12.919	12.919	(0.828)	45	670035	10.0000	9.205	80.00- 120.00	100.00	
12.919	12.919	(0.828)	43	180701			0.00- 55.86	26.97	
12.919	12.919	(0.828)	59	23852			0.00- 34.14	3.56	

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	273361	10.0000	9.037	80.00- 120.00	100.00	
13.376	13.376	(0.857)	49	490520			112.26- 172.26	179.44	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.376	13.376	(0.857)	51	145930			12.15- 72.15	53.38	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	1008662	10.0000	9.499	80.00- 120.00	100.00	
13.564	13.564	(0.869)	41	270210			0.00- 54.99	26.79	
13.564	13.564	(0.869)	57	124405			0.00- 41.32	12.33	

31 MTBE CAS #: 1634-04-4									
13.701	13.701	(0.878)	73	1093796	10.0000	11.004	80.00- 120.00	100.00	
13.701	13.701	(0.878)	57	270405			0.00- 54.97	24.72	
13.701	13.701	(0.878)	41	339949			0.00- 55.95	31.08	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.756	13.756	(0.881)	98	275257	10.0000	10.799	80.00- 120.00	100.00	
13.729	13.729	(0.879)	61	673279			175.95- 235.95	244.60	
13.756	13.756	(0.881)	96	432589			121.11- 181.11	157.16	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	611969	10.0000	11.137	80.00- 120.00	100.00	
14.031	14.031	(0.899)	43	458223			35.27- 95.27	74.88	
14.031	14.031	(0.899)	86	103938			0.00- 46.67	16.98	

36 Isopropyl ether CAS #: 108-20-3									
14.388	14.388	(0.922)	45	1525170	10.0000	10.839	80.00- 120.00	100.00	
14.388	14.388	(0.922)	87	349368			0.00- 55.94	22.91	
14.388	14.388	(0.922)	59	152202			0.00- 41.46	9.98	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.443	14.443	(0.925)	63	781602	10.0000	10.214	80.00- 120.00	100.00	
14.443	14.443	(0.925)	65	226617			0.10- 60.10	28.99	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	110640	10.0000	10.880	80.00- 120.00	100.00	
14.470	14.470	(0.927)	42	154045			58.55- 118.55	139.23	
14.470	14.470	(0.927)	43	1549474			1046.17-1106.17	1400.46	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	1375559	10.0000	10.671	80.00- 120.00	100.00	
14.878	14.878	(0.953)	87	541787			11.70- 71.70	39.39	
14.878	14.878	(0.953)	41	327715			0.00- 52.35	23.82	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	289812	10.0000	9.954	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	617086			155.56- 215.56	212.93	
15.259	15.259	(0.977)	96	461288			124.76- 184.76	159.17	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
42 2-Butanone					CAS #: 78-93-3			
15.259	15.259	(0.977)	72	164869	10.0000	10.392	80.00- 120.00	100.00
15.259	15.259	(0.977)	43	964817			419.99- 479.99	585.20
15.259	15.259	(0.977)	57	67838			5.97- 65.97	41.15
-----					-----			
44 Tetrahydrofuran					CAS #: 109-99-9			
15.611	15.611	(1.000)	42	486826	10.0000	10.192	80.00- 120.00	100.00
15.611	15.611	(1.000)	71	143365			4.62- 64.62	29.45
15.611	15.611	(1.000)	72	142418			8.51- 68.51	29.25
-----					-----			
47 Chloroform					CAS #: 67-66-3			
15.672	15.672	(1.004)	83	1064261	10.0000	9.795	80.00- 120.00	100.00
15.672	15.672	(1.004)	85	708081			36.52- 96.52	66.53
-----					-----			
48 Cyclohexane					CAS #: 110-82-7			
15.888	15.888	(1.018)	84	534626	10.0000	10.965	80.00- 120.00	100.00
15.888	15.888	(1.018)	56	681603			96.90- 156.90	127.49
15.888	15.888	(1.018)	41	480516			38.62- 98.62	89.88
-----					-----			
49 1,1,1-Trichloroethane					CAS #: 71-55-6			
15.888	15.888	(1.018)	97	1391540	10.0000	9.976	80.00- 120.00	100.00
15.919	15.919	(1.020)	99	900648			33.43- 93.43	64.72
-----					-----			
51 Carbon Tetrachloride					CAS #: 56-23-5			
16.104	16.104	(1.032)	119	1570242	10.0000	9.994	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	1624156			74.78- 134.78	103.43
-----					-----			
52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.337	16.337	(1.047)	56	977291	10.0000	10.638	80.00- 120.00	100.00
16.337	16.337	(1.047)	57	2921896			264.46- 324.46	298.98
16.337	16.337	(1.047)	41	1088731			53.88- 113.88	111.40
-----					-----			
53 Benzene					CAS #: 71-43-2			
16.433	16.433	(0.967)	78	1178138	10.0000	9.816	80.00- 120.00	100.00
16.433	16.433	(0.967)	77	282820			0.00- 53.40	24.01
-----					-----			
55 tert-amyl methyl ether					CAS #: 994-05-8			
16.457	16.457	(0.969)	87	369053	10.0000	10.655	80.00- 120.00	100.00
16.457	16.457	(0.969)	73	1261744			351.86- 411.86	341.89
16.457	16.457	(0.969)	55	447456			87.28- 147.28	121.24
-----					-----			
56 1,2-Dichloroethane					CAS #: 107-06-2			
16.530	16.530	(0.973)	62	879837	10.0000	10.049	80.00- 120.00	100.00
16.530	16.530	(0.973)	64	270271			2.90- 62.90	30.72
-----					-----			
57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.976)	57	422811	10.0000	10.504	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
57 Heptane (continued)								
16.578	16.578	(0.976)	100	200185			14.70- 74.70	47.35
16.578	16.578	(0.976)	43	883334			159.65- 219.65	208.92

59 Trichloroethene CAS #: 79-01-6								
17.397	17.397	(1.024)	130	812405	10.0000	9.493	80.00- 120.00	100.00
17.397	17.397	(1.024)	95	665517			48.43- 108.43	81.92
17.397	17.397	(1.024)	97	419226			20.03- 80.03	51.60

60 Methylcyclohexane CAS #: 108-87-2								
17.614	17.614	(1.037)	83	656980	10.0000	10.637	80.00- 120.00	100.00
17.614	17.614	(1.037)	55	674851			57.78- 117.78	102.72
17.614	17.614	(1.037)	56	205030			0.00- 58.27	31.21

61 1,2-Dichloropropane CAS #: 78-87-5								
17.831	17.831	(1.050)	63	387371	10.0000	8.683	80.00- 120.00	100.00
17.831	17.831	(1.050)	62	276583			41.39- 101.39	71.40
17.831	17.831	(1.050)	41	381370			30.08- 90.08	98.45

62 1,4-Dioxane CAS #: 123-91-1								
17.975	17.975	(1.058)	88	291599	10.0000	9.677	80.00- 120.00	100.00
17.951	17.951	(1.057)	58	220007			41.23- 101.23	75.45
17.975	17.975	(1.058)	57	74808			0.00- 53.84	25.65

63 Bromodichloromethane CAS #: 75-27-4								
18.264	18.264	(1.075)	83	1069920	10.0000	9.466	80.00- 120.00	100.00
18.264	18.264	(1.075)	85	728824			37.91- 97.91	68.12

64 cis-1,3-Dichloropropene CAS #: 10061-01-5								
19.108	19.108	(1.125)	75	572215	10.0000	9.424	80.00- 120.00	100.00
19.108	19.108	(1.125)	77	196450			2.56- 62.56	34.33
19.108	19.108	(1.125)	39	425140			19.94- 79.94	74.30

65 4-Methyl-2-pentanone CAS #: 108-10-1								
19.310	19.310	(1.137)	43	958463	10.0000	9.948	80.00- 120.00	100.00
19.310	19.310	(1.137)	58	305856			7.11- 67.11	31.91
19.310	19.310	(1.137)	85	140763			0.00- 46.29	14.69

68 Toluene CAS #: 108-88-3								
19.758	19.758	(1.163)	91	1548310	10.0000	10.321	80.00- 120.00	100.00
19.758	19.758	(1.163)	92	898641			28.99- 88.99	58.04

69 trans-1,3-Dichloropropene CAS #: 10061-02-6								
20.331	20.331	(0.908)	75	657874	10.0000	10.209	80.00- 120.00	100.00
20.331	20.331	(0.908)	77	220119			3.77- 63.77	33.46
20.331	20.331	(0.908)	39	427094			18.43- 78.43	64.92

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	550804	10.0000	10.123	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	347773			34.78- 94.78	63.14
20.716	20.716	(0.925)	83	416087			49.45- 109.45	75.54
71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	887601	10.0000	10.736	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	830519			54.11- 114.11	93.57
20.881	20.881	(0.933)	131	828571			55.30- 115.30	93.35
72 2-Hexanone					CAS #: 591-78-6			
21.046	21.046	(0.940)	58	509860	10.0000	11.270	80.00- 120.00	100.00
21.046	21.046	(0.940)	43	1217139			162.06- 222.06	238.72
21.046	21.046	(0.940)	100	122282			0.00- 52.96	23.98
73 Dibromochloromethane					CAS #: 124-48-1			
21.458	21.458	(0.958)	129	1518371	10.0000	10.555	80.00- 120.00	100.00
21.458	21.458	(0.958)	127	1203982			46.93- 106.93	79.29
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	992175	10.0000	10.425	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	996481			68.26- 128.26	100.43
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	1548263	10.0000	10.062	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	494793			1.73- 61.73	31.96
22.428	22.428	(1.002)	77	743118			16.56- 76.56	48.00
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	734867	10.0000	10.566	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	2170419			261.70- 321.70	295.35
80 m,p-Xylene					CAS #: 108-38-3			
22.677	22.677	(1.013)	106	900994	10.0000	10.856	80.00- 120.00	100.00
22.677	22.677	(1.013)	91	1714602			150.71- 210.71	190.30
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	819084	10.0000	11.256	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	1652069			165.12- 225.12	201.70
83 Styrene					CAS #: 100-42-5			
23.319	23.319	(1.042)	104	1488786	10.0000	11.575	80.00- 120.00	100.00
23.319	23.319	(1.042)	78	720977			12.29- 72.29	48.43
84 Bromoform					CAS #: 75-25-2			
23.661	23.661	(1.057)	173	1157566	10.0000	10.427	80.00- 120.00	100.00

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
84 Bromoform (continued)									
23.661	23.661	(1.057)	171	635377			23.53-	83.53	54.89

85 Cumene									
23.751	23.751	(1.061)	105	2687809	10.0000	11.616	80.00-	120.00	100.00
23.751	23.751	(1.061)	120	761191			0.00-	58.84	28.32

89 1,1,2,2-Tetrachloroethane									
24.222	24.222	(1.082)	83	1036692	10.0000	9.538	80.00-	120.00	100.00
24.222	24.222	(1.082)	85	736629			37.40-	97.40	71.06

90 Propylbenzene									
24.289	24.289	(1.085)	91	2842719	10.0000	10.561	80.00-	120.00	100.00
24.289	24.289	(1.085)	120	808469			0.00-	58.05	28.44

92 4-Ethyltoluene									
24.424	24.424	(1.091)	105	2611458	10.0000	11.156	80.00-	120.00	100.00
24.424	24.424	(1.091)	120	841027			2.80-	62.80	32.21

94 1,3,5-Trimethylbenzene									
24.491	24.491	(1.094)	105	2280266	10.0000	11.406	80.00-	120.00	100.00
24.491	24.491	(1.094)	120	1165567			23.16-	83.16	51.12

98 1,2,4-Trimethylbenzene									
24.940	24.940	(1.114)	105	1716480	10.0000	11.004	80.00-	120.00	100.00
24.940	24.940	(1.114)	120	847596			19.74-	79.74	49.38

101 1,3-Dichlorobenzene									
25.343	25.343	(1.132)	146	1577935	10.0000	10.373	80.00-	120.00	100.00
25.343	25.343	(1.132)	148	971821			31.66-	91.66	61.59
25.343	25.343	(1.132)	111	595309			6.44-	66.44	37.73

104 1,4-Dichlorobenzene									
25.455	25.455	(1.137)	146	1614095	10.0000	11.204	80.00-	120.00	100.00
25.455	25.455	(1.137)	148	991971			32.25-	92.25	61.46
25.433	25.433	(1.136)	111	598347			4.82-	64.82	37.07

105 alpha-chlorotoluene									
25.590	25.590	(1.143)	91	1835251	10.0000	11.217	80.00-	120.00	100.00
25.590	25.590	(1.143)	126	490366			0.00-	57.25	26.72

108 1,2-Dichlorobenzene									
25.881	25.881	(1.156)	146	1477682	10.0000	10.983	80.00-	120.00	100.00
25.881	25.881	(1.156)	148	901090			31.25-	91.25	60.98
25.881	25.881	(1.156)	111	590112			7.65-	67.65	39.93

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	576727	10.0000	9.065	80.00- 120.00	100.00	
27.630	27.630	(1.234)	182	569620			66.40- 126.40	98.77	

113	Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	469243	10.0000	8.721	80.00- 120.00	100.00	
27.719	27.719	(1.238)	223	289973			31.93- 91.93	61.80	

114	Naphthalene					CAS #: 91-20-3			
27.944	27.944	(1.248)	128	154461	1.00000	0.9734	80.00- 120.00	100.00	
27.944	27.944	(1.248)	127	18338			0.00- 47.34	11.87	

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051512.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 10
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: md	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 10ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	169336	0.00
58 1,4-Difluorobenze	587158	352295	822021	587158	0.00
75 Chlorobenzene-d5	557421	334453	780389	557421	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 17:04

Client ID: Level 10

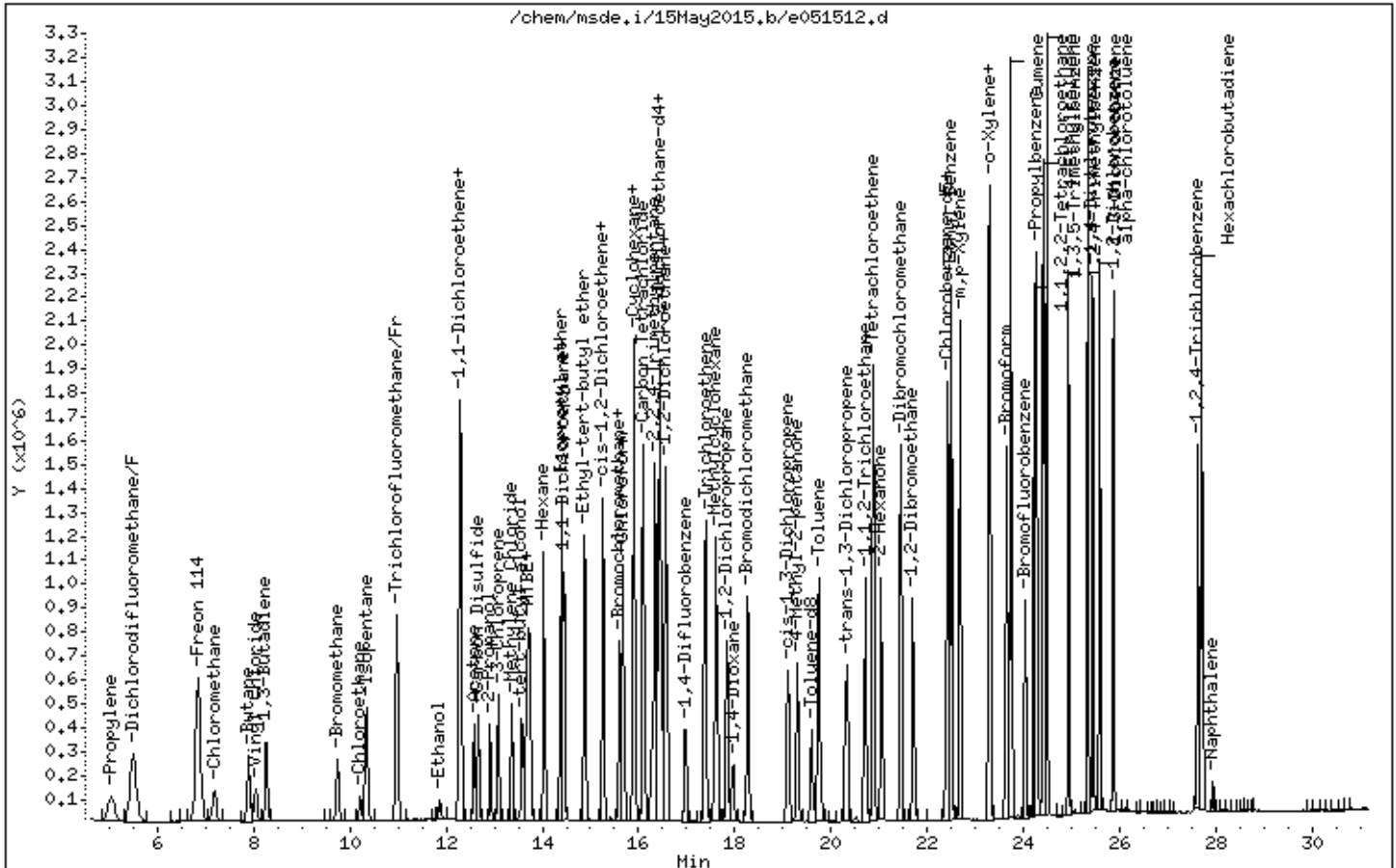
Instrument: msde.i

Sample Info: 50mL# 2716-288

Operator: md

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051514.d
 Lab Smp Id: ICAL Client Smp ID: Level 11
 Inj Date : 15-MAY-2015 19:22
 Operator : md Inst ID: msde.i
 Smp Info : 100mL# 2716-288
 Misc Info : 20ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:53 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 19:22 Cal File: e051514.d
 Als bottle: 1 Calibration Sample, Level: 11
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT09.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	175336	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	140216					46.94- 106.94	79.97
15.611	15.611	(1.000)	49	256594					103.66- 163.66	146.34
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	628360	5.00000				80.00- 120.00	100.00
16.987	16.987	(1.000)	88	76019					0.00- 43.53	12.10
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	599035	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	243164					13.25- 73.25	40.59
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0										
16.433	16.433	(1.053)	65	287264	5.00000		5.215		80.00- 120.00	100.00
16.433	16.433	(1.053)	67	134389					24.87- 84.87	46.78

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.154)	98	548729	5.00000	5.084	80.00- 120.00	100.00
19.601	19.601	(1.154)	70	58439			0.00- 40.24	10.65
19.601	19.601	(1.154)	100	375995			39.39- 99.39	68.52

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	303823	5.00000	5.010	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	398213			88.06- 148.06	131.07
24.042	24.042	(1.074)	176	298080			66.20- 126.20	98.11

2 Propylene						CAS #: 115-07-1		
5.046	5.046	(0.323)	41	657676	20.0000	17.719	80.00- 120.00	100.00
5.046	5.046	(0.323)	42	424236			38.37- 98.37	64.51
5.046	5.046	(0.323)	39	518906			42.39- 102.39	78.90

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.503	5.503	(0.353)	85	2824093	20.0000	18.154	80.00- 120.00	100.00
5.479	5.479	(0.351)	87	915129			2.12- 62.12	32.40

6 Freon 114						CAS #: 76-14-2		
6.829	6.829	(0.437)	135	2205958	20.0000	18.539	80.00- 120.00	100.00
6.853	6.853	(0.439)	137	704093			1.87- 61.87	31.92

7 Chloromethane						CAS #: 74-87-3		
7.167	7.167	(0.459)	50	779464	20.0000	17.122	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	252892			2.64- 62.64	32.44

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	144888	20.0000	20.207	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	1217543			798.08- 858.08	840.33

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	672832	20.0000	18.771	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	208328			1.55- 61.55	30.96

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	653907	20.0000	20.429	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	738626			68.70- 128.70	112.96

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	601829	20.0000	18.215	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	554521			67.78- 127.78	92.14

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	298799	20.0000	18.528	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	115139			0.00- 59.93	38.53

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	91520			2.40- 62.40	30.63	

14 Isopentane CAS #: 78-78-4									
10.329	10.329	(0.662)	57	586773	20.0000	19.599	80.00- 120.00	100.00	
10.329	10.329	(0.662)	43	939449			113.81- 173.81	160.10	
10.329	10.329	(0.662)	42	816734			97.27- 157.27	139.19	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	3345236	20.0000	19.156	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	2162481			34.06- 94.06	64.64	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	302655	20.0000	18.319	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	110993			7.61- 67.61	36.67	
11.871	11.871	(0.760)	43	76997			0.00- 55.64	25.44	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.290	12.290	(0.787)	98	502633	20.0000	20.413	80.00- 120.00	100.00	
12.290	12.290	(0.787)	61	1508556			208.58- 268.58	300.13	
12.290	12.290	(0.787)	96	806727			127.45- 187.45	160.50	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	1691623	20.0000	19.829	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	1104127			34.06- 94.06	65.27	
12.271	12.271	(0.786)	101	1922931			81.22- 141.22	113.67	

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	376110	20.0000	17.576	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	1612378			294.37- 354.37	428.70	

23 Carbon Disulfide CAS #: 75-15-0									
12.652	12.652	(0.810)	76	1890324	20.0000	18.231	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	283903	20.0000	20.471	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	1100185			276.20- 336.20	387.52	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	1529082	20.0000	20.288	80.00- 120.00	100.00	
12.918	12.918	(0.828)	43	375674			0.00- 55.86	24.57	
12.918	12.918	(0.828)	59	49273			0.00- 34.14	3.22	

29 Methylene Chloride CAS #: 75-09-2									
13.357	13.357	(0.856)	84	552965	20.0000	17.655	80.00- 120.00	100.00	
13.357	13.357	(0.856)	49	1032995			112.26- 172.26	186.81	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.357	13.357	(0.856)	51	304680			12.15- 72.15	55.10	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	2377294	20.0000	21.622	80.00- 120.00	100.00	
13.564	13.564	(0.869)	41	641762			0.00- 54.99	27.00	
13.564	13.564	(0.869)	57	299786			0.00- 41.32	12.61	

31 MTBE CAS #: 1634-04-4									
13.674	13.674	(0.876)	73	2386080	20.0000	23.182	80.00- 120.00	100.00	
13.674	13.674	(0.876)	57	595626			0.00- 54.97	24.96	
13.674	13.674	(0.876)	41	696542			0.00- 55.95	29.19	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	555299	20.0000	21.040	80.00- 120.00	100.00	
13.729	13.729	(0.879)	61	1331682			175.95- 235.95	239.81	
13.729	13.729	(0.879)	96	869945			121.11- 181.11	156.66	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	1257720	20.0000	22.105	80.00- 120.00	100.00	
14.031	14.031	(0.899)	43	931502			35.27- 95.27	74.06	
14.031	14.031	(0.899)	86	219598			0.00- 46.67	17.46	

36 Isopropyl ether CAS #: 108-20-3									
14.387	14.387	(0.922)	45	3247302	20.0000	22.288	80.00- 120.00	100.00	
14.387	14.387	(0.922)	87	730434			0.00- 55.94	22.49	
14.387	14.387	(0.922)	59	318561			0.00- 41.46	9.81	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	1543488	20.0000	19.480	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	467275			0.10- 60.10	30.27	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	231092	20.0000	21.948	80.00- 120.00	100.00	
14.470	14.470	(0.927)	42	295267			58.55- 118.55	127.77	
14.470	14.470	(0.927)	43	3150662			1046.17-1106.17	1363.38	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	2911426	20.0000	21.813	80.00- 120.00	100.00	
14.878	14.878	(0.953)	87	1144975			11.70- 71.70	39.33	
14.878	14.878	(0.953)	41	656415			0.00- 52.35	22.55	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	596891	20.0000	19.801	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	1296957			155.56- 215.56	217.29	
15.259	15.259	(0.977)	96	929185			124.76- 184.76	155.67	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
42 2-Butanone						CAS #: 78-93-3			
15.259	15.259	(0.977)	72	349500	20.0000	21.277	80.00- 120.00	100.00	
15.259	15.259	(0.977)	43	2023169			419.99- 479.99	578.88	
15.259	15.259	(0.977)	57	151725			5.97- 65.97	43.41	

44 Tetrahydrofuran						CAS #: 109-99-9			
15.580	15.580	(0.998)	42	1071050	20.0000	21.656	80.00- 120.00	100.00	
15.611	15.611	(1.000)	71	312935			4.62- 64.62	29.22	
15.611	15.611	(1.000)	72	329587			8.51- 68.51	30.77	

47 Chloroform						CAS #: 67-66-3			
15.672	15.672	(1.004)	83	2115200	20.0000	18.801	80.00- 120.00	100.00	
15.672	15.672	(1.004)	85	1469247			36.52- 96.52	69.46	

48 Cyclohexane						CAS #: 110-82-7			
15.888	15.888	(1.018)	84	1062763	20.0000	21.052	80.00- 120.00	100.00	
15.888	15.888	(1.018)	56	1395633			96.90- 156.90	131.32	
15.888	15.888	(1.018)	41	968178			38.62- 98.62	91.10	

49 1,1,1-Trichloroethane						CAS #: 71-55-6			
15.888	15.888	(1.018)	97	2778213	20.0000	19.235	80.00- 120.00	100.00	
15.888	15.888	(1.018)	99	1798833			33.43- 93.43	64.75	

51 Carbon Tetrachloride						CAS #: 56-23-5			
16.104	16.104	(1.032)	119	3232308	20.0000	19.868	80.00- 120.00	100.00	
16.104	16.104	(1.032)	117	3249684			74.78- 134.78	100.54	

52 2,2,4-Trimethylpentane						CAS #: 540-84-1			
16.337	16.337	(1.047)	56	1975461	20.0000	20.768	80.00- 120.00	100.00	
16.337	16.337	(1.047)	57	5843019			264.46- 324.46	295.78	
16.337	16.337	(1.047)	41	2218515			53.88- 113.88	112.30	

53 Benzene						CAS #: 71-43-2			
16.433	16.433	(0.967)	78	2332260	20.0000	18.157	80.00- 120.00	100.00	
16.433	16.433	(0.967)	77	560914			0.00- 53.40	24.05	

55 tert-amyl methyl ether						CAS #: 994-05-8			
16.457	16.457	(0.969)	87	750782	20.0000	20.254	80.00- 120.00	100.00	
16.457	16.457	(0.969)	73	2566314			351.86- 411.86	341.82	
16.457	16.457	(0.969)	55	868354			87.28- 147.28	115.66	

56 1,2-Dichloroethane						CAS #: 107-06-2			
16.530	16.530	(0.973)	62	1776984	20.0000	18.964	80.00- 120.00	100.00	
16.530	16.530	(0.973)	64	572579			2.90- 62.90	32.22	

57 Heptane						CAS #: 142-82-5			
16.578	16.578	(0.976)	57	843624	20.0000	19.585	80.00- 120.00	100.00	

RT	EXP RT	(REL RT)	MASS	AMOUNTS		ON-COL	TARGET RANGE	RATIO
				CAL-AMT	RESPONSE			
==	=====	=====	====	=====	=====	=====	=====	=====
57 Heptane (continued)								
16.578	16.578	(0.976)	100	390293			14.70- 74.70	46.26
16.578	16.578	(0.976)	43	1820800			159.65- 219.65	215.83

59 Trichloroethene						CAS #: 79-01-6		
17.397	17.397	(1.024)	130	1670768	20.0000	18.244	80.00- 120.00	100.00
17.397	17.397	(1.024)	95	1320534			48.43- 108.43	79.04
17.397	17.397	(1.024)	97	856515			20.03- 80.03	51.26

60 Methylcyclohexane						CAS #: 108-87-2		
17.614	17.614	(1.037)	83	1409628	20.0000	21.326	80.00- 120.00	100.00
17.614	17.614	(1.037)	55	1386195			57.78- 117.78	98.34
17.614	17.614	(1.037)	56	414004			0.00- 58.27	29.37

61 1,2-Dichloropropane						CAS #: 78-87-5		
17.831	17.831	(1.050)	63	826558	20.0000	17.313	80.00- 120.00	100.00
17.831	17.831	(1.050)	62	579806			41.39- 101.39	70.15
17.831	17.831	(1.050)	41	788982			30.08- 90.08	95.45

62 1,4-Dioxane						CAS #: 123-91-1		
17.975	17.975	(1.058)	88	645174	20.0000	20.007	80.00- 120.00	100.00
17.975	17.975	(1.058)	58	464776			41.23- 101.23	72.04
17.951	17.951	(1.057)	57	165343			0.00- 53.84	25.63

63 Bromodichloromethane						CAS #: 75-27-4		
18.264	18.264	(1.075)	83	2309298	20.0000	19.091	80.00- 120.00	100.00
18.264	18.264	(1.075)	85	1543724			37.91- 97.91	66.85

64 cis-1,3-Dichloropropene						CAS #: 10061-01-5		
19.108	19.108	(1.125)	75	1243113	20.0000	19.132	80.00- 120.00	100.00
19.108	19.108	(1.125)	77	406560			2.56- 62.56	32.70
19.108	19.108	(1.125)	39	955291			19.94- 79.94	76.85

65 4-Methyl-2-pentanone						CAS #: 108-10-1		
19.310	19.310	(1.137)	43	2197419	20.0000	21.313	80.00- 120.00	100.00
19.310	19.310	(1.137)	58	696232			7.11- 67.11	31.68
19.310	19.310	(1.137)	85	315303			0.00- 46.29	14.35

68 Toluene						CAS #: 108-88-3		
19.758	19.758	(1.163)	91	3145105	20.0000	19.591	80.00- 120.00	100.00
19.758	19.758	(1.163)	92	1833331			28.99- 88.99	58.29

69 trans-1,3-Dichloropropene						CAS #: 10061-02-6		
20.331	20.331	(0.908)	75	1416010	20.0000	20.447	80.00- 120.00	100.00
20.331	20.331	(0.908)	77	475924			3.77- 63.77	33.61
20.331	20.331	(0.908)	39	907764			18.43- 78.43	64.11

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	1142799	20.0000	19.544	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	714759			34.78- 94.78	62.54
20.716	20.716	(0.925)	83	842872			49.45- 109.45	73.76
71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	1763774	20.0000	19.851	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	1699612			54.11- 114.11	96.36
20.881	20.881	(0.933)	131	1626104			55.30- 115.30	92.19
72 2-Hexanone					CAS #: 591-78-6			
21.045	21.045	(0.940)	58	1096511	20.0000	22.553	80.00- 120.00	100.00
21.045	21.045	(0.940)	43	2539319			162.06- 222.06	231.58
21.045	21.045	(0.940)	100	268108			0.00- 52.96	24.45
73 Dibromochloromethane					CAS #: 124-48-1			
21.457	21.457	(0.958)	129	3157091	20.0000	20.423	80.00- 120.00	100.00
21.457	21.457	(0.958)	127	2447676			46.93- 106.93	77.53
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	2037211	20.0000	19.918	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	2021479			68.26- 128.26	99.23
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	3096889	20.0000	18.728	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	1002507			1.73- 61.73	32.37
22.428	22.428	(1.002)	77	1461645			16.56- 76.56	47.20
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	1482014	20.0000	19.828	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	4381965			261.70- 321.70	295.68
80 m,p-Xylene					CAS #: 108-38-3			
22.677	22.677	(1.013)	106	1822245	20.0000	20.430	80.00- 120.00	100.00
22.677	22.677	(1.013)	91	3484023			150.71- 210.71	191.19
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	1708900	20.0000	21.853	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	3397824			165.12- 225.12	198.83
83 Styrene					CAS #: 100-42-5			
23.319	23.319	(1.042)	104	2965101	20.0000	21.451	80.00- 120.00	100.00
23.319	23.319	(1.042)	78	1455659			12.29- 72.29	49.09
84 Bromoform					CAS #: 75-25-2			
23.661	23.661	(1.057)	173	2373411	20.0000	19.895	80.00- 120.00	100.00

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
84 Bromoform (continued)									
23.661	23.661	(1.057)	171	1295599			23.53-	83.53	54.59

85 Cumene									
23.751	23.751	(1.061)	105	5707944	20.0000	22.956	80.00-	120.00	100.00
23.751	23.751	(1.061)	120	1631619			0.00-	58.84	28.59

89 1,1,2,2-Tetrachloroethane									
24.222	24.222	(1.082)	83	2111659	20.0000	18.079	80.00-	120.00	100.00
24.222	24.222	(1.082)	85	1480426			37.40-	97.40	70.11

90 Propylbenzene									
24.289	24.289	(1.085)	91	5806575	20.0000	20.074	80.00-	120.00	100.00
24.289	24.289	(1.085)	120	1623437			0.00-	58.05	27.96

92 4-Ethyltoluene									
24.424	24.424	(1.091)	105	5325220	20.0000	21.169	80.00-	120.00	100.00
24.424	24.424	(1.091)	120	1710911			2.80-	62.80	32.13

94 1,3,5-Trimethylbenzene									
24.491	24.491	(1.094)	105	4600983	20.0000	21.416	80.00-	120.00	100.00
24.491	24.491	(1.094)	120	2365454			23.16-	83.16	51.41

98 1,2,4-Trimethylbenzene									
24.939	24.939	(1.114)	105	3708217	20.0000	22.121	80.00-	120.00	100.00
24.939	24.939	(1.114)	120	1778975			19.74-	79.74	47.97

101 1,3-Dichlorobenzene									
25.343	25.343	(1.132)	146	3201375	20.0000	19.583	80.00-	120.00	100.00
25.343	25.343	(1.132)	148	1921637			31.66-	91.66	60.03
25.343	25.343	(1.132)	111	1248880			6.44-	66.44	39.01

104 1,4-Dichlorobenzene									
25.455	25.455	(1.137)	146	3184201	20.0000	20.567	80.00-	120.00	100.00
25.455	25.455	(1.137)	148	1930672			32.25-	92.25	60.63
25.455	25.455	(1.137)	111	1197862			4.82-	64.82	37.62

105 alpha-chlorotoluene									
25.590	25.590	(1.143)	91	3750387	20.0000	21.331	80.00-	120.00	100.00
25.590	25.590	(1.143)	126	1007671			0.00-	57.25	26.87

108 1,2-Dichlorobenzene									
25.881	25.881	(1.156)	146	2921990	20.0000	20.210	80.00-	120.00	100.00
25.881	25.881	(1.156)	148	1776693			31.25-	91.25	60.80
25.881	25.881	(1.156)	111	1178401			7.65-	67.65	40.33

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	1262999	20.0000	18.472	80.00- 120.00	100.00	
27.630	27.630	(1.234)	182	1203382			66.40- 126.40	95.28	

113	Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	1128062	20.0000	19.509	80.00- 120.00	100.00	
27.719	27.719	(1.238)	223	697469			31.93- 91.93	61.83	

114	Naphthalene					CAS #: 91-20-3			
27.943	27.943	(1.248)	128	353379	2.00000	2.072	80.00- 120.00	100.00	
27.943	27.943	(1.248)	127	45595			0.00- 47.34	12.90	

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051514.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 11
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: md	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 20ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	175336	3.54
58 1,4-Difluorobenze	587158	352295	822021	628360	7.02
75 Chlorobenzene-d5	557421	334453	780389	599035	7.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 19:22

Client ID: Level 11

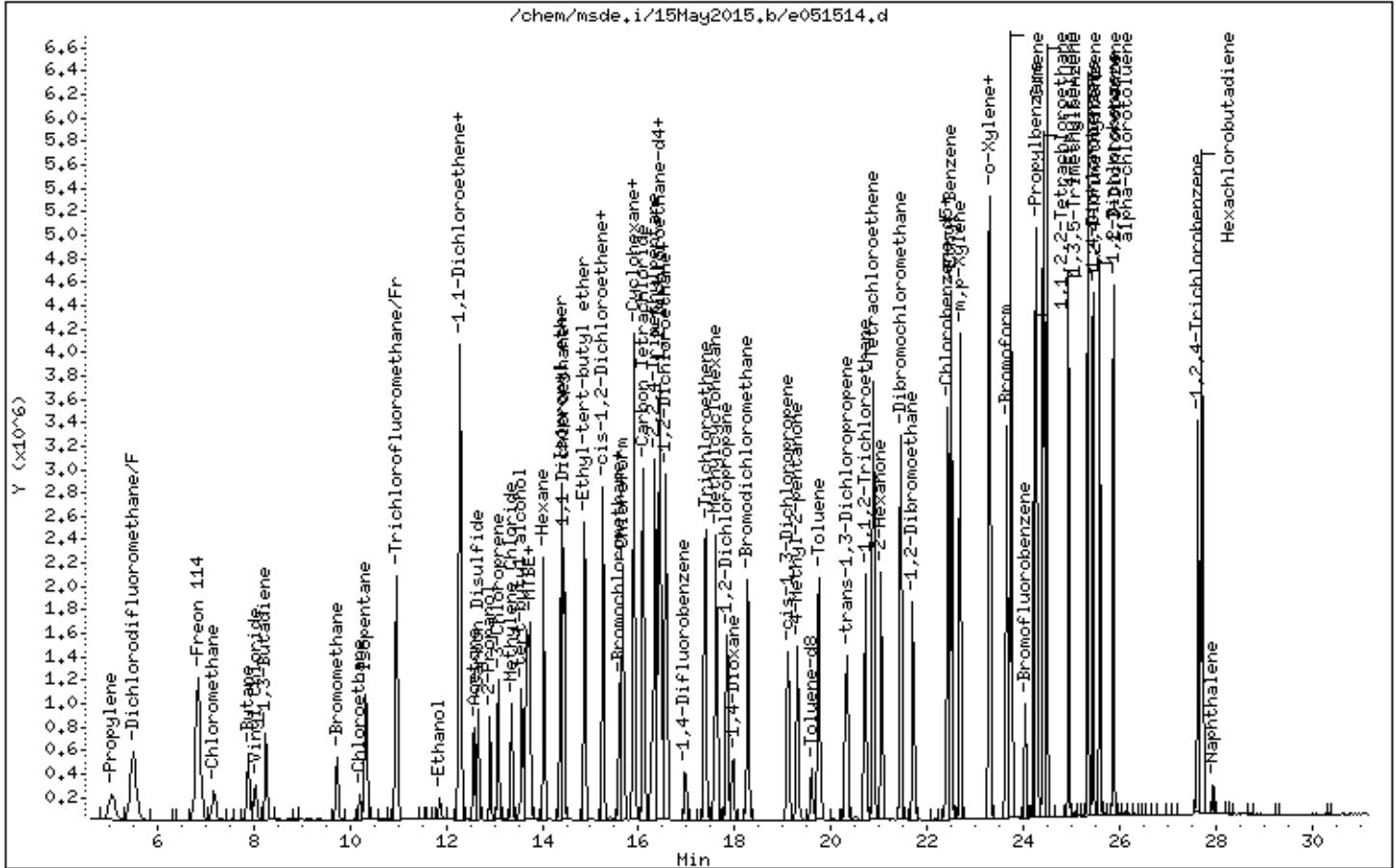
Instrument: msde.i

Sample Info: 100mL# 2716-288

Operator: md

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/15May2015.b/e051515.d
 Lab Smp Id: ICAL Client Smp ID: Level 12
 Inj Date : 15-MAY-2015 20:07
 Operator : md Inst ID: msde.i
 Smp Info : 200mL# 2716-288
 Misc Info : 40ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/15May2015.b/e1510515a.m
 Meth Date : 18-May-2015 08:54 efinn Quant Type: ISTD
 Cal Date : 15-MAY-2015 20:07 Cal File: e051515.d
 Als bottle: 1 Calibration Sample, Level: 12
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT09.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	178389 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	140802			46.94- 106.94	78.93
15.672	15.672 (1.000)	49	662534			103.66- 163.66	371.40
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	640620 5.00000			80.00- 120.00	100.00
16.987	16.987 (1.000)	88	82785			0.00- 43.53	12.92
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	619220 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	267831			13.25- 73.25	43.25
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	295728 5.00000	5.277		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	141512			24.87- 84.87	47.85

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8					CAS #: 2037-26-5			
19.601	19.601	(1.154)	98	597769	5.00000	5.432	80.00- 120.00	100.00
19.601	19.601	(1.154)	70	63571			0.00- 40.24	10.63
19.601	19.601	(1.154)	100	394983			39.39- 99.39	66.08

\$ 87 Bromofluorobenzene					CAS #: 460-00-4			
24.042	24.042	(1.074)	174	318110	5.00000	5.074	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	422758			88.06- 148.06	132.90
24.042	24.042	(1.074)	176	311261			66.20- 126.20	97.85

2 Propylene					CAS #: 115-07-1			
5.070	5.070	(0.325)	41	1400022	40.0000	37.074	80.00- 120.00	100.00
5.070	5.070	(0.325)	42	928596			38.37- 98.37	66.33
5.046	5.046	(0.323)	39	1095833			42.39- 102.39	78.27

4 Dichlorodifluoromethane/Fr12					CAS #: 75-71-8			
5.504	5.504	(0.353)	85	5890098	40.0000	37.215	80.00- 120.00	100.00
5.504	5.504	(0.353)	87	1917416			2.12- 62.12	32.55

6 Freon 114					CAS #: 76-14-2			
6.853	6.853	(0.439)	135	4633676	40.0000	38.275	80.00- 120.00	100.00
6.853	6.853	(0.439)	137	1492172			1.87- 61.87	32.20

7 Chloromethane					CAS #: 74-87-3			
7.191	7.191	(0.461)	50	1628718	40.0000	35.166	80.00- 120.00	100.00
7.191	7.191	(0.461)	52	531407			2.64- 62.64	32.63

9 Butane					CAS #: 106-97-8			
7.906	7.906	(0.506)	58	316322	40.0000	43.362	80.00- 120.00	100.00(A)
7.906	7.906	(0.506)	43	2695074			798.08- 858.08	852.00

10 Vinyl Chloride					CAS #: 75-01-4			
8.028	8.028	(0.514)	62	1470026	40.0000	40.309	80.00- 120.00	100.00(A)
8.028	8.028	(0.514)	64	470867			1.55- 61.55	32.03

11 1,3-Butadiene					CAS #: 106-99-0			
8.271	8.271	(0.530)	54	1446986	40.0000	44.433	80.00- 120.00	100.00(A)
8.271	8.271	(0.530)	39	1588770			68.70- 128.70	109.80

12 Bromomethane					CAS #: 74-83-9			
9.746	9.746	(0.624)	94	1228879	40.0000	36.556	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	1145886			67.78- 127.78	93.25

13 Chloroethane					CAS #: 75-00-3			
10.214	10.214	(0.654)	64	660138	40.0000	40.233	80.00- 120.00	100.00(A)
10.214	10.214	(0.654)	49	253759			0.00- 59.93	38.44

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	194583			2.40- 62.40	29.48	

14 Isopentane CAS #: 78-78-4									
10.348	10.348	(0.663)	57	1301798	40.0000	42.737	80.00- 120.00	100.00(A)	
10.348	10.348	(0.663)	43	2047117			113.81- 173.81	157.25	
10.348	10.348	(0.663)	42	1757635			97.27- 157.27	135.02	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	7028067	40.0000	39.556	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	4557848			34.06- 94.06	64.85	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	629011	40.0000	37.421	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	238050			7.61- 67.61	37.85	
11.871	11.871	(0.760)	43	154056			0.00- 55.64	24.49	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	1054253	40.0000	42.082	80.00- 120.00	100.00(A)	
12.309	12.309	(0.788)	61	3122308			208.58- 268.58	296.16	
12.309	12.309	(0.788)	96	1658229			127.45- 187.45	157.29	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	3479556	40.0000	40.088	80.00- 120.00	100.00(A)	
12.290	12.290	(0.787)	153	2241131			34.06- 94.06	64.41	
12.290	12.290	(0.787)	101	4003338			81.22- 141.22	115.05	

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	750998	40.0000	34.495	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	3284241			294.37- 354.37	437.32	

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	3791518	40.0000	35.942	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	574661	40.0000	40.728	80.00- 120.00	100.00(A)	
13.090	13.090	(0.839)	41	2276462			276.20- 336.20	396.14	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	3273443	40.0000	42.689	80.00- 120.00	100.00(A)	
12.918	12.918	(0.828)	43	757992			0.00- 55.86	23.16	
12.918	12.918	(0.828)	59	105652			0.00- 34.14	3.23	

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	1119253	40.0000	35.124	80.00- 120.00	100.00	
13.376	13.376	(0.857)	49	2081084			112.26- 172.26	185.94	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.376	13.376	(0.857)	51	595531			12.15- 72.15	53.21	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	5192471	40.0000	46.420	80.00- 120.00	100.00(A)	
13.564	13.564	(0.869)	41	1341553			0.00- 54.99	25.84	
13.564	13.564	(0.869)	57	627640			0.00- 41.32	12.09	

31 MTBE CAS #: 1634-04-4									
13.674	13.674	(0.876)	73	4921900	40.0000	47.001	80.00- 120.00	100.00(A)	
13.674	13.674	(0.876)	57	1211855			0.00- 54.97	24.62	
13.674	13.674	(0.876)	41	1400322			0.00- 55.95	28.45	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	1146971	40.0000	42.715	80.00- 120.00	100.00(A)	
13.729	13.729	(0.879)	61	2675678			175.95- 235.95	233.28	
13.729	13.729	(0.879)	96	1759723			121.11- 181.11	153.42	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	2575969	40.0000	44.499	80.00- 120.00	100.00(A)	
14.031	14.031	(0.899)	43	1893973			35.27- 95.27	73.52	
14.031	14.031	(0.899)	86	413165			0.00- 46.67	16.04	

36 Isopropyl ether CAS #: 108-20-3									
14.388	14.388	(0.922)	45	6645724	40.0000	44.833	80.00- 120.00	100.00(A)	
14.388	14.388	(0.922)	87	1463627			0.00- 55.94	22.02	
14.388	14.388	(0.922)	59	650691			0.00- 41.46	9.79	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	3100282	40.0000	38.458	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	942240			0.10- 60.10	30.39	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	488523	40.0000	45.603	80.00- 120.00	100.00(A)	
14.470	14.470	(0.927)	42	601995			58.55- 118.55	123.23	
14.470	14.470	(0.927)	43	6455287			1046.17-1106.17	1321.39	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	6056723	40.0000	44.602	80.00- 120.00	100.00(A)	
14.878	14.878	(0.953)	87	2356694			11.70- 71.70	38.91	
14.878	14.878	(0.953)	41	1305225			0.00- 52.35	21.55	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	1222234	40.0000	39.851	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	2626992			155.56- 215.56	214.93	
15.259	15.259	(0.977)	96	1885290			124.76- 184.76	154.25	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT (PPBV)	ON-COL (PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
42 2-Butanone					CAS #: 78-93-3			
15.259	15.259	(0.977)	72	731910	40.0000	43.795	80.00- 120.00	100.00(A)
15.259	15.259	(0.977)	43	4185297			419.99- 479.99	571.83
15.259	15.259	(0.977)	57	315089			5.97- 65.97	43.05
44 Tetrahydrofuran					CAS #: 109-99-9			
15.580	15.580	(0.998)	42	2191768	40.0000	43.558	80.00- 120.00	100.00(A)
15.611	15.611	(1.000)	71	622957			4.62- 64.62	28.42
15.611	15.611	(1.000)	72	654834			8.51- 68.51	29.88
47 Chloroform					CAS #: 67-66-3			
15.672	15.672	(1.004)	83	4258439	40.0000	37.203	80.00- 120.00	100.00
15.672	15.672	(1.004)	85	2910416			36.52- 96.52	68.34
48 Cyclohexane					CAS #: 110-82-7			
15.888	15.888	(1.018)	84	2172479	40.0000	42.297	80.00- 120.00	100.00(A)
15.888	15.888	(1.018)	56	2811393			96.90- 156.90	129.41
15.888	15.888	(1.018)	41	1901075			38.62- 98.62	87.51
49 1,1,1-Trichloroethane					CAS #: 71-55-6			
15.888	15.888	(1.018)	97	5553711	40.0000	37.793	80.00- 120.00	100.00
15.888	15.888	(1.018)	99	3572384			33.43- 93.43	64.32
51 Carbon Tetrachloride					CAS #: 56-23-5			
16.104	16.104	(1.032)	119	6268613	40.0000	37.872	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	6584064			74.78- 134.78	105.03
52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.337	16.337	(1.047)	56	3952058	40.0000	40.837	80.00- 120.00	100.00(A)
16.337	16.337	(1.047)	57	12414191			264.46- 324.46	314.12
16.337	16.337	(1.047)	41	4359676			53.88- 113.88	110.31
53 Benzene					CAS #: 71-43-2			
16.433	16.433	(0.967)	78	4683884	40.0000	35.767	80.00- 120.00	100.00
16.433	16.433	(0.967)	77	1134840			0.00- 53.40	24.23
55 tert-amyl methyl ether					CAS #: 994-05-8			
16.457	16.457	(0.969)	87	1532377	40.0000	40.549	80.00- 120.00	100.00(A)
16.457	16.457	(0.969)	73	5246547			351.86- 411.86	342.38
16.457	16.457	(0.969)	55	1698729			87.28- 147.28	110.86
56 1,2-Dichloroethane					CAS #: 107-06-2			
16.530	16.530	(0.973)	62	3508533	40.0000	36.728	80.00- 120.00	100.00
16.530	16.530	(0.973)	64	1131854			2.90- 62.90	32.26
57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.976)	57	1740479	40.0000	39.632	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
57 Heptane (continued)								
16.578	16.578	(0.976)	100	796988			14.70- 74.70	45.79
16.578	16.578	(0.976)	43	3607519			159.65- 219.65	207.27

59 Trichloroethene								
							CAS #: 79-01-6	
17.397	17.397	(1.024)	130	3383549	40.0000	36.239	80.00- 120.00	100.00
17.397	17.397	(1.024)	95	2644859			48.43- 108.43	78.17
17.397	17.397	(1.024)	97	1759450			20.03- 80.03	52.00

60 Methylcyclohexane								
							CAS #: 108-87-2	
17.614	17.614	(1.037)	83	2867659	40.0000	42.554	80.00- 120.00	100.00(A)
17.614	17.614	(1.037)	55	2844416			57.78- 117.78	99.19
17.614	17.614	(1.037)	56	871736			0.00- 58.27	30.40

61 1,2-Dichloropropane								
							CAS #: 78-87-5	
17.831	17.831	(1.050)	63	1702843	40.0000	34.986	80.00- 120.00	100.00
17.831	17.831	(1.050)	62	1171434			41.39- 101.39	68.79
17.831	17.831	(1.050)	41	1565608			30.08- 90.08	91.94

62 1,4-Dioxane								
							CAS #: 123-91-1	
17.975	17.975	(1.058)	88	1312861	40.0000	39.934	80.00- 120.00	100.00
17.975	17.975	(1.058)	58	955864			41.23- 101.23	72.81
17.975	17.975	(1.058)	57	352100			0.00- 53.84	26.82

63 Bromodichloromethane								
							CAS #: 75-27-4	
18.264	18.264	(1.075)	83	4710310	40.0000	38.195	80.00- 120.00	100.00
18.264	18.264	(1.075)	85	3187885			37.91- 97.91	67.68

64 cis-1,3-Dichloropropene								
							CAS #: 10061-01-5	
19.108	19.108	(1.125)	75	2633563	40.0000	39.756	80.00- 120.00	100.00
19.108	19.108	(1.125)	77	884115			2.56- 62.56	33.57
19.108	19.108	(1.125)	39	2023848			19.94- 79.94	76.85

65 4-Methyl-2-pentanone								
							CAS #: 108-10-1	
19.310	19.310	(1.137)	43	4822639	40.0000	45.880	80.00- 120.00	100.00(A)
19.310	19.310	(1.137)	58	1520992			7.11- 67.11	31.54
19.310	19.310	(1.137)	85	680753			0.00- 46.29	14.12

68 Toluene								
							CAS #: 108-88-3	
19.758	19.758	(1.163)	91	6395922	40.0000	39.078	80.00- 120.00	100.00
19.758	19.758	(1.163)	92	3759226			28.99- 88.99	58.78

69 trans-1,3-Dichloropropene								
							CAS #: 10061-02-6	
20.331	20.331	(0.908)	75	2989145	40.0000	41.756	80.00- 120.00	100.00(A)
20.331	20.331	(0.908)	77	990861			3.77- 63.77	33.15
20.331	20.331	(0.908)	39	1891986			18.43- 78.43	63.30

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	2341180	40.0000	38.733	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	1459639			34.78- 94.78	62.35
20.716	20.716	(0.925)	83	1693453			49.45- 109.45	72.33
71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	3606727	40.0000	39.270	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	3384082			54.11- 114.11	93.83
20.881	20.881	(0.933)	131	3339261			55.30- 115.30	92.58
72 2-Hexanone					CAS #: 591-78-6			
21.046	21.046	(0.940)	58	2268233	40.0000	45.132	80.00- 120.00	100.00(A)
21.046	21.046	(0.940)	43	5234493			162.06- 222.06	230.77
21.046	21.046	(0.940)	100	557080			0.00- 52.96	24.56
73 Dibromochloromethane					CAS #: 124-48-1			
21.458	21.458	(0.958)	129	6519871	40.0000	40.801	80.00- 120.00	100.00(A)
21.458	21.458	(0.958)	127	5013158			46.93- 106.93	76.89
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	4249110	40.0000	40.190	80.00- 120.00	100.00(A)
21.705	21.705	(0.970)	109	4187297			68.26- 128.26	98.55
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	6361657	40.0000	37.216	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	2045552			1.73- 61.73	32.15
22.428	22.428	(1.002)	77	2994995			16.56- 76.56	47.08
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	3033729	40.0000	39.266	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	9001503			261.70- 321.70	296.71
80 m,p-Xylene					CAS #: 108-38-3			
22.677	22.677	(1.013)	106	3673812	40.0000	39.846	80.00- 120.00	100.00
22.677	22.677	(1.013)	91	7156789			150.71- 210.71	194.81
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	3499750	40.0000	43.296	80.00- 120.00	100.00(A)
23.278	23.278	(1.040)	91	7016825			165.12- 225.12	200.50
83 Styrene					CAS #: 100-42-5			
23.319	23.319	(1.042)	104	6152448	40.0000	43.059	80.00- 120.00	100.00(A)
23.319	23.319	(1.042)	78	2981330			12.29- 72.29	48.46
84 Bromoform					CAS #: 75-25-2			
23.661	23.661	(1.057)	173	4948257	40.0000	40.126	80.00- 120.00	100.00(A)

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
84 Bromoform (continued)									
23.661	23.661	(1.057)	171	2713120			23.53- 83.53	54.83	

85 Cumene									
23.751	23.751	(1.061)	105	11637574	40.0000	45.277	80.00- 120.00	100.00(A)	
23.751	23.751	(1.061)	120	3409689			0.00- 58.84	29.30	

89 1,1,2,2-Tetrachloroethane									
24.222	24.222	(1.082)	83	4250245	40.0000	35.203	80.00- 120.00	100.00	
24.222	24.222	(1.082)	85	2997449			37.40- 97.40	70.52	

90 Propylbenzene									
24.289	24.289	(1.085)	91	11743775	40.0000	39.277	80.00- 120.00	100.00	
24.289	24.289	(1.085)	120	3392806			0.00- 58.05	28.89	

92 4-Ethyltoluene									
24.424	24.424	(1.091)	105	10877983	40.0000	41.833	80.00- 120.00	100.00(A)	
24.424	24.424	(1.091)	120	3525050			2.80- 62.80	32.41	

94 1,3,5-Trimethylbenzene									
24.491	24.491	(1.094)	105	9348389	40.0000	42.096	80.00- 120.00	100.00(A)	
24.491	24.491	(1.094)	120	4811206			23.16- 83.16	51.47	

98 1,2,4-Trimethylbenzene									
24.940	24.940	(1.114)	105	7633739	40.0000	44.053	80.00- 120.00	100.00(A)	
24.940	24.940	(1.114)	120	3718068			19.74- 79.74	48.71	

101 1,3-Dichlorobenzene									
25.343	25.343	(1.132)	146	6588440	40.0000	38.988	80.00- 120.00	100.00	
25.343	25.343	(1.132)	148	4034701			31.66- 91.66	61.24	
25.343	25.343	(1.132)	111	2555892			6.44- 66.44	38.79	

104 1,4-Dichlorobenzene									
25.455	25.455	(1.137)	146	6453780	40.0000	40.326	80.00- 120.00	100.00(A)	
25.455	25.455	(1.137)	148	3929562			32.25- 92.25	60.89	
25.455	25.455	(1.137)	111	2400312			4.82- 64.82	37.19	

105 alpha-chlorotoluene									
25.590	25.590	(1.143)	91	7744534	40.0000	42.612	80.00- 120.00	100.00(A)	
25.590	25.590	(1.143)	126	2064888			0.00- 57.25	26.66	

108 1,2-Dichlorobenzene									
25.881	25.881	(1.156)	146	5939155	40.0000	39.740	80.00- 120.00	100.00	
25.881	25.881	(1.156)	148	3613892			31.25- 91.25	60.85	
25.881	25.881	(1.156)	111	2393005			7.65- 67.65	40.29	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	3047053	40.0000	43.113	80.00- 120.00	100.00	(A)
27.630	27.630	(1.234)	182	2836202			66.40- 126.40	93.08	

113	Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	2549714	40.0000	42.658	80.00- 120.00	100.00	(A)
27.719	27.719	(1.238)	223	1626006			31.93- 91.93	63.77	

114	Naphthalene					CAS #: 91-20-3			
27.944	27.944	(1.248)	128	824931	4.00000	4.680	80.00- 120.00	100.00	(A)
27.944	27.944	(1.248)	127	109731			0.00- 47.34	13.30	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 15-MAY-2015
Lab File ID: e051515.d	Calibration Time: 17:04
Lab Smp Id: ICAL	Client Smp ID: Level 12
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: md	
Method File: /chem/msde.i/15May2015.b/e15l0515a.m	
Misc Info: 40ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	169336	101602	237070	178389	5.35
58 1,4-Difluorobenze	587158	352295	822021	640620	9.11
75 Chlorobenzene-d5	557421	334453	780389	619220	11.09

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 15-MAY-2015 20:07

Client ID: Level 12

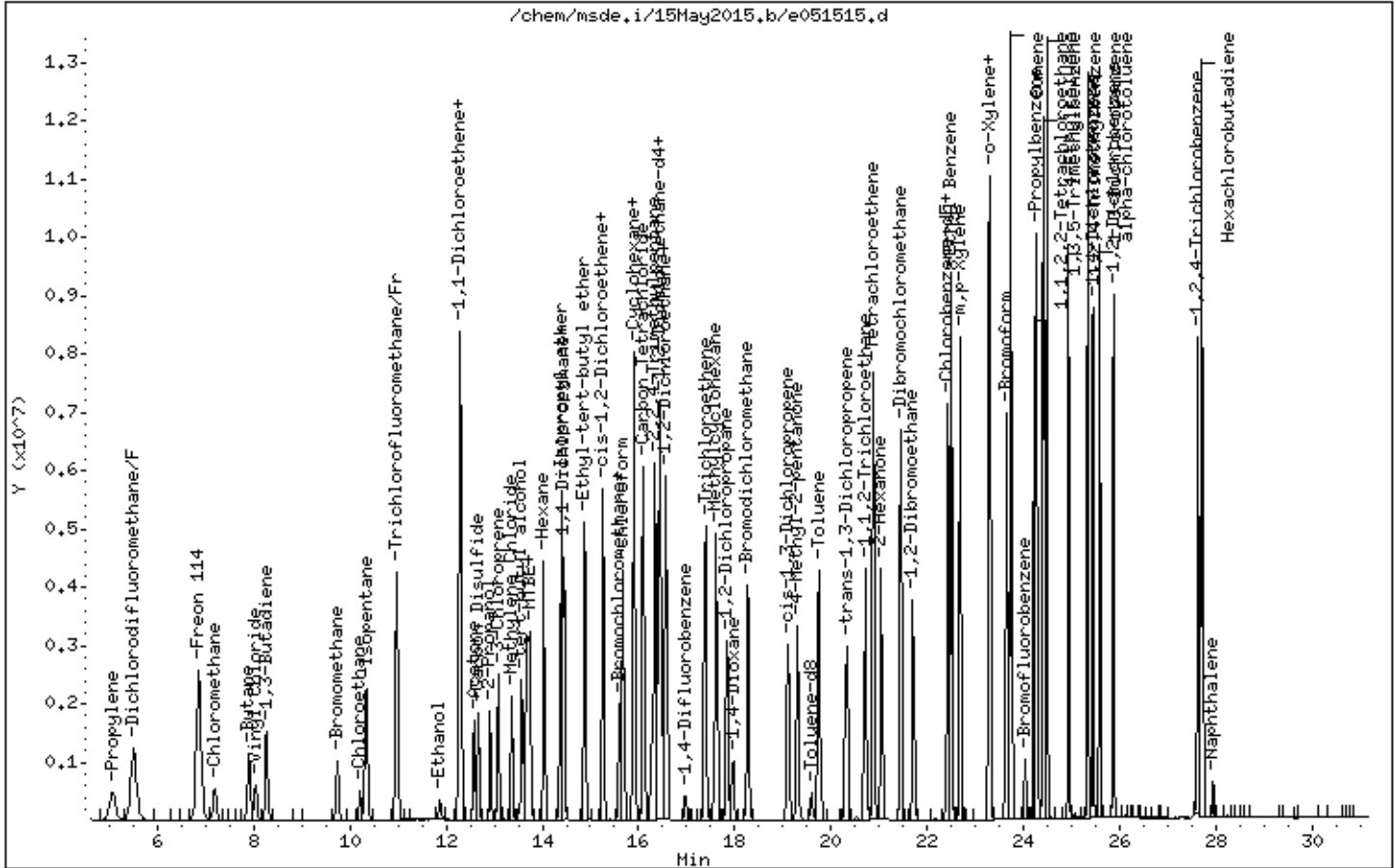
Instrument: msde.i

Sample Info: 200mL# 2716-288

Operator: md

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/18May2015.b/e051810.d
 Lab Smp Id: ICAL Client Smp ID: Level 13
 Inj Date : 18-MAY-2015 15:50
 Operator : gh Inst ID: msde.i
 Smp Info : 100mL# 2736-8
 Misc Info : 2.0ppbv (5.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/18May2015.b/e1510515a.m
 Meth Date : 18-May-2015 18:20 ghehir Quant Type: ISTD
 Cal Date : 18-MAY-2015 15:50 Cal File: e051810.d
 Als bottle: 1 Calibration Sample, Level: 13
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: IsobutyleneICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	119386	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	88949					46.94- 106.94	74.51
15.611	15.611	(1.000)	49	141242					103.66- 163.66	118.31
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.987	16.987	(1.000)	114	426744	5.00000				80.00- 120.00	100.00
16.963	16.963	(1.000)	88	54776					0.00- 43.53	12.84
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	410347	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	175783					13.25- 73.25	42.84
8 Isobutylene CAS #: 115-11-7										
7.802	7.802	(0.500)	41	56753	2.00000	1.723			0.00- 0.00	100.00(H)
7.785	7.785	(0.499)	56	27471					0.00- 0.00	48.40
7.802	7.802	(0.500)	39	33185					0.00- 0.00	58.47

QC Flag Legend

H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 18-MAY-2015
Lab File ID: e051810.d	Calibration Time: 10:13
Lab Smp Id: ICAL	Client Smp ID: Level 13
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: gh	
Method File: /chem/msde.i/18May2015.b/e15l0515a.m	
Misc Info: 2.0ppbv (5.0ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	180559	108335	252783	119386	-33.88
58 1,4-Difluorobenze	663550	398130	928970	426744	-35.69
75 Chlorobenzene-d5	634456	380674	888238	410347	-35.32

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 18-MAY-2015 15:50

Client ID: Level 13

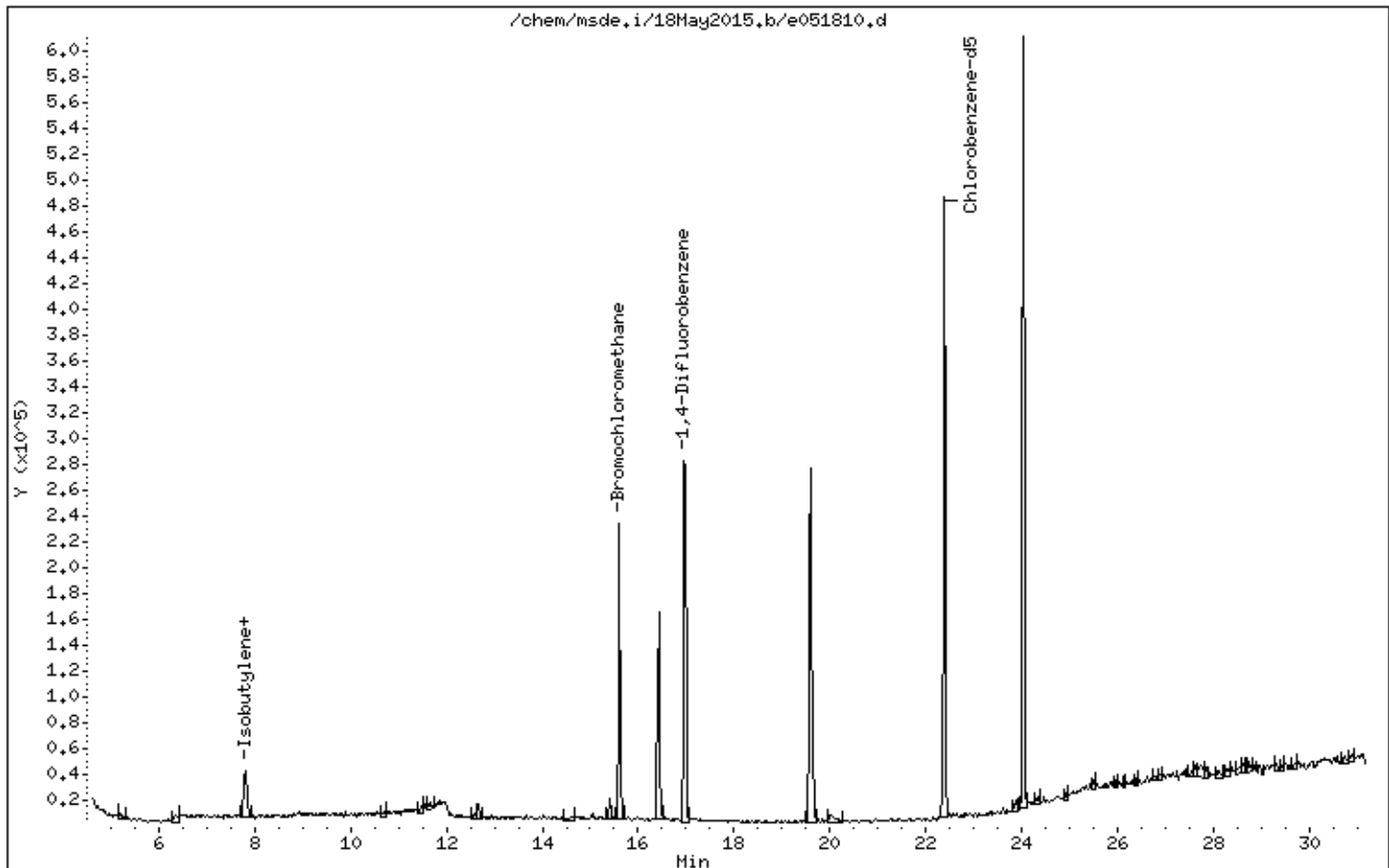
Instrument: msde.i

Sample Info: 100mL# 2736-8

Operator: gh

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/18May2015.b/e051811.d
 Lab Smp Id: ICAL Client Smp ID: Level 15
 Inj Date : 18-MAY-2015 16:40
 Operator : gh Inst ID: msde.i
 Smp Info : 200mL# 2736-8
 Misc Info : 4.0ppbv (5.0ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/18May2015.b/e1510515a.m
 Meth Date : 18-May-2015 18:20 ghehir Quant Type: ISTD
 Cal Date : 18-MAY-2015 16:40 Cal File: e051811.d
 Als bottle: 1 Calibration Sample, Level: 15
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: IsobutyleneICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.610	15.610 (1.000)	130	119504 5.00000			80.00- 120.00	100.00
15.610	15.610 (1.000)	128	87280			46.94- 106.94	73.04
15.610	15.610 (1.000)	49	144765			103.66- 163.66	121.14
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.987	16.987 (1.000)	114	409972 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	53876			0.00- 43.53	13.14
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	401013 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	171882			13.25- 73.25	42.86
8 Isobutylene CAS #: 115-11-7							
7.802	7.802 (0.500)	41	108992 4.00000	3.455		0.00- 0.00	100.00(H)
7.802	7.802 (0.500)	56	58633			0.00- 0.00	53.80
7.802	7.802 (0.500)	39	67081			0.00- 0.00	61.55

QC Flag Legend

H - Operator selected an alternate compound hit.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 18-MAY-2015
Lab File ID: e051811.d	Calibration Time: 10:13
Lab Smp Id: ICAL	Client Smp ID: Level 15
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: gh	
Method File: /chem/msde.i/18May2015.b/e15l0515a.m	
Misc Info: 4.0ppbv (5.0ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	180559	108335	252783	119504	-33.81
58 1,4-Difluorobenze	663550	398130	928970	409972	-38.22
75 Chlorobenzene-d5	634456	380674	888238	401013	-36.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.99	16.66	17.32	16.99	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 18-MAY-2015 16:40

Client ID: Level 15

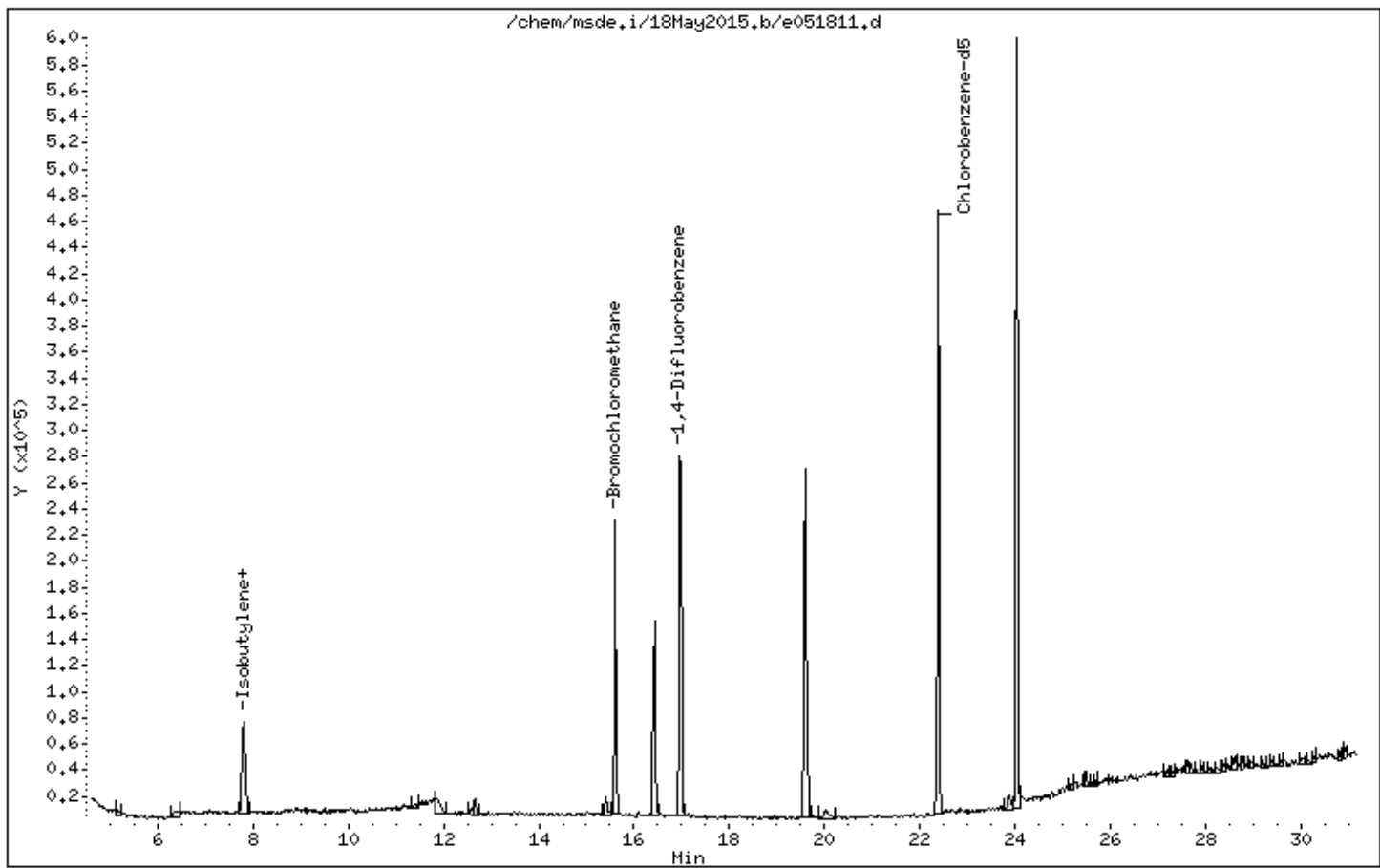
Instrument: msde.i

Sample Info: 200mL# 2736-8

Operator: gh

Column phase: RTx-624

Column diameter: 0.32



**Eurofins Air Toxics, Inc. 1Q2015 TO-14A_TO-15 LL Limit of Detections (LODs) MSD-E
Effective 04-01-15**

CAS #	Analyte	Molecular				
		Weight (MW)	LOD (ppbv)	LOQ (ppbv)	LOD (ug/m3)	LOQ (ug/m3)
71-55-6	1,1,1-Trichloroethane	133.42	0.05	0.1	0.27284	0.54569
79-34-5	1,1,2,2-Tetrachloroethane	167.86	0.05	0.1	0.34327	0.68654
79-00-5	1,1,2-Trichloroethane	133.42	0.05	0.1	0.27284	0.54569
75-34-3	1,1-Dichloroethane	98.97	0.05	0.1	0.20239	0.40479
75-35-4	1,1-Dichloroethene	96.95	0.05	0.1	0.19826	0.39652
120-82-1	1,2,4-Trichlorobenzene	181.46	0.05	0.5	0.37108	3.71084
95-63-6	1,2,4-Trimethylbenzene	120.19	0.05	0.1	0.24579	0.49157
106-93-4	1,2-Dibromoethane (EDB)	187.88	0.05	0.1	0.38421	0.76843
95-50-1	1,2-Dichlorobenzene	147.01	0.05	0.1	0.30063	0.60127
107-06-2	1,2-Dichloroethane	98.96	0.05	0.1	0.20237	0.40474
78-87-5	1,2-Dichloropropane	112.99	0.05	0.1	0.23106	0.46213
108-67-8	1,3,5-Trimethylbenzene	120.19	0.05	0.1	0.24579	0.49157
106-99-0	1,3-Butadiene	54.09	0.05	0.1	0.11061	0.22123
541-73-1	1,3-Dichlorobenzene	147.01	0.05	0.1	0.30063	0.60127
106-46-7	1,4-Dichlorobenzene	147.01	0.05	0.1	0.30063	0.60127
123-91-1	1,4-Dioxane	88.11	0.05	0.1	0.18018	0.36037
540-84-1	2,2,4-Trimethylpentane*	114.22	0.05483	0.5	0.25614	2.33579
78-93-3	2-Butanone	72.11	0.05	0.4	0.14746	1.17971
591-78-6	2-Hexanone*	100.16	0.05034	0.5	0.20622	2.04826
67-63-0	2-Propanol*	60.09	0.05969	0.5	0.1467	1.22883
107-05-1	3-Chloropropene	76.53	0.05	0.5	0.1565	1.56503
622-96-8	4-Ethyltoluene	120.19	0.05	0.1	0.24579	0.49157
108-10-1	4-Methyl-2-pentanone	100.16	0.05	0.1	0.20483	0.40965
67-64-1	Acetone*	58.08	0.08111	0.5	0.19267	1.18773
100-44-7	alpha-Chlorotoluene	126.58	0.05	0.1	0.25885	0.51771
71-43-2	Benzene	78.11	0.05	0.1	0.15973	0.31947
75-27-4	Bromodichloromethane	163.83	0.05	0.1	0.33503	0.67006
75-25-2	Bromoform	252.77	0.05	0.1	0.51691	1.03382
74-83-9	Bromomethane	94.95	0.05	0.4	0.19417	1.55337
75-15-0	Carbon Disulfide*	76.14	0.20233	0.5	0.63008	1.55706
56-23-5	Carbon Tetrachloride	153.84	0.05	0.1	0.3146	0.6292
108-90-7	Chlorobenzene	112.56	0.05	0.1	0.23018	0.46037
75-00-3	Chloroethane*	64.52	0.07213	0.5	0.19034	1.31943
67-66-3	Chloroform	119.39	0.05	0.1	0.24415	0.4883
74-87-3	Chloromethane*	50.49	0.05704	0.5	0.11779	1.03252
156-59-2	cis-1,2-Dichloroethene	96.94	0.05	0.1	0.19824	0.39648
10061-01-5	cis-1,3-Dichloropropene	110.97	0.05	0.1	0.22693	0.45387
98-82-8	Cumene	120.19	0.05	0.1	0.24579	0.49157
110-82-7	Cyclohexane	84.16	0.05	0.1	0.17211	0.34421
124-48-1	Dibromochloromethane	208.28	0.05	0.1	0.42593	0.85186
64-17-5	Ethanol*	46.07	0.10705	0.5	0.20171	0.94213

1Q2015 MSD-E LL LODs

100-41-4	Ethyl Benzene	106.16	0.05	0.1	0.2171	0.43419
75-69-4	Freon 11	137.38	0.05	0.1	0.28094	0.56188
76-13-1	Freon 113	187.39	0.05	0.1	0.38321	0.76642
76-14-2	Freon 114	170.93	0.05	0.1	0.34955	0.6991
75-71-8	Freon 12	120.92	0.05	0.1	0.24728	0.49456
142-82-5	Heptane	100.2	0.05	0.1	0.20491	0.40982
87-68-3	Hexachlorobutadiene	260.76	0.05	0.5	0.53325	5.33252
110-54-3	Hexane	86.17	0.05	0.1	0.17622	0.35243
108-38-3	m,p-Xylene	106.17	0.05	0.1	0.21712	0.43423
1634-04-4	Methyl tert-butyl ether	88.15	0.05	0.1	0.18027	0.36053
75-09-2	Methylene Chloride	84.94	0.05	0.2	0.1737	0.69481
91-20-3	Naphthalene	128.17	0.04	0.5	0.20969	2.62106
95-47-6	o-Xylene	106.17	0.05	0.1	0.21712	0.43423
103-65-1	Propylbenzene	120.19	0.05	0.1	0.24579	0.49157
115-07-1	Propylene	42.08	0.4	0.5	0.68843	0.86053
100-42-5	Styrene	104.14	0.05	0.1	0.21297	0.42593
127-18-4	Tetrachloroethene	165.85	0.05	0.1	0.33916	0.67832
109-99-9	Tetrahydrofuran*	72.1	0.07358	0.5	0.21698	1.47444
108-88-3	Toluene	92.13	0.05	0.1	0.1884	0.37681
156-60-5	trans-1,2-Dichloroethene	96.94	0.05	0.1	0.19824	0.39648
10061-02-6	trans-1,3-Dichloropropene	110.97	0.05	0.1	0.22693	0.45387
79-01-6	Trichloroethene	131.39	0.05	0.1	0.26869	0.53738
108-05-4	Vinyl Acetate	86.09	0.4	0.5	1.40843	1.76053
75-01-4	Vinyl Chloride	62.5	0.05	0.1	0.12781	0.25562

ppbv - part per billion by volume

Concentration (ug/m3) = Concentration (ppbv)*MW/24.45

Instrument ID - msde.i file msde.i/18Mar2015.b/e031819.d msde.i/18Mar2015.b/e031820.d msde.i/18Mar2

*LOD was less then the MDL therefore was raised to equal the MDL value.

Report Date : 21-Oct-2014 16:28

Page 1

Eurofins Air Toxics Inc. METHOD DETECTION LIMIT SUMMARY REPORT 0.1 ppbv LC MBL

Method File: /chem/msde.i/16oct2014.b/e1411008a.m
Batch File: /chem/msde.i/16oct2014.b
Inst ID: msde.i

Spill MBLs for 1,2,4 TEB, Hexachlorobenzene
2677-278 (1.0 ppbv) = 25 mL LOAD

ID: MDL01 MDL02 MDL03 MDL04 MDL05 MDL06 MDL07 MDL08
FILENAME: e101613 e101614 e101615 e101616 e101617 e101618 e101619 e101620
INT. DATE: 16-OCT-2014 16-OCT-2014 16-OCT-2014 16-OCT-2014 16-OCT-2014 17-OCT-2014 17-OCT-2014 17-OCT-2014
INT. TIME: 19:12 19:59 20:56 21:42 22:28 08:13 08:58 10:01

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
1 Freon134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
207 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
205 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
204 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Propylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Freon 152A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Dichlorodifluoromethan	87.74	83.52	59.53	93.86	86.29	86.11	91.62	80.48	88.64	5.10	18.26
5 Freon 22	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
6 Freon 114	91.20	103.22	86.15	84.34	85.13	82.27	86.93	90.11	88.69	6.57	19.71
7 Chloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
8 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
9 Butane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
10 Vinyl Chloride	82.09	79.34	77.90	87.01	83.66	84.16	80.50	80.43	81.88	2.95	8.92
11 1,3-Butadiene	89.66	91.54	85.22	89.16	84.36	73.75	77.90	74.81	83.30	6.97	20.91
12 Bromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Isopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

PPM (als)

Reviewer 1
Reviewer 2

Date: 10/21/14
Date: 10/23/14

All 0.1 compounds - parts of

take mean detection concentration

AND take avg value is Bisubstit

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/16oct2014.b/e1411008a.m
 Batch File: /chem/msde.i/16oct2014.b
 Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
35 Hexane	72.61	77.47	81.94	72.77	70.33	63.64	67.33	61.45	70.94	6.83	20.47
191 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
36 Isopropyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 1,1-Dichloroethane	80.64	79.97	79.96	82.38	75.22	77.64	88.24	75.52	79.95	4.18	12.54
38 Vinyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Chlorprena	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
40 Ethyl-tert-butyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 cis-1,2-Dichloroethane	77.50	93.27	86.86	80.30	88.75	83.72	82.82	79.28	84.06	5.30	15.88
42 2-Butanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
192 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Tetrahydrofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 46 Bromochloroethane	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00
47 Chloroform	96.39	93.72	90.96	92.70	101.48	82.13	98.44	88.50	92.04	5.68	17.03
45 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Cyclohexane	75.45	82.44	62.83	73.46	73.72	63.04	72.94	68.30	71.53	6.58	19.73
49 1,1,1-Trichloroethane	89.52	96.67	93.66	96.89	91.61	92.02	84.18	89.67	91.78	4.15	12.45
193 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Carbon Tetrachloride	84.85	84.77	81.89	73.74	73.79	62.79	73.12	66.57	75.19	8.16	24.47
52 2,2,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Benzene	102.82	91.37	96.54	93.27	99.27	96.11	86.25	94.20	94.98	5.02	15.05
\$ 54 1,2-Dichloroethane-d4	4903.49	4987.13	4874.94	4933.60	4891.74	4943.75	4947.63	5030.70	4939.32	51.34	153.92
55 tert-amyl methyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 1,2-Dichloroethane	94.66	94.77	101.50	88.02	90.69	88.43	92.62	83.11	91.72	5.53	16.58

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/16oct2014.b/e1411008a.m
Batch File: /chem/msde.i/16oct2014.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
189 Dodecane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
99 sec-Butylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
100 p-Cymene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
101 1,3-Dichlorobenzene	85.09	87.65	91.88	79.71	86.09	83.28	83.43	85.68	85.35	3.53	10.65
103 1,2,3-trimethylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
104 1,4-Dichlorobenzene	89.87	85.11	87.68	85.57	85.83	77.54	69.51	82.36	82.93	6.55	19.64
105 alpha-chlorotoluene	87.37	91.74	95.37	70.47	88.78	73.34	85.34	82.73	84.39	8.64	25.90
195 trans-1,4-dichloro-2-b	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
95 Dibromomethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
102 Indan	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
107 Butylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
108 1,2-Dichlorobenzene	86.63	84.31	81.33	84.45	83.96	77.73	76.24	85.39	82.51	3.74	11.21
106 Indene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
110 1,2-dibromo-3-chloropr	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
109 Hexachloroethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
112 1,2,4-Trichlorobenzene	93.38	96.41	86.51	98.69	91.54	70.10	77.89	82.38	87.38	20.12	30.35
113 Hexachlorobutadiene	88.97	89.05	64.91	89.14	91.10	73.71	88.13	78.28	85.28	6.11	18.32
114 Naphthalene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
111 1,3,5-Trichlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
115 1,2,3-Trichlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
187 2,3-Dichloropropene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
201 2,2-Dichloropropane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
197 1-Methoxy-2-Propyl Ace	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
198 2-Heptanone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

free 580
500
100
100
100

Report Date : 21-Oct-2014 16:45

Page 1

Eurofins Air Toxics Inc. REPORT
METHOD DETECTION LIMIT SUMMARY

D.5 ppb/L MDL

Method File: /chem/msde.i/15Oct2014.b/e1411008a.m
Batch File: /chem/msde.i/15oct2014.b
Inst ID: msde.1

2677-278 (1.0ppb/L) 125 uL LOD

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	e101506	e101507	e101508	e101510	e101511	e101512	e101513	e101514
INT. DATE:	15-OCT-2014	15-OCT-2014	15-OCT-2014	15-OCT-2014	15-OCT-2014	15-OCT-2014	15-OCT-2014	15-OCT-2014
INT. TIME:	12:32	14:05	14:50	17:11	18:27	19:18	20:15	21:34

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
1 Freon134a	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
207 Iodomethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
205 Cyclohexanone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
204 2-Chloroethyl Vinyl Et	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
2 Propylene	502.50	543.67	547.39	479.85	486.41	457.94	476.95	459.54	494.36	34.83	104.41
3 Freon 152A	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
4 Dichlorodifluoromethan	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
5 Freon 22	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
6 Freon 114	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
7 Chloromethane	428.22	425.85	402.83	454.54	421.95	415.08	404.80	393.45	418.34	19.03	57.04
8 Isobutylene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
9 Butane	395.56	388.03	387.46	373.82	368.27	368.97	410.94	325.96	377.38	25.10	75.86
10 Vinyl Chloride	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
11 1,3-Butadiene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	500
12 Bromomethane	523.93	505.22	509.26	529.64	499.06	521.55	480.21	503.20	509.01	15.96	47.84
13 Chloroethane	446.21	473.85	448.14	446.96	449.07	423.22	391.22	436.44	439.39	24.06	72.13
14 Isopentane	443.69	434.27	453.73	428.69	428.38	433.41	436.53	413.77	434.06	11.71	35.09

Reviewer 1
Reviewer 2

Date: 10/21/14
Date: 10/22/14

X = 0.0693
2σ = 0.1386

All O.S. compounds - Ratio of the
MBAN Division concentration and the MDL
Value is between 1 and 20.

PTV (u)

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/15oct2014.b/e1411008a.m
Batch File: /chem/msde.i/15oct2014.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
15 Vinyl Bromide	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
17 Pentane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
16 Trichlorofluoromethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
18 Ethanol	602.90	584.61	566.47	581.22	524.24	529.70	532.93	501.18	552.91	35.71	107.05
20 Acrolein	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
19 Freon 113	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
190 1-Pentene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
21 1,1-Dichloroethene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
22 Acetone	500.00	502.97	479.20	440.02	466.10	436.38	439.79	451.73	464.52	27.06	81.11
23 Carbon Disulfide	560.08	715.45	550.76	543.98	606.21	508.60	504.56	585.58	571.89	67.49	202.33
184 Bromoethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
25 2-Propanol	445.55	423.90	432.01	406.08	402.77	405.74	405.81	381.71	412.95	19.91	59.69
27 Methyl Acetate	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
26 3-Chloroprene	398.90	404.94	420.31	420.50	409.83	398.58	411.74	388.91	406.71	11.07	33.18
24 2-Methylpentane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
28 Acetonitrile	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
29 Methylene Chloride	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
30 tert-butyl alcohol	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
31 MTBE	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
32 trans-1,2-Dichloroethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
33 Acrylonitrile	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
34 2,4-Dimethylpentane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

500
500

500
500

500

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/15oct2014.b/e1411008a.m
Batch File: /chem/msde.i/15oct2014.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
35 Hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
191 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
36 Isopropyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 1,1-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
38 Vinyl acetate	390.48	377.46	372.74	353.12	398.80	377.94	311.08	345.04	360.83	29.39	88.11
39 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
40 Ethyl-tert-butyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Ethyl acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 cis-1,2-Dichloroethane	420.89	417.51	466.10	395.08	401.82	418.96	438.70	392.85	411.24	14.90	44.68
42 2-Butanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
192 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Tetrahydrofuran	371.05	386.78	399.57	405.17	360.97	366.80	389.35	329.18	378.63	24.54	73.58
* 46 Bromochloroethane	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00
47 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
193 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Carbon Tetrachloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 2,2,4-Trimethylpentane	418.17	397.67	419.03	394.03	381.40	383.38	361.97	378.14	392.22	18.29	54.83
53 Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 1,2-Dichloroethane-da	4985.28	5007.62	5029.93	5132.67	5086.78	5169.25	4996.78	5107.00	5065.66	69.44	208.17
55 tert-amy methyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 1,2-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

500

500

500

500

EUROFINS AIR TOXICS INC.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/15oct2014.b/e1411008a.m
Batch File: /chem/msde.i/15oct2014.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MEL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
57 Heptane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
50 Thiophene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
* 58 1,4-Difluorobenzene	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00
59 Trichloroethene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
60 Methylcyclohexane	402.91	398.22	401.27	372.67	366.27	380.38	366.88	371.15	382.47	15.83	47.44
61 1,2-Dichloropropane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
62 1,4-Dioxane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
63 Bromodichloromethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
64 cis-1,3-Dichloropropene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
65 4-Methyl-2-pentanone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
66 Octane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
\$ 67 Toluene-d8	4741.56	4760.73	4730.14	4635.71	4828.17	4685.46	4814.66	4756.01	4744.05	63.08	189.11
68 Toluene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
194 Ethyl Acrylate	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
69 trans-1,3-Dichloroprop	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
70 1,1,2-Trichloroethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
71 Tetrachloroethene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
72 2-Hexanone	352.21	336.09	351.18	315.74	321.57	301.42	323.14	325.91	330.78	16.79	50.14
73 Dibromochloromethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
74 1,2-Dibromoethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
* 75 Chlorobenzene-d5	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00
76 Chlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
78 Nonane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

See

500

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/150oct2014.b/e1411008a.m
Batch File: /chem/msde.i/150oct2014.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
189 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
100 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 1,3-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
104 1,4-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 alpha-chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
195 trans-1,4-dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
95 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 1,2-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 1,2-dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
112 1,2,4-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
113 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
114 Naphthalene	48.84	51.06	50.59	44.64	47.94	41.32	41.04	42.35	45.96	4.13	12.37
111 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
115 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
187 2,3-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
201 2,2-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
197 1-Methoxy-2-Propyl Ace	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
198 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

\$50 FTV

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	CCV	Date/Time Analyzed:	6/5/15 10:08 AM
Lab ID:	1506011A-14A	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060503a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	82
Trichloroethene	79-01-6	81

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	125
4-Bromofluorobenzene	460-00-4	83-116	84
Toluene-d8	2037-26-5	90-108	97

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 05-JUN-2015 10:08
 Lab File ID: e060503a.d Init. Cal. Date(s): 15-MAY-2015 27-MAY-2015
 Analysis Type: AIR Init. Cal. Times: 13:24 11:25
 Lab Sample ID: CCV Quant Type: ISTD
 Method: /chem/msde.i/05Jun2015.b/e1510515b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 54 1,2-Dichloroethane-d4	1.57073	1.97079	0.010	-25.47007	30.00000	Averaged
\$ 67 Toluene-d8	0.85891	0.83551	0.010	2.72461	30.00000	Averaged
\$ 87 Bromofluorobenzene	0.50621	0.42266	0.010	16.50505	30.00000	Averaged
2 Propylene	1.05845	1.30472	0.010	-23.26777	30.00000	Averaged
4 Dichlorodifluoromethane/Fr1	4.43619	4.73542	0.010	-6.74514	30.00000	Averaged
6 Freon 114	3.39322	3.01211	0.010	11.23155	30.00000	Averaged
7 Chloromethane	1.29815	1.54788	0.010	-19.23712	30.00000	Averaged
9 Butane	0.20447	0.26829	0.010	-31.21289	30.00000	Averaged <-
10 Vinyl Chloride	1.02218	1.11906	0.010	-9.47817	30.00000	Averaged
11 1,3-Butadiene	0.91276	1.06606	0.010	-16.79490	30.00000	Averaged
12 Bromomethane	0.94221	0.90642	0.010	3.79888	30.00000	Averaged
13 Chloroethane	0.45989	0.49559	0.010	-7.76194	30.00000	Averaged
14 Isopentane	0.85377	0.89051	0.010	-4.30406	30.00000	Averaged
16 Trichlorofluoromethane/Fr11	4.97999	4.80365	0.010	3.54089	30.00000	Averaged
18 Ethanol	0.47113	0.53278	0.010	-13.08518	30.00000	Averaged
21 1,1-Dichloroethene	0.70218	0.67242	0.010	4.23723	30.00000	Averaged
19 Freon 113	2.43281	2.00183	0.010	17.71510	30.00000	Averaged
22 Acetone	0.61022	0.57581	0.010	5.63903	30.00000	Averaged
23 Carbon Disulfide	2.95675	3.04874	0.010	-3.11131	30.00000	Averaged
26 3-Chloroprene	0.39548	0.39312	0.010	0.59628	30.00000	Averaged
25 2-Propanol	2.14926	2.55102	0.010	-18.69282	30.00000	Averaged
29 Methylene Chloride	0.89315	0.81849	0.010	8.35914	30.00000	Averaged
30 tert-butyl alcohol	3.13526	3.39946	0.010	-8.42679	30.00000	Averaged
31 MTBE	2.93510	3.33271	0.010	-13.54653	30.00000	Averaged
32 trans-1,2-Dichloroethene	0.75262	0.79357	0.010	-5.44087	30.00000	Averaged
35 Hexane	1.62253	2.18210	0.010	-34.48766	30.00000	Averaged <-
36 Isopropyl ether	4.15477	5.90348	0.010	-42.08922	30.00000	Averaged <-
37 1,1-Dichloroethane	2.25951	2.64366	0.010	-17.00137	30.00000	Averaged
38 Vinyl Acetate	0.30026	0.31409	0.010	-4.60699	30.00000	Averaged
40 Ethyl-tert-butyl ether	3.80614	4.74963	0.010	-24.78859	30.00000	Averaged
41 cis-1,2-Dichloroethene	0.85964	0.83379	0.010	3.00635	30.00000	Averaged
42 2-Butanone	0.46842	0.51996	0.010	-11.00225	30.00000	Averaged
44 Tetrahydrofuran	1.41036	1.93846	0.010	-37.44423	30.00000	Averaged <-
47 Chloroform	3.20830	3.26359	0.010	-1.72339	30.00000	Averaged
48 Cyclohexane	1.43963	1.57816	0.010	-9.62240	30.00000	Averaged
49 1,1,1-Trichloroethane	4.11886	4.22720	0.010	-2.63033	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 05-JUN-2015 10:08
 Lab File ID: e060503a.d Init. Cal. Date(s): 15-MAY-2015 27-MAY-2015
 Analysis Type: AIR Init. Cal. Times: 13:24 11:25
 Lab Sample ID: CCV Quant Type: ISTD
 Method: /chem/msde.i/05Jun2015.b/e1510515b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
51 Carbon Tetrachloride	4.63932	3.38709	0.010	26.99161	30.00000	Averaged
52 2,2,4-Trimethylpentane	2.71250	3.34417	0.010	-23.28732	30.00000	Averaged
53 Benzene	1.02209	0.99582	0.010	2.56978	30.00000	Averaged
55 tert-amyl methyl ether	0.29496	0.29641	0.010	-0.49293	30.00000	Averaged
56 1,2-Dichloroethane	0.74559	0.76094	0.010	-2.05850	30.00000	Averaged
57 Heptane	0.34276	0.37844	0.010	-10.40742	30.00000	Averaged
59 Trichloroethene	0.72873	0.59043	0.010	18.97781	30.00000	Averaged
60 Methylcyclohexane	0.52597	0.53780	0.010	-2.24929	30.00000	Averaged
61 1,2-Dichloropropane	0.37989	0.35983	0.010	5.27893	30.00000	Averaged
62 1,4-Dioxane	0.25660	0.22749	0.010	11.34186	30.00000	Averaged
63 Bromodichloromethane	0.96253	0.84384	0.010	12.33125	30.00000	Averaged
64 cis-1,3-Dichloropropene	0.51703	0.46920	0.010	9.25134	30.00000	Averaged
65 4-Methyl-2-pentanone	0.82041	0.96011	0.010	-17.02889	30.00000	Averaged
68 Toluene	1.27744	1.21456	0.010	4.92245	30.00000	Averaged
69 trans-1,3-Dichloropropene	0.57803	0.59842	0.010	-3.52613	30.00000	Averaged
70 1,1,2-Trichloroethane	0.48807	0.43724	0.010	10.41278	30.00000	Averaged
71 Tetrachloroethene	0.74161	0.60876	0.010	17.91325	30.00000	Averaged
72 2-Hexanone	0.40581	0.46793	0.010	-15.30634	30.00000	Averaged
73 Dibromochloromethane	1.29031	1.16517	0.010	9.69837	30.00000	Averaged
74 1,2-Dibromoethane	0.85370	0.80709	0.010	5.45947	30.00000	Averaged
76 Chlorobenzene	1.38026	1.21047	0.010	12.30140	30.00000	Averaged
77 Ethyl Benzene	0.62385	0.55174	0.010	11.55861	30.00000	Averaged
80 m,p-Xylene	0.74448	0.68400	0.010	8.12395	30.00000	Averaged
81 o-Xylene	0.65270	0.64174	0.010	1.68041	30.00000	Averaged
83 Styrene	1.15374	1.13963	0.010	1.22239	30.00000	Averaged
84 Bromoform	0.99576	0.76108	0.010	23.56823	30.00000	Averaged
85 Cumene	2.07543	2.03443	0.010	1.97546	30.00000	Averaged
89 1,1,2,2-Tetrachloroethane	0.97490	0.89768	0.010	7.92106	30.00000	Averaged
90 Propylbenzene	2.41433	2.31124	0.010	4.26984	30.00000	Averaged
92 4-Ethyltoluene	2.09968	2.06164	0.010	1.81154	30.00000	Averaged
94 1,3,5-Trimethylbenzene	1.79319	1.71982	0.010	4.09161	30.00000	Averaged
98 1,2,4-Trimethylbenzene	1.39921	1.33103	0.010	4.87251	30.00000	Averaged
101 1,3-Dichlorobenzene	1.36451	1.11811	0.010	18.05766	30.00000	Averaged
104 1,4-Dichlorobenzene	1.29226	1.09910	0.010	14.94745	30.00000	Averaged
105 alpha-chlorotoluene	1.46753	1.50710	0.010	-2.69606	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 05-JUN-2015 10:08
Lab File ID: e060503a.d Init. Cal. Date(s): 15-MAY-2015 27-MAY-2015
Analysis Type: AIR Init. Cal. Times: 13:24 11:25
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/05Jun2015.b/e1510515b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
108 1,2-Dichlorobenzene	1.20678	1.03530	0.010	14.20909	30.00000	Averaged
112 1,2,4-Trichlorobenzene	0.57069	0.40966	0.010	28.21643	30.00000	Averaged
113 Hexachlorobutadiene	0.48263	0.32110	0.010	33.46928	30.00000	Averaged
114 Naphthalene	1.42343	1.13951	0.010	19.94653	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060503a.d
 Lab Smp Id: CCV Client Smp ID: CCV
 Inj Date : 05-JUN-2015 10:08
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL #2716-289
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: CNTRL062415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5										
15.611	15.611	(1.000)	130	141734	5.00000				80.00- 120.00	100.00
15.611	15.611	(1.000)	128	120388					46.94- 106.94	84.94
15.611	15.611	(1.000)	49	292036					103.66- 163.66	206.05
* 58 1,4-Difluorobenzene CAS #: 540-36-3										
16.963	16.963	(1.000)	114	538789	5.00000				80.00- 120.00	100.00
16.963	16.963	(1.000)	88	75949					0.00- 43.53	14.10
* 75 Chlorobenzene-d5 CAS #: 3114-55-4										
22.386	22.386	(1.000)	117	499778	5.00000				80.00- 120.00	100.00
22.386	22.386	(1.000)	82	230518					13.25- 73.25	46.12
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0										
16.433	16.433	(1.053)	65	279328	5.00000			6.274	80.00- 120.00	100.00
16.433	16.433	(1.053)	67	124690					24.87- 84.87	44.64

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	450162	5.00000	4.864	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	50950			0.00- 40.24	11.32
19.601	19.601	(1.156)	100	304346			39.39- 99.39	67.61

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	211237	5.00000	4.175	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	339552			88.06- 148.06	160.74
24.042	24.042	(1.074)	176	207359			66.20- 126.20	98.16

2 Propylene						CAS #: 115-07-1		
5.046	5.046	(0.323)	41	184924	5.00000	6.163	80.00- 120.00	100.00
5.070	5.070	(0.325)	42	127114			38.37- 98.37	68.74
5.046	5.046	(0.323)	39	146307			42.39- 102.39	79.12

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.503	5.503	(0.353)	85	671170	5.00000	5.337	80.00- 120.00	100.00
5.503	5.503	(0.353)	87	214758			2.12- 62.12	32.00

6 Freon 114						CAS #: 76-14-2		
6.829	6.829	(0.437)	135	426919	5.00000	4.438	80.00- 120.00	100.00
6.829	6.829	(0.437)	137	141225			1.87- 61.87	33.08

7 Chloromethane						CAS #: 74-87-3		
7.191	7.191	(0.461)	50	219387	5.00000	5.962	80.00- 120.00	100.00
7.191	7.191	(0.461)	52	71603			2.64- 62.64	32.64

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	38025	5.00000	6.561	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	338010			798.08- 858.08	888.90

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	158609	5.00000	5.474	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	49368			1.55- 61.55	31.13

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	151097	5.00000	5.840	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	188523			68.70- 128.70	124.77

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	128470	5.00000	4.810	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	119208			67.78- 127.78	92.79

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	70241	5.00000	5.388	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	28724			0.00- 59.93	40.89

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	21523			2.40- 62.40	30.64	

14 Isopentane CAS #: 78-78-4									
10.329	10.329	(0.662)	57	126216	5.00000	5.215	80.00- 120.00	100.00	
10.348	10.348	(0.663)	43	227483			113.81- 173.81	180.23	
10.329	10.329	(0.662)	42	185907			97.27- 157.27	147.29	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	680842	5.00000	4.823	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	427842			34.06- 94.06	62.84	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	75513	5.00000	5.654	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	28497			7.61- 67.61	37.74	
11.871	11.871	(0.760)	43	21703			0.00- 55.64	28.74	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	95305	5.00000	4.788	80.00- 120.00	100.00	
12.309	12.309	(0.788)	61	322763			208.58- 268.58	338.66	
12.309	12.309	(0.788)	96	149213			127.45- 187.45	156.56	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	283728	5.00000	4.114	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	186827			34.06- 94.06	65.85	
12.290	12.290	(0.787)	101	387232			81.22- 141.22	136.48	

22 Acetone CAS #: 67-64-1									
12.576	12.576	(0.806)	58	81611	5.00000	4.718	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	409547			294.37- 354.37	501.82	

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	432111	5.00000	5.156	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	55718	5.00000	4.970	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	265087			276.20- 336.20	475.76	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	361567	5.00000	5.935	80.00- 120.00	100.00	
12.918	12.918	(0.828)	43	98224			0.00- 55.86	27.17	
12.918	12.918	(0.828)	59	11563			0.00- 34.14	3.20	

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	116007	5.00000	4.582	80.00- 120.00	100.00	
13.357	13.357	(0.856)	49	260767			112.26- 172.26	224.78	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.357	13.357	(0.856)	51	75842			12.15- 72.15	65.38	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	481820	5.00000	5.421	80.00- 120.00	100.00	
13.564	13.564	(0.869)	41	140741			0.00- 54.99	29.21	
13.564	13.564	(0.869)	57	63658			0.00- 41.32	13.21	

31 MTBE CAS #: 1634-04-4									
13.674	13.674	(0.876)	73	472359	5.00000	5.677	80.00- 120.00	100.00	
13.674	13.674	(0.876)	57	125228			0.00- 54.97	26.51	
13.674	13.674	(0.876)	41	164685			0.00- 55.95	34.86	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	112475	5.00000	5.272	80.00- 120.00	100.00	
13.729	13.729	(0.879)	61	321185			175.95- 235.95	285.56	
13.729	13.729	(0.879)	96	181694			121.11- 181.11	161.54	

35 Hexane CAS #: 110-54-3									
14.031	14.031	(0.899)	57	309278	5.00000	6.724	80.00- 120.00	100.00	
14.031	14.031	(0.899)	43	248476			35.27- 95.27	80.34	
14.031	14.031	(0.899)	86	41471			0.00- 46.67	13.41	

36 Isopropyl ether CAS #: 108-20-3									
14.387	14.387	(0.922)	45	836725	5.00000	7.104	80.00- 120.00	100.00	
14.387	14.387	(0.922)	87	151186			0.00- 55.94	18.07	
14.387	14.387	(0.922)	59	76811			0.00- 41.46	9.18	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	374697	5.00000	5.850	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	110139			0.10- 60.10	29.39	

38 Vinyl Acetate CAS #: 108-05-4									
14.442	14.442	(0.925)	86	44517	5.00000	5.230	80.00- 120.00	100.00	
14.442	14.442	(0.925)	42	76477			58.55- 118.55	171.79	
14.442	14.442	(0.925)	43	809993			1046.17-1106.17	1819.51	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	673185	5.00000	6.239	80.00- 120.00	100.00	
14.878	14.878	(0.953)	87	239989			11.70- 71.70	35.65	
14.878	14.878	(0.953)	41	186965			0.00- 52.35	27.77	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	118177	5.00000	4.850	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	298918			155.56- 215.56	252.94	
15.259	15.259	(0.977)	96	193464			124.76- 184.76	163.71	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
42 2-Butanone						CAS #: 78-93-3			
15.259	15.259	(0.977)	72	73696	5.00000	5.550	80.00- 120.00	100.00	
15.240	15.240	(0.976)	43	523352			419.99- 479.99	710.15	
15.259	15.259	(0.977)	57	36248			5.97- 65.97	49.19	

44 Tetrahydrofuran						CAS #: 109-99-9			
15.580	15.580	(0.998)	42	274746	5.00000	6.872	80.00- 120.00	100.00	
15.580	15.580	(0.998)	71	64952			4.62- 64.62	23.64	
15.580	15.580	(0.998)	72	75396			8.51- 68.51	27.44	

47 Chloroform						CAS #: 67-66-3			
15.672	15.672	(1.004)	83	462562	5.00000	5.086	80.00- 120.00	100.00	
15.672	15.672	(1.004)	85	329662			36.52- 96.52	71.27	

48 Cyclohexane						CAS #: 110-82-7			
15.888	15.888	(1.018)	84	223679	5.00000	5.481	80.00- 120.00	100.00	
15.888	15.888	(1.018)	56	332378			96.90- 156.90	148.60	
15.888	15.888	(1.018)	41	257242			38.62- 98.62	115.00	

49 1,1,1-Trichloroethane						CAS #: 71-55-6			
15.888	15.888	(1.018)	97	599139	5.00000	5.132	80.00- 120.00	100.00	
15.888	15.888	(1.018)	99	394988			33.43- 93.43	65.93	

51 Carbon Tetrachloride						CAS #: 56-23-5			
16.104	16.104	(1.032)	119	480067	5.00000	3.650	80.00- 120.00	100.00	
16.104	16.104	(1.032)	117	500843			74.78- 134.78	104.33	

52 2,2,4-Trimethylpentane						CAS #: 540-84-1			
16.337	16.337	(1.047)	56	473983	5.00000	6.164	80.00- 120.00	100.00	
16.337	16.337	(1.047)	57	1352260			264.46- 324.46	285.30	
16.337	16.337	(1.047)	41	564135			53.88- 113.88	119.02	

53 Benzene						CAS #: 71-43-2			
16.433	16.433	(0.969)	78	536540	5.00000	4.872	80.00- 120.00	100.00	
16.409	16.409	(0.967)	77	128912			0.00- 53.40	24.03	

55 tert-amyl methyl ether						CAS #: 994-05-8			
16.457	16.457	(0.970)	87	159702	5.00000	5.025	80.00- 120.00	100.00	
16.457	16.457	(0.970)	73	579508			351.86- 411.86	362.87	
16.457	16.457	(0.970)	55	211364			87.28- 147.28	132.35	

56 1,2-Dichloroethane						CAS #: 107-06-2			
16.530	16.530	(0.974)	62	409988	5.00000	5.103	80.00- 120.00	100.00	
16.530	16.530	(0.974)	64	130886			2.90- 62.90	31.92	

57 Heptane						CAS #: 142-82-5			
16.578	16.578	(0.977)	57	203898	5.00000	5.520	80.00- 120.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT	ON-COL	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
57 Heptane (continued)									
16.578	16.578	(0.977)	100	78759			14.70- 74.70	38.63	
16.578	16.578	(0.977)	43	500166			159.65- 219.65	245.30	

59 Trichloroethene CAS #: 79-01-6									
17.373	17.373	(1.024)	130	318119	5.00000	4.051	80.00- 120.00	100.00	
17.373	17.373	(1.024)	95	284395			48.43- 108.43	89.40	
17.373	17.373	(1.024)	97	183241			20.03- 80.03	57.60	

60 Methylcyclohexane CAS #: 108-87-2									
17.614	17.614	(1.038)	83	289759	5.00000	5.112	80.00- 120.00	100.00	
17.614	17.614	(1.038)	55	317227			57.78- 117.78	109.48	
17.614	17.614	(1.038)	56	101912			0.00- 58.27	35.17	

61 1,2-Dichloropropane CAS #: 78-87-5									
17.831	17.831	(1.051)	63	193874	5.00000	4.736	80.00- 120.00	100.00	
17.831	17.831	(1.051)	62	133208			41.39- 101.39	68.71	
17.831	17.831	(1.051)	41	207383			30.08- 90.08	106.97	

62 1,4-Dioxane CAS #: 123-91-1									
17.951	17.951	(1.058)	88	122571	5.00000	4.433	80.00- 120.00	100.00	
17.951	17.951	(1.058)	58	103212			41.23- 101.23	84.21	
17.951	17.951	(1.058)	57	34674			0.00- 53.84	28.29	

63 Bromodichloromethane CAS #: 75-27-4									
18.264	18.264	(1.077)	83	454652	5.00000	4.383	80.00- 120.00	100.00	
18.264	18.264	(1.077)	85	319499			37.91- 97.91	70.27	

64 cis-1,3-Dichloropropene CAS #: 10061-01-5									
19.108	19.108	(1.126)	75	252797	5.00000	4.537	80.00- 120.00	100.00	
19.108	19.108	(1.126)	77	85678			2.56- 62.56	33.89	
19.108	19.108	(1.126)	39	218347			19.94- 79.94	86.37	

65 4-Methyl-2-pentanone CAS #: 108-10-1									
19.287	19.287	(1.137)	43	517299	5.00000	5.851	80.00- 120.00	100.00	
19.287	19.287	(1.137)	58	149000			7.11- 67.11	28.80	
19.310	19.310	(1.138)	85	56965			0.00- 46.29	11.01	

68 Toluene CAS #: 108-88-3									
19.736	19.736	(1.163)	91	654391	5.00000	4.754	80.00- 120.00	100.00	
19.736	19.736	(1.163)	92	368457			28.99- 88.99	56.31	

69 trans-1,3-Dichloropropene CAS #: 10061-02-6									
20.304	20.304	(0.907)	75	299075	5.00000	5.176	80.00- 120.00	100.00	
20.304	20.304	(0.907)	77	100495			3.77- 63.77	33.60	
20.304	20.304	(0.907)	39	221838			18.43- 78.43	74.17	

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	218525	5.00000	4.479	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	132692			34.78- 94.78	60.72
20.716	20.716	(0.925)	83	175803			49.45- 109.45	80.45
-----					-----			
71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	304246	5.00000	4.104	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	306099			54.11- 114.11	100.61
20.881	20.881	(0.933)	131	315434			55.30- 115.30	103.68
-----					-----			
72 2-Hexanone					CAS #: 591-78-6			
21.045	21.045	(0.940)	58	233861	5.00000	5.765	80.00- 120.00	100.00
21.045	21.045	(0.940)	43	626070			162.06- 222.06	267.71
21.045	21.045	(0.940)	100	48030			0.00- 52.96	20.54
-----					-----			
73 Dibromochloromethane					CAS #: 124-48-1			
21.457	21.457	(0.958)	129	582326	5.00000	4.515	80.00- 120.00	100.00
21.457	21.457	(0.958)	127	444467			46.93- 106.93	76.33
-----					-----			
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	403367	5.00000	4.727	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	397704			68.26- 128.26	98.60
-----					-----			
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	604966	5.00000	4.385	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	193761			1.73- 61.73	32.03
22.428	22.428	(1.002)	77	321741			16.56- 76.56	53.18
-----					-----			
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	275747	5.00000	4.422	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	867900			261.70- 321.70	314.74
-----					-----			
80 m,p-Xylene					CAS #: 108-38-3			
22.676	22.676	(1.013)	106	341846	5.00000	4.594	80.00- 120.00	100.00
22.676	22.676	(1.013)	91	691052			150.71- 210.71	202.15
-----					-----			
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	320725	5.00000	4.916	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	651403			165.12- 225.12	203.10
-----					-----			
83 Styrene					CAS #: 100-42-5			
23.298	23.298	(1.041)	104	569563	5.00000	4.939	80.00- 120.00	100.00
23.298	23.298	(1.041)	78	305568			12.29- 72.29	53.65
-----					-----			
84 Bromoform					CAS #: 75-25-2			
23.639	23.639	(1.056)	173	380368	5.00000	3.822	80.00- 120.00	100.00

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
84 Bromoform (continued)									
23.639	23.639	(1.056)	171	195438			23.53-	83.53	51.38

85 Cumene									
23.751	23.751	(1.061)	105	1016765	5.00000	4.901	80.00-	120.00	100.00
23.751	23.751	(1.061)	120	288456			0.00-	58.84	28.37

89 1,1,2,2-Tetrachloroethane									
24.222	24.222	(1.082)	83	448638	5.00000	4.604	80.00-	120.00	100.00
24.222	24.222	(1.082)	85	318538			37.40-	97.40	71.00

90 Propylbenzene									
24.267	24.267	(1.084)	91	1155106	5.00000	4.786	80.00-	120.00	100.00
24.267	24.267	(1.084)	120	305562			0.00-	58.05	26.45

92 4-Ethyltoluene									
24.424	24.424	(1.091)	105	1030364	5.00000	4.909	80.00-	120.00	100.00
24.424	24.424	(1.091)	120	316344			2.80-	62.80	30.70

94 1,3,5-Trimethylbenzene									
24.491	24.491	(1.094)	105	859526	5.00000	4.795	80.00-	120.00	100.00
24.491	24.491	(1.094)	120	417537			23.16-	83.16	48.58

98 1,2,4-Trimethylbenzene									
24.939	24.939	(1.114)	105	665220	5.00000	4.756	80.00-	120.00	100.00
24.939	24.939	(1.114)	120	324455			19.74-	79.74	48.77

101 1,3-Dichlorobenzene									
25.343	25.343	(1.132)	146	558808	5.00000	4.097	80.00-	120.00	100.00
25.343	25.343	(1.132)	148	325440			31.66-	91.66	58.24
25.343	25.343	(1.132)	111	237763			6.44-	66.44	42.55

104 1,4-Dichlorobenzene									
25.433	25.433	(1.136)	146	549306	5.00000	4.253	80.00-	120.00	100.00
25.433	25.433	(1.136)	148	340960			32.25-	92.25	62.07
25.433	25.433	(1.136)	111	232215			4.82-	64.82	42.27

105 alpha-chlorotoluene									
25.590	25.590	(1.143)	91	753213	5.00000	5.135	80.00-	120.00	100.00
25.590	25.590	(1.143)	126	177050			0.00-	57.25	23.51

108 1,2-Dichlorobenzene									
25.859	25.859	(1.155)	146	517422	5.00000	4.290	80.00-	120.00	100.00
25.859	25.859	(1.155)	148	303974			31.25-	91.25	58.75
25.859	25.859	(1.155)	111	229154			7.65-	67.65	44.29

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112 1,2,4-Trichlorobenzene CAS #: 120-82-1									
27.630	27.630	(1.234)	180	204738	5.00000	3.589	80.00- 120.00	100.00	
27.630	27.630	(1.234)	182	190739			66.40- 126.40	93.16	

113 Hexachlorobutadiene CAS #: 87-68-3									
27.719	27.719	(1.238)	225	160478	5.00000	3.326	80.00- 120.00	100.00	
27.719	27.719	(1.238)	223	99063			31.93- 91.93	61.73	

114 Naphthalene CAS #: 91-20-3									
27.943	27.943	(1.248)	128	56949	0.50000	0.4003	80.00- 120.00	100.00(a)	
27.943	27.943	(1.248)	127	9713			0.00- 47.34	17.06	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 05-JUN-2015
Lab File ID: e060503a.d	Calibration Time: 10:08
Lab Smp Id: CCV	Client Smp ID: CCV
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m	
Misc Info: 5.0ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	141734	0.00
58 1,4-Difluorobenze	538789	323273	754305	538789	0.00
75 Chlorobenzene-d5	499778	299867	699689	499778	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 05-JUN-2015 10:08

Client ID: CCV

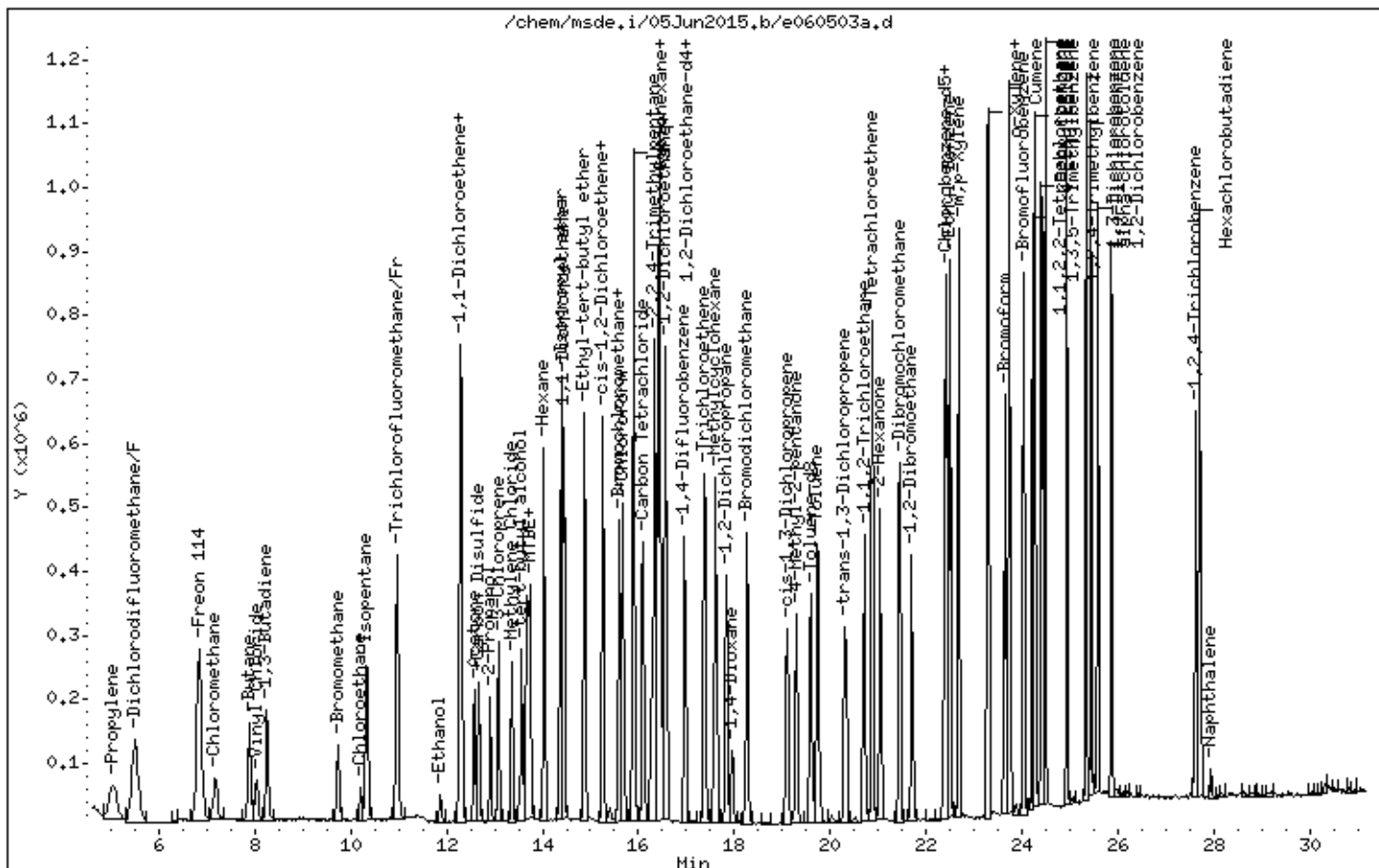
Instrument: msde.i

Sample Info: 25mL #2716-289

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	CCV	Date/Time Analyzed:	6/8/15 02:59 PM
Lab ID:	1506011A-14B	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060802a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	77
Trichloroethene	79-01-6	76

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	122
4-Bromofluorobenzene	460-00-4	83-116	92
Toluene-d8	2037-26-5	90-108	104

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 08-JUN-2015 14:59
 Lab File ID: e060802a.d Init. Cal. Date(s): 15-MAY-2015 27-MAY-2015
 Analysis Type: AIR Init. Cal. Times: 13:24 11:25
 Lab Sample ID: CCV Quant Type: ISTD
 Method: /chem/msde.i/08Jun2015.b/e1510515b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 54 1,2-Dichloroethane-d4	1.57073	1.92125	0.010	-22.31594	30.00000	Averaged
\$ 67 Toluene-d8	0.85891	0.89674	0.010	-4.40407	30.00000	Averaged
\$ 87 Bromofluorobenzene	0.50621	0.46529	0.010	8.08398	30.00000	Averaged
2 Propylene	1.05845	1.21911	0.010	-15.17878	30.00000	Averaged
4 Dichlorodifluoromethane/Fr1	4.43619	4.45773	0.010	-0.48548	30.00000	Averaged
6 Freon 114	3.39322	2.87352	0.010	15.31582	30.00000	Averaged
7 Chloromethane	1.29815	1.46529	0.010	-12.87510	30.00000	Averaged
9 Butane	0.20447	0.23626	0.010	-15.54925	30.00000	Averaged
10 Vinyl Chloride	1.02218	1.06880	0.010	-4.56106	30.00000	Averaged
11 1,3-Butadiene	0.91276	1.05235	0.010	-15.29291	30.00000	Averaged
12 Bromomethane	0.94221	0.70288	0.010	25.40093	30.00000	Averaged
13 Chloroethane	0.45989	0.45588	0.010	0.87286	30.00000	Averaged
14 Isopentane	0.85377	0.87436	0.010	-2.41206	30.00000	Averaged
16 Trichlorofluoromethane/Fr11	4.97999	4.59879	0.010	7.65464	30.00000	Averaged
18 Ethanol	0.47113	0.50871	0.010	-7.97468	30.00000	Averaged
21 1,1-Dichloroethene	0.70218	0.84274	0.010	-20.01800	30.00000	Averaged
19 Freon 113	2.43281	2.47079	0.010	-1.56115	30.00000	Averaged
22 Acetone	0.61022	0.62028	0.010	-1.64850	30.00000	Averaged
23 Carbon Disulfide	2.95675	3.29789	0.010	-11.53772	30.00000	Averaged
26 3-Chloroprene	0.39548	0.38926	0.010	1.57171	30.00000	Averaged
25 2-Propanol	2.14926	2.52320	0.010	-17.39852	30.00000	Averaged
29 Methylene Chloride	0.89315	0.74147	0.010	16.98274	30.00000	Averaged
30 tert-butyl alcohol	3.13526	3.40317	0.010	-8.54483	30.00000	Averaged
31 MTBE	2.93510	3.19346	0.010	-8.80216	30.00000	Averaged
32 trans-1,2-Dichloroethene	0.75262	0.76120	0.010	-1.14015	30.00000	Averaged
35 Hexane	1.62253	1.94539	0.010	-19.89840	30.00000	Averaged
36 Isopropyl ether	4.15477	5.31095	0.010	-27.82778	30.00000	Averaged
37 1,1-Dichloroethane	2.25951	2.45868	0.010	-8.81466	30.00000	Averaged
38 Vinyl Acetate	0.30026	0.32153	0.010	-7.08518	30.00000	Averaged
40 Ethyl-tert-butyl ether	3.80614	4.32280	0.010	-13.57438	30.00000	Averaged
41 cis-1,2-Dichloroethene	0.85964	0.74434	0.010	13.41254	30.00000	Averaged
42 2-Butanone	0.46842	0.44538	0.010	4.91852	30.00000	Averaged
44 Tetrahydrofuran	1.41036	1.92729	0.010	-36.65227	30.00000	Averaged <-
47 Chloroform	3.20830	3.14627	0.010	1.93344	30.00000	Averaged
48 Cyclohexane	1.43963	1.46004	0.010	-1.41790	30.00000	Averaged
49 1,1,1-Trichloroethane	4.11886	4.12603	0.010	-0.17408	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 08-JUN-2015 14:59
 Lab File ID: e060802a.d Init. Cal. Date(s): 15-MAY-2015 27-MAY-2015
 Analysis Type: AIR Init. Cal. Times: 13:24 11:25
 Lab Sample ID: CCV Quant Type: ISTD
 Method: /chem/msde.i/08Jun2015.b/e1510515b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
51 Carbon Tetrachloride	4.63932	3.01196	0.010	35.07745	30.00000	Averaged <-
52 2,2,4-Trimethylpentane	2.71250	2.88286	0.010	-6.28057	30.00000	Averaged
53 Benzene	1.02209	0.91352	0.010	10.62185	30.00000	Averaged
55 tert-amyl methyl ether	0.29496	0.30322	0.010	-2.80157	30.00000	Averaged
56 1,2-Dichloroethane	0.74559	0.75327	0.010	-1.02886	30.00000	Averaged
57 Heptane	0.34276	0.36938	0.010	-7.76435	30.00000	Averaged
59 Trichloroethene	0.72873	0.55766	0.010	23.47480	30.00000	Averaged
60 Methylcyclohexane	0.52597	0.49538	0.010	5.81424	30.00000	Averaged
61 1,2-Dichloropropane	0.37989	0.34085	0.010	10.27660	30.00000	Averaged
62 1,4-Dioxane	0.25660	0.20170	0.010	21.39487	30.00000	Averaged
63 Bromodichloromethane	0.96253	0.82860	0.010	13.91461	30.00000	Averaged
64 cis-1,3-Dichloropropene	0.51703	0.45879	0.010	11.26309	30.00000	Averaged
65 4-Methyl-2-pentanone	0.82041	0.89417	0.010	-8.99051	30.00000	Averaged
68 Toluene	1.27744	1.22361	0.010	4.21407	30.00000	Averaged
69 trans-1,3-Dichloropropene	0.57803	0.55561	0.010	3.87923	30.00000	Averaged
70 1,1,2-Trichloroethane	0.48807	0.42990	0.010	11.91703	30.00000	Averaged
71 Tetrachloroethene	0.74161	0.56992	0.010	23.15043	30.00000	Averaged
72 2-Hexanone	0.40581	0.42865	0.010	-5.62595	30.00000	Averaged
73 Dibromochloromethane	1.29031	1.09521	0.010	15.12022	30.00000	Averaged
74 1,2-Dibromoethane	0.85370	0.77141	0.010	9.63937	30.00000	Averaged
76 Chlorobenzene	1.38026	1.15938	0.010	16.00274	30.00000	Averaged
77 Ethyl Benzene	0.62385	0.54301	0.010	12.95785	30.00000	Averaged
80 m,p-Xylene	0.74448	0.66985	0.010	10.02447	30.00000	Averaged
81 o-Xylene	0.65270	0.59003	0.010	9.60251	30.00000	Averaged
83 Styrene	1.15374	1.09478	0.010	5.11021	30.00000	Averaged
84 Bromoform	0.99576	0.68506	0.010	31.20200	30.00000	Averaged <-
85 Cumene	2.07543	1.94243	0.010	6.40852	30.00000	Averaged
89 1,1,2,2-Tetrachloroethane	0.97490	0.83685	0.010	14.16072	30.00000	Averaged
90 Propylbenzene	2.41433	2.30442	0.010	4.55222	30.00000	Averaged
92 4-Ethyltoluene	2.09968	2.04455	0.010	2.62563	30.00000	Averaged
94 1,3,5-Trimethylbenzene	1.79319	1.70584	0.010	4.87073	30.00000	Averaged
98 1,2,4-Trimethylbenzene	1.39921	1.37809	0.010	1.50945	30.00000	Averaged
101 1,3-Dichlorobenzene	1.36451	1.07651	0.010	21.10648	30.00000	Averaged
104 1,4-Dichlorobenzene	1.29226	1.10919	0.010	14.16647	30.00000	Averaged
105 alpha-chlorotoluene	1.46753	1.46363	0.010	0.26576	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 08-JUN-2015 14:59
Lab File ID: e060802a.d Init. Cal. Date(s): 15-MAY-2015 27-MAY-2015
Analysis Type: AIR Init. Cal. Times: 13:24 11:25
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/08Jun2015.b/e1510515b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX RRF	%D / %DRIFT	CURVE TYPE
108 1,2-Dichlorobenzene	1.20678	1.03599	0.010	14.15222	30.00000		Averaged
112 1,2,4-Trichlorobenzene	0.57069	0.41455	0.010	27.36003	30.00000		Averaged
113 Hexachlorobutadiene	0.48263	0.32242	0.010	33.19562	30.00000		Averaged
114 Naphthalene	1.42343	1.10673	0.010	22.24889	40.00000		Averaged

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060802a.d
 Lab Smp Id: CCV Client Smp ID: CCV
 Inj Date : 08-JUN-2015 14:59
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL #2716-289
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: CNTRL062415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	145549 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	117972			46.94- 106.94	81.05
15.611	15.611 (1.000)	49	286316			103.66- 163.66	196.71
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	530478 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	69874			0.00- 43.53	13.17
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	509716 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	243692			13.25- 73.25	47.81
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	279636 5.00000	6.116		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	126411			24.87- 84.87	45.21

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	475699	5.00000	5.220	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	59832			0.00- 40.24	12.58
19.601	19.601	(1.156)	100	327607			39.39- 99.39	68.87

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	237167	5.00000	4.596	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	364030			88.06- 148.06	153.49
24.042	24.042	(1.074)	176	218553			66.20- 126.20	92.15

2 Propylene						CAS #: 115-07-1		
4.997	4.997	(0.320)	41	177440	5.00000	5.759	80.00- 120.00	100.00
4.997	4.997	(0.320)	42	127859			38.37- 98.37	72.06
5.021	5.021	(0.322)	39	150956			42.39- 102.39	85.07

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.455	5.455	(0.349)	85	648820	5.00000	5.024	80.00- 120.00	100.00
5.455	5.455	(0.349)	87	206842			2.12- 62.12	31.88

6 Freon 114						CAS #: 76-14-2		
6.853	6.853	(0.439)	135	418240	5.00000	4.234	80.00- 120.00	100.00
6.853	6.853	(0.439)	137	130367			1.87- 61.87	31.17

7 Chloromethane						CAS #: 74-87-3		
7.167	7.167	(0.459)	50	213272	5.00000	5.644	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	69706			2.64- 62.64	32.68

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	34387	5.00000	5.777	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	328485			798.08- 858.08	955.24

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	155563	5.00000	5.228	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	47107			1.55- 61.55	30.28

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	153169	5.00000	5.765	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	172848			68.70- 128.70	112.85

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	102304	5.00000	3.730	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	95097			67.78- 127.78	92.96

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	66352	5.00000	4.956	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	28816			0.00- 59.93	43.43

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	21701			2.40- 62.40	32.71	

14 Isopentane CAS #: 78-78-4									
10.328	10.328	(0.662)	57	127262	5.00000	5.121	80.00- 120.00	100.00	
10.348	10.348	(0.663)	43	214337			113.81- 173.81	168.42	
10.348	10.348	(0.663)	42	181480			97.27- 157.27	142.60	

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	669351	5.00000	4.617	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	431603			34.06- 94.06	64.48	

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	74041	5.00000	5.399	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	30348			7.61- 67.61	40.99	
11.871	11.871	(0.760)	43	21033			0.00- 55.64	28.41	

21 1,1-Dichloroethene CAS #: 75-35-4									
12.290	12.290	(0.787)	98	122660	5.00000	6.001	80.00- 120.00	100.00	
12.290	12.290	(0.787)	61	394808			208.58- 268.58	321.87	
12.290	12.290	(0.787)	96	183872			127.45- 187.45	149.90	

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	359622	5.00000	5.078	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	226373			34.06- 94.06	62.95	
12.271	12.271	(0.786)	101	522234			81.22- 141.22	145.22	

22 Acetone CAS #: 67-64-1									
12.556	12.556	(0.804)	58	90280	5.00000	5.082	80.00- 120.00	100.00	
12.556	12.556	(0.804)	43	435210			294.37- 354.37	482.06	

23 Carbon Disulfide CAS #: 75-15-0									
12.652	12.652	(0.810)	76	480006	5.00000	5.577	80.00- 120.00	100.00	

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	56657	5.00000	4.921	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	251106			276.20- 336.20	443.20	

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	367251	5.00000	5.870	80.00- 120.00	100.00	
12.918	12.918	(0.828)	43	94249			0.00- 55.86	25.66	
12.918	12.918	(0.828)	59	10085			0.00- 34.14	2.75	

29 Methylene Chloride CAS #: 75-09-2									
13.356	13.356	(0.856)	84	107920	5.00000	4.151	80.00- 120.00	100.00	
13.356	13.356	(0.856)	49	257566			112.26- 172.26	238.66	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.356	13.356	(0.856)	51	74048			12.15- 72.15	68.61	

30 tert-butyl alcohol CAS #: 75-65-0									
13.564	13.564	(0.869)	59	495329	5.00000	5.427	80.00- 120.00	100.00	
13.564	13.564	(0.869)	41	134797			0.00- 54.99	27.21	
13.564	13.564	(0.869)	57	63269			0.00- 41.32	12.77	

31 MTBE CAS #: 1634-04-4									
13.674	13.674	(0.876)	73	464806	5.00000	5.440	80.00- 120.00	100.00	
13.674	13.674	(0.876)	57	129297			0.00- 54.97	27.82	
13.674	13.674	(0.876)	41	167374			0.00- 55.95	36.01	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	110792	5.00000	5.057	80.00- 120.00	100.00	
13.729	13.729	(0.879)	61	312284			175.95- 235.95	281.86	
13.729	13.729	(0.879)	96	188920			121.11- 181.11	170.52	

35 Hexane CAS #: 110-54-3									
14.030	14.030	(0.899)	57	283150	5.00000	5.995	80.00- 120.00	100.00	
14.030	14.030	(0.899)	43	230005			35.27- 95.27	81.23	
14.030	14.030	(0.899)	86	43254			0.00- 46.67	15.28	

36 Isopropyl ether CAS #: 108-20-3									
14.387	14.387	(0.922)	45	773006	5.00000	6.391	80.00- 120.00	100.00	
14.387	14.387	(0.922)	87	142401			0.00- 55.94	18.42	
14.387	14.387	(0.922)	59	72713			0.00- 41.46	9.41	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	357860	5.00000	5.441	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	101755			0.10- 60.10	28.43	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.470	(0.927)	86	46798	5.00000	5.354	80.00- 120.00	100.00	
14.442	14.442	(0.925)	42	76333			58.55- 118.55	163.11	
14.442	14.442	(0.925)	43	778546			1046.17-1106.17	1663.61	

40 Ethyl-tert-butyl ether CAS #: 637-92-3									
14.878	14.878	(0.953)	59	629182	5.00000	5.679	80.00- 120.00	100.00	
14.878	14.878	(0.953)	87	221316			11.70- 71.70	35.18	
14.878	14.878	(0.953)	41	169097			0.00- 52.35	26.88	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	108338	5.00000	4.329	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	276038			155.56- 215.56	254.79	
15.259	15.259	(0.977)	96	178648			124.76- 184.76	164.90	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT		ON-COL		RATIO
					(PPBV)	(PPBV)	TARGET	RANGE	
==	=====	=====	====	=====	=====	=====	=====	=====	=====
42 2-Butanone					CAS #: 78-93-3				
15.259	15.259	(0.977)	72	64825	5.00000	4.754	80.00-	120.00	100.00
15.259	15.259	(0.977)	43	501933			419.99-	479.99	774.29
15.259	15.259	(0.977)	57	33254			5.97-	65.97	51.30

44 Tetrahydrofuran					CAS #: 109-99-9				
15.580	15.580	(0.998)	42	280516	5.00000	6.833	80.00-	120.00	100.00
15.580	15.580	(0.998)	71	63223			4.62-	64.62	22.54
15.611	15.611	(1.000)	72	70326			8.51-	68.51	25.07

47 Chloroform					CAS #: 67-66-3				
15.672	15.672	(1.004)	83	457938	5.00000	4.903	80.00-	120.00	100.00
15.672	15.672	(1.004)	85	308380			36.52-	96.52	67.34

48 Cyclohexane					CAS #: 110-82-7				
15.888	15.888	(1.018)	84	212509	5.00000	5.071	80.00-	120.00	100.00
15.888	15.888	(1.018)	56	309001			96.90-	156.90	145.41
15.888	15.888	(1.018)	41	241367			38.62-	98.62	113.58

49 1,1,1-Trichloroethane					CAS #: 71-55-6				
15.888	15.888	(1.018)	97	600541	5.00000	5.009	80.00-	120.00	100.00
15.888	15.888	(1.018)	99	384925			33.43-	93.43	64.10

51 Carbon Tetrachloride					CAS #: 56-23-5				
16.104	16.104	(1.032)	119	438390	5.00000	3.246	80.00-	120.00	100.00
16.104	16.104	(1.032)	117	456975			74.78-	134.78	104.24

52 2,2,4-Trimethylpentane					CAS #: 540-84-1				
16.337	16.337	(1.047)	56	419599	5.00000	5.314	80.00-	120.00	100.00
16.337	16.337	(1.047)	57	1255873			264.46-	324.46	299.30
16.337	16.337	(1.047)	41	584394			53.88-	113.88	139.27

53 Benzene					CAS #: 71-43-2				
16.409	16.409	(0.967)	78	484605	5.00000	4.469	80.00-	120.00	100.00
16.409	16.409	(0.967)	77	121337			0.00-	53.40	25.04

55 tert-amyl methyl ether					CAS #: 994-05-8				
16.457	16.457	(0.970)	87	160851	5.00000	5.140	80.00-	120.00	100.00
16.457	16.457	(0.970)	73	540483			351.86-	411.86	336.01
16.457	16.457	(0.970)	55	196705			87.28-	147.28	122.29

56 1,2-Dichloroethane					CAS #: 107-06-2				
16.529	16.529	(0.974)	62	399591	5.00000	5.051	80.00-	120.00	100.00
16.529	16.529	(0.974)	64	129113			2.90-	62.90	32.31

57 Heptane					CAS #: 142-82-5				
16.578	16.578	(0.977)	57	195947	5.00000	5.388	80.00-	120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
57 Heptane (continued)								
16.578	16.578	(0.977)	100	74944			14.70- 74.70	38.25
16.578	16.578	(0.977)	43	472165			159.65- 219.65	240.97

59 Trichloroethene								
							CAS #: 79-01-6	
17.373	17.373	(1.024)	130	295827	5.00000	3.826	80.00- 120.00	100.00
17.373	17.373	(1.024)	95	266819			48.43- 108.43	90.19
17.373	17.373	(1.024)	97	163497			20.03- 80.03	55.27

60 Methylcyclohexane								
							CAS #: 108-87-2	
17.614	17.614	(1.038)	83	262791	5.00000	4.709	80.00- 120.00	100.00
17.614	17.614	(1.038)	55	307023			57.78- 117.78	116.83
17.614	17.614	(1.038)	56	93126			0.00- 58.27	35.44

61 1,2-Dichloropropane								
							CAS #: 78-87-5	
17.831	17.831	(1.051)	63	180812	5.00000	4.486	80.00- 120.00	100.00
17.831	17.831	(1.051)	62	128475			41.39- 101.39	71.05
17.831	17.831	(1.051)	41	200423			30.08- 90.08	110.85

62 1,4-Dioxane								
							CAS #: 123-91-1	
17.951	17.951	(1.058)	88	106996	5.00000	3.930	80.00- 120.00	100.00
17.951	17.951	(1.058)	58	88987			41.23- 101.23	83.17
17.951	17.951	(1.058)	57	34021			0.00- 53.84	31.80

63 Bromodichloromethane								
							CAS #: 75-27-4	
18.264	18.264	(1.077)	83	439554	5.00000	4.304	80.00- 120.00	100.00
18.264	18.264	(1.077)	85	294693			37.91- 97.91	67.04

64 cis-1,3-Dichloropropene								
							CAS #: 10061-01-5	
19.108	19.108	(1.126)	75	243380	5.00000	4.437	80.00- 120.00	100.00
19.108	19.108	(1.126)	77	83860			2.56- 62.56	34.46
19.108	19.108	(1.126)	39	218107			19.94- 79.94	89.62

65 4-Methyl-2-pentanone								
							CAS #: 108-10-1	
19.287	19.287	(1.137)	43	474336	5.00000	5.450	80.00- 120.00	100.00
19.287	19.287	(1.137)	58	140189			7.11- 67.11	29.55
19.287	19.287	(1.137)	85	52176			0.00- 46.29	11.00

68 Toluene								
							CAS #: 108-88-3	
19.736	19.736	(1.163)	91	649097	5.00000	4.789	80.00- 120.00	100.00
19.736	19.736	(1.163)	92	361424			28.99- 88.99	55.68

69 trans-1,3-Dichloropropene								
							CAS #: 10061-02-6	
20.304	20.304	(0.907)	75	283203	5.00000	4.806	80.00- 120.00	100.00
20.304	20.304	(0.907)	77	96712			3.77- 63.77	34.15
20.304	20.304	(0.907)	39	222461			18.43- 78.43	78.55

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
70 1,1,2-Trichloroethane					CAS #: 79-00-5			
20.716	20.716	(0.925)	97	219128	5.00000	4.404	80.00- 120.00	100.00
20.716	20.716	(0.925)	99	135757			34.78- 94.78	61.95
20.716	20.716	(0.925)	83	168936			49.45- 109.45	77.09
71 Tetrachloroethene					CAS #: 127-18-4			
20.881	20.881	(0.933)	166	290499	5.00000	3.842	80.00- 120.00	100.00
20.881	20.881	(0.933)	129	301893			54.11- 114.11	103.92
20.881	20.881	(0.933)	131	302884			55.30- 115.30	104.26
72 2-Hexanone					CAS #: 591-78-6			
21.045	21.045	(0.940)	58	218487	5.00000	5.281	80.00- 120.00	100.00
21.045	21.045	(0.940)	43	573707			162.06- 222.06	262.58
21.045	21.045	(0.940)	100	45041			0.00- 52.96	20.61
73 Dibromochloromethane					CAS #: 124-48-1			
21.430	21.430	(0.957)	129	558247	5.00000	4.244	80.00- 120.00	100.00
21.430	21.430	(0.957)	127	418343			46.93- 106.93	74.94
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	393199	5.00000	4.518	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	386081			68.26- 128.26	98.19
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	590956	5.00000	4.200	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	185222			1.73- 61.73	31.34
22.428	22.428	(1.002)	77	331610			16.56- 76.56	56.11
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	276781	5.00000	4.352	80.00- 120.00	100.00
22.511	22.511	(1.006)	91	865131			261.70- 321.70	312.57
80 m,p-Xylene					CAS #: 108-38-3			
22.676	22.676	(1.013)	106	341432	5.00000	4.499	80.00- 120.00	100.00
22.676	22.676	(1.013)	91	688375			150.71- 210.71	201.61
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	300746	5.00000	4.520	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	636700			165.12- 225.12	211.71
83 Styrene					CAS #: 100-42-5			
23.298	23.298	(1.041)	104	558026	5.00000	4.744	80.00- 120.00	100.00
23.298	23.298	(1.041)	78	303874			12.29- 72.29	54.46
84 Bromoform					CAS #: 75-25-2			
23.639	23.639	(1.056)	173	349187	5.00000	3.440	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS		TARGET RANGE	RATIO
					CAL-AMT	ON-COL		
==	=====	=====	====	=====	=====	=====	=====	=====
84 Bromoform (continued)								
23.639	23.639	(1.056)	171	195685			23.53- 83.53	56.04

85 Cumene								
23.728	23.728	(1.060)	105	990087	5.00000	4.680	80.00- 120.00	100.00
23.751	23.751	(1.061)	120	281130			0.00- 58.84	28.39

89 1,1,2,2-Tetrachloroethane								
24.222	24.222	(1.082)	83	426554	5.00000	4.292	80.00- 120.00	100.00
24.222	24.222	(1.082)	85	305671			37.40- 97.40	71.66

90 Propylbenzene								
24.267	24.267	(1.084)	91	1174601	5.00000	4.772	80.00- 120.00	100.00
24.267	24.267	(1.084)	120	310283			0.00- 58.05	26.42

92 4-Ethyltoluene								
24.401	24.401	(1.090)	105	1042140	5.00000	4.869	80.00- 120.00	100.00
24.401	24.401	(1.090)	120	326984			2.80- 62.80	31.38

94 1,3,5-Trimethylbenzene								
24.491	24.491	(1.094)	105	869497	5.00000	4.756	80.00- 120.00	100.00
24.491	24.491	(1.094)	120	431195			23.16- 83.16	49.59

98 1,2,4-Trimethylbenzene								
24.939	24.939	(1.114)	105	702434	5.00000	4.924	80.00- 120.00	100.00
24.939	24.939	(1.114)	120	334387			19.74- 79.74	47.60

101 1,3-Dichlorobenzene								
25.343	25.343	(1.132)	146	548715	5.00000	3.945	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	323300			31.66- 91.66	58.92
25.343	25.343	(1.132)	111	239271			6.44- 66.44	43.61

104 1,4-Dichlorobenzene								
25.433	25.433	(1.136)	146	565373	5.00000	4.292	80.00- 120.00	100.00
25.433	25.433	(1.136)	148	342041			32.25- 92.25	60.50
25.433	25.433	(1.136)	111	236826			4.82- 64.82	41.89

105 alpha-chlorotoluene								
25.590	25.590	(1.143)	91	746036	5.00000	4.987	80.00- 120.00	100.00
25.590	25.590	(1.143)	126	176644			0.00- 57.25	23.68

108 1,2-Dichlorobenzene								
25.859	25.859	(1.155)	146	528061	5.00000	4.292	80.00- 120.00	100.00
25.859	25.859	(1.155)	148	312493			31.25- 91.25	59.18
25.859	25.859	(1.155)	111	227832			7.65- 67.65	43.14

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

112	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	211300	5.00000	3.632	80.00- 120.00	100.00	
27.630	27.630	(1.234)	182	197494			66.40- 126.40	93.47	

113	Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	164343	5.00000	3.340	80.00- 120.00	100.00	
27.719	27.719	(1.238)	223	96921			31.93- 91.93	58.98	

114	Naphthalene					CAS #: 91-20-3			
27.943	27.943	(1.248)	128	56411	0.50000	0.3888	80.00- 120.00	100.00(a)	
27.943	27.943	(1.248)	127	10687			0.00- 47.34	18.95	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060802a.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: ef

Calibration Date: 08-JUN-2015
Calibration Time: 14:59
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
Misc Info: 5.0ppbv (50ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	145549	0.00
58 1,4-Difluorobenze	530478	318287	742669	530478	0.00
75 Chlorobenzene-d5	509716	305830	713602	509716	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 08-JUN-2015 14:59

Client ID: CCV

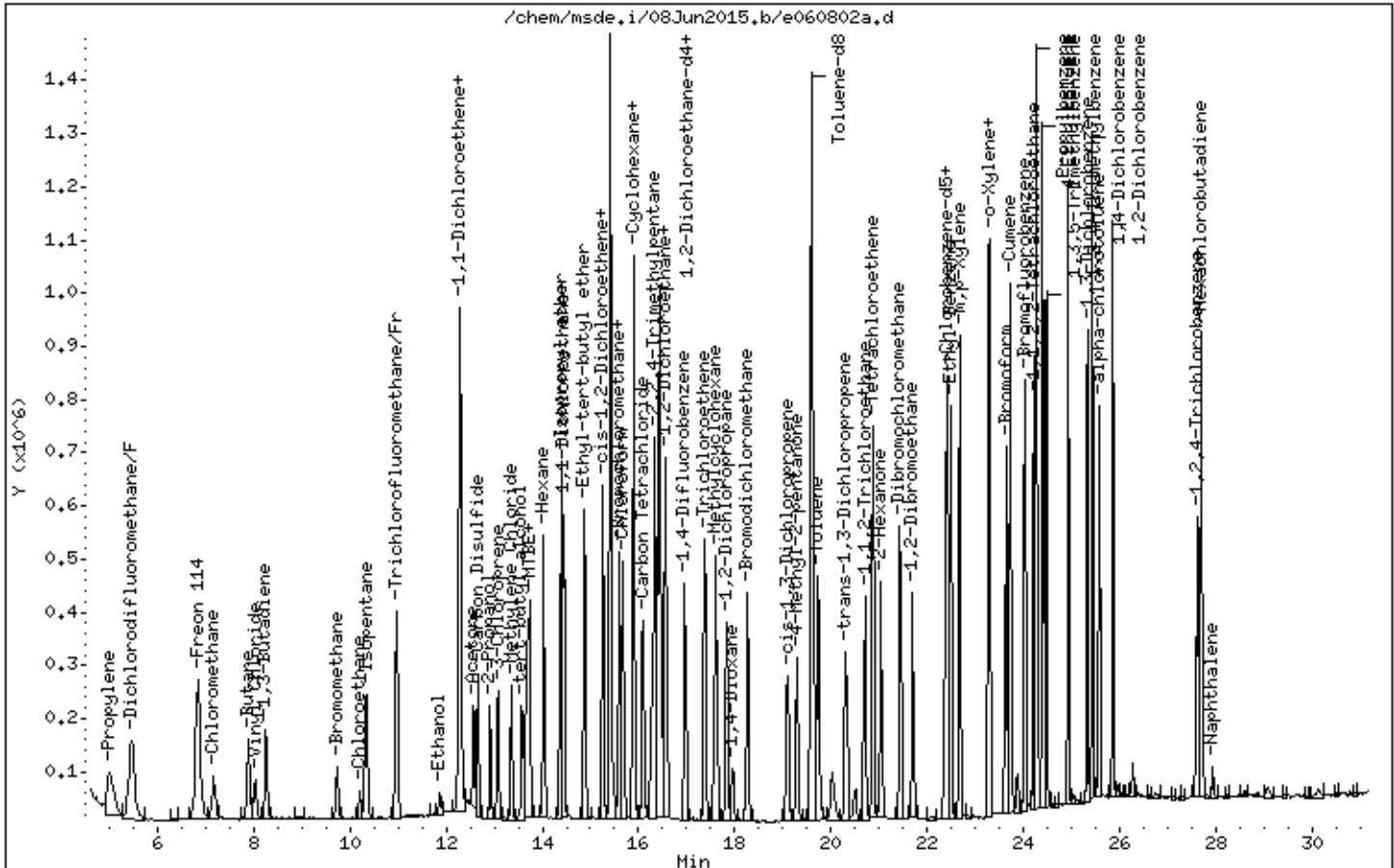
Instrument: msde.i

Sample Info: 25mL #2716-289

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	LCS	Date/Time Analyzed:	6/5/15 10:52 AM
Lab ID:	1506011A-15A	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060504a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	74
Trichloroethene	79-01-6	78

Q = Exceeds Quality Control limits.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	126 Q
4-Bromofluorobenzene	460-00-4	83-116	85
Toluene-d8	2037-26-5	90-108	100

* % Recovery is calculated using unrounded analytical results.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: LCS Client Smp ID: LCS
 Level: LOW Operator: ef
 Data Type: MS DATA SampleType: LCS
 SpikeList File: ControlDOD.spk Quant Type: ISTD
 Sublist File: CNTRL062415.sub
 Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m
 Misc Info: 5.0ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
4 Dichlorodifluorome	5.000	5.100	102.01	59-128
2 Propylene	5.000	5.837	116.75	57-136
6 Freon 114	5.000	4.422	88.45	63-121
7 Chloromethane	5.000	5.666	113.32	59-132
10 Vinyl Chloride	5.000	5.322	106.43	64-127
11 1,3-Butadiene	5.000	5.545	110.90	66-134
12 Bromomethane	5.000	4.432	88.64	63-134
13 Chloroethane	5.000	4.990	99.81	63-127
16 Trichlorofluoromet	5.000	4.628	92.55	62-126
18 Ethanol	5.000	6.043	120.85	59-125
19 Freon 113	5.000	3.893	77.87	66-126
21 1,1-Dichloroethene	5.000	4.659	93.19	61-133
22 Acetone	5.000	5.110	102.19	58-128
23 Carbon Disulfide	5.000	4.124	82.49	57-134
25 2-Propanol	5.000	5.726	114.52	52-125
26 3-Chloroprene	5.000	4.374	87.48	71-131
29 Methylene Chloride	5.000	4.480	89.61	62-115
31 MTBE	5.000	4.930	98.61	66-126
32 trans-1,2-Dichloro	5.000	4.312	86.23	67-124
35 Hexane	5.000	6.095	121.91*	63-120
37 1,1-Dichloroethane	5.000	5.439	108.78	68-126
38 Vinyl Acetate	5.000	4.924	98.48	56-139
41 cis-1,2-Dichloroet	5.000	5.186	103.72	70-121
42 2-Butanone	5.000	5.534	110.69	67-130
44 Tetrahydrofuran	5.000	6.180	123.60*	64-123
47 Chloroform	5.000	4.919	98.38	68-123
48 Cyclohexane	5.000	4.908	98.16	70-117
49 1,1,1-Trichloroeth	5.000	5.023	100.46	68-125
51 Carbon Tetrachlori	5.000	4.803	96.06	68-132
52 2,2,4-Trimethylpen	5.000	5.662	113.25	68-121
53 Benzene	5.000	4.559	91.19	69-119
57 Heptane	5.000	5.565	111.30	69-123
56 1,2-Dichloroethane	5.000	4.971	99.43	65-128

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
59 Trichloroethene	5.000	3.894	77.88	71-123
61 1,2-Dichloropropan	5.000	4.607	92.14	69-123
62 1,4-Dioxane	5.000	4.025	80.50	71-122
63 Bromodichlorometha	5.000	4.402	88.03	72-128
64 cis-1,3-Dichloropr	5.000	4.216	84.32	70-128
65 4-Methyl-2-pentano	5.000	5.740	114.79	67-130
68 Toluene	5.000	4.599	91.97	66-119
69 trans-1,3-Dichloro	5.000	4.769	95.38	75-133
70 1,1,2-Trichloroeth	5.000	4.389	87.78	73-119
72 2-Hexanone	5.000	4.879	97.58	62-128
71 Tetrachloroethene	5.000	3.710	74.21	66-124
73 Dibromochlorometha	5.000	4.518	90.35	70-130
74 1,2-Dibromoethane	5.000	4.505	90.10	74-122
76 Chlorobenzene	5.000	4.162	83.24	70-119
77 Ethyl Benzene	5.000	4.262	85.25	70-124
80 m,p-Xylene	5.000	4.441	88.83	61-134
81 o-Xylene	5.000	4.650	93.01	67-125
83 Styrene	5.000	4.737	94.74	73-127
84 Bromoform	5.000	3.735	74.70	66-139
85 Cumene	5.000	4.720	94.40	68-124
89 1,1,2,2-Tetrachlor	5.000	4.480	89.61	65-127
90 Propylbenzene	5.000	4.690	93.81	69-123
92 4-Ethyltoluene	5.000	4.615	92.31	67-129
94 1,3,5-Trimethylben	5.000	4.430	88.59	67-130
98 1,2,4-Trimethylben	5.000	4.626	92.52	66-132
101 1,3-Dichlorobenzen	5.000	3.918	78.36	65-130
104 1,4-Dichlorobenzen	5.000	4.220	84.39	60-131
105 alpha-chlorotoluen	5.000	4.980	99.60	50-147
108 1,2-Dichlorobenzen	5.000	4.077	81.53	63-129
112 1,2,4-Trichloroben	5.000	3.608	72.16	55-142
113 Hexachlorobutadien	5.000	3.354	67.09	56-138
114 Naphthalene	0.5000	0.000	*	57-138
14 Isopentane	5.000	5.123	102.46*	0-0
9 Butane	5.000	6.599	131.97*	64-129
60 Methylcyclohexane	5.000	4.821	96.42*	0-0

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.299	125.98*	80-125
\$ 67 Toluene-d8	5.000	5.002	100.04	90-108
\$ 87 Bromofluorobenzene	5.000	4.241	84.82	83-116

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060504a.d
 Lab Smp Id: LCS Client Smp ID: LCS
 Inj Date : 05-JUN-2015 10:52
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2716-220
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 10:47 chemist Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: CNTRL062415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	142378 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	109197			46.94- 106.94	76.70
15.611	15.611 (1.000)	49	299875			103.66- 163.66	210.62
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	532101 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	81057			0.00- 43.53	15.23
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	506837 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	238479			13.25- 73.25	47.05
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	281737 6.29899	6.299		80.00- 120.00	100.00(R)
16.433	16.433 (1.053)	67	126800			24.87- 84.87	45.01

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	457207	5.00198	5.002	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	54422			0.00- 40.24	11.90
19.601	19.601	(1.156)	100	312306			39.39- 99.39	68.31

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	217611	4.24081	4.241	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	349300			88.06- 148.06	160.52
24.042	24.042	(1.074)	176	202925			66.20- 126.20	93.25

2 Propylene						CAS #: 115-07-1		
5.021	5.046	(0.322)	41	175934	5.83727	5.837	80.00- 120.00	100.00
5.045	5.070	(0.323)	42	116253			38.37- 98.37	66.08
5.070	5.046	(0.325)	39	146723			42.39- 102.39	83.40

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.503	5.503	(0.353)	85	644295	5.10037	5.100	80.00- 120.00	100.00
5.503	5.503	(0.353)	87	206488			2.12- 62.12	32.05

6 Freon 114						CAS #: 76-14-2		
6.853	6.829	(0.439)	135	427307	4.42236	4.422	80.00- 120.00	100.00
6.853	6.829	(0.439)	137	137523			1.87- 61.87	32.18

7 Chloromethane						CAS #: 74-87-3		
7.191	7.191	(0.461)	50	209446	5.66596	5.666	80.00- 120.00	100.00
7.167	7.191	(0.459)	52	69100			2.64- 62.64	32.99

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	38419	6.59871	6.599	80.00- 120.00	100.00(R)
7.889	7.889	(0.505)	43	336182			798.08- 858.08	875.02

10 Vinyl Chloride						CAS #: 75-01-4		
8.045	8.028	(0.515)	62	154898	5.32165	5.322	80.00- 120.00	100.00
8.045	8.028	(0.515)	64	48857			1.55- 61.55	31.54

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	144117	5.54480	5.545	80.00- 120.00	100.00
8.271	8.253	(0.530)	39	173819			68.70- 128.70	120.61

12 Bromomethane						CAS #: 74-83-9		
9.746	9.729	(0.624)	94	118907	4.43185	4.432	80.00- 120.00	100.00
9.746	9.729	(0.624)	96	114155			67.78- 127.78	96.00

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	65353	4.99047	4.990	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	30541			0.00- 59.93	46.73

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		CONCENTRATIONS		TARGET RANGE	RATIO
				(PPBV)	(PPBV)	ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	20289				2.40- 62.40	31.05

14 Isopentane CAS #: 78-78-4									
10.348	10.329	(0.663)	57	124550	5.12312	5.123		80.00- 120.00	100.00(R)
10.348	10.348	(0.663)	43	227519				113.81- 173.81	182.67
10.348	10.329	(0.663)	42	190195				97.27- 157.27	152.71

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.976	10.957	(0.703)	101	656249	4.62773	4.628		80.00- 120.00	100.00
10.976	10.957	(0.703)	103	428242				34.06- 94.06	65.26

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	81067	6.04264	6.043		80.00- 120.00	100.00
11.871	11.871	(0.760)	46	30323				7.61- 67.61	37.40
11.871	11.871	(0.760)	43	22563				0.00- 55.64	27.83

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.309	(0.788)	98	93165	4.65947	4.659		80.00- 120.00	100.00
12.309	12.309	(0.788)	61	306887				208.58- 268.58	329.40
12.309	12.309	(0.788)	96	145015				127.45- 187.45	155.65

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	269713	3.89334	3.893		80.00- 120.00	100.00
12.290	12.290	(0.787)	153	169406				34.06- 94.06	62.81
12.290	12.290	(0.787)	101	349399				81.22- 141.22	129.54

22 Acetone CAS #: 67-64-1									
12.575	12.576	(0.806)	58	88785	5.10958	5.110		80.00- 120.00	100.00
12.575	12.576	(0.806)	43	419245				294.37- 354.37	472.20

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.671	(0.812)	76	347262	4.12449	4.124		80.00- 120.00	100.00

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	49258	4.37406	4.374		80.00- 120.00	100.00
13.090	13.090	(0.839)	41	233642				276.20- 336.20	474.32

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	350447	5.72611	5.726		80.00- 120.00	100.00
12.918	12.918	(0.828)	43	89276				0.00- 55.86	25.47
12.918	12.918	(0.828)	59	12120				0.00- 34.14	3.46

29 Methylene Chloride CAS #: 75-09-2									
13.376	13.376	(0.857)	84	113950	4.48043	4.480		80.00- 120.00	100.00
13.376	13.357	(0.857)	49	250370				112.26- 172.26	219.72

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
29 Methylene Chloride (continued)									
13.356	13.357	(0.856)	51	76340			12.15- 72.15	67.00	

31 MTBE CAS #: 1634-04-4									
13.701	13.674	(0.878)	73	412079	4.93042	4.930	80.00- 120.00	100.00	
13.674	13.674	(0.876)	57	115392			0.00- 54.97	28.00	
13.674	13.674	(0.876)	41	146769			0.00- 55.95	35.62	

32 trans-1,2-Dichloroethene CAS #: 156-60-5									
13.729	13.729	(0.879)	98	92402	4.31159	4.312	80.00- 120.00	100.00	
13.729	13.729	(0.879)	61	253125			175.95- 235.95	273.94	
13.729	13.729	(0.879)	96	155408			121.11- 181.11	168.19	

35 Hexane CAS #: 110-54-3									
14.030	14.031	(0.899)	57	281627	6.09550	6.095	80.00- 120.00	100.00(R)	
14.030	14.031	(0.899)	43	235393			35.27- 95.27	83.58	
14.030	14.031	(0.899)	86	40479			0.00- 46.67	14.37	

37 1,1-Dichloroethane CAS #: 75-34-3									
14.442	14.442	(0.925)	63	349965	5.43922	5.439	80.00- 120.00	100.00	
14.442	14.442	(0.925)	65	101898			0.10- 60.10	29.12	

38 Vinyl Acetate CAS #: 108-05-4									
14.470	14.442	(0.927)	86	42100	4.92407	4.924	80.00- 120.00	100.00	
14.470	14.442	(0.927)	42	60014			58.55- 118.55	142.55	
14.470	14.442	(0.927)	43	635453			1046.17-1106.17	1509.36	

41 cis-1,2-Dichloroethene CAS #: 156-59-2									
15.259	15.259	(0.977)	98	126940	5.18575	5.186	80.00- 120.00	100.00	
15.259	15.259	(0.977)	61	313321			155.56- 215.56	246.83	
15.259	15.259	(0.977)	96	190926			124.76- 184.76	150.41	

42 2-Butanone CAS #: 78-93-3									
15.259	15.259	(0.977)	72	73820	5.53435	5.534	80.00- 120.00	100.00	
15.259	15.240	(0.977)	43	486973			419.99- 479.99	659.67	
15.259	15.259	(0.977)	57	33408			5.97- 65.97	45.26	

44 Tetrahydrofuran CAS #: 109-99-9									
15.580	15.580	(0.998)	42	248202	6.18018	6.180	80.00- 120.00	100.00(R)	
15.580	15.580	(0.998)	71	62509			4.62- 64.62	25.18	
15.580	15.580	(0.998)	72	67290			8.51- 68.51	27.11	

47 Chloroform CAS #: 67-66-3									
15.672	15.672	(1.004)	83	449372	4.91879	4.919	80.00- 120.00	100.00	
15.672	15.672	(1.004)	85	314551			36.52- 96.52	70.00	

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
48 Cyclohexane									
							CAS #:	110-82-7	
15.888	15.888	(1.018)	84	201211	4.90825	4.908		80.00- 120.00	100.00
15.888	15.888	(1.018)	56	334448				96.90- 156.90	166.22
15.888	15.888	(1.018)	41	240880				38.62- 98.62	119.72

49 1,1,1-Trichloroethane									
							CAS #:	71-55-6	
15.888	15.888	(1.018)	97	589128	5.02296	5.023		80.00- 120.00	100.00
15.888	15.888	(1.018)	99	387809				33.43- 93.43	65.83

51 Carbon Tetrachloride									
							CAS #:	56-23-5	
16.104	16.104	(1.032)	119	634535	4.80317	4.803		80.00- 120.00	100.00
16.104	16.104	(1.032)	117	661731				74.78- 134.78	104.29

52 2,2,4-Trimethylpentane									
							CAS #:	540-84-1	
16.337	16.337	(1.047)	56	437369	5.66246	5.662		80.00- 120.00	100.00
16.337	16.337	(1.047)	57	1266633				264.46- 324.46	289.60
16.337	16.337	(1.047)	41	499996				53.88- 113.88	114.32

53 Benzene									
							CAS #:	71-43-2	
16.433	16.433	(0.969)	78	495936	4.55946	4.559		80.00- 120.00	100.00
16.433	16.409	(0.969)	77	122367				0.00- 53.40	24.67

56 1,2-Dichloroethane									
							CAS #:	107-06-2	
16.529	16.530	(0.974)	62	394470	4.97150	4.971		80.00- 120.00	100.00
16.529	16.530	(0.974)	64	129813				2.90- 62.90	32.91

57 Heptane									
							CAS #:	142-82-5	
16.578	16.578	(0.977)	57	203000	5.56516	5.565		80.00- 120.00	100.00
16.578	16.578	(0.977)	100	77123				14.70- 74.70	37.99
16.578	16.578	(0.977)	43	464349				159.65- 219.65	228.74

59 Trichloroethene									
							CAS #:	79-01-6	
17.373	17.373	(1.024)	130	302003	3.89423	3.894		80.00- 120.00	100.00
17.373	17.373	(1.024)	95	269168				48.43- 108.43	89.13
17.373	17.373	(1.024)	97	179603				20.03- 80.03	59.47

60 Methylcyclohexane									
							CAS #:	108-87-2	
17.614	17.614	(1.038)	83	269835	4.82079	4.821		80.00- 120.00	100.00(R)
17.614	17.614	(1.038)	55	304978				57.78- 117.78	113.02
17.614	17.614	(1.038)	56	98775				0.00- 58.27	36.61

61 1,2-Dichloropropane									
							CAS #:	78-87-5	
17.831	17.831	(1.051)	63	186250	4.60700	4.607		80.00- 120.00	100.00
17.831	17.831	(1.051)	62	129209				41.39- 101.39	69.37
17.831	17.831	(1.051)	41	189900				30.08- 90.08	101.96

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
62 1,4-Dioxane						CAS #: 123-91-1			
17.951	17.951	(1.058)	88	109916	4.02523	4.025	80.00-	120.00	100.00
17.951	17.951	(1.058)	58	89687			41.23-	101.23	81.60
17.951	17.951	(1.058)	57	36817			0.00-	53.84	33.50

63 Bromodichloromethane						CAS #: 75-27-4			
18.264	18.264	(1.077)	83	450861	4.40153	4.402	80.00-	120.00	100.00
18.264	18.264	(1.077)	85	306994			37.91-	97.91	68.09

64 cis-1,3-Dichloropropene						CAS #: 10061-01-5			
19.108	19.108	(1.126)	75	231965	4.21585	4.216	80.00-	120.00	100.00
19.108	19.108	(1.126)	77	74386			2.56-	62.56	32.07
19.108	19.108	(1.126)	39	199868			19.94-	79.94	86.16

65 4-Methyl-2-pentanone						CAS #: 108-10-1			
19.287	19.287	(1.137)	43	501123	5.73972	5.740	80.00-	120.00	100.00
19.310	19.287	(1.138)	58	146667			7.11-	67.11	29.27
19.287	19.310	(1.137)	85	52246			0.00-	46.29	10.43

68 Toluene						CAS #: 108-88-3			
19.736	19.736	(1.163)	91	625159	4.59860	4.599	80.00-	120.00	100.00
19.736	19.736	(1.163)	92	368394			28.99-	88.99	58.93

69 trans-1,3-Dichloropropene						CAS #: 10061-02-6			
20.304	20.304	(0.907)	75	279443	4.76915	4.769	80.00-	120.00	100.00
20.304	20.304	(0.907)	77	85452			3.77-	63.77	30.58
20.304	20.304	(0.907)	39	215955			18.43-	78.43	77.28

70 1,1,2-Trichloroethane						CAS #: 79-00-5			
20.716	20.716	(0.925)	97	217141	4.38898	4.389	80.00-	120.00	100.00
20.716	20.716	(0.925)	99	134735			34.78-	94.78	62.05
20.716	20.716	(0.925)	83	159357			49.45-	109.45	73.39

71 Tetrachloroethene						CAS #: 127-18-4			
20.881	20.881	(0.933)	166	278943	3.71059	3.710	80.00-	120.00	100.00
20.881	20.881	(0.933)	129	297078			54.11-	114.11	106.50
20.881	20.881	(0.933)	131	306204			55.30-	115.30	109.77

72 2-Hexanone						CAS #: 591-78-6			
21.045	21.045	(0.940)	58	200704	4.87901	4.879	80.00-	120.00	100.00
21.045	21.045	(0.940)	43	551279			162.06-	222.06	274.67
21.045	21.045	(0.940)	100	41036			0.00-	52.96	20.45

73 Dibromochloromethane						CAS #: 124-48-1			
21.457	21.457	(0.958)	129	590877	4.51757	4.518	80.00-	120.00	100.00
21.457	21.457	(0.958)	127	445095			46.93-	106.93	75.33

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
74 1,2-Dibromoethane CAS #: 106-93-4									
21.705	21.705	(0.970)	107	389865	4.50516	4.505	80.00-	120.00	100.00
21.705	21.705	(0.970)	109	383025			68.26-	128.26	98.25

76 Chlorobenzene CAS #: 108-90-7									
22.428	22.428	(1.002)	112	582352	4.16222	4.162	80.00-	120.00	100.00
22.428	22.428	(1.002)	114	190716			1.73-	61.73	32.75
22.428	22.428	(1.002)	77	311714			16.56-	76.56	53.53

77 Ethyl Benzene CAS #: 100-41-4									
22.511	22.511	(1.006)	106	269552	4.26251	4.262	80.00-	120.00	100.00
22.511	22.511	(1.006)	91	841153			261.70-	321.70	312.06

80 m,p-Xylene CAS #: 108-38-3									
22.676	22.676	(1.013)	106	335178	4.44146	4.441	80.00-	120.00	100.00
22.676	22.676	(1.013)	91	664042			150.71-	210.71	198.12

81 o-Xylene CAS #: 95-47-6									
23.278	23.278	(1.040)	106	307689	4.65048	4.650	80.00-	120.00	100.00
23.278	23.278	(1.040)	91	656956			165.12-	225.12	213.51

83 Styrene CAS #: 100-42-5									
23.298	23.298	(1.041)	104	554004	4.73705	4.737	80.00-	120.00	100.00
23.298	23.298	(1.041)	78	292230			12.29-	72.29	52.75

84 Bromoform CAS #: 75-25-2									
23.639	23.639	(1.056)	173	377020	3.73519	3.735	80.00-	120.00	100.00
23.639	23.639	(1.056)	171	199721			23.53-	83.53	52.97

85 Cumene CAS #: 98-82-8									
23.751	23.751	(1.061)	105	992982	4.71991	4.720	80.00-	120.00	100.00
23.751	23.751	(1.061)	120	275913			0.00-	58.84	27.79

89 1,1,2,2-Tetrachloroethane CAS #: 79-34-5									
24.222	24.222	(1.082)	83	442780	4.48054	4.480	80.00-	120.00	100.00
24.222	24.222	(1.082)	85	309439			37.40-	97.40	69.89

90 Propylbenzene CAS #: 103-65-1									
24.267	24.267	(1.084)	91	1147933	4.69053	4.690	80.00-	120.00	100.00
24.267	24.267	(1.084)	120	294116			0.00-	58.05	25.62

92 4-Ethyltoluene CAS #: 622-96-8									
24.401	24.424	(1.090)	105	982331	4.61536	4.615	80.00-	120.00	100.00
24.424	24.424	(1.091)	120	305504			2.80-	62.80	31.10

94 1,3,5-Trimethylbenzene CAS #: 108-67-8									
24.491	24.491	(1.094)	105	805181	4.42965	4.430	80.00-	120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	=====	=====	=====	=====	=====	=====
94 1,3,5-Trimethylbenzene (continued)								
24.491	24.491	(1.094)	120	411267			23.16- 83.16	51.08

98 1,2,4-Trimethylbenzene CAS #: 95-63-6								
24.939	24.939	(1.114)	105	656099	4.62581	4.626	80.00- 120.00	100.00
24.939	24.939	(1.114)	120	306243			19.74- 79.74	46.68

101 1,3-Dichlorobenzene CAS #: 541-73-1								
25.343	25.343	(1.132)	146	541936	3.91807	3.918	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	331036			31.66- 91.66	61.08
25.343	25.343	(1.132)	111	228454			6.44- 66.44	42.16

104 1,4-Dichlorobenzene CAS #: 106-46-7								
25.433	25.433	(1.136)	146	552737	4.21959	4.220	80.00- 120.00	100.00
25.433	25.433	(1.136)	148	341517			32.25- 92.25	61.79
25.433	25.433	(1.136)	111	233556			4.82- 64.82	42.25

105 alpha-chlorotoluene CAS #: 100-44-7								
25.590	25.590	(1.143)	91	740792	4.97978	4.980	80.00- 120.00	100.00
25.590	25.590	(1.143)	126	174936			0.00- 57.25	23.61

108 1,2-Dichlorobenzene CAS #: 95-50-1								
25.859	25.859	(1.155)	146	498684	4.07661	4.077	80.00- 120.00	100.00
25.859	25.859	(1.155)	148	299328			31.25- 91.25	60.02
25.859	25.859	(1.155)	111	226948			7.65- 67.65	45.51

112 1,2,4-Trichlorobenzene CAS #: 120-82-1								
27.630	27.630	(1.234)	180	208705	3.60776	3.608	80.00- 120.00	100.00
27.630	27.630	(1.234)	182	199096			66.40- 126.40	95.40

113 Hexachlorobutadiene CAS #: 87-68-3								
27.719	27.719	(1.238)	225	164118	3.35460	3.354	80.00- 120.00	100.00
27.719	27.719	(1.238)	223	103065			31.93- 91.93	62.80

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 05-JUN-2015
Lab File ID: e060504a.d	Calibration Time: 10:08
Lab Smp Id: LCS	Client Smp ID: LCS
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m	
Misc Info: 5.0ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	142378	0.45
58 1,4-Difluorobenze	538789	323273	754305	532101	-1.24
75 Chlorobenzene-d5	499778	299867	699689	506837	1.41

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 05-JUN-2015 10:52

Client ID: LCS

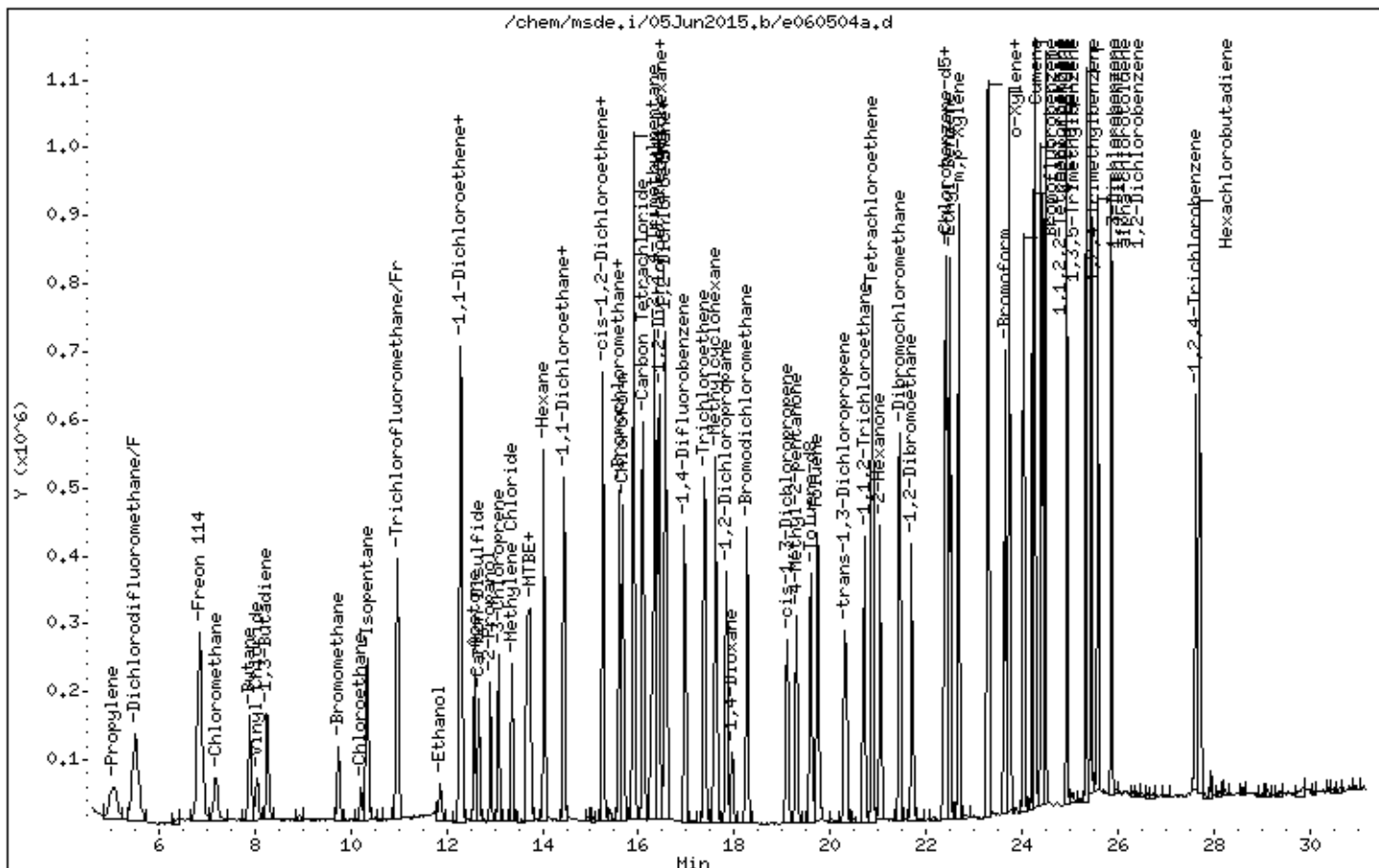
Instrument: msde.i

Sample Info: 25mL# 2716-220

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	LCSD	Date/Time Analyzed:	6/5/15 11:37 AM
Lab ID:	1506011A-15AA	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060505a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	78
Trichloroethene	79-01-6	76

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	119
4-Bromofluorobenzene	460-00-4	83-116	87
Toluene-d8	2037-26-5	90-108	96

* % Recovery is calculated using unrounded analytical results.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05Jun2015
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: LCSD Client Smp ID: LCSD
 Level: LOW Operator: ef
 Data Type: MS DATA SampleType: LCSD
 SpikeList File: ControlDOD.spk Quant Type: ISTD
 Sublist File: CNTRL062415.sub
 Method File: /chem/msde.i/05Jun2015.b/e1510515b.m
 Misc Info: 5.0ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
4 Dichlorodifluorome	5.000	4.863	97.27	59-128
2 Propylene	5.000	5.935	118.70	57-136
6 Freon 114	5.000	4.337	86.73	63-121
7 Chloromethane	5.000	5.548	110.96	59-132
10 Vinyl Chloride	5.000	4.992	99.84	64-127
11 1,3-Butadiene	5.000	5.405	108.09	66-134
12 Bromomethane	5.000	4.433	88.66	63-134
13 Chloroethane	5.000	4.950	99.01	63-127
16 Trichlorofluoromet	5.000	4.468	89.36	62-126
18 Ethanol	5.000	5.725	114.51	59-125
19 Freon 113	5.000	3.694	73.88	66-126
21 1,1-Dichloroethene	5.000	4.225	84.51	61-133
22 Acetone	5.000	4.897	97.93	58-128
23 Carbon Disulfide	5.000	4.025	80.50	57-134
25 2-Propanol	5.000	5.452	109.05	52-125
26 3-Chloroprene	5.000	4.156	83.12	71-131
29 Methylene Chloride	5.000	4.218	84.36	62-115
31 MTBE	5.000	4.732	94.64	66-126
32 trans-1,2-Dichloro	5.000	4.270	85.40	67-124
35 Hexane	5.000	5.938	118.77	63-120
37 1,1-Dichloroethane	5.000	5.350	107.01	68-126
38 Vinyl Acetate	5.000	4.504	90.09	56-139
41 cis-1,2-Dichloroet	5.000	4.868	97.37	70-121
42 2-Butanone	5.000	4.990	99.80	67-130
44 Tetrahydrofuran	5.000	6.679	133.58*	64-123
47 Chloroform	5.000	4.802	96.05	68-123
48 Cyclohexane	5.000	5.167	103.34	70-117
49 1,1,1-Trichloroeth	5.000	4.749	94.99	68-125
51 Carbon Tetrachlori	5.000	4.551	91.02	68-132
52 2,2,4-Trimethylpen	5.000	5.161	103.23	68-121
53 Benzene	5.000	4.443	88.87	69-119
57 Heptane	5.000	5.308	106.16	69-123
56 1,2-Dichloroethane	5.000	4.835	96.71	65-128

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
59 Trichloroethene	5.000	3.828	76.56	71-123
61 1,2-Dichloropropan	5.000	4.383	87.66	69-123
62 1,4-Dioxane	5.000	3.837	76.74	71-122
63 Bromodichlorometha	5.000	4.197	83.94	72-128
64 cis-1,3-Dichloropr	5.000	3.987	79.75	70-128
65 4-Methyl-2-pentano	5.000	5.353	107.06	67-130
68 Toluene	5.000	4.400	88.00	66-119
69 trans-1,3-Dichloro	5.000	4.805	96.10	75-133
70 1,1,2-Trichloroeth	5.000	4.430	88.59	73-119
72 2-Hexanone	5.000	5.156	103.12	62-128
71 Tetrachloroethene	5.000	3.888	77.75	66-124
73 Dibromochlorometha	5.000	4.452	89.05	70-130
74 1,2-Dibromoethane	5.000	4.626	92.51	74-122
76 Chlorobenzene	5.000	4.315	86.30	70-119
77 Ethyl Benzene	5.000	4.326	86.52	70-124
80 m,p-Xylene	5.000	4.522	90.45	61-134
81 o-Xylene	5.000	4.862	97.24	67-125
83 Styrene	5.000	4.862	97.25	73-127
84 Bromoform	5.000	3.814	76.27	66-139
85 Cumene	5.000	4.794	95.88	68-124
89 1,1,2,2-Tetrachlor	5.000	4.632	92.63	65-127
90 Propylbenzene	5.000	4.831	96.61	69-123
92 4-Ethyltoluene	5.000	4.646	92.92	67-129
94 1,3,5-Trimethylben	5.000	4.534	90.69	67-130
98 1,2,4-Trimethylben	5.000	4.631	92.61	66-132
101 1,3-Dichlorobenzen	5.000	3.967	79.34	65-130
104 1,4-Dichlorobenzen	5.000	4.377	87.54	60-131
105 alpha-chlorotoluen	5.000	5.221	104.42	50-147
108 1,2-Dichlorobenzen	5.000	4.152	83.03	63-129
112 1,2,4-Trichloroben	5.000	3.684	73.67	55-142
113 Hexachlorobutadien	5.000	3.260	65.19	56-138
114 Naphthalene	0.5000	0.000	*	57-138
14 Isopentane	5.000	4.855	97.11*	0-0
9 Butane	5.000	6.068	121.37	64-129
60 Methylcyclohexane	5.000	4.750	95.00*	0-0

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	5.948	118.95	80-125
\$ 67 Toluene-d8	5.000	4.787	95.74	90-108
\$ 87 Bromofluorobenzene	5.000	4.343	86.86	83-116

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/05Jun2015.b/e060505a.d
 Lab Smp Id: LCSD Client Smp ID: LCSD
 Inj Date : 05-JUN-2015 11:37
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2716-220
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/05Jun2015.b/e1510515b.m
 Meth Date : 05-Jun-2015 11:39 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 QC Sample: LCSD
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: CNTRL062415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	147940 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	116276			46.94- 106.94	78.60
15.611	15.611 (1.000)	49	295285			103.66- 163.66	199.60
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	553879 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	80746			0.00- 43.53	14.58
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	496796 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	239500			13.25- 73.25	48.21
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.433	16.433 (1.053)	65	276415 5.94763	5.948		80.00- 120.00	100.00
16.433	16.433 (1.053)	67	130271			24.87- 84.87	47.13

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	455441	4.78675	4.787	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	53035			0.00- 40.24	11.64
19.601	19.601	(1.156)	100	309704			39.39- 99.39	68.00

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	218450	4.34319	4.343	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	345630			88.06- 148.06	158.22
24.042	24.042	(1.074)	176	208862			66.20- 126.20	95.61

2 Propylene						CAS #: 115-07-1		
5.022	5.046	(0.322)	41	185869	5.93499	5.935	80.00- 120.00	100.00
5.046	5.070	(0.323)	42	121924			38.37- 98.37	65.60
5.070	5.046	(0.325)	39	143827			42.39- 102.39	77.38

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.504	5.503	(0.353)	85	638376	4.86350	4.863	80.00- 120.00	100.00
5.504	5.503	(0.353)	87	205722			2.12- 62.12	32.23

6 Freon 114						CAS #: 76-14-2		
6.829	6.829	(0.437)	135	435406	4.33674	4.337	80.00- 120.00	100.00
6.853	6.829	(0.439)	137	136476			1.87- 61.87	31.34

7 Chloromethane						CAS #: 74-87-3		
7.167	7.191	(0.459)	50	213093	5.54787	5.548	80.00- 120.00	100.00
7.191	7.191	(0.461)	52	64144			2.64- 62.64	30.10

9 Butane						CAS #: 106-97-8		
7.906	7.889	(0.506)	58	36712	6.06828	6.068	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	324340			798.08- 858.08	883.47

10 Vinyl Chloride						CAS #: 75-01-4		
8.045	8.028	(0.515)	62	150978	4.99196	4.992	80.00- 120.00	100.00
8.028	8.028	(0.514)	64	48699			1.55- 61.55	32.26

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	145962	5.40464	5.405	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	179374			68.70- 128.70	122.89

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	123580	4.43286	4.433	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	114372			67.78- 127.78	92.55

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	67359	4.95026	4.950	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	30535			0.00- 59.93	45.33

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		CONCENTRATIONS		TARGET RANGE	RATIO
				(PPBV)	(PPBV)	ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	19724				2.40- 62.40	29.28

14 Isopentane									
10.348	10.329	(0.663)	57	122656	4.85550	4.855	80.00- 120.00	100.00(R)	
10.348	10.348	(0.663)	43	216973			113.81- 173.81	176.90	
10.329	10.329	(0.662)	42	190857			97.27- 157.27	155.60	

16 Trichlorofluoromethane/Fr11									
10.957	10.957	(0.702)	101	658319	4.46777	4.468	80.00- 120.00	100.00	
10.957	10.957	(0.702)	103	421991			34.06- 94.06	64.10	

18 Ethanol									
11.871	11.871	(0.760)	45	79812	5.72545	5.725	80.00- 120.00	100.00	
11.871	11.871	(0.760)	46	31582			7.61- 67.61	39.57	
11.871	11.871	(0.760)	43	22953			0.00- 55.64	28.76	

21 1,1-Dichloroethene									
12.309	12.309	(0.788)	98	87787	4.22540	4.225	80.00- 120.00	100.00	
12.309	12.309	(0.788)	61	313032			208.58- 268.58	356.58	
12.309	12.309	(0.788)	96	144529			127.45- 187.45	164.64	

19 Freon 113									
12.290	12.290	(0.787)	151	265888	3.69380	3.694	80.00- 120.00	100.00	
12.290	12.290	(0.787)	153	175327			34.06- 94.06	65.94	
12.290	12.290	(0.787)	101	357672			81.22- 141.22	134.52	

22 Acetone									
12.576	12.576	(0.806)	58	88411	4.89671	4.897	80.00- 120.00	100.00	
12.576	12.576	(0.806)	43	412086			294.37- 354.37	466.10	

23 Carbon Disulfide									
12.671	12.671	(0.812)	76	352130	4.02505	4.025	80.00- 120.00	100.00	

26 3-Chloroprene									
13.090	13.090	(0.839)	76	48629	4.15580	4.156	80.00- 120.00	100.00	
13.090	13.090	(0.839)	41	231721			276.20- 336.20	476.51	

25 2-Propanol									
12.919	12.918	(0.828)	45	346730	5.45235	5.452	80.00- 120.00	100.00	
12.919	12.918	(0.828)	43	91825			0.00- 55.86	26.48	
12.919	12.918	(0.828)	59	10787			0.00- 34.14	3.11	

29 Methylene Chloride									
13.357	13.376	(0.856)	84	111472	4.21818	4.218	80.00- 120.00	100.00	
13.357	13.357	(0.856)	49	249902			112.26- 172.26	224.18	

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO	
					ON-COL	FINAL			
==	=====	=====	====	=====	=====	=====	=====	=====	=====
29 Methylene Chloride (continued)									
13.357	13.357	(0.856)	51	69882			12.15-	72.15	62.69

31 MTBE					CAS #: 1634-04-4				
13.674	13.674	(0.876)	73	410946	4.73199	4.732	80.00-	120.00	100.00
13.674	13.674	(0.876)	57	121070			0.00-	54.97	29.46
13.674	13.674	(0.876)	41	151466			0.00-	55.95	36.86

32 trans-1,2-Dichloroethene					CAS #: 156-60-5				
13.729	13.729	(0.879)	98	95089	4.27012	4.270	80.00-	120.00	100.00
13.729	13.729	(0.879)	61	255238			175.95-	235.95	268.42
13.729	13.729	(0.879)	96	153252			121.11-	181.11	161.17

35 Hexane					CAS #: 110-54-3				
14.031	14.031	(0.899)	57	285094	5.93851	5.938	80.00-	120.00	100.00
14.031	14.031	(0.899)	43	254992			35.27-	95.27	89.44
14.031	14.031	(0.899)	86	40659			0.00-	46.67	14.26

37 1,1-Dichloroethane					CAS #: 75-34-3				
14.442	14.442	(0.925)	63	357698	5.35038	5.350	80.00-	120.00	100.00
14.442	14.442	(0.925)	65	101923			0.10-	60.10	28.49

38 Vinyl Acetate					CAS #: 108-05-4				
14.442	14.442	(0.925)	86	40018	4.50456	4.504	80.00-	120.00	100.00
14.442	14.442	(0.925)	42	62796			58.55-	118.55	156.92
14.442	14.442	(0.925)	43	642253			1046.17-	1106.17	1604.88

41 cis-1,2-Dichloroethene					CAS #: 156-59-2				
15.259	15.259	(0.977)	98	123828	4.86839	4.868	80.00-	120.00	100.00
15.259	15.259	(0.977)	61	306337			155.56-	215.56	247.39
15.259	15.259	(0.977)	96	198527			124.76-	184.76	160.33

42 2-Butanone					CAS #: 78-93-3				
15.259	15.259	(0.977)	72	69158	4.98987	4.990	80.00-	120.00	100.00
15.259	15.240	(0.977)	43	484594			419.99-	479.99	700.70
15.259	15.259	(0.977)	57	34664			5.97-	65.97	50.12

44 Tetrahydrofuran					CAS #: 109-99-9				
15.580	15.580	(0.998)	42	278715	6.67901	6.679	80.00-	120.00	100.00(R)
15.580	15.580	(0.998)	71	63970			4.62-	64.62	22.95
15.580	15.580	(0.998)	72	64243			8.51-	68.51	23.05

47 Chloroform					CAS #: 67-66-3				
15.672	15.672	(1.004)	83	455883	4.80243	4.802	80.00-	120.00	100.00
15.672	15.672	(1.004)	85	302380			36.52-	96.52	66.33

CONCENTRATIONS								
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
					(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
48 Cyclohexane					CAS #: 110-82-7			
15.888	15.888	(1.018)	84	220099	5.16713	5.167	80.00- 120.00	100.00
15.888	15.888	(1.018)	56	317106			96.90- 156.90	144.07
15.888	15.888	(1.018)	41	246290			38.62- 98.62	111.90

49 1,1,1-Trichloroethane					CAS #: 71-55-6			
15.888	15.888	(1.018)	97	578797	4.74932	4.749	80.00- 120.00	100.00
15.888	15.888	(1.018)	99	377469			33.43- 93.43	65.22

51 Carbon Tetrachloride					CAS #: 56-23-5			
16.104	16.104	(1.032)	119	624744	4.55124	4.551	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	668286			74.78- 134.78	106.97

52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.337	16.337	(1.047)	56	414233	5.16128	5.161	80.00- 120.00	100.00
16.337	16.337	(1.047)	57	1251427			264.46- 324.46	302.11
16.337	16.337	(1.047)	41	515701			53.88- 113.88	124.50

53 Benzene					CAS #: 71-43-2			
16.433	16.433	(0.969)	78	503091	4.44338	4.443	80.00- 120.00	100.00
16.433	16.409	(0.969)	77	121912			0.00- 53.40	24.23

56 1,2-Dichloroethane					CAS #: 107-06-2			
16.530	16.530	(0.974)	62	399375	4.83541	4.835	80.00- 120.00	100.00
16.530	16.530	(0.974)	64	128109			2.90- 62.90	32.08

57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.977)	57	201545	5.30803	5.308	80.00- 120.00	100.00
16.578	16.578	(0.977)	100	79003			14.70- 74.70	39.20
16.578	16.578	(0.977)	43	449708			159.65- 219.65	223.13

59 Trichloroethene					CAS #: 79-01-6			
17.373	17.373	(1.024)	130	309027	3.82812	3.828	80.00- 120.00	100.00
17.373	17.373	(1.024)	95	261095			48.43- 108.43	84.49
17.373	17.373	(1.024)	97	172390			20.03- 80.03	55.79

60 Methylcyclohexane					CAS #: 108-87-2			
17.614	17.614	(1.038)	83	276762	4.75013	4.750	80.00- 120.00	100.00(R)
17.614	17.614	(1.038)	55	307523			57.78- 117.78	111.11
17.614	17.614	(1.038)	56	97593			0.00- 58.27	35.26

61 1,2-Dichloropropane					CAS #: 78-87-5			
17.831	17.831	(1.051)	63	184454	4.38319	4.383	80.00- 120.00	100.00
17.831	17.831	(1.051)	62	133166			41.39- 101.39	72.19
17.831	17.831	(1.051)	41	196300			30.08- 90.08	106.42

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO	
					ON-COL	FINAL			
==	=====	=====	====	=====	=====	=====	=====	=====	=====
62 1,4-Dioxane					CAS #: 123-91-1				
17.951	17.951	(1.058)	88	109069	3.83715	3.837	80.00-	120.00	100.00
17.951	17.951	(1.058)	58	96035			41.23-	101.23	88.05
17.951	17.951	(1.058)	57	34729			0.00-	53.84	31.84

63 Bromodichloromethane					CAS #: 75-27-4				
18.264	18.264	(1.077)	83	447508	4.19702	4.197	80.00-	120.00	100.00
18.264	18.264	(1.077)	85	308424			37.91-	97.91	68.92

64 cis-1,3-Dichloropropene					CAS #: 10061-01-5				
19.108	19.108	(1.126)	75	228370	3.98731	3.987	80.00-	120.00	100.00
19.108	19.108	(1.126)	77	74494			2.56-	62.56	32.62
19.108	19.108	(1.126)	39	201250			19.94-	79.94	88.12

65 4-Methyl-2-pentanone					CAS #: 108-10-1				
19.288	19.287	(1.137)	43	486497	5.35311	5.353	80.00-	120.00	100.00
19.288	19.287	(1.137)	58	145376			7.11-	67.11	29.88
19.288	19.310	(1.137)	85	54449			0.00-	46.29	11.19

68 Toluene					CAS #: 108-88-3				
19.736	19.736	(1.163)	91	622643	4.40001	4.400	80.00-	120.00	100.00
19.736	19.736	(1.163)	92	354864			28.99-	88.99	56.99

69 trans-1,3-Dichloropropene					CAS #: 10061-02-6				
20.304	20.304	(0.907)	75	275958	4.80487	4.805	80.00-	120.00	100.00
20.304	20.304	(0.907)	77	91277			3.77-	63.77	33.08
20.304	20.304	(0.907)	39	212147			18.43-	78.43	76.88

70 1,1,2-Trichloroethane					CAS #: 79-00-5				
20.716	20.716	(0.925)	97	214805	4.42953	4.430	80.00-	120.00	100.00
20.716	20.716	(0.925)	99	134968			34.78-	94.78	62.83
20.716	20.716	(0.925)	83	167246			49.45-	109.45	77.86

71 Tetrachloroethene					CAS #: 127-18-4				
20.881	20.881	(0.933)	166	286455	3.88752	3.888	80.00-	120.00	100.00
20.881	20.881	(0.933)	129	300107			54.11-	114.11	104.77
20.881	20.881	(0.933)	131	295506			55.30-	115.30	103.16

72 2-Hexanone					CAS #: 591-78-6				
21.046	21.045	(0.940)	58	207905	5.15620	5.156	80.00-	120.00	100.00
21.046	21.045	(0.940)	43	561779			162.06-	222.06	270.21
21.046	21.045	(0.940)	100	43094			0.00-	52.96	20.73

73 Dibromochloromethane					CAS #: 124-48-1				
21.458	21.457	(0.958)	129	570801	4.45228	4.452	80.00-	120.00	100.00
21.458	21.457	(0.958)	127	451370			46.93-	106.93	79.08

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
74 1,2-Dibromoethane CAS #: 106-93-4									
21.705	21.705	(0.970)	107	392362	4.62565	4.626	80.00-	120.00	100.00
21.705	21.705	(0.970)	109	384554			68.26-	128.26	98.01

76 Chlorobenzene CAS #: 108-90-7									
22.428	22.428	(1.002)	112	591789	4.31516	4.315	80.00-	120.00	100.00
22.428	22.428	(1.002)	114	187537			1.73-	61.73	31.69
22.428	22.428	(1.002)	77	314502			16.56-	76.56	53.14

77 Ethyl Benzene CAS #: 100-41-4									
22.511	22.511	(1.006)	106	268150	4.32604	4.326	80.00-	120.00	100.00
22.511	22.511	(1.006)	91	858449			261.70-	321.70	320.14

80 m,p-Xylene CAS #: 108-38-3									
22.677	22.676	(1.013)	106	334520	4.52233	4.522	80.00-	120.00	100.00
22.677	22.676	(1.013)	91	667533			150.71-	210.71	199.55

81 o-Xylene CAS #: 95-47-6									
23.278	23.278	(1.040)	106	315299	4.86181	4.862	80.00-	120.00	100.00
23.278	23.278	(1.040)	91	649192			165.12-	225.12	205.90

83 Styrene CAS #: 100-42-5									
23.299	23.298	(1.041)	104	557404	4.86245	4.862	80.00-	120.00	100.00
23.299	23.298	(1.041)	78	295680			12.29-	72.29	53.05

84 Bromoform CAS #: 75-25-2									
23.639	23.639	(1.056)	173	377305	3.81356	3.814	80.00-	120.00	100.00
23.639	23.639	(1.056)	171	211159			23.53-	83.53	55.97

85 Cumene CAS #: 98-82-8									
23.751	23.751	(1.061)	105	988591	4.79401	4.794	80.00-	120.00	100.00
23.751	23.751	(1.061)	120	276415			0.00-	58.84	27.96

89 1,1,2,2-Tetrachloroethane CAS #: 79-34-5									
24.222	24.222	(1.082)	83	448646	4.63166	4.632	80.00-	120.00	100.00
24.222	24.222	(1.082)	85	315270			37.40-	97.40	70.27

90 Propylbenzene CAS #: 103-65-1									
24.267	24.267	(1.084)	91	1158822	4.83072	4.831	80.00-	120.00	100.00
24.267	24.267	(1.084)	120	300268			0.00-	58.05	25.91

92 4-Ethyltoluene CAS #: 622-96-8									
24.401	24.424	(1.090)	105	969256	4.64597	4.646	80.00-	120.00	100.00
24.401	24.424	(1.090)	120	308733			2.80-	62.80	31.85

94 1,3,5-Trimethylbenzene CAS #: 108-67-8									
24.491	24.491	(1.094)	105	807896	4.53441	4.534	80.00-	120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====
94 1,3,5-Trimethylbenzene (continued)								
24.491	24.491	(1.094)	120	412542			23.16- 83.16	51.06

98 1,2,4-Trimethylbenzene CAS #: 95-63-6								
24.940	24.939	(1.114)	105	643768	4.63061	4.631	80.00- 120.00	100.00
24.940	24.939	(1.114)	120	311003			19.74- 79.74	48.31

101 1,3-Dichlorobenzene CAS #: 541-73-1								
25.343	25.343	(1.132)	146	537811	3.96683	3.967	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	327824			31.66- 91.66	60.96
25.343	25.343	(1.132)	111	233678			6.44- 66.44	43.45

104 1,4-Dichlorobenzene CAS #: 106-46-7								
25.433	25.433	(1.136)	146	562021	4.37718	4.377	80.00- 120.00	100.00
25.433	25.433	(1.136)	148	329721			32.25- 92.25	58.67
25.433	25.433	(1.136)	111	230761			4.82- 64.82	41.06

105 alpha-chlorotoluene CAS #: 100-44-7								
25.590	25.590	(1.143)	91	761282	5.22095	5.221	80.00- 120.00	100.00
25.590	25.590	(1.143)	126	180520			0.00- 57.25	23.71

108 1,2-Dichlorobenzene CAS #: 95-50-1								
25.859	25.859	(1.155)	146	497795	4.15159	4.152	80.00- 120.00	100.00
25.859	25.859	(1.155)	148	297055			31.25- 91.25	59.67
25.859	25.859	(1.155)	111	227962			7.65- 67.65	45.79

112 1,2,4-Trichlorobenzene CAS #: 120-82-1								
27.630	27.630	(1.234)	180	208873	3.68365	3.684	80.00- 120.00	100.00
27.630	27.630	(1.234)	182	192764			66.40- 126.40	92.29

113 Hexachlorobutadiene CAS #: 87-68-3								
27.719	27.719	(1.238)	225	156311	3.25959	3.260	80.00- 120.00	100.00
27.719	27.719	(1.238)	223	100151			31.93- 91.93	64.07

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 05-JUN-2015
Lab File ID: e060505a.d	Calibration Time: 10:08
Lab Smp Id: LCSD	Client Smp ID: LCSD
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/05Jun2015.b/e15l0515b.m	
Misc Info: 5.0ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	141734	85040	198428	147940	4.38
58 1,4-Difluorobenze	538789	323273	754305	553879	2.80
75 Chlorobenzene-d5	499778	299867	699689	496796	-0.60

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 05-JUN-2015 11:37

Client ID: LCSD

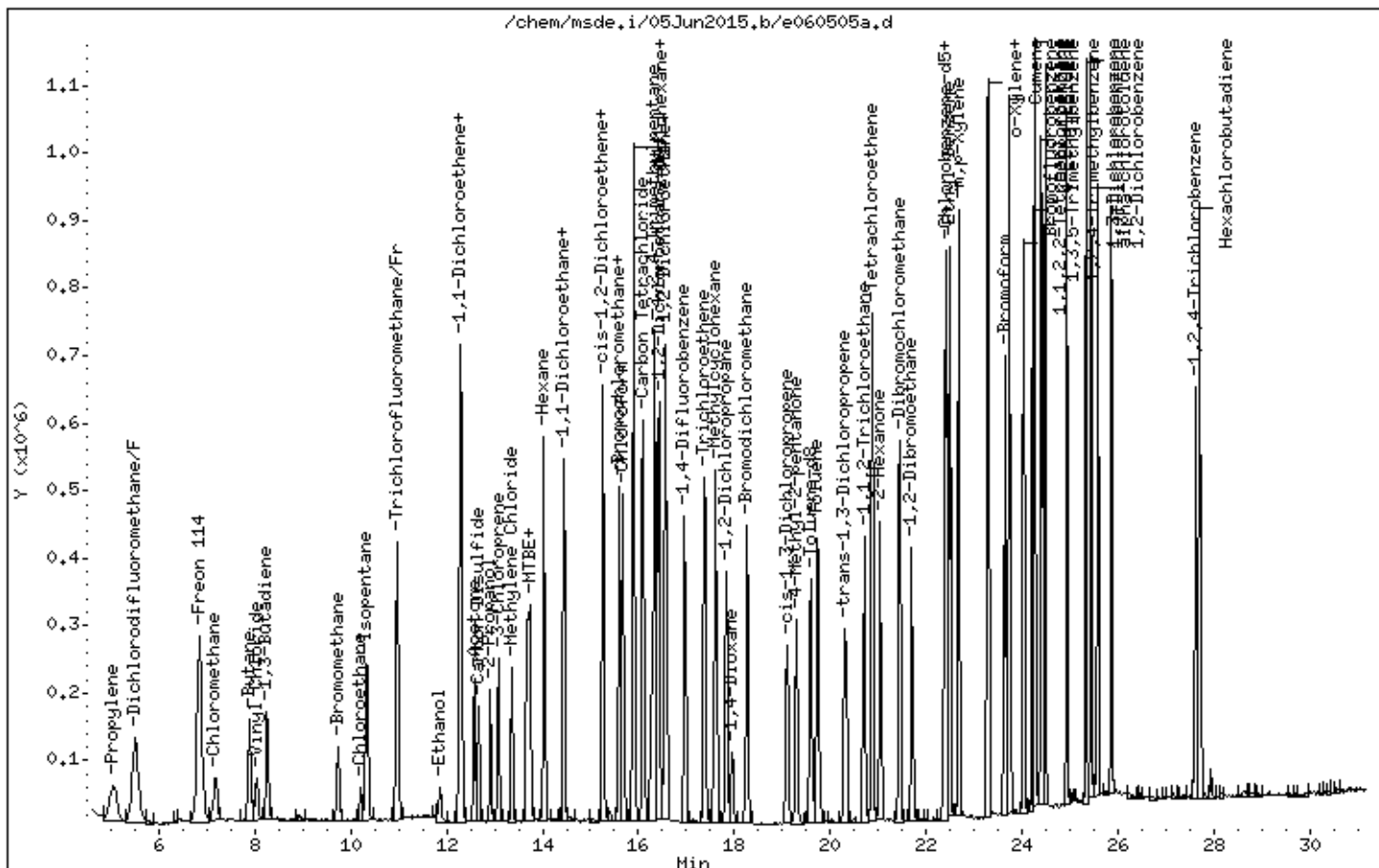
Instrument: msde.i

Sample Info: 25mL# 2716-220

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	LCS	Date/Time Analyzed:	6/8/15 03:44 PM
Lab ID:	1506011A-15B	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060803a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	72
Trichloroethene	79-01-6	76

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	119
4-Bromofluorobenzene	460-00-4	83-116	85
Toluene-d8	2037-26-5	90-108	99

* % Recovery is calculated using unrounded analytical results.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: LCS Client Smp ID: LCS
 Level: LOW Operator: ef
 Data Type: MS DATA SampleType: LCS
 SpikeList File: ControlDOD.spk Quant Type: ISTD
 Sublist File: CNTRL062415.sub
 Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
 Misc Info: 5.0ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
4 Dichlorodifluorome	5.000	4.865	97.30	59-128
2 Propylene	5.000	5.832	116.65	57-136
6 Freon 114	5.000	4.281	85.62	63-121
7 Chloromethane	5.000	5.604	112.09	59-132
10 Vinyl Chloride	5.000	5.076	101.51	64-127
11 1,3-Butadiene	5.000	5.396	107.92	66-134
12 Bromomethane	5.000	4.401	88.02	63-134
13 Chloroethane	5.000	4.772	95.44	63-127
16 Trichlorofluoromet	5.000	4.547	90.93	62-126
18 Ethanol	5.000	5.378	107.55	59-125
19 Freon 113	5.000	3.738	74.77	66-126
21 1,1-Dichloroethene	5.000	4.226	84.51	61-133
22 Acetone	5.000	4.711	94.22	58-128
23 Carbon Disulfide	5.000	4.310	86.20	57-134
25 2-Propanol	5.000	5.445	108.90	52-125
26 3-Chloroprene	5.000	4.198	83.96	71-131
29 Methylene Chloride	5.000	4.203	84.07	62-115
31 MTBE	5.000	4.716	94.32	66-126
32 trans-1,2-Dichloro	5.000	4.267	85.34	67-124
35 Hexane	5.000	5.752	115.04	63-120
37 1,1-Dichloroethane	5.000	5.221	104.42	68-126
38 Vinyl Acetate	5.000	4.684	93.69	56-139
41 cis-1,2-Dichloroet	5.000	4.785	95.69	70-121
42 2-Butanone	5.000	4.926	98.52	67-130
44 Tetrahydrofuran	5.000	6.134	122.67	64-123
47 Chloroform	5.000	4.794	95.88	68-123
48 Cyclohexane	5.000	5.040	100.81	70-117
49 1,1,1-Trichloroeth	5.000	4.948	98.96	68-125
51 Carbon Tetrachlori	5.000	4.565	91.30	68-132
52 2,2,4-Trimethylpen	5.000	5.512	110.23	68-121
53 Benzene	5.000	4.379	87.58	69-119
57 Heptane	5.000	5.100	102.00	69-123
56 1,2-Dichloroethane	5.000	4.834	96.67	65-128

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
59 Trichloroethene	5.000	3.799	75.99	71-123
61 1,2-Dichloropropan	5.000	4.248	84.97	69-123
62 1,4-Dioxane	5.000	3.879	77.58	71-122
63 Bromodichlorometha	5.000	4.240	84.80	72-128
64 cis-1,3-Dichloropr	5.000	3.874	77.49	70-128
65 4-Methyl-2-pentano	5.000	5.306	106.11	67-130
68 Toluene	5.000	4.390	87.80	66-119
69 trans-1,3-Dichloro	5.000	4.622	92.44	75-133
70 1,1,2-Trichloroeth	5.000	4.095	81.91	73-119
72 2-Hexanone	5.000	4.739	94.79	62-128
71 Tetrachloroethene	5.000	3.582	71.63	66-124
73 Dibromochlorometha	5.000	4.300	86.00	70-130
74 1,2-Dibromoethane	5.000	4.350	87.01	74-122
76 Chlorobenzene	5.000	4.246	84.91	70-119
77 Ethyl Benzene	5.000	4.282	85.65	70-124
80 m,p-Xylene	5.000	4.393	87.86	61-134
81 o-Xylene	5.000	4.504	90.08	67-125
83 Styrene	5.000	4.678	93.57	73-127
84 Bromoform	5.000	3.676	73.53	66-139
85 Cumene	5.000	4.625	92.50	68-124
89 1,1,2,2-Tetrachlor	5.000	4.418	88.37	65-127
90 Propylbenzene	5.000	4.705	94.11	69-123
92 4-Ethyltoluene	5.000	4.650	93.00	67-129
94 1,3,5-Trimethylben	5.000	4.442	88.85	67-130
98 1,2,4-Trimethylben	5.000	4.655	93.09	66-132
101 1,3-Dichlorobenzen	5.000	3.796	75.91	65-130
104 1,4-Dichlorobenzen	5.000	4.298	85.95	60-131
105 alpha-chlorotoluen	5.000	5.044	100.88	50-147
108 1,2-Dichlorobenzen	5.000	4.195	83.90	63-129
112 1,2,4-Trichloroben	5.000	3.675	73.49	55-142
113 Hexachlorobutadien	5.000	3.359	67.19	56-138
114 Naphthalene	0.5000	0.000	*	57-138
14 Isopentane	5.000	4.976	99.52*	0-0
9 Butane	5.000	5.924	118.47	64-129
60 Methylcyclohexane	5.000	4.370	87.39*	0-0

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	5.930	118.60	80-125
\$ 67 Toluene-d8	5.000	4.939	98.78	90-108
\$ 87 Bromofluorobenzene	5.000	4.256	85.12	83-116

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060803a.d
 Lab Smp Id: LCS Client Smp ID: LCS
 Inj Date : 08-JUN-2015 15:44
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2716-220
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: CNTRL062415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.610	15.611 (1.000)	130	142191 5.00000			80.00- 120.00	100.00
15.610	15.611 (1.000)	128	104171			46.94- 106.94	73.26
15.610	15.611 (1.000)	49	288318			103.66- 163.66	202.77
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	537097 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	73983			0.00- 43.53	13.77
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	503183 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	231790			13.25- 73.25	46.06
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.409	16.433 (1.051)	65	264886 5.93003	5.930		80.00- 120.00	100.00
16.409	16.433 (1.051)	67	120584			24.87- 84.87	45.52

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	455667	4.93876	4.939	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	55291			0.00- 40.24	12.13
19.601	19.601	(1.156)	100	301784			39.39- 99.39	66.23

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	216825	4.25618	4.256	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	344098			88.06- 148.06	158.70
24.042	24.042	(1.074)	176	218318			66.20- 126.20	100.69

2 Propylene						CAS #: 115-07-1		
5.045	4.997	(0.323)	41	175555	5.83236	5.832	80.00- 120.00	100.00
4.997	4.997	(0.320)	42	119343			38.37- 98.37	67.98
5.021	5.021	(0.322)	39	130351			42.39- 102.39	74.25

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.479	5.455	(0.351)	85	613756	4.86501	4.865	80.00- 120.00	100.00
5.503	5.455	(0.353)	87	197942			2.12- 62.12	32.25

6 Freon 114						CAS #: 76-14-2		
6.829	6.853	(0.437)	135	413106	4.28102	4.281	80.00- 120.00	100.00
6.829	6.853	(0.437)	137	133692			1.87- 61.87	32.36

7 Chloromethane						CAS #: 74-87-3		
7.167	7.167	(0.459)	50	206903	5.60452	5.604	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	65096			2.64- 62.64	31.46

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	34444	5.92370	5.924	80.00- 120.00	100.00
7.871	7.889	(0.504)	43	322722			798.08- 858.08	936.94

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	147544	5.07569	5.076	80.00- 120.00	100.00
8.010	8.028	(0.513)	64	46913			1.55- 61.55	31.80

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	140069	5.39613	5.396	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	162453			68.70- 128.70	115.98

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	117917	4.40076	4.401	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	107917			67.78- 127.78	91.52

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	62410	4.77199	4.772	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	31220			0.00- 59.93	50.02

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		TARGET RANGE		RATIO	
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
13 Chloroethane (continued)									
10.195	10.214	(0.653)	66	19419		2.40-	62.40	31.12	

14 Isopentane CAS #: 78-78-4									
10.328	10.328	(0.662)	57	120815	4.97603	4.976	80.00-	120.00	100.00(R)
10.328	10.348	(0.662)	43	209658			113.81-	173.81	173.54
10.328	10.348	(0.662)	42	189632			97.27-	157.27	156.96

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	643900	4.54661	4.547	80.00-	120.00	100.00
10.957	10.957	(0.702)	103	422236			34.06-	94.06	65.57

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	72048	5.37750	5.378	80.00-	120.00	100.00
11.871	11.871	(0.760)	46	29585			7.61-	67.61	41.06
11.871	11.871	(0.760)	43	20653			0.00-	55.64	28.67

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.290	(0.788)	98	84381	4.22571	4.226	80.00-	120.00	100.00
12.290	12.290	(0.787)	61	297552			208.58-	268.58	352.63
12.309	12.290	(0.788)	96	139830			127.45-	187.45	165.71

19 Freon 113 CAS #: 76-13-1									
12.271	12.290	(0.786)	151	258646	3.73849	3.738	80.00-	120.00	100.00
12.290	12.290	(0.787)	153	166739			34.06-	94.06	64.47
12.271	12.271	(0.786)	101	353108			81.22-	141.22	136.52

22 Acetone CAS #: 67-64-1									
12.575	12.556	(0.806)	58	81749	4.71085	4.711	80.00-	120.00	100.00
12.575	12.556	(0.806)	43	398059			294.37-	354.37	486.93

23 Carbon Disulfide CAS #: 75-15-0									
12.652	12.652	(0.810)	76	362383	4.30975	4.310	80.00-	120.00	100.00

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	47216	4.19820	4.198	80.00-	120.00	100.00
13.090	13.090	(0.839)	41	216048			276.20-	336.20	457.57

25 2-Propanol CAS #: 67-63-0									
12.918	12.918	(0.828)	45	332796	5.44486	5.445	80.00-	120.00	100.00
12.918	12.918	(0.828)	43	88475			0.00-	55.86	26.59
12.918	12.918	(0.828)	59	11977			0.00-	34.14	3.60

29 Methylene Chloride CAS #: 75-09-2									
13.356	13.356	(0.856)	84	106764	4.20341	4.203	80.00-	120.00	100.00
13.356	13.356	(0.856)	49	241653			112.26-	172.26	226.34

CONCENTRATIONS								
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
29 Methylene Chloride (continued)								
13.356	13.356	(0.856)	51	65521			12.15- 72.15	61.37

31 MTBE CAS #: 1634-04-4								
13.674	13.674	(0.876)	73	393646	4.71608	4.716	80.00- 120.00	100.00
13.674	13.674	(0.876)	57	102604			0.00- 54.97	26.07
13.674	13.674	(0.876)	41	141517			0.00- 55.95	35.95

32 trans-1,2-Dichloroethene CAS #: 156-60-5								
13.728	13.729	(0.879)	98	91329	4.26709	4.267	80.00- 120.00	100.00
13.728	13.729	(0.879)	61	237514			175.95- 235.95	260.06
13.728	13.729	(0.879)	96	143545			121.11- 181.11	157.17

35 Hexane CAS #: 110-54-3								
14.030	14.030	(0.899)	57	265405	5.75194	5.752	80.00- 120.00	100.00
14.030	14.030	(0.899)	43	226725			35.27- 95.27	85.43
14.030	14.030	(0.899)	86	39445			0.00- 46.67	14.86

37 1,1-Dichloroethane CAS #: 75-34-3								
14.442	14.442	(0.925)	63	335483	5.22100	5.221	80.00- 120.00	100.00
14.442	14.442	(0.925)	65	100495			0.10- 60.10	29.96

38 Vinyl Acetate CAS #: 108-05-4								
14.442	14.470	(0.925)	86	40000	4.68459	4.684	80.00- 120.00	100.00
14.442	14.442	(0.925)	42	64028			58.55- 118.55	160.07
14.442	14.442	(0.925)	43	598160			1046.17-1106.17	1495.38

41 cis-1,2-Dichloroethene CAS #: 156-59-2								
15.259	15.259	(0.977)	98	116967	4.78462	4.785	80.00- 120.00	100.00
15.259	15.259	(0.977)	61	283516			155.56- 215.56	242.39
15.259	15.259	(0.977)	96	185028			124.76- 184.76	158.19

42 2-Butanone CAS #: 78-93-3								
15.240	15.259	(0.976)	72	65622	4.92623	4.926	80.00- 120.00	100.00
15.240	15.259	(0.976)	43	459324			419.99- 479.99	699.95
15.240	15.259	(0.976)	57	30350			5.97- 65.97	46.25

44 Tetrahydrofuran CAS #: 109-99-9								
15.580	15.580	(0.998)	42	246005	6.13353	6.134	80.00- 120.00	100.00
15.580	15.580	(0.998)	71	57497			4.62- 64.62	23.37
15.580	15.611	(0.998)	72	61783			8.51- 68.51	25.11

47 Chloroform CAS #: 67-66-3								
15.672	15.672	(1.004)	83	437406	4.79411	4.794	80.00- 120.00	100.00
15.672	15.672	(1.004)	85	289140			36.52- 96.52	66.10

CONCENTRATIONS								
RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====
48 Cyclohexane					CAS #: 110-82-7			
15.888	15.888	(1.018)	84	206361	5.04051	5.040	80.00- 120.00	100.00
15.888	15.888	(1.018)	56	304181			96.90- 156.90	147.40
15.888	15.888	(1.018)	41	229510			38.62- 98.62	111.22
-----					-----			
49 1,1,1-Trichloroethane					CAS #: 71-55-6			
15.888	15.888	(1.018)	97	579550	4.94779	4.948	80.00- 120.00	100.00
15.888	15.888	(1.018)	99	363892			33.43- 93.43	62.79
-----					-----			
51 Carbon Tetrachloride					CAS #: 56-23-5			
16.073	16.104	(1.030)	119	602263	4.56488	4.565	80.00- 120.00	100.00
16.104	16.104	(1.032)	117	652381			74.78- 134.78	108.32
-----					-----			
52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.337	16.337	(1.047)	56	425151	5.51151	5.512	80.00- 120.00	100.00
16.337	16.337	(1.047)	57	1242862			264.46- 324.46	292.33
16.337	16.337	(1.047)	41	488518			53.88- 113.88	114.90
-----					-----			
53 Benzene					CAS #: 71-43-2			
16.409	16.409	(0.967)	78	480778	4.37898	4.379	80.00- 120.00	100.00
16.409	16.409	(0.967)	77	112212			0.00- 53.40	23.34
-----					-----			
56 1,2-Dichloroethane					CAS #: 107-06-2			
16.529	16.529	(0.974)	62	387141	4.83375	4.834	80.00- 120.00	100.00
16.529	16.529	(0.974)	64	128138			2.90- 62.90	33.10
-----					-----			
57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.977)	57	187773	5.09983	5.100	80.00- 120.00	100.00
16.578	16.578	(0.977)	100	73712			14.70- 74.70	39.26
16.578	16.578	(0.977)	43	436248			159.65- 219.65	232.33
-----					-----			
59 Trichloroethene					CAS #: 79-01-6			
17.373	17.373	(1.024)	130	297423	3.79950	3.799	80.00- 120.00	100.00
17.373	17.373	(1.024)	95	251560			48.43- 108.43	84.58
17.373	17.373	(1.024)	97	174334			20.03- 80.03	58.61
-----					-----			
60 Methylcyclohexane					CAS #: 108-87-2			
17.614	17.614	(1.038)	83	246884	4.36972	4.370	80.00- 120.00	100.00(R)
17.614	17.614	(1.038)	55	285546			57.78- 117.78	115.66
17.614	17.614	(1.038)	56	87988			0.00- 58.27	35.64
-----					-----			
61 1,2-Dichloropropane					CAS #: 78-87-5			
17.830	17.831	(1.051)	63	173366	4.24843	4.248	80.00- 120.00	100.00
17.830	17.831	(1.051)	62	121762			41.39- 101.39	70.23
17.830	17.831	(1.051)	41	191847			30.08- 90.08	110.66
-----					-----			

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
62 1,4-Dioxane						CAS #: 123-91-1			
17.951	17.951	(1.058)	88	106912	3.87878	3.879	80.00-	120.00	100.00
17.951	17.951	(1.058)	58	89515			41.23-	101.23	83.73
17.951	17.951	(1.058)	57	34262			0.00-	53.84	32.05

63 Bromodichloromethane						CAS #: 75-27-4			
18.264	18.264	(1.077)	83	438380	4.23988	4.240	80.00-	120.00	100.00
18.264	18.264	(1.077)	85	292089			37.91-	97.91	66.63

64 cis-1,3-Dichloropropene						CAS #: 10061-01-5			
19.108	19.108	(1.126)	75	215185	3.87450	3.874	80.00-	120.00	100.00
19.108	19.108	(1.126)	77	73939			2.56-	62.56	34.36
19.108	19.108	(1.126)	39	192700			19.94-	79.94	89.55

65 4-Methyl-2-pentanone						CAS #: 108-10-1			
19.287	19.287	(1.137)	43	467570	5.30560	5.306	80.00-	120.00	100.00
19.287	19.287	(1.137)	58	132204			7.11-	67.11	28.27
19.287	19.287	(1.137)	85	52997			0.00-	46.29	11.33

68 Toluene						CAS #: 108-88-3			
19.736	19.736	(1.163)	91	602403	4.39000	4.390	80.00-	120.00	100.00
19.736	19.736	(1.163)	92	342109			28.99-	88.99	56.79

69 trans-1,3-Dichloropropene						CAS #: 10061-02-6			
20.304	20.304	(0.907)	75	268881	4.62222	4.622	80.00-	120.00	100.00
20.304	20.304	(0.907)	77	91155			3.77-	63.77	33.90
20.304	20.304	(0.907)	39	212575			18.43-	78.43	79.06

70 1,1,2-Trichloroethane						CAS #: 79-00-5			
20.716	20.716	(0.925)	97	201152	4.09533	4.095	80.00-	120.00	100.00
20.716	20.716	(0.925)	99	122577			34.78-	94.78	60.94
20.716	20.716	(0.925)	83	157532			49.45-	109.45	78.32

71 Tetrachloroethene						CAS #: 127-18-4			
20.881	20.881	(0.933)	166	267302	3.58155	3.582	80.00-	120.00	100.00
20.881	20.881	(0.933)	129	295792			54.11-	114.11	110.66
20.881	20.881	(0.933)	131	290525			55.30-	115.30	108.69

72 2-Hexanone						CAS #: 591-78-6			
21.045	21.045	(0.940)	58	193550	4.73926	4.739	80.00-	120.00	100.00
21.045	21.045	(0.940)	43	501263			162.06-	222.06	258.98
21.045	21.045	(0.940)	100	38306			0.00-	52.96	19.79

73 Dibromochloromethane						CAS #: 124-48-1			
21.430	21.430	(0.957)	129	558388	4.30017	4.300	80.00-	120.00	100.00
21.430	21.430	(0.957)	127	441247			46.93-	106.93	79.02

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====
74 1,2-Dibromoethane					CAS #: 106-93-4			
21.705	21.705	(0.970)	107	373771	4.35055	4.350	80.00- 120.00	100.00
21.705	21.705	(0.970)	109	375669			68.26- 128.26	100.51
76 Chlorobenzene					CAS #: 108-90-7			
22.428	22.428	(1.002)	112	589737	4.24561	4.246	80.00- 120.00	100.00
22.428	22.428	(1.002)	114	181094			1.73- 61.73	30.71
22.428	22.428	(1.002)	77	311636			16.56- 76.56	52.84
77 Ethyl Benzene					CAS #: 100-41-4			
22.511	22.511	(1.006)	106	268858	4.28241	4.282	80.00- 120.00	100.00
22.490	22.511	(1.005)	91	827025			261.70- 321.70	307.61
80 m,p-Xylene					CAS #: 108-38-3			
22.676	22.676	(1.013)	106	329145	4.39319	4.393	80.00- 120.00	100.00
22.676	22.676	(1.013)	91	642396			150.71- 210.71	195.17
81 o-Xylene					CAS #: 95-47-6			
23.278	23.278	(1.040)	106	295851	4.50403	4.504	80.00- 120.00	100.00
23.278	23.278	(1.040)	91	622838			165.12- 225.12	210.52
83 Styrene					CAS #: 100-42-5			
23.298	23.298	(1.041)	104	543201	4.67841	4.678	80.00- 120.00	100.00
23.298	23.298	(1.041)	78	291513			12.29- 72.29	53.67
84 Bromoform					CAS #: 75-25-2			
23.639	23.639	(1.056)	173	368430	3.67659	3.676	80.00- 120.00	100.00
23.639	23.639	(1.056)	171	197527			23.53- 83.53	53.61
85 Cumene					CAS #: 98-82-8			
23.728	23.728	(1.060)	105	965974	4.62488	4.625	80.00- 120.00	100.00
23.728	23.751	(1.060)	120	268990			0.00- 58.84	27.85
89 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5			
24.222	24.222	(1.082)	83	433487	4.41836	4.418	80.00- 120.00	100.00
24.222	24.222	(1.082)	85	299265			37.40- 97.40	69.04
90 Propylbenzene					CAS #: 103-65-1			
24.267	24.267	(1.084)	91	1143246	4.70530	4.705	80.00- 120.00	100.00
24.267	24.267	(1.084)	120	287341			0.00- 58.05	25.13
92 4-Ethyltoluene					CAS #: 622-96-8			
24.401	24.401	(1.090)	105	982577	4.65005	4.650	80.00- 120.00	100.00
24.401	24.401	(1.090)	120	304069			2.80- 62.80	30.95
94 1,3,5-Trimethylbenzene					CAS #: 108-67-8			
24.491	24.491	(1.094)	105	801661	4.44231	4.442	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====
94 1,3,5-Trimethylbenzene (continued)								
24.491	24.491	(1.094)	120	392668			23.16- 83.16	48.98

98 1,2,4-Trimethylbenzene					CAS #: 95-63-6			
24.939	24.939	(1.114)	105	655440	4.65472	4.655	80.00- 120.00	100.00
24.939	24.939	(1.114)	120	302992			19.74- 79.74	46.23

101 1,3-Dichlorobenzene					CAS #: 541-73-1			
25.343	25.343	(1.132)	146	521213	3.79561	3.796	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	318052			31.66- 91.66	61.02
25.343	25.343	(1.132)	111	223688			6.44- 66.44	42.92

104 1,4-Dichlorobenzene					CAS #: 106-46-7			
25.433	25.433	(1.136)	146	558885	4.29750	4.298	80.00- 120.00	100.00
25.433	25.433	(1.136)	148	339526			32.25- 92.25	60.75
25.433	25.433	(1.136)	111	232967			4.82- 64.82	41.68

105 alpha-chlorotoluene					CAS #: 100-44-7			
25.589	25.590	(1.143)	91	744937	5.04401	5.044	80.00- 120.00	100.00
25.589	25.590	(1.143)	126	179642			0.00- 57.25	24.12

108 1,2-Dichlorobenzene					CAS #: 95-50-1			
25.858	25.859	(1.155)	146	509495	4.19524	4.195	80.00- 120.00	100.00
25.858	25.859	(1.155)	148	304017			31.25- 91.25	59.67
25.858	25.859	(1.155)	111	230853			7.65- 67.65	45.31

112 1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.629	27.630	(1.234)	180	211039	3.67461	3.675	80.00- 120.00	100.00
27.629	27.630	(1.234)	182	193264			66.40- 126.40	91.58

113 Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	163161	3.35927	3.359	80.00- 120.00	100.00
27.719	27.719	(1.238)	223	105354			31.93- 91.93	64.57

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e060803a.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 08-JUN-2015
Calibration Time: 14:59
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	142191	-2.31
58 1,4-Difluorobenze	530478	318287	742669	537097	1.25
75 Chlorobenzene-d5	509716	305830	713602	503183	-1.28

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 08-JUN-2015 15:44

Client ID: LCS

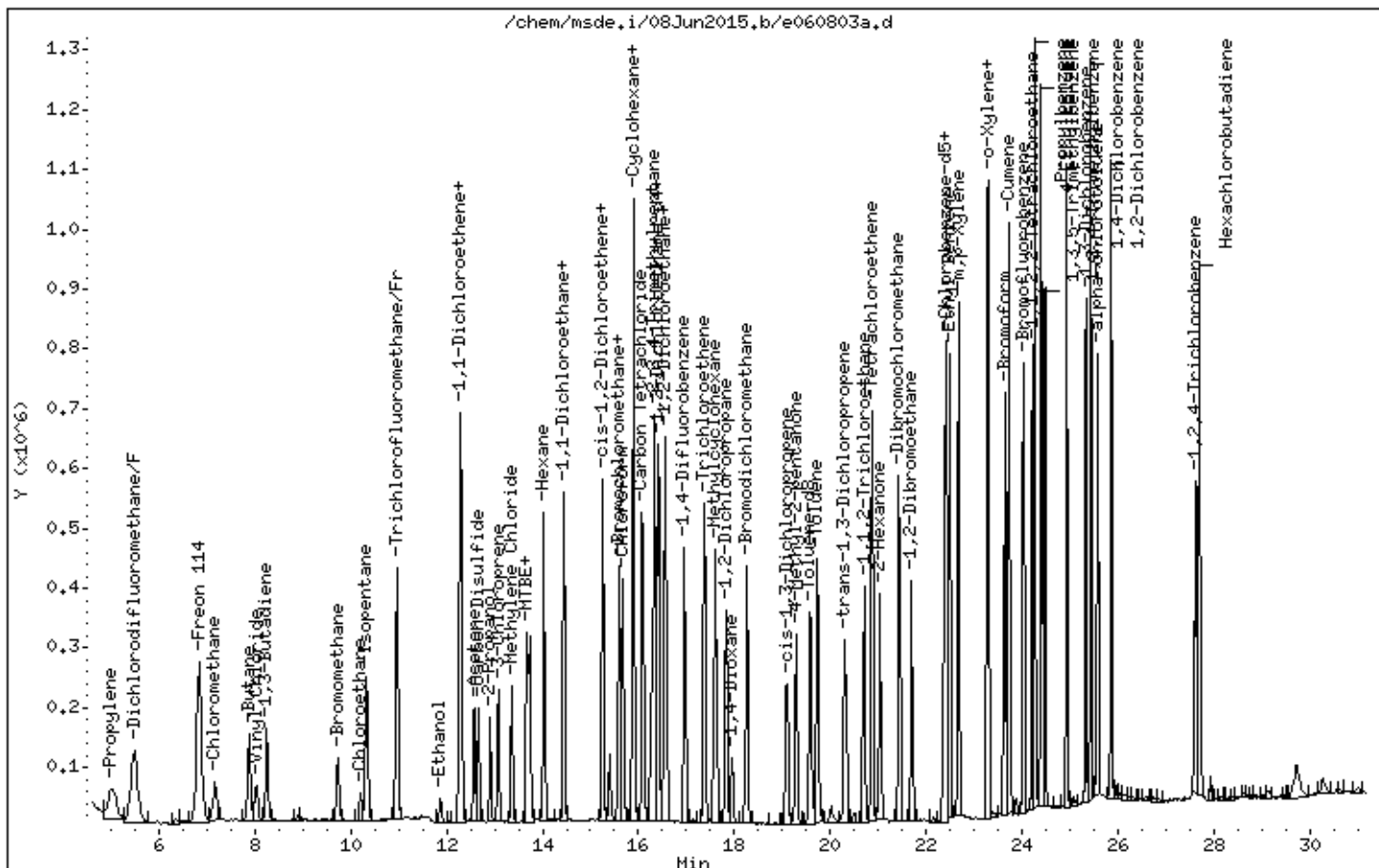
Instrument: msde.i

Sample Info: 25mL# 2716-220

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
SITE 12 RIFS

Client ID:	LCSD	Date/Time Analyzed:	6/8/15 04:24 PM
Lab ID:	1506011A-15BB	Dilution Factor:	1.00
Date/Time Collecte	NA - Not Applicable	Instrument/Filename:	msde.i / e060804a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	73
Trichloroethene	79-01-6	77

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	80-125	124
4-Bromofluorobenzene	460-00-4	83-116	86
Toluene-d8	2037-26-5	90-108	96

* % Recovery is calculated using unrounded analytical results.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 08Jun2015
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: LCSD Client Smp ID: LCSD
 Level: LOW Operator: ef
 Data Type: MS DATA SampleType: LCSD
 SpikeList File: ControlDOD.spk Quant Type: ISTD
 Sublist File: CNTRL062415.sub
 Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m
 Misc Info: 5.0ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
4 Dichlorodifluorome	5.000	5.058	101.16	59-128
2 Propylene	5.000	5.633	112.66	57-136
6 Freon 114	5.000	4.340	86.81	63-121
7 Chloromethane	5.000	5.479	109.58	59-132
10 Vinyl Chloride	5.000	5.111	102.21	64-127
11 1,3-Butadiene	5.000	5.332	106.64	66-134
12 Bromomethane	5.000	4.463	89.26	63-134
13 Chloroethane	5.000	5.091	101.81	63-127
16 Trichlorofluoromet	5.000	4.598	91.97	62-126
18 Ethanol	5.000	5.603	112.07	59-125
19 Freon 113	5.000	3.912	78.25	66-126
21 1,1-Dichloroethene	5.000	4.544	90.88	61-133
22 Acetone	5.000	4.887	97.75	58-128
23 Carbon Disulfide	5.000	4.186	83.71	57-134
25 2-Propanol	5.000	5.453	109.06	52-125
26 3-Chloroprene	5.000	4.245	84.90	71-131
29 Methylene Chloride	5.000	4.151	83.01	62-115
31 MTBE	5.000	4.842	96.83	66-126
32 trans-1,2-Dichloro	5.000	4.306	86.13	67-124
35 Hexane	5.000	5.968	119.37	63-120
37 1,1-Dichloroethane	5.000	5.103	102.07	68-126
38 Vinyl Acetate	5.000	4.781	95.63	56-139
41 cis-1,2-Dichloroet	5.000	4.674	93.47	70-121
42 2-Butanone	5.000	5.081	101.62	67-130
44 Tetrahydrofuran	5.000	6.438	128.76*	64-123
47 Chloroform	5.000	4.951	99.02	68-123
48 Cyclohexane	5.000	5.078	101.56	70-117
49 1,1,1-Trichloroeth	5.000	4.911	98.22	68-125
51 Carbon Tetrachlori	5.000	4.805	96.11	68-132
52 2,2,4-Trimethylpen	5.000	5.742	114.84	68-121
53 Benzene	5.000	4.354	87.07	69-119
57 Heptane	5.000	4.910	98.21	69-123
56 1,2-Dichloroethane	5.000	4.674	93.47	65-128

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
59 Trichloroethene	5.000	3.871	77.42	71-123
61 1,2-Dichloropropan	5.000	4.256	85.12	69-123
62 1,4-Dioxane	5.000	3.673	73.47	71-122
63 Bromodichlorometha	5.000	4.019	80.38	72-128
64 cis-1,3-Dichloropr	5.000	3.892	77.83	70-128
65 4-Methyl-2-pentano	5.000	5.229	104.59	67-130
68 Toluene	5.000	4.288	85.76	66-119
69 trans-1,3-Dichloro	5.000	4.557	91.14	75-133
70 1,1,2-Trichloroeth	5.000	4.027	80.54	73-119
72 2-Hexanone	5.000	4.571	91.42	62-128
71 Tetrachloroethene	5.000	3.632	72.64	66-124
73 Dibromochlorometha	5.000	4.172	83.44	70-130
74 1,2-Dibromoethane	5.000	4.384	87.68	74-122
76 Chlorobenzene	5.000	4.107	82.14	70-119
77 Ethyl Benzene	5.000	4.221	84.43	70-124
80 m,p-Xylene	5.000	4.369	87.37	61-134
81 o-Xylene	5.000	4.532	90.64	67-125
83 Styrene	5.000	4.597	91.95	73-127
84 Bromoform	5.000	3.603	72.05	66-139
85 Cumene	5.000	4.400	88.00	68-124
89 1,1,2,2-Tetrachlor	5.000	4.488	89.76	65-127
90 Propylbenzene	5.000	4.643	92.86	69-123
92 4-Ethyltoluene	5.000	4.596	91.92	67-129
94 1,3,5-Trimethylben	5.000	4.297	85.93	67-130
98 1,2,4-Trimethylben	5.000	4.602	92.03	66-132
101 1,3-Dichlorobenzen	5.000	3.812	76.25	65-130
104 1,4-Dichlorobenzen	5.000	4.294	85.87	60-131
105 alpha-chlorotoluen	5.000	4.920	98.41	50-147
108 1,2-Dichlorobenzen	5.000	4.236	84.72	63-129
112 1,2,4-Trichloroben	5.000	3.570	71.40	55-142
113 Hexachlorobutadien	5.000	3.447	68.94	56-138
114 Naphthalene	0.5000	0.000	*	57-138
14 Isopentane	5.000	5.063	101.26*	0-0
9 Butane	5.000	5.853	117.06	64-129
60 Methylcyclohexane	5.000	4.445	88.90*	0-0

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 54 1,2-Dichloroethane	5.000	6.201	124.03	80-125
\$ 67 Toluene-d8	5.000	4.812	96.24	90-108
\$ 87 Bromofluorobenzene	5.000	4.280	85.60	83-116

Eurofins Air Toxics Inc.

EPA TO-15/Modified TO14A

Data file : /chem/msde.i/08Jun2015.b/e060804a.d
 Lab Smp Id: LCSD Client Smp ID: LCSD
 Inj Date : 08-JUN-2015 16:24
 Operator : ef Inst ID: msde.i
 Smp Info : 25mL# 2716-220
 Misc Info : 5.0ppbv (50ppbv)
 Comment : Low-Level/GC-MS
 Method : /chem/msde.i/08Jun2015.b/e1510515b.m
 Meth Date : 08-Jun-2015 16:30 efinn Quant Type: ISTD
 Cal Date : 27-MAY-2015 11:25 Cal File: e052708.d
 Als bottle: 1 QC Sample: LCSD
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: CNTRL062415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
* 46 Bromochloromethane CAS #: 74-97-5							
15.611	15.611 (1.000)	130	138015 5.00000			80.00- 120.00	100.00
15.611	15.611 (1.000)	128	113477			46.94- 106.94	82.22
15.611	15.611 (1.000)	49	276957			103.66- 163.66	200.67
* 58 1,4-Difluorobenzene CAS #: 540-36-3							
16.963	16.963 (1.000)	114	543903 5.00000			80.00- 120.00	100.00
16.963	16.963 (1.000)	88	74591			0.00- 43.53	13.71
* 75 Chlorobenzene-d5 CAS #: 3114-55-4							
22.386	22.386 (1.000)	117	508808 5.00000			80.00- 120.00	100.00
22.386	22.386 (1.000)	82	229665			13.25- 73.25	45.14
\$ 54 1,2-Dichloroethane-d4 CAS #: 17060-07-0							
16.409	16.433 (1.051)	65	268869 6.20132	6.201		80.00- 120.00	100.00
16.409	16.433 (1.051)	67	122181			24.87- 84.87	45.44

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
\$ 67 Toluene-d8						CAS #: 2037-26-5		
19.601	19.601	(1.156)	98	449590	4.81192	4.812	80.00- 120.00	100.00
19.601	19.601	(1.156)	70	56919			0.00- 40.24	12.66
19.579	19.601	(1.154)	100	306604			39.39- 99.39	68.20

\$ 87 Bromofluorobenzene						CAS #: 460-00-4		
24.042	24.042	(1.074)	174	220478	4.28003	4.280	80.00- 120.00	100.00
24.042	24.042	(1.074)	95	341207			88.06- 148.06	154.76
24.042	24.042	(1.074)	176	206375			66.20- 126.20	93.60

2 Propylene						CAS #: 115-07-1		
5.022	4.997	(0.322)	41	164575	5.63299	5.633	80.00- 120.00	100.00
5.022	4.997	(0.322)	42	111205			38.37- 98.37	67.57
5.046	5.021	(0.323)	39	134504			42.39- 102.39	81.73

4 Dichlorodifluoromethane/Fr12						CAS #: 75-71-8		
5.479	5.455	(0.351)	85	619343	5.05784	5.058	80.00- 120.00	100.00
5.504	5.455	(0.353)	87	195976			2.12- 62.12	31.64

6 Freon 114						CAS #: 76-14-2		
6.853	6.853	(0.439)	135	406548	4.34053	4.340	80.00- 120.00	100.00
6.829	6.853	(0.437)	137	136052			1.87- 61.87	33.47

7 Chloromethane						CAS #: 74-87-3		
7.167	7.167	(0.459)	50	196320	5.47876	5.479	80.00- 120.00	100.00
7.167	7.167	(0.459)	52	60522			2.64- 62.64	30.83

9 Butane						CAS #: 106-97-8		
7.889	7.889	(0.505)	58	33035	5.85320	5.853	80.00- 120.00	100.00
7.889	7.889	(0.505)	43	318610			798.08- 858.08	964.46

10 Vinyl Chloride						CAS #: 75-01-4		
8.028	8.028	(0.514)	62	144200	5.11073	5.111	80.00- 120.00	100.00
8.010	8.028	(0.513)	64	45216			1.55- 61.55	31.36

11 1,3-Butadiene						CAS #: 106-99-0		
8.253	8.253	(0.529)	54	134343	5.33213	5.332	80.00- 120.00	100.00
8.253	8.253	(0.529)	39	159032			68.70- 128.70	118.38

12 Bromomethane						CAS #: 74-83-9		
9.729	9.729	(0.623)	94	116069	4.46284	4.463	80.00- 120.00	100.00
9.729	9.729	(0.623)	96	107516			67.78- 127.78	92.63

13 Chloroethane						CAS #: 75-00-3		
10.214	10.214	(0.654)	64	64622	5.09061	5.091	80.00- 120.00	100.00
10.214	10.214	(0.654)	49	30503			0.00- 59.93	47.20

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		CONCENTRATIONS		TARGET RANGE	RATIO
				(PPBV)	(PPBV)	ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
13 Chloroethane (continued)									
10.214	10.214	(0.654)	66	18962				2.40- 62.40	29.34

14 Isopentane CAS #: 78-78-4									
10.329	10.328	(0.662)	57	119316	5.06295	5.063		80.00- 120.00	100.00(R)
10.329	10.348	(0.662)	43	215323				113.81- 173.81	180.46
10.329	10.348	(0.662)	42	184819				97.27- 157.27	154.90

16 Trichlorofluoromethane/Fr11 CAS #: 75-69-4									
10.957	10.957	(0.702)	101	632116	4.59846	4.598		80.00- 120.00	100.00
10.957	10.957	(0.702)	103	399872				34.06- 94.06	63.26

18 Ethanol CAS #: 64-17-5									
11.871	11.871	(0.760)	45	72870	5.60336	5.603		80.00- 120.00	100.00
11.871	11.871	(0.760)	46	30603				7.61- 67.61	42.00
11.871	11.871	(0.760)	43	21445				0.00- 55.64	29.43

21 1,1-Dichloroethene CAS #: 75-35-4									
12.309	12.290	(0.788)	98	88069	4.54381	4.544		80.00- 120.00	100.00
12.309	12.290	(0.788)	61	292538				208.58- 268.58	332.17
12.309	12.290	(0.788)	96	138278				127.45- 187.45	157.01

19 Freon 113 CAS #: 76-13-1									
12.290	12.290	(0.787)	151	262719	3.91226	3.912		80.00- 120.00	100.00
12.290	12.290	(0.787)	153	165954				34.06- 94.06	63.17
12.290	12.271	(0.787)	101	346042				81.22- 141.22	131.72

22 Acetone CAS #: 67-64-1									
12.576	12.556	(0.806)	58	82320	4.88725	4.887		80.00- 120.00	100.00
12.576	12.556	(0.806)	43	407939				294.37- 354.37	495.55

23 Carbon Disulfide CAS #: 75-15-0									
12.671	12.652	(0.812)	76	341601	4.18551	4.186		80.00- 120.00	100.00

26 3-Chloroprene CAS #: 107-05-1									
13.090	13.090	(0.839)	76	46338	4.24478	4.245		80.00- 120.00	100.00
13.090	13.090	(0.839)	41	215010				276.20- 336.20	464.00

25 2-Propanol CAS #: 67-63-0									
12.919	12.918	(0.828)	45	323499	5.45289	5.453		80.00- 120.00	100.00
12.919	12.918	(0.828)	43	87520				0.00- 55.86	27.05
12.919	12.918	(0.828)	59	11258				0.00- 34.14	3.48

29 Methylene Chloride CAS #: 75-09-2									
13.357	13.356	(0.856)	84	102329	4.15069	4.151		80.00- 120.00	100.00
13.357	13.356	(0.856)	49	231357				112.26- 172.26	226.09

CONCENTRATIONS								
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====
29 Methylene Chloride (continued)								
13.357	13.356	(0.856)	51	65929			12.15- 72.15	64.43

31 MTBE CAS #: 1634-04-4								
13.674	13.674	(0.876)	73	392254	4.84159	4.842	80.00- 120.00	100.00
13.674	13.674	(0.876)	57	110181			0.00- 54.97	28.09
13.674	13.674	(0.876)	41	139424			0.00- 55.95	35.54

32 trans-1,2-Dichloroethene CAS #: 156-60-5								
13.729	13.729	(0.879)	98	89464	4.30643	4.306	80.00- 120.00	100.00
13.729	13.729	(0.879)	61	237778			175.95- 235.95	265.78
13.729	13.729	(0.879)	96	149374			121.11- 181.11	166.97

35 Hexane CAS #: 110-54-3								
14.031	14.030	(0.899)	57	267305	5.96841	5.968	80.00- 120.00	100.00
14.031	14.030	(0.899)	43	229896			35.27- 95.27	86.01
14.031	14.030	(0.899)	86	37967			0.00- 46.67	14.20

37 1,1-Dichloroethane CAS #: 75-34-3								
14.442	14.442	(0.925)	63	318293	5.10336	5.103	80.00- 120.00	100.00
14.442	14.442	(0.925)	65	97625			0.10- 60.10	30.67

38 Vinyl Acetate CAS #: 108-05-4								
14.442	14.470	(0.925)	86	39628	4.78138	4.781	80.00- 120.00	100.00
14.442	14.442	(0.925)	42	60028			58.55- 118.55	151.48
14.442	14.442	(0.925)	43	596352			1046.17-1106.17	1504.88

41 cis-1,2-Dichloroethene CAS #: 156-59-2								
15.259	15.259	(0.977)	98	110898	4.67361	4.674	80.00- 120.00	100.00
15.259	15.259	(0.977)	61	285130			155.56- 215.56	257.11
15.259	15.259	(0.977)	96	187889			124.76- 184.76	169.43

42 2-Butanone CAS #: 78-93-3								
15.240	15.259	(0.976)	72	65699	5.08119	5.081	80.00- 120.00	100.00
15.240	15.259	(0.976)	43	448858			419.99- 479.99	683.20
15.240	15.259	(0.976)	57	34598			5.97- 65.97	52.66

44 Tetrahydrofuran CAS #: 109-99-9								
15.580	15.580	(0.998)	42	250626	6.43782	6.438	80.00- 120.00	100.00(R)
15.580	15.580	(0.998)	71	58309			4.62- 64.62	23.27
15.580	15.611	(0.998)	72	58497			8.51- 68.51	23.34

47 Chloroform CAS #: 67-66-3								
15.672	15.672	(1.004)	83	438459	4.95106	4.951	80.00- 120.00	100.00
15.672	15.672	(1.004)	85	284951			36.52- 96.52	64.99

CONCENTRATIONS								
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
					(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====
48 Cyclohexane					CAS #: 110-82-7			
15.888	15.888	(1.018)	84	201799	5.07822	5.078	80.00- 120.00	100.00
15.888	15.888	(1.018)	56	322634			96.90- 156.90	159.88
15.888	15.888	(1.018)	41	241217			38.62- 98.62	119.53

49 1,1,1-Trichloroethane					CAS #: 71-55-6			
15.888	15.888	(1.018)	97	558348	4.91102	4.911	80.00- 120.00	100.00
15.888	15.888	(1.018)	99	360033			33.43- 93.43	64.48

51 Carbon Tetrachloride					CAS #: 56-23-5			
16.104	16.104	(1.032)	119	615360	4.80528	4.805	80.00- 120.00	100.00
16.073	16.104	(1.030)	117	637799			74.78- 134.78	103.65

52 2,2,4-Trimethylpentane					CAS #: 540-84-1			
16.337	16.337	(1.047)	56	429918	5.74195	5.742	80.00- 120.00	100.00
16.337	16.337	(1.047)	57	1196174			264.46- 324.46	278.23
16.337	16.337	(1.047)	41	478803			53.88- 113.88	111.37

53 Benzene					CAS #: 71-43-2			
16.409	16.409	(0.967)	78	484050	4.35361	4.354	80.00- 120.00	100.00
16.409	16.409	(0.967)	77	119635			0.00- 53.40	24.72

56 1,2-Dichloroethane					CAS #: 107-06-2			
16.530	16.529	(0.974)	62	379053	4.67354	4.674	80.00- 120.00	100.00
16.530	16.529	(0.974)	64	124063			2.90- 62.90	32.73

57 Heptane					CAS #: 142-82-5			
16.578	16.578	(0.977)	57	183087	4.91033	4.910	80.00- 120.00	100.00
16.578	16.578	(0.977)	100	71430			14.70- 74.70	39.01
16.578	16.578	(0.977)	43	442752			159.65- 219.65	241.83

59 Trichloroethene					CAS #: 79-01-6			
17.373	17.373	(1.024)	130	306867	3.87108	3.871	80.00- 120.00	100.00
17.373	17.373	(1.024)	95	259431			48.43- 108.43	84.54
17.373	17.373	(1.024)	97	169160			20.03- 80.03	55.12

60 Methylcyclohexane					CAS #: 108-87-2			
17.614	17.614	(1.038)	83	254308	4.44479	4.445	80.00- 120.00	100.00(R)
17.614	17.614	(1.038)	55	290130			57.78- 117.78	114.09
17.590	17.614	(1.037)	56	91631			0.00- 58.27	36.03

61 1,2-Dichloropropane					CAS #: 78-87-5			
17.831	17.831	(1.051)	63	175869	4.25582	4.256	80.00- 120.00	100.00
17.831	17.831	(1.051)	62	123907			41.39- 101.39	70.45
17.831	17.831	(1.051)	41	180429			30.08- 90.08	102.59

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO	
					ON-COL	FINAL			
==	=====	=====	====	=====	=====	=====	=====	=====	=====
62 1,4-Dioxane					CAS #: 123-91-1				
17.951	17.951	(1.058)	88	102534	3.67339	3.673	80.00- 120.00	100.00	
17.951	17.951	(1.058)	58	82612			41.23- 101.23	80.57	
17.951	17.951	(1.058)	57	31944			0.00- 53.84	31.15	

63 Bromodichloromethane					CAS #: 75-27-4				
18.264	18.264	(1.077)	83	420811	4.01902	4.019	80.00- 120.00	100.00	
18.264	18.264	(1.077)	85	288966			37.91- 97.91	68.67	

64 cis-1,3-Dichloropropene					CAS #: 10061-01-5				
19.108	19.108	(1.126)	75	218879	3.89170	3.892	80.00- 120.00	100.00	
19.108	19.108	(1.126)	77	68953			2.56- 62.56	31.50	
19.108	19.108	(1.126)	39	192725			19.94- 79.94	88.05	

65 4-Methyl-2-pentanone					CAS #: 108-10-1				
19.288	19.287	(1.137)	43	466688	5.22932	5.229	80.00- 120.00	100.00	
19.288	19.287	(1.137)	58	127446			7.11- 67.11	27.31	
19.288	19.287	(1.137)	85	49589			0.00- 46.29	10.63	

68 Toluene					CAS #: 108-88-3				
19.736	19.736	(1.163)	91	595840	4.28783	4.288	80.00- 120.00	100.00	
19.736	19.736	(1.163)	92	340808			28.99- 88.99	57.20	

69 trans-1,3-Dichloropropene					CAS #: 10061-02-6				
20.304	20.304	(0.907)	75	268037	4.55678	4.557	80.00- 120.00	100.00	
20.304	20.304	(0.907)	77	90669			3.77- 63.77	33.83	
20.304	20.304	(0.907)	39	208659			18.43- 78.43	77.85	

70 1,1,2-Trichloroethane					CAS #: 79-00-5				
20.716	20.716	(0.925)	97	199998	4.02683	4.027	80.00- 120.00	100.00	
20.716	20.716	(0.925)	99	126737			34.78- 94.78	63.37	
20.716	20.716	(0.925)	83	155566			49.45- 109.45	77.78	

71 Tetrachloroethene					CAS #: 127-18-4				
20.881	20.881	(0.933)	166	274085	3.63183	3.632	80.00- 120.00	100.00	
20.881	20.881	(0.933)	129	291036			54.11- 114.11	106.18	
20.881	20.881	(0.933)	131	281738			55.30- 115.30	102.79	

72 2-Hexanone					CAS #: 591-78-6				
21.046	21.045	(0.940)	58	188771	4.57113	4.571	80.00- 120.00	100.00	
21.046	21.045	(0.940)	43	509489			162.06- 222.06	269.90	
21.046	21.045	(0.940)	100	44430			0.00- 52.96	23.54	

73 Dibromochloromethane					CAS #: 124-48-1				
21.430	21.430	(0.957)	129	547804	4.17203	4.172	80.00- 120.00	100.00	
21.430	21.430	(0.957)	127	428335			46.93- 106.93	78.19	

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPBV)	(PPBV)	(PPBV)	(PPBV)		
==	=====	=====	====	=====	=====	=====	=====	=====	=====
74 1,2-Dibromoethane									
							CAS #: 106-93-4		
21.705	21.705	(0.970)	107	380858	4.38403	4.384	80.00- 120.00	100.00	
21.705	21.705	(0.970)	109	369764			68.26- 128.26	97.09	

76 Chlorobenzene									
							CAS #: 108-90-7		
22.428	22.428	(1.002)	112	576879	4.10714	4.107	80.00- 120.00	100.00	
22.428	22.428	(1.002)	114	178186			1.73- 61.73	30.89	
22.428	22.428	(1.002)	77	305911			16.56- 76.56	53.03	

77 Ethyl Benzene									
							CAS #: 100-41-4		
22.490	22.511	(1.005)	106	267993	4.22144	4.221	80.00- 120.00	100.00	
22.490	22.511	(1.005)	91	834206			261.70- 321.70	311.28	

80 m,p-Xylene									
							CAS #: 108-38-3		
22.677	22.676	(1.013)	106	330972	4.36874	4.369	80.00- 120.00	100.00	
22.677	22.676	(1.013)	91	661499			150.71- 210.71	199.87	

81 o-Xylene									
							CAS #: 95-47-6		
23.278	23.278	(1.040)	106	301026	4.53215	4.532	80.00- 120.00	100.00	
23.278	23.278	(1.040)	91	625480			165.12- 225.12	207.78	

83 Styrene									
							CAS #: 100-42-5		
23.299	23.298	(1.041)	104	539747	4.59727	4.597	80.00- 120.00	100.00	
23.299	23.298	(1.041)	78	292761			12.29- 72.29	54.24	

84 Bromoform									
							CAS #: 75-25-2		
23.639	23.639	(1.056)	173	365059	3.60268	3.603	80.00- 120.00	100.00	
23.639	23.639	(1.056)	171	198115			23.53- 83.53	54.27	

85 Cumene									
							CAS #: 98-82-8		
23.728	23.728	(1.060)	105	929307	4.40014	4.400	80.00- 120.00	100.00	
23.728	23.751	(1.060)	120	266230			0.00- 58.84	28.65	

89 1,1,2,2-Tetrachloroethane									
							CAS #: 79-34-5		
24.222	24.222	(1.082)	83	445221	4.48779	4.488	80.00- 120.00	100.00	
24.222	24.222	(1.082)	85	303518			37.40- 97.40	68.17	

90 Propylbenzene									
							CAS #: 103-65-1		
24.267	24.267	(1.084)	91	1140760	4.64317	4.643	80.00- 120.00	100.00	
24.267	24.267	(1.084)	120	302425			0.00- 58.05	26.51	

92 4-Ethyltoluene									
							CAS #: 622-96-8		
24.401	24.401	(1.090)	105	982007	4.59597	4.596	80.00- 120.00	100.00	
24.401	24.401	(1.090)	120	311353			2.80- 62.80	31.71	

94 1,3,5-Trimethylbenzene									
							CAS #: 108-67-8		
24.469	24.491	(1.093)	105	784042	4.29665	4.297	80.00- 120.00	100.00	

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS		TARGET RANGE	RATIO
					ON-COL	FINAL		
==	=====	=====	====	=====	=====	=====	=====	=====
94 1,3,5-Trimethylbenzene (continued)								
24.491	24.491	(1.094)	120	387668			23.16- 83.16	49.44

98 1,2,4-Trimethylbenzene					CAS #: 95-63-6			
24.940	24.939	(1.114)	105	655223	4.60175	4.602	80.00- 120.00	100.00
24.940	24.939	(1.114)	120	300394			19.74- 79.74	45.85

101 1,3-Dichlorobenzene					CAS #: 541-73-1			
25.343	25.343	(1.132)	146	529382	3.81248	3.812	80.00- 120.00	100.00
25.343	25.343	(1.132)	148	316064			31.66- 91.66	59.70
25.343	25.343	(1.132)	111	215513			6.44- 66.44	40.71

104 1,4-Dichlorobenzene					CAS #: 106-46-7			
25.433	25.433	(1.136)	146	564616	4.29358	4.294	80.00- 120.00	100.00
25.433	25.433	(1.136)	148	333389			32.25- 92.25	59.05
25.433	25.433	(1.136)	111	226615			4.82- 64.82	40.14

105 alpha-chlorotoluene					CAS #: 100-44-7			
25.590	25.590	(1.143)	91	734828	4.92056	4.920	80.00- 120.00	100.00
25.590	25.590	(1.143)	126	169606			0.00- 57.25	23.08

108 1,2-Dichlorobenzene					CAS #: 95-50-1			
25.859	25.859	(1.155)	146	520219	4.23619	4.236	80.00- 120.00	100.00
25.859	25.859	(1.155)	148	308385			31.25- 91.25	59.28
25.859	25.859	(1.155)	111	223352			7.65- 67.65	42.93

112 1,2,4-Trichlorobenzene					CAS #: 120-82-1			
27.630	27.630	(1.234)	180	207312	3.56980	3.570	80.00- 120.00	100.00
27.630	27.630	(1.234)	182	199276			66.40- 126.40	96.12

113 Hexachlorobutadiene					CAS #: 87-68-3			
27.719	27.719	(1.238)	225	169302	3.44715	3.447	80.00- 120.00	100.00
27.719	27.719	(1.238)	223	107622			31.93- 91.93	63.57

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: msde.i	Calibration Date: 08-JUN-2015
Lab File ID: e060804a.d	Calibration Time: 14:59
Lab Smp Id: LCSD	Client Smp ID: LCSD
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: AIR
Operator: ef	
Method File: /chem/msde.i/08Jun2015.b/e15l0515b.m	
Misc Info: 5.0ppbv (50ppbv)	

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	145549	87329	203769	138015	-5.18
58 1,4-Difluorobenze	530478	318287	742669	543903	2.53
75 Chlorobenzene-d5	509716	305830	713602	508808	-0.18

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
46 Bromochloromethan	15.61	15.28	15.94	15.61	0.00
58 1,4-Difluorobenze	16.96	16.63	17.29	16.96	0.00
75 Chlorobenzene-d5	22.39	22.06	22.72	22.39	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.

Date : 08-JUN-2015 16:24

Client ID: LCSD

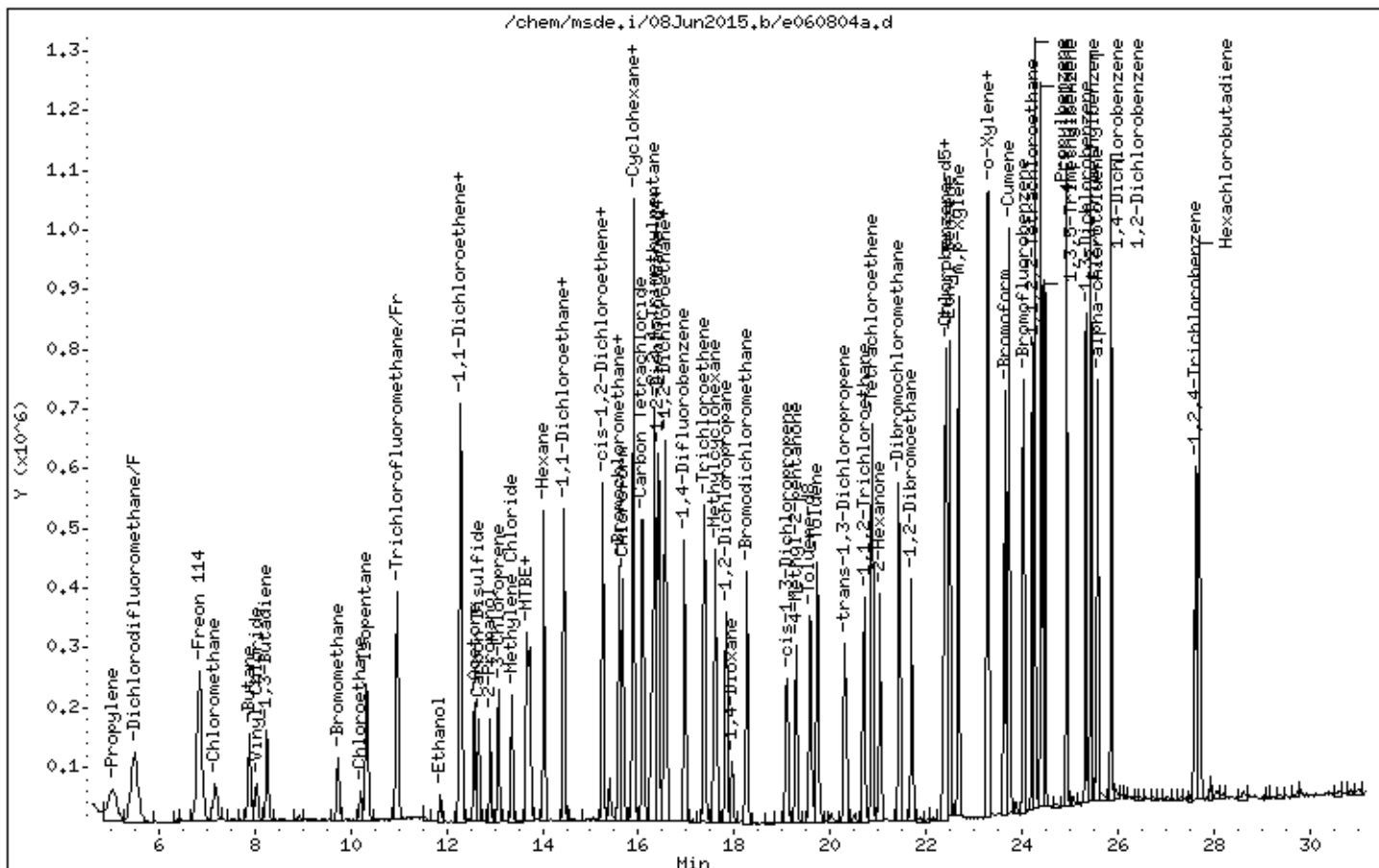
Instrument: msde.i

Sample Info: 25mL# 2716-220

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



BFB Verification of 176/174 m/z Ratio: $(\frac{1673.3}{1671.4}) \times 100 = 99.55$

Tekmar Purge Flow: N/A

Vacuum: $8.88e-6$

IS/S Std. #:	2716-280	Exp. Date:	7/12/15
BCM	14784	Sample	15162
1,4-DFB	538787	Sample	595851
CB-D5	498718	Sample	55227

Verified CCV IS vs ICAL mid-point (-40% D): 5

File ID: 20150503

Compound: 104502-18

Initials: EA

Calculation Check:

ppbv of compound = $\frac{\text{Area Sample}}{\text{Area IS}} \times \text{Conc IS} \times \text{RRF}$

$(\frac{450162}{538787}) \times (5.000) \times (0.85871) = 4.864$

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

Method Name: 2151051515/155015A

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	206501	ZFB - Time check	2097a	50 inHg	2µL	1.00	EA	6/5/15	0826	EA	
X	02	CV (50µL)	2716-280	50 inHg	25µL	1.00	EA		0924	EA	Exp. 2/1/15
✓	03	CV (50µL)	2716-280	50 inHg	25µL	1.00	EA		1088	EA	Exp. 8/1/15
✓	04	CV (50µL)	2716-280	50 inHg	25µL	1.00	EA		1052	EA	Exp. 7/1/15
✓	05	CV (50µL)	2716-280	50 inHg	25µL	1.00	EA		1137	EA	Exp. 7/8/15
X	06	LAB Blank	349164	Hand	250µL	1.00	EA		1239	EA	
X	07	LAB Blank	349164	Hand	250µL	1.00	EA		1306	EA	
✓	08	15000A - 01A	60224	4.1 inHg, 5.2 inHg	250µL	1.57	EA		1421	EA	Exp. 2/1/15
✓	09	06A	12940	4.7 inHg, 8.1 inHg	25µL	16.0	EA		1502	EA	Exp. 2/1/15
✓	10	07A	3724	4.3 inHg, 5.2 inHg	25µL	15.8	EA		1633	EA	Exp. 2/1/15
✓	11	15000A - 01A	611204	8.9 inHg, 3.1 inHg	250µL	1.55	EA		1805	EA	Exp. 2/1/15
✓	12	10A	35138	4.9 inHg, 5.8 inHg	1.00	1.00	EA		1910	EA	Exp. 2/1/15
✓	13	10A	612006	5.7 inHg, 5.2 inHg	1.07	1.07	EA		2037	EA	Exp. 2/1/15
✓	14	10A	1		1.07	1.07	EA		2129	EA	Exp. 2/1/15

Reviewed: EA Date: 6/5/15

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	15 1501011-08A 347429	1501011-08A	347429	4.14 5.2 psia Humid	250ml	1.57	EA	6/8/15	12:15	EA	
✓	16 No							6/8/15	14:01	EA	
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											

Reviewed EA

Date 6/8/15

BFB Verification of 176/174 m/z Ratio:	591652 / 524928 ratio 95.59
Tekmar Purge Flow:	N/A
Vacuum:	N/A

IS/S Std. #:	29110-136	Exp. Date:	7/14/15
BCM	41 148549	Sim 151165	
14-DFB	530472	586825	
CB-D5	509702	572335	

Verified CCV IS vs ICal mid-point (-40%D): SR

File ID:	TEL0802
Compound:	Toluene 18
Initials:	SR

Calculation Check:

ppbv of compound = $\frac{\text{Area}_{\text{Sample}} \times \text{Conc}_{\text{IS}}}{\text{Area}_{\text{IS}} \times \text{RRF}}$ = $\frac{475699}{530472} \times \frac{5.000}{0.85991}$ = 5.220

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

Reported Result: 5.220

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

Method Name: TEL0802 / TEL0802

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	Bekebel	SRB TUNE CHECK	2099-291	5.0 psi	2µl	1.00	SR	6/8/15	1441	SR	
✓		02 (21 (50 psi))	2100-289	5.0 psi	25µl	1.00	SR		1469	SR	SR 7/11/15 and 1 car
✓		03 (22 (50 psi))	2100-290	5.0 psi	25µl	1.00	SR		1544	SR	SR 7/6/15 and 1 car
✓		04 (23 (50 psi))	2100-290	5.0 psi	25µl	1.00	SR		1624	EA	SR 7/8/15
✓		05 Lab Blank	35248	Humid	20µl	1.00	EA		1806	EA	SL only 1st and 2nd
✓		06 1501011A - 09A	921	5.5 psi - 5.1 psi	25µl	1.05	EA		1409	EA	1st sample OK 2nd sample OK 3rd sample OK
✓		07 - 09A		5.5 psi	25µl	1.05	EA		1003	EA	1st sample OK 2nd sample OK 3rd sample OK
✓		08 - 10A	1452	5.5 psi	25µl	1.03	EA		1054	EA	1st sample OK 2nd sample OK 3rd sample OK
✓		09 - 10A		5.5 psi	25µl	1.03	EA		1142	EA	1st sample OK 2nd sample OK 3rd sample OK
✓		10 - 12A	1591	5.5 psi	25µl	1.02	EA		2008	EA	1st sample OK 2nd sample OK 3rd sample OK
		11 Lab Blank	34764	Humid	25µl	1.00	EA	6/9/15		EA	

Reviewed

Date

6/9/15

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/15May2015.b/e051501.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 15-MAY-2015 09:12
 Operator : ef Inst ID: msde.i
 Smp Info : 2.0uL #2299-791; BFB; BFB
 Misc Info : 50ng
 Comment :
 Method : /var/chem/msde.i/15May2015.b/bfb60.m
 Meth Date : 15-May-2015 09:29 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

CONCENTRATIONS

RT	EXP RT	DLT RT	MASS	RESPONSE (ug/L)	ON-COL	FINAL	TARGET RANGE	RATIO
1	bfb							
							CAS #: 460-00-4	
6.235	6.235	0.000	95	899136			100.00- 100.00	100.00
6.235	6.235	0.000	50	215904			8.00- 40.00	24.01
6.235	6.235	0.000	75	484493			30.00- 66.00	53.88
6.235	6.235	0.000	96	56895			5.00- 9.00	6.33
6.235	6.235	0.000	173	0			0.00- 1.99	0.00
6.235	6.235	0.000	174	724672			50.00- 120.00	80.60
6.235	6.235	0.000	175	54958			4.00- 9.00	7.58
6.235	6.235	0.000	176	709757			93.00- 101.00	97.94
6.235	6.235	0.000	177	46589			5.00- 9.00	6.56

Data File: /var/chem/msde.i/15May2015.b/e051501.d

Page 1

Date : 15-MAY-2015 09:12

Client ID: BFB

Instrument: msde.i

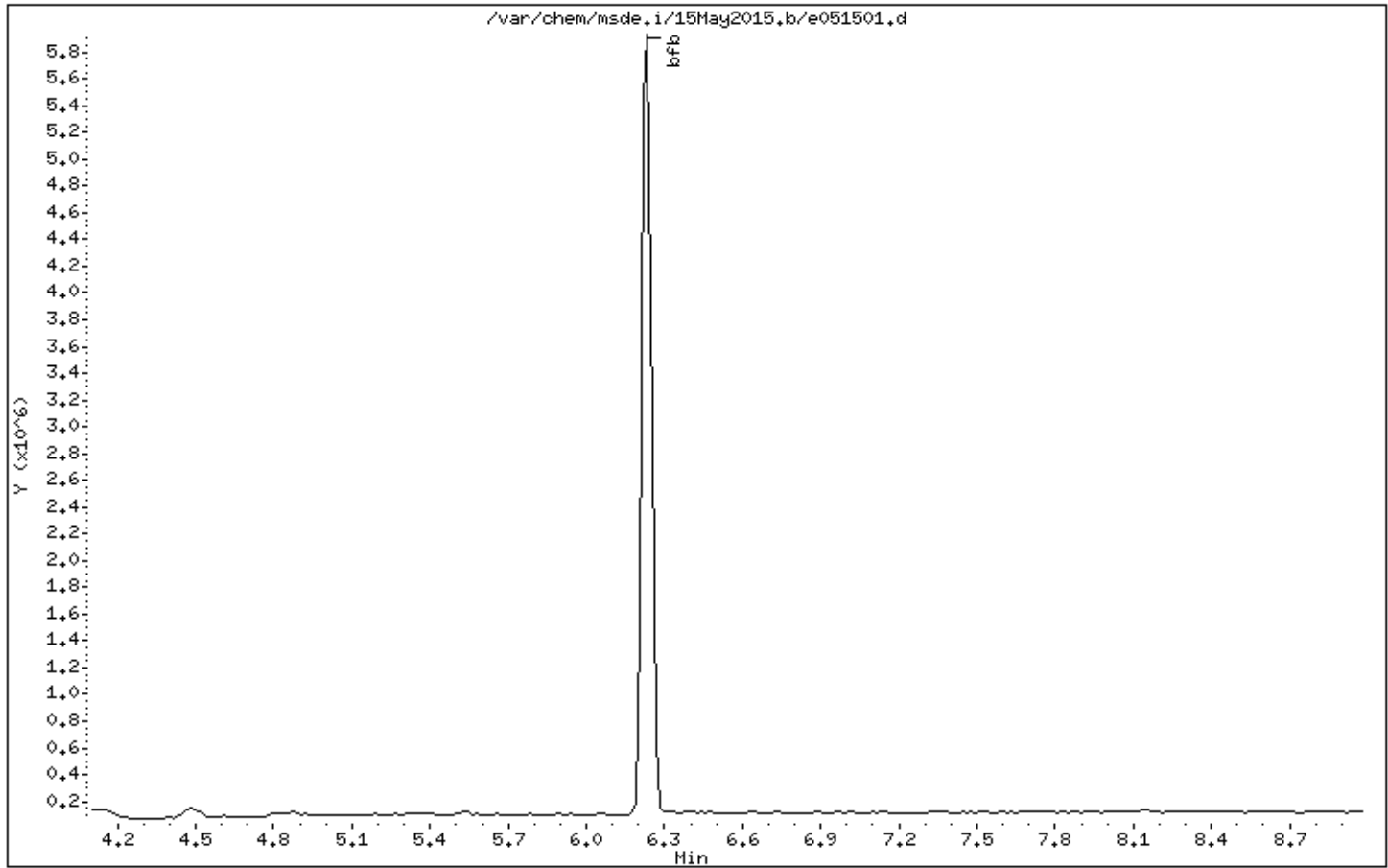
Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Date : 15-MAY-2015 09:12

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

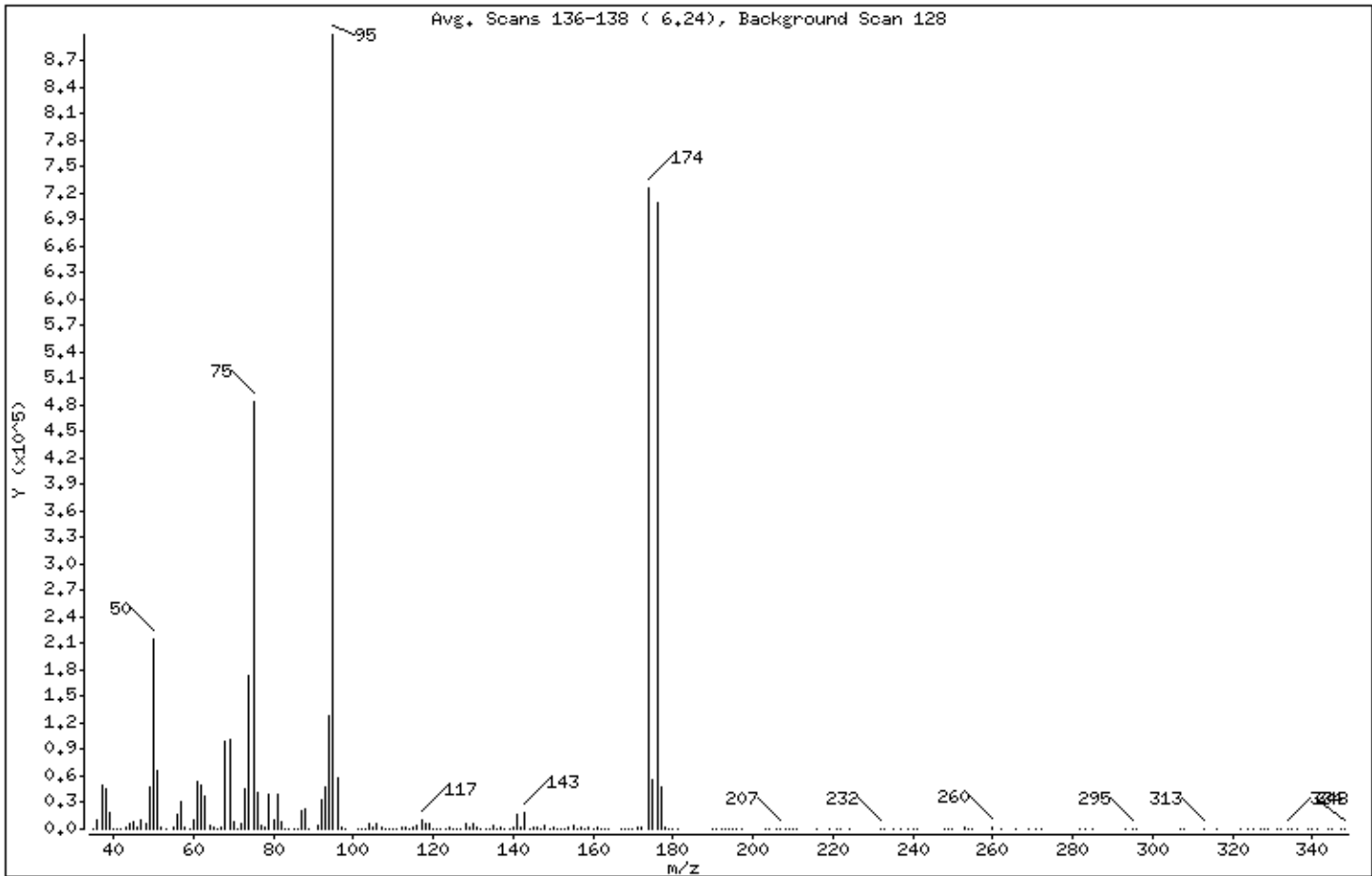
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

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	24.01
75	30.00 - 66.00% of mass 95	53.88
96	5.00 - 9.00% of mass 95	6.33
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	80.60
175	4.00 - 9.00% of mass 174	6.11 (7.58)
176	93.00 - 101.00% of mass 174	78.94 (97.94)
177	5.00 - 9.00% of mass 176	5.18 (6.56)

Date : 15-MAY-2015 09:12

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e051501.d

Spectrum: Avg. Scans 136-138 (6.24), Background Scan 128

Location of Maximum: 95.00

Number of points: 208

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35,00	48	89,00	44	145,00	1902	222,00	114
36,00	9887	91,00	4718	146,00	1597	224,00	91
37,00	49648	92,00	33024	147,00	865	232,00	595
38,00	45328	93,00	48232	148,00	3222	233,00	315
39,00	17944	94,00	127760	149,00	821	235,00	121
40,00	652	95,00	899136	150,00	1377	237,00	103
41,00	499	96,00	56888	151,00	273	239,00	192
42,00	261	97,00	1733	152,00	757	240,00	101
43,00	1074	98,00	138	153,00	1033	241,00	84
44,00	6600	101,00	132	154,00	1064	248,00	10
45,00	8653	102,00	330	155,00	3209	249,00	21
46,00	1038	103,00	596	156,00	370	250,00	179
47,00	9648	104,00	5664	157,00	2450	253,00	1080
48,00	6998	105,00	2089	158,00	745	254,00	172
49,00	47112	106,00	5361	159,00	1820	255,00	560
50,00	215872	107,00	1137	160,00	2	260,00	1293
51,00	66888	108,00	242	161,00	1972	262,00	286
52,00	2904	109,00	154	162,00	473	266,00	43
53,00	473	110,00	922	163,00	84	269,00	854
55,00	2902	111,00	1022	164,00	134	271,00	166
56,00	17520	112,00	1278	167,00	281	272,00	1
57,00	31160	113,00	1112	168,00	205	282,00	84
58,00	1135	114,00	61	169,00	798	283,00	163
59,00	734	115,00	1205	170,00	575	285,00	68
60,00	10871	116,00	4919	171,00	1233	293,00	69
61,00	53968	117,00	9438	172,00	1892	295,00	208
62,00	48920	118,00	5222	174,00	724672	296,00	45
63,00	37120	119,00	6841	175,00	54952	307,00	62
64,00	3620	120,00	314	176,00	709696	308,00	36
65,00	1630	121,00	118	177,00	46584	313,00	236
66,00	499	122,00	357	178,00	1665	316,00	39
67,00	2550	123,00	475	179,00	139	322,00	161
68,00	99408	124,00	1113	180,00	55	324,00	215
69,00	100536	125,00	720	181,00	341	325,00	160
70,00	7786	126,00	929	190,00	49	327,00	221

Date : 15-MAY-2015 09:12

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e051501.d

Spectrum: Avg. Scans 136-138 (6.24), Background Scan 128

Location of Maximum: 95.00

Number of points: 208

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	397	127.00	373	191.00	457	328.00	259
72.00	5308	128.00	5378	192.00	30	329.00	47
73.00	46352	129.00	1786	193.00	391	331.00	92
74.00	174400	130.00	5517	194.00	89	332.00	147
75.00	484480	131.00	2175	195.00	243	334.00	755
76.00	41264	132.00	607	196.00	42	335.00	139
77.00	5062	133.00	829	197.00	112	336.00	384
78.00	1202	134.00	432	203.00	141	339.00	147
79.00	38984	135.00	3192	204.00	290	340.00	78
80.00	10924	136.00	688	206.00	235	341.00	62
81.00	38336	137.00	2954	207.00	942	344.00	181
82.00	7864	138.00	100	208.00	273	345.00	87
83.00	999	139.00	577	209.00	339	347.00	46
84.00	79	140.00	1079	210.00	93	348.00	45
85.00	200	141.00	16210	211.00	259		
86.00	511	142.00	1733	216.00	67		
87.00	21104	143.00	18080	219.00	74		
88.00	22480	144.00	913	221.00	224		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/18May2015.b/e051801.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 18-MAY-2015 09:02
 Operator : ef Inst ID: msde.i
 Smp Info : 2.0uL #2299-791; BFB; BFB
 Misc Info : 50ng
 Comment :
 Method : /var/chem/msde.i/18May2015.b/bfb60.m
 Meth Date : 18-May-2015 09:18 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

CONCENTRATIONS								
RT	EXP RT	DLT RT	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
					(ug/L)	(ug/L)		
==	=====	=====	====	=====	=====	=====	=====	=====
1 bfb				CAS #: 460-00-4				
6.204	6.235	-0.031	95	941914			100.00- 100.00	100.00
6.204	6.235	-0.031	50	236861			8.00- 40.00	25.15
6.204	6.235	-0.031	75	509745			30.00- 66.00	54.12
6.204	6.235	-0.031	96	61451			5.00- 9.00	6.52
6.204	6.235	-0.031	173	0			0.00- 1.99	0.00
6.204	6.235	-0.031	174	685888			50.00- 120.00	72.82
6.204	6.235	-0.031	175	52984			4.00- 9.00	7.72
6.204	6.235	-0.031	176	664816			93.00- 101.00	96.93
6.204	6.235	-0.031	177	42229			5.00- 9.00	6.35

Date : 18-MAY-2015 09:02

Client ID: BFB

Instrument: msde.i

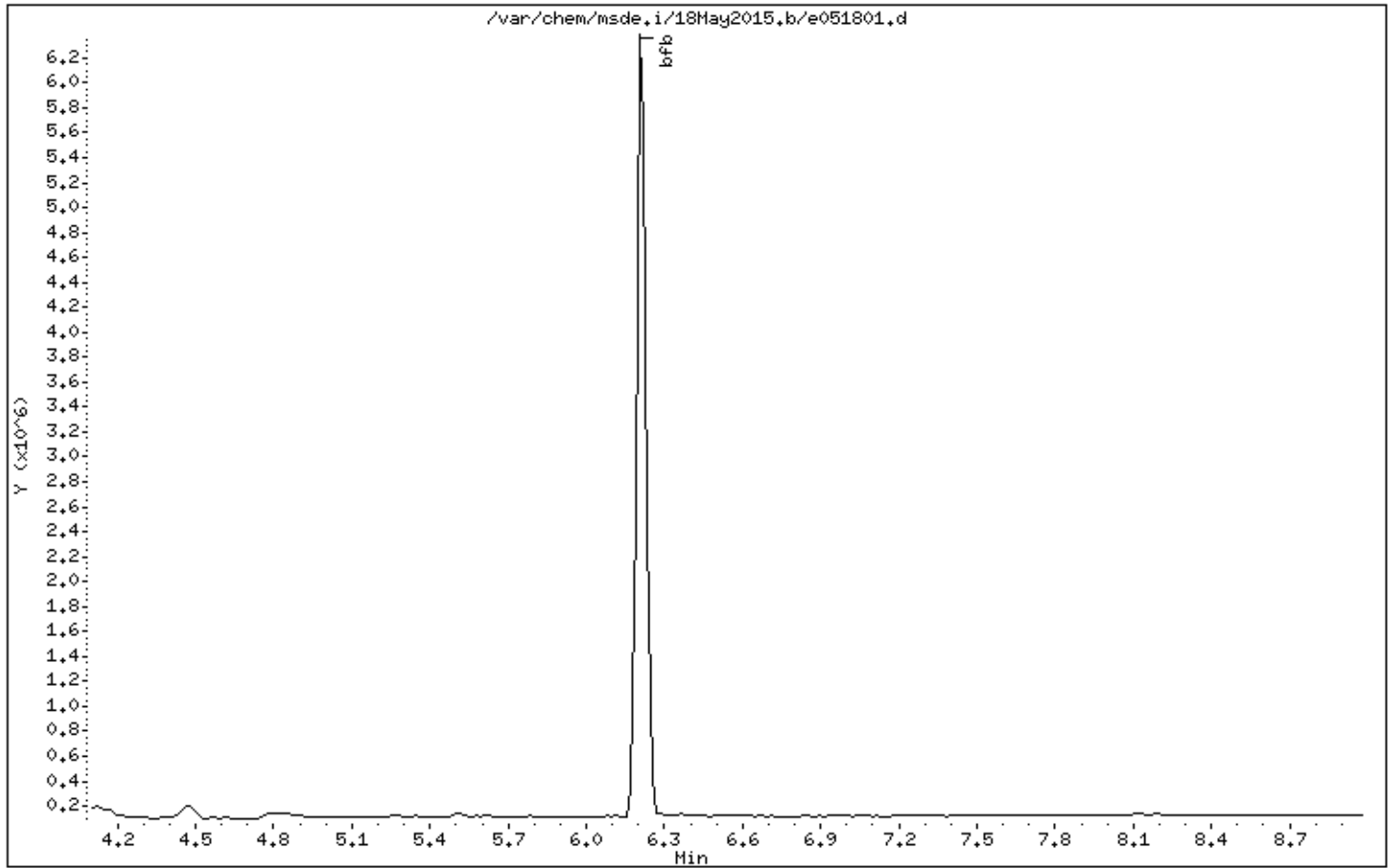
Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Date : 18-MAY-2015 09:02

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

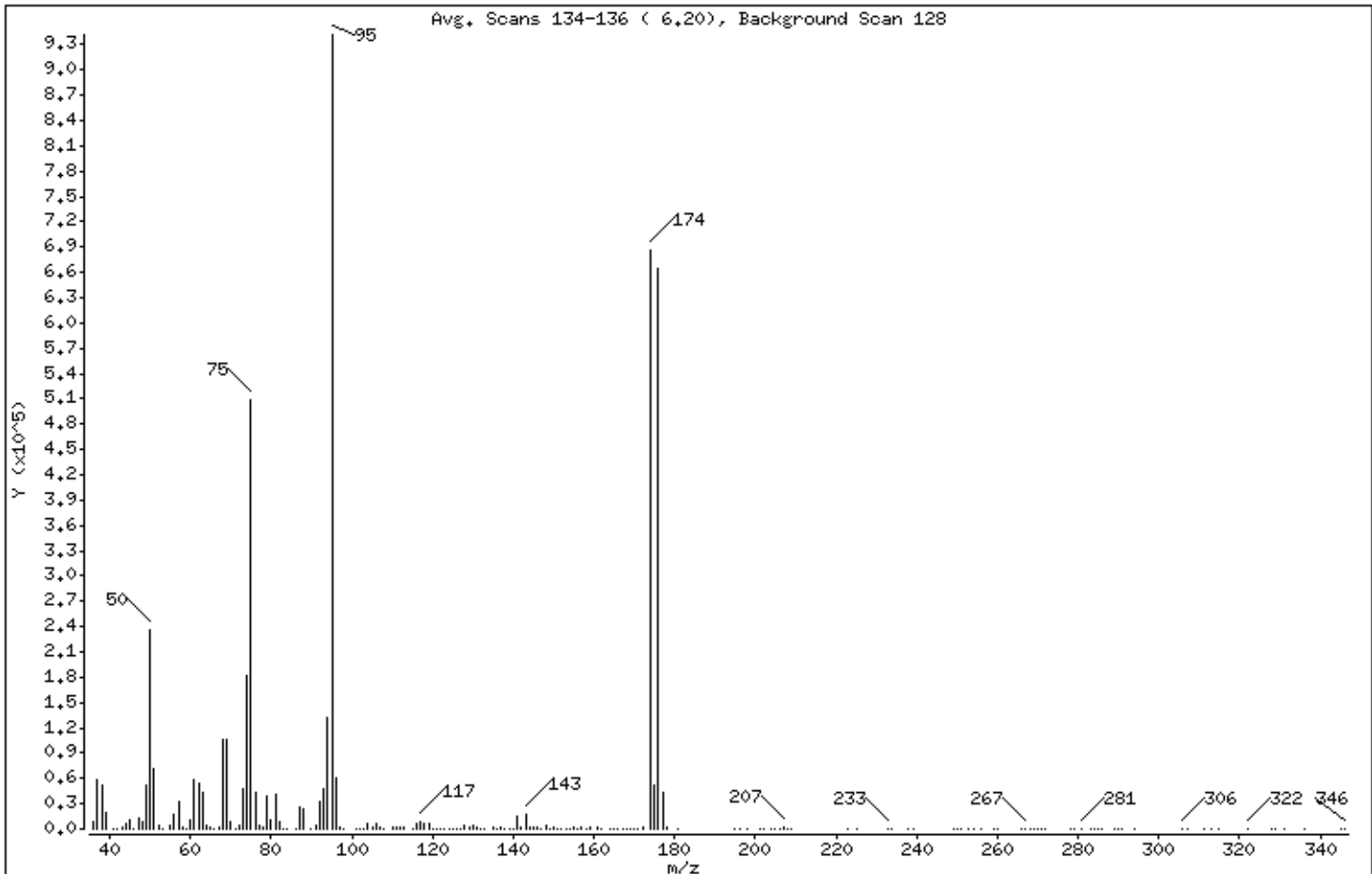
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

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	25.15
75	30.00 - 66.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.52
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	72.82
175	4.00 - 9.00% of mass 174	5.63 (7.72)
176	93.00 - 101.00% of mass 174	70.58 (96.93)
177	5.00 - 9.00% of mass 176	4.48 (6.35)

Date : 18-MAY-2015 09:02

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e051801.d

Spectrum: Avg. Scans 134-136 (6.20), Background Scan 128

Location of Maximum: 95.00

Number of points: 187

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	8843	86.00	778	139.00	519	208.00	255
37.00	57672	87.00	24912	140.00	732	209.00	40
38.00	51096	88.00	23512	141.00	15981	223.00	90
39.00	18832	90.00	297	142.00	2130	225.00	55
41.00	314	91.00	4149	143.00	17896	233.00	275
42.00	552	92.00	33040	144.00	1127	234.00	141
43.00	1134	93.00	47544	145.00	2117	238.00	79
44.00	6104	94.00	131520	146.00	2176	239.00	256
45.00	10203	95.00	941888	147.00	1021	249.00	228
46.00	351	96.00	61448	148.00	3476	250.00	180
47.00	11973	97.00	1481	149.00	1013	251.00	84
48.00	7864	98.00	474	150.00	1229	253.00	166
49.00	51184	101.00	238	151.00	368	254.00	224
50.00	236800	102.00	47	152.00	677	256.00	91
51.00	71784	103.00	235	153.00	901	259.00	36
52.00	3248	104.00	6189	154.00	921	260.00	31
53.00	657	105.00	2129	155.00	2800	266.00	74
55.00	4029	106.00	6104	156.00	389	267.00	628
56.00	18352	107.00	1328	157.00	2454	268.00	59
57.00	32880	108.00	575	158.00	168	269.00	483
58.00	1180	110.00	1138	159.00	1732	270.00	181
59.00	357	111.00	1498	161.00	1762	271.00	222
60.00	9949	112.00	1089	162.00	233	272.00	162
61.00	57616	113.00	1425	164.00	231	278.00	48
62.00	54464	115.00	632	165.00	271	279.00	47
63.00	42640	116.00	5892	166.00	290	281.00	791
64.00	4624	117.00	8426	167.00	153	283.00	243
65.00	1678	118.00	5757	168.00	200	284.00	93
66.00	148	119.00	6880	169.00	507	285.00	216
67.00	2578	120.00	81	170.00	1002	286.00	112
68.00	106632	121.00	590	171.00	460	289.00	44
69.00	105152	122.00	423	172.00	2626	290.00	215
70.00	7730	123.00	290	174.00	685888	291.00	40
71.00	258	124.00	852	175.00	52984	294.00	255
72.00	4772	125.00	516	176.00	664768	306.00	425

Date : 18-MAY-2015 09:02

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e051801.d

Spectrum: Avg. Scans 134-136 (6.20), Background Scan 128

Location of Maximum: 95.00

Number of points: 187

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	46768	126.00	786	177.00	42224	307.00	105
74.00	180800	127.00	297	178.00	1786	311.00	155
75.00	509696	128.00	4501	181.00	189	313.00	184
76.00	42728	129.00	2138	195.00	76	315.00	70
77.00	4598	130.00	4992	196.00	85	322.00	360
78.00	2614	131.00	2431	198.00	55	328.00	103
79.00	39784	132.00	462	201.00	55	329.00	17
80.00	10776	133.00	89	202.00	236	331.00	89
81.00	41272	135.00	2621	204.00	308	336.00	349
82.00	8283	136.00	101	205.00	181	345.00	67
83.00	727	137.00	2350	206.00	198	346.00	150
84.00	277	138.00	453	207.00	1644		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/27May2015.b/e052701.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 27-MAY-2015 06:11
 Operator : act Inst ID: msde.i
 Smp Info : 2.0uL #2299-791; BFB; BFB
 Misc Info : 50ng
 Comment :
 Method : /var/chem/msde.i/27May2015.b/bfb60.m
 Meth Date : 27-May-2015 06:26 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

CONCENTRATIONS

RT	EXP RT	DLT RT	MASS	RESPONSE	ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1	bfb						CAS #: 460-00-4	
6.219	6.235	-0.016	95	1307009			100.00- 100.00	100.00
6.219	6.235	-0.016	50	355811			8.00- 40.00	27.22
6.219	6.235	-0.016	75	731118			30.00- 66.00	55.94
6.219	6.235	-0.016	96	84211			5.00- 9.00	6.44
6.219	6.235	-0.016	173	0			0.00- 1.99	0.00
6.219	6.235	-0.016	174	933653			50.00- 120.00	71.43
6.219	6.235	-0.016	175	74073			4.00- 9.00	7.93
6.219	6.235	-0.016	176	903880			93.00- 101.00	96.81
6.219	6.235	-0.016	177	57457			5.00- 9.00	6.36

Date : 27-MAY-2015 06:11

Client ID: BFB

Instrument: msde.i

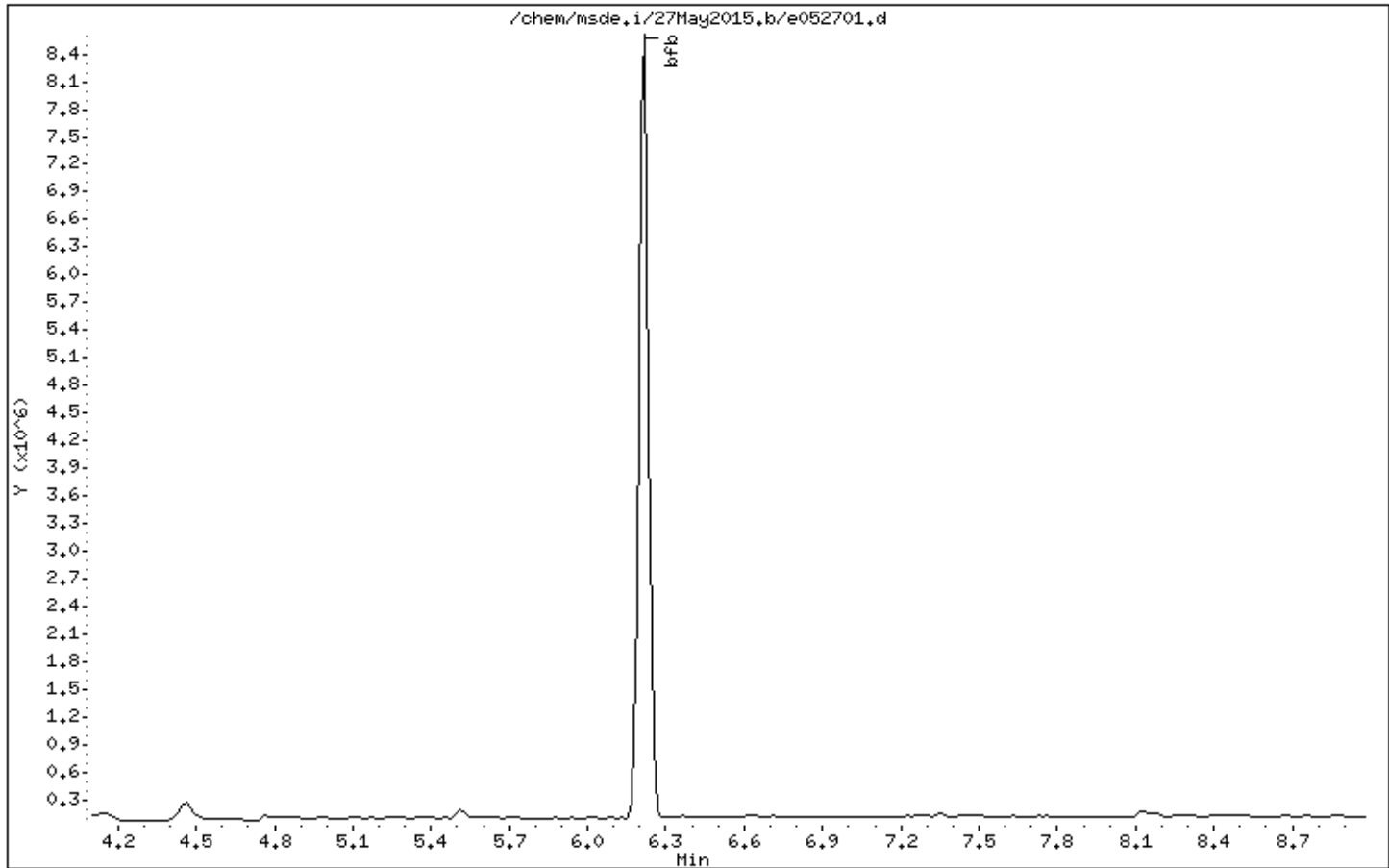
Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00



Date : 27-MAY-2015 06:11

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

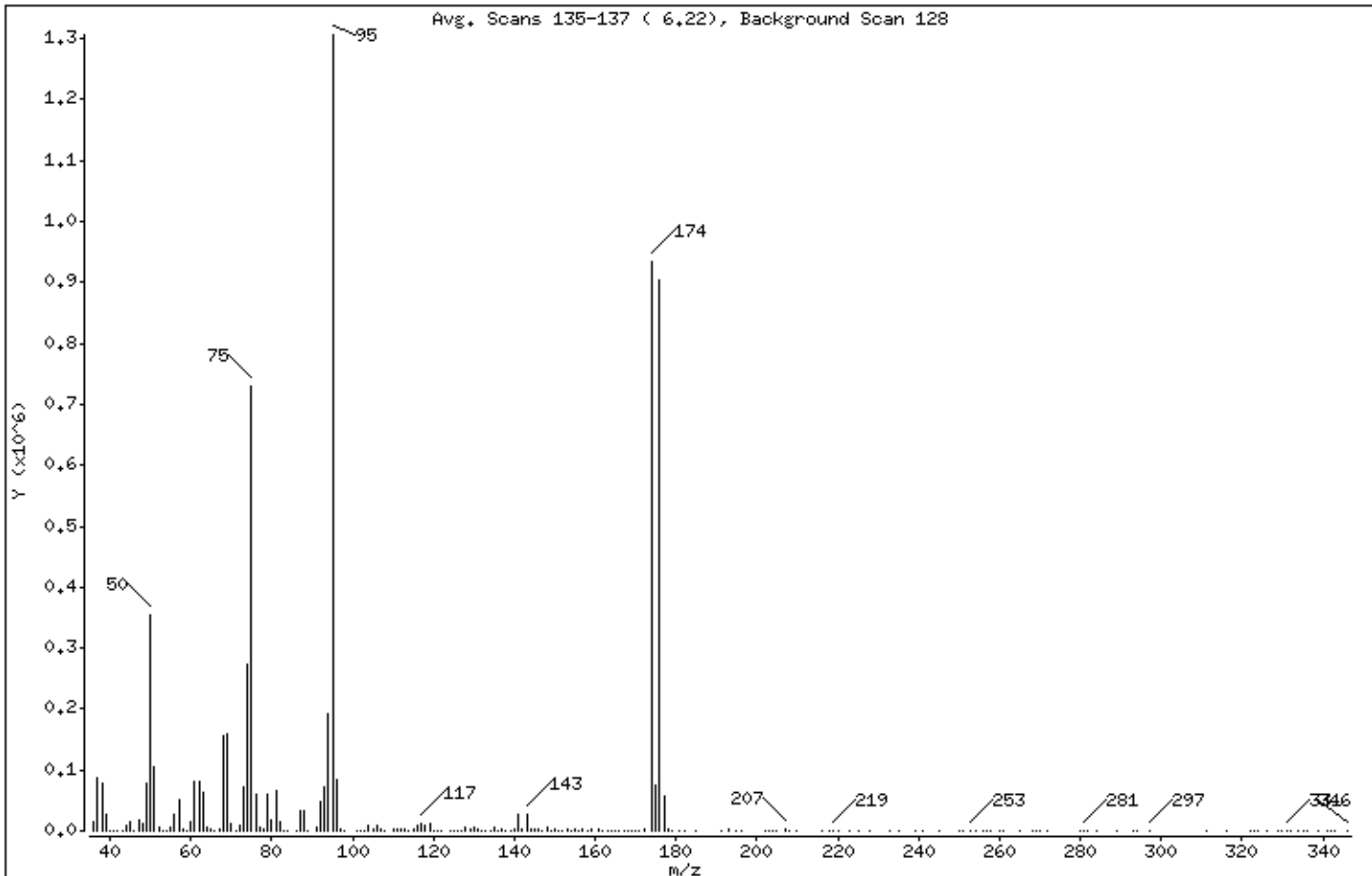
Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

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	27.22
75	30.00 - 66.00% of mass 95	55.94
96	5.00 - 9.00% of mass 95	6.44
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	71.43
175	4.00 - 9.00% of mass 174	5.67 (7.93)
176	93.00 - 101.00% of mass 174	69.16 (96.81)
177	5.00 - 9.00% of mass 176	4.40 (6.36)

Date : 27-MAY-2015 06:11

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00

Data File: e052701.d

Spectrum: Avg. Scans 135-137 (6.22), Background Scan 128

Location of Maximum: 95.00

Number of points: 202

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	15826	88.00	33128	144.00	1842	220.00	36
37.00	87672	89.00	317	145.00	3354	223.00	11
38.00	77584	91.00	6674	146.00	2949	225.00	109
39.00	28336	92.00	48960	147.00	1003	228.00	34
40.00	619	93.00	72216	148.00	4518	233.00	131
41.00	254	94.00	193152	149.00	1442	235.00	99
42.00	537	95.00	1306624	150.00	2410	239.00	49
43.00	976	96.00	84208	151.00	262	241.00	125
44.00	10243	97.00	2101	152.00	761	245.00	33
45.00	14828	98.00	411	153.00	1722	250.00	127
46.00	1158	101.00	77	154.00	1002	251.00	305
47.00	16904	102.00	84	155.00	4121	253.00	739
48.00	10936	103.00	910	156.00	665	254.00	484
49.00	77488	104.00	9042	157.00	3136	256.00	92
50.00	355776	105.00	2257	158.00	585	257.00	73
51.00	105656	106.00	8976	159.00	2635	258.00	59
52.00	4818	107.00	1927	161.00	3260	260.00	205
53.00	184	108.00	602	162.00	432	261.00	41
54.00	154	110.00	1533	163.00	452	265.00	188
55.00	4636	111.00	2184	164.00	504	268.00	237
56.00	27744	112.00	1749	165.00	219	269.00	721
57.00	50904	113.00	1913	166.00	231	270.00	528
58.00	1951	114.00	256	167.00	316	272.00	22
59.00	474	115.00	2137	168.00	924	280.00	239
60.00	15757	116.00	9102	169.00	514	281.00	940
61.00	81120	117.00	13481	170.00	1351	282.00	79
62.00	82488	118.00	8697	171.00	312	284.00	388
63.00	62240	119.00	10914	172.00	2405	289.00	57
64.00	6353	120.00	518	174.00	933632	293.00	207
65.00	1996	121.00	167	175.00	74072	294.00	110
66.00	559	122.00	430	176.00	903872	297.00	102
67.00	3965	124.00	685	177.00	57456	311.00	20
68.00	156672	125.00	296	178.00	1819	316.00	82
69.00	158912	126.00	1265	179.00	12	322.00	201
70.00	11598	127.00	797	181.00	202	323.00	155

Date : 27-MAY-2015 06:11

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: act

Column phase: Rtx-624

Column diameter: 2.00

Data File: e052701.d

Spectrum: Avg. Scans 135-137 (6.22), Background Scan 128

Location of Maximum: 95.00

Number of points: 202

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	601	128.00	6573	182.00	39	324.00	103
72.00	8588	129.00	3827	185.00	65	326.00	42
73.00	70744	130.00	7379	191.00	301	329.00	210
74.00	272832	131.00	3177	193.00	1545	330.00	38
75.00	731072	132.00	309	195.00	535	331.00	284
76.00	61480	133.00	99	196.00	86	332.00	34
77.00	5909	134.00	667	202.00	157	334.00	25
78.00	3288	135.00	4569	203.00	99	335.00	162
79.00	61544	136.00	557	204.00	289	336.00	78
80.00	17224	137.00	4109	205.00	160	339.00	123
81.00	64584	138.00	414	207.00	1584	341.00	171
82.00	13550	139.00	490	208.00	387	342.00	49
83.00	1092	140.00	1770	210.00	159	343.00	212
84.00	186	141.00	26176	216.00	96	346.00	2
86.00	1320	142.00	3335	218.00	375		
87.00	33656	143.00	28488	219.00	389		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/05Jun2015.b/e060501.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 05-JUN-2015 08:25
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2299-791; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/05Jun2015.b/bfb60.m
Meth Date : 05-Jun-2015 08:41 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

CONCENTRATIONS								
RT	EXP RT	DLT RT	MASS	RESPONSE	ON-COL	FINAL	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====
1 bfb				CAS #: 460-00-4				
6.236	6.235	0.001	95	1050560			100.00- 100.00	100.00
6.236	6.235	0.001	50	313153			8.00- 40.00	29.81
6.236	6.235	0.001	75	612153			30.00- 66.00	58.27
6.236	6.235	0.001	96	68475			5.00- 9.00	6.52
6.236	6.235	0.001	173	0			0.00- 1.99	0.00
6.236	6.235	0.001	174	671466			50.00- 120.00	63.92
6.236	6.235	0.001	175	56082			4.00- 9.00	8.35
6.236	6.235	0.001	176	643631			93.00- 101.00	95.85
6.236	6.235	0.001	177	41803			5.00- 9.00	6.49

Date : 05-JUN-2015 08:25

Client ID: BFB

Instrument: msde.i

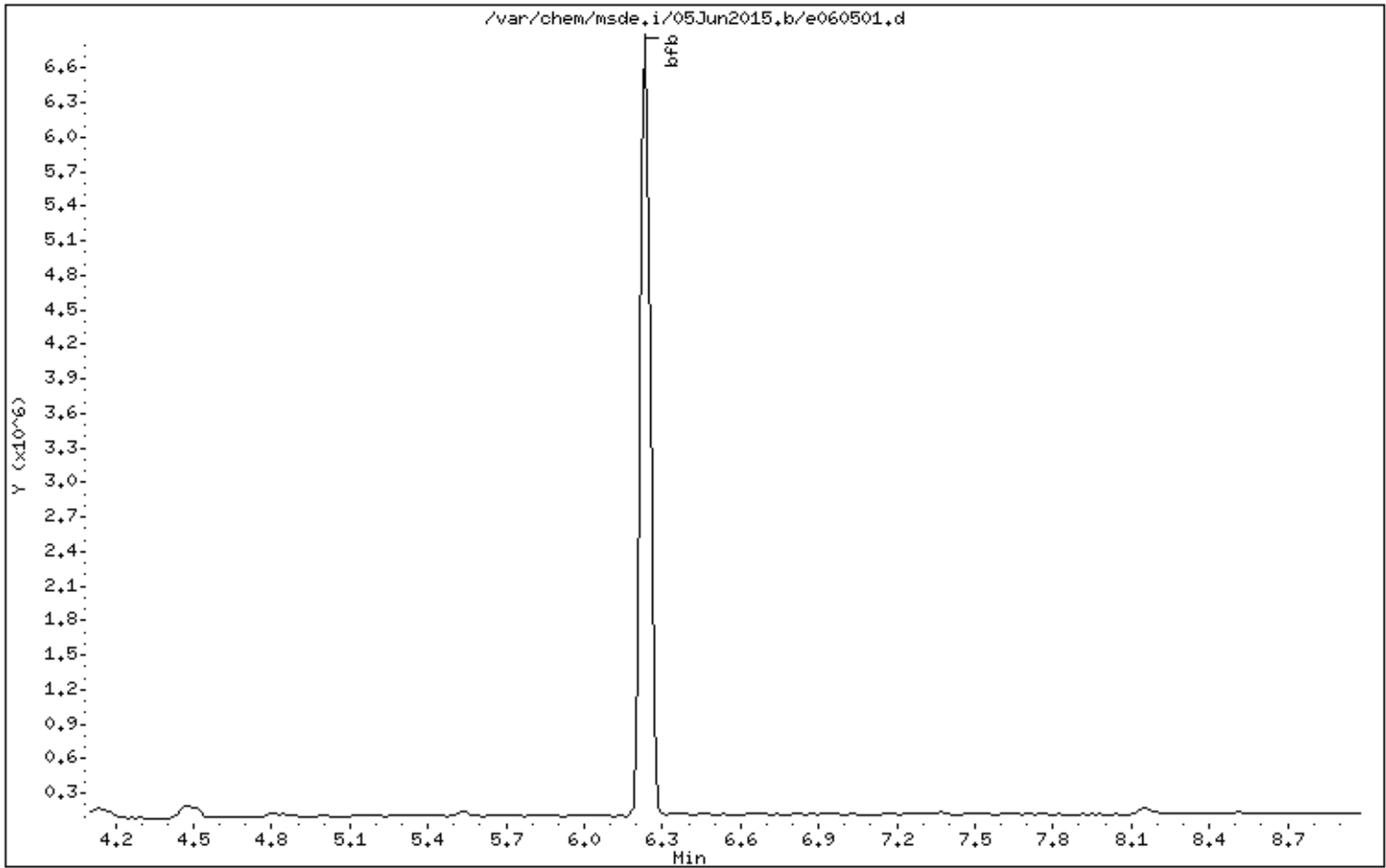
Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Date : 05-JUN-2015 08:25

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

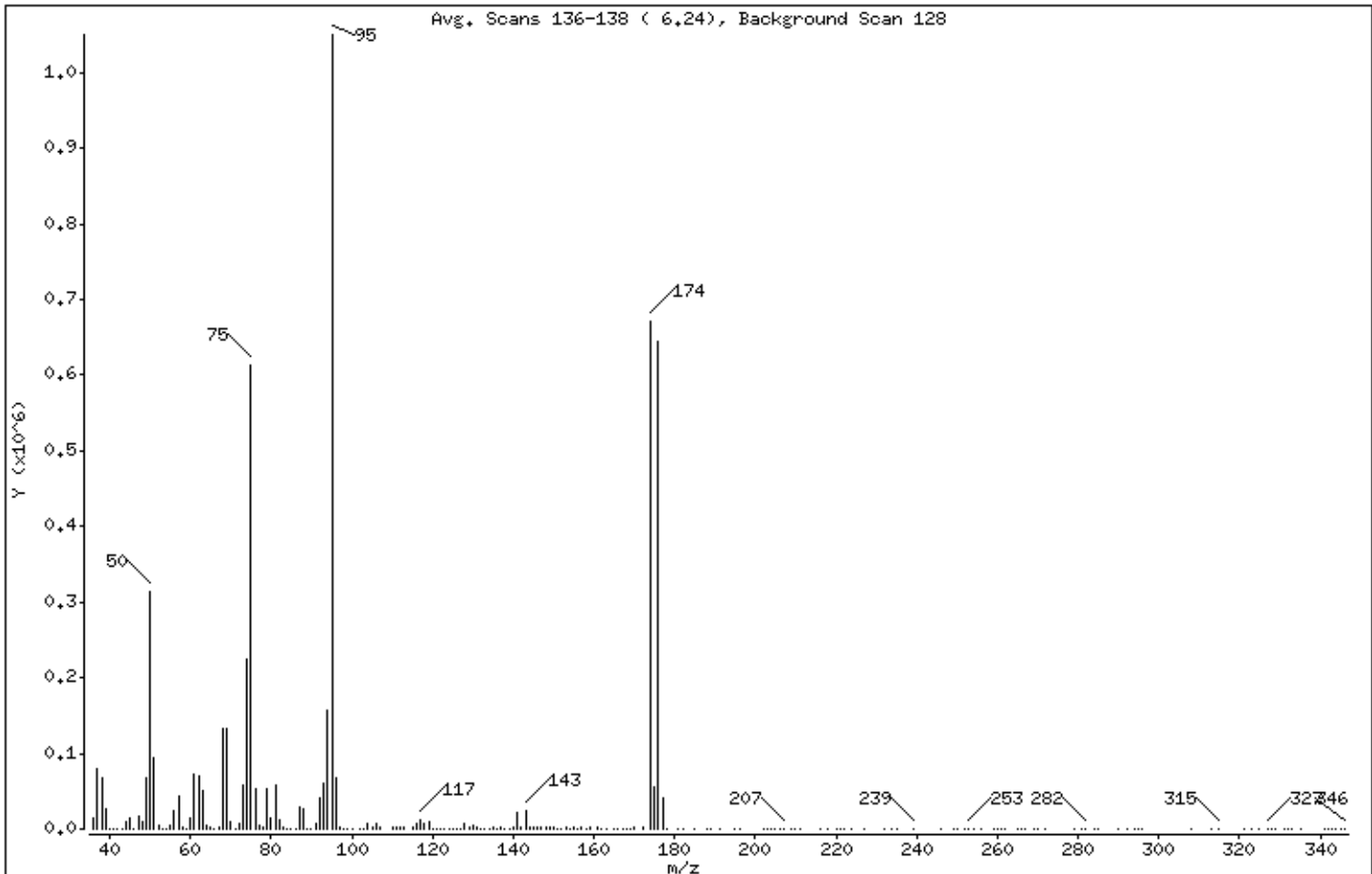
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

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	29.81
75	30.00 - 66.00% of mass 95	58.27
96	5.00 - 9.00% of mass 95	6.52
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	63.92
175	4.00 - 9.00% of mass 174	5.34 (8.35)
176	93.00 - 101.00% of mass 174	61.27 (95.85)
177	5.00 - 9.00% of mass 176	3.98 (6.49)

Date : 05-JUN-2015 08:25

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e060501.d

Spectrum: Avg. Scans 136-138 (6.24), Background Scan 128

Location of Maximum: 95.00

Number of points: 209

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	14579	89.00	679	146.00	2133	232.00	29
37.00	80712	90.00	204	147.00	1468	234.00	178
38.00	67960	91.00	6244	148.00	3511	235.00	17
39.00	26256	92.00	40704	149.00	1556	239.00	427
40.00	725	93.00	59864	150.00	1593	246.00	93
41.00	420	94.00	156352	151.00	84	249.00	79
42.00	294	95.00	1050112	152.00	816	250.00	282
43.00	832	96.00	68472	153.00	1295	252.00	106
44.00	10286	97.00	2125	154.00	1167	253.00	700
45.00	14130	98.00	176	155.00	3322	254.00	209
46.00	1064	99.00	126	156.00	712	256.00	209
47.00	15698	100.00	85	157.00	2046	259.00	40
48.00	10159	102.00	273	158.00	784	260.00	485
49.00	67544	103.00	646	159.00	1688	261.00	95
50.00	313152	104.00	8215	161.00	1800	262.00	189
51.00	94328	105.00	2368	162.00	305	265.00	66
52.00	4030	106.00	7941	163.00	396	266.00	37
53.00	353	107.00	1639	165.00	373	267.00	281
54.00	57	110.00	1388	166.00	270	269.00	190
55.00	4437	111.00	2187	167.00	535	270.00	5
56.00	23880	112.00	1416	168.00	497	272.00	70
57.00	44296	113.00	1914	169.00	499	279.00	128
58.00	1901	115.00	2189	170.00	1477	281.00	296
59.00	807	116.00	7897	172.00	2062	282.00	508
60.00	14210	117.00	11383	174.00	671424	284.00	121
61.00	71584	118.00	7058	175.00	56080	285.00	203
62.00	69496	119.00	9351	176.00	643584	290.00	63
63.00	51616	120.00	493	177.00	41800	292.00	53
64.00	4715	121.00	180	178.00	1148	294.00	226
65.00	1576	122.00	555	181.00	420	295.00	74
66.00	253	123.00	519	182.00	142	296.00	41
67.00	3526	124.00	977	185.00	47	308.00	82
68.00	133376	125.00	961	188.00	64	313.00	41
69.00	133888	126.00	553	189.00	360	315.00	97
70.00	9564	127.00	314	191.00	650	321.00	36

Date : 05-JUN-2015 08:25

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e060501.d

Spectrum: Avg. Scans 136-138 (6.24), Background Scan 128

Location of Maximum: 95.00

Number of points: 209

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	432	128.00	6354	195.00	356	323.00	1
72.00	7612	129.00	2911	196.00	164	325.00	48
73.00	57936	130.00	5723	202.00	28	327.00	427
74.00	225216	131.00	2883	203.00	42	328.00	189
75.00	612096	132.00	632	204.00	154	329.00	75
76.00	53368	133.00	927	205.00	220	331.00	232
77.00	5147	134.00	722	206.00	370	332.00	241
78.00	2954	135.00	3079	207.00	845	333.00	114
79.00	54016	136.00	514	209.00	375	335.00	19
80.00	15148	137.00	3236	210.00	68	341.00	131
81.00	57160	138.00	136	211.00	52	342.00	169
82.00	12164	139.00	941	216.00	131	343.00	268
83.00	1319	140.00	1588	218.00	257	344.00	93
84.00	19	141.00	22880	220.00	39	345.00	161
85.00	285	142.00	2482	221.00	320	346.00	162
86.00	916	143.00	23088	222.00	42		
87.00	27832	144.00	1489	224.00	54		
88.00	25696	145.00	2361	227.00	63		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/08Jun2015.b/e060801.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 08-JUN-2015 14:41
 Operator : ef Inst ID: msde.i
 Smp Info : 2.0uL #2299-791; BFB; BFB
 Misc Info : 50ng
 Comment :
 Method : /var/chem/msde.i/08Jun2015.b/bfb60.m
 Meth Date : 08-Jun-2015 14:57 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

CONCENTRATIONS

RT	EXP RT	DLT RT	MASS	RESPONSE	ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb CAS #: 460-00-4								
6.220	6.235	-0.015	95	857209			100.00- 100.00	100.00
6.220	6.235	-0.015	50	270264			8.00- 40.00	31.53
6.220	6.235	-0.015	75	513195			30.00- 66.00	59.87
6.220	6.235	-0.015	96	56091			5.00- 9.00	6.54
6.220	6.235	-0.015	173	0			0.00- 1.99	0.00
6.220	6.235	-0.015	174	524928			50.00- 120.00	61.24
6.220	6.235	-0.015	175	44488			4.00- 9.00	8.48
6.220	6.235	-0.015	176	501652			93.00- 101.00	95.57
6.220	6.235	-0.015	177	33518			5.00- 9.00	6.68

Date : 08-JUN-2015 14:41

Client ID: BFB

Instrument: msde.i

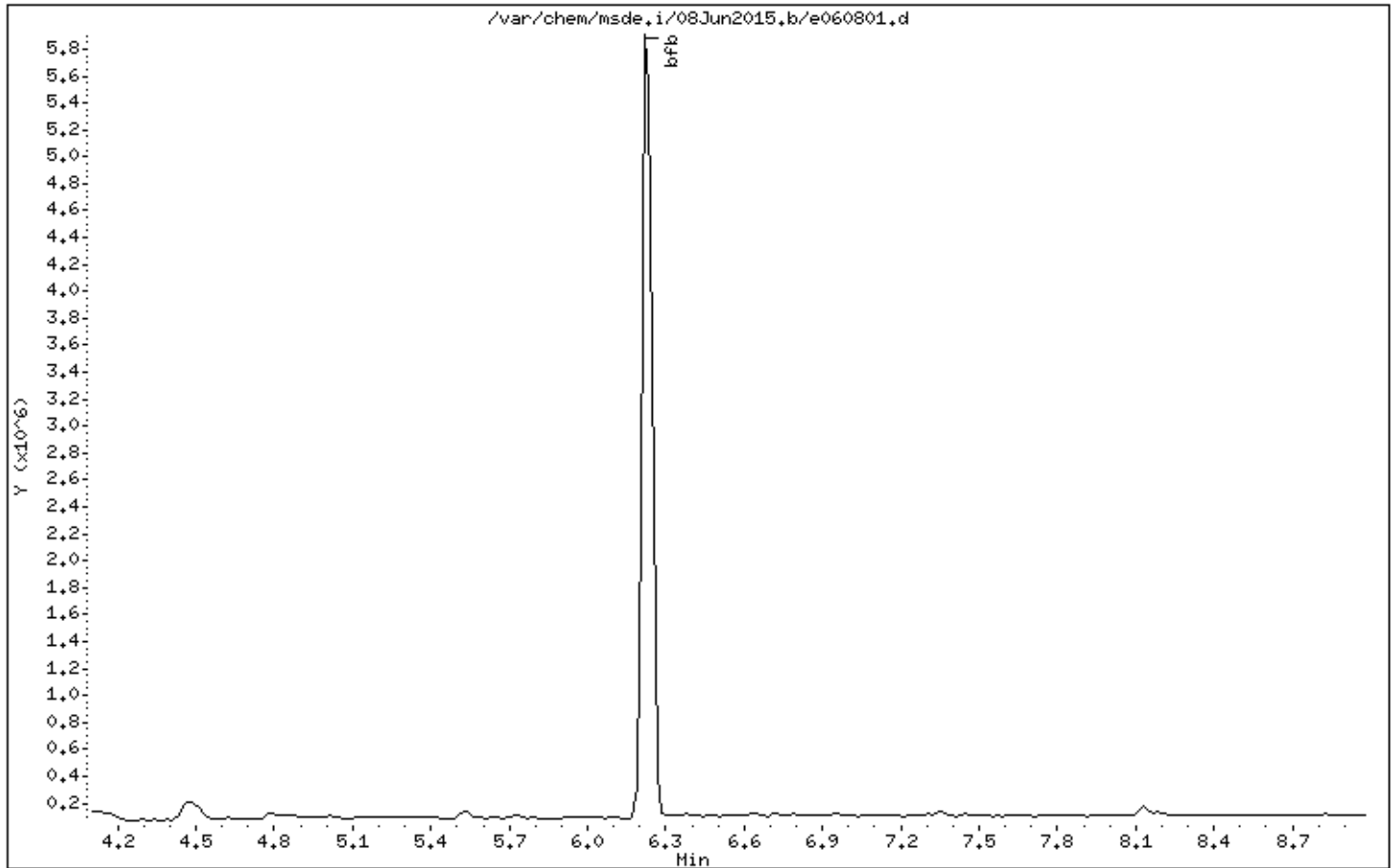
Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Date : 08-JUN-2015 14:41

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

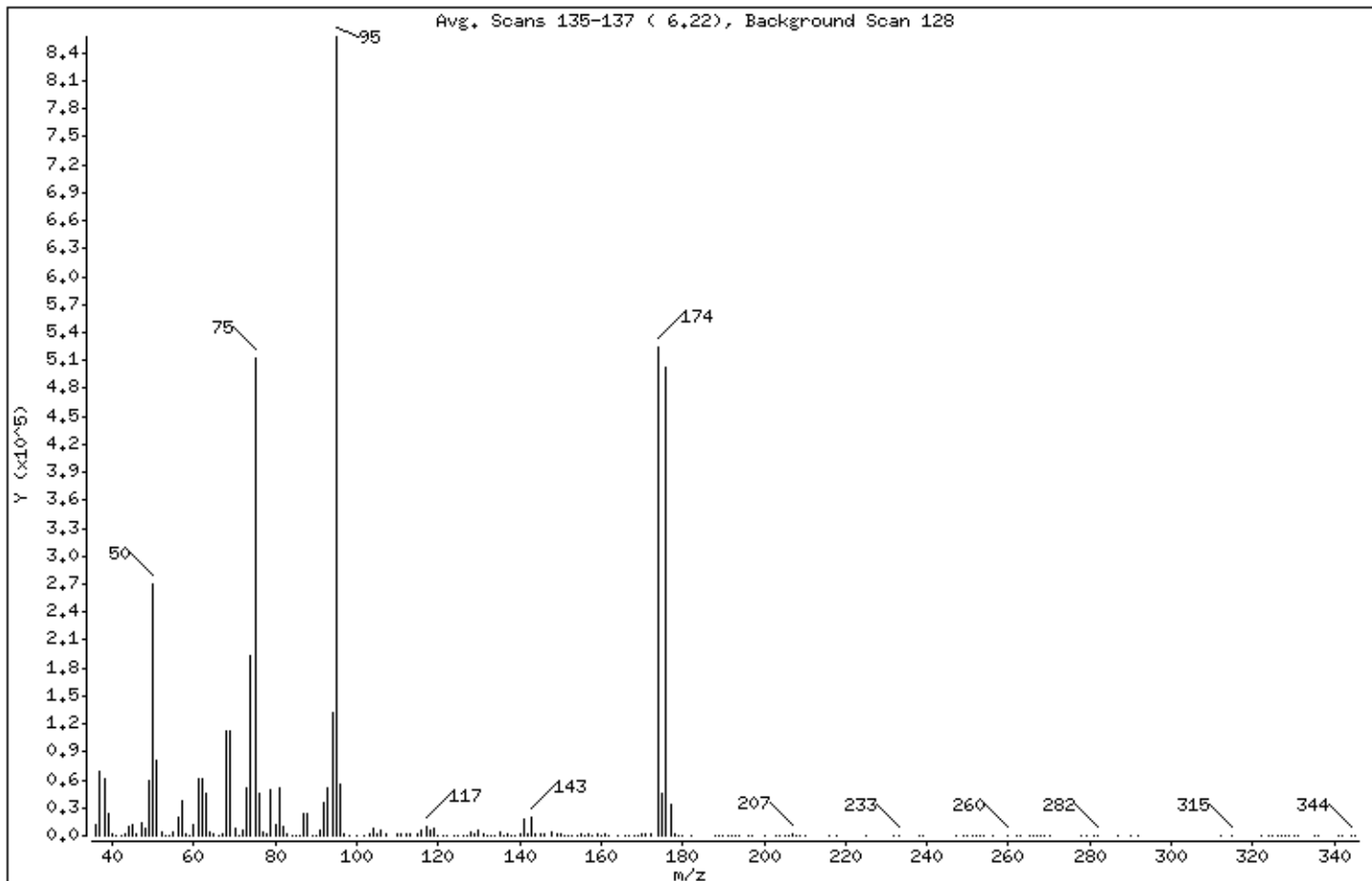
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

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	31.53
75	30.00 - 66.00% of mass 95	59.87
96	5.00 - 9.00% of mass 95	6.54
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	61.24
175	4.00 - 9.00% of mass 174	5.19 (8.48)
176	93.00 - 101.00% of mass 174	58.52 (95.57)
177	5.00 - 9.00% of mass 176	3.91 (6.68)

Date : 08-JUN-2015 14:41

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e060801.d

Spectrum: Avg. Scans 135-137 (6.22), Background Scan 128

Location of Maximum: 95.00

Number of points: 202

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	11908	87.00	22944	144.00	1123	210.00	278
37.00	68048	88.00	23256	145.00	1750	216.00	152
38.00	60472	89.00	78	146.00	1568	218.00	17
39.00	23592	90.00	229	148.00	3277	225.00	95
40.00	1469	91.00	5053	149.00	1083	232.00	47
41.00	342	92.00	35152	150.00	1243	233.00	136
42.00	596	93.00	50536	151.00	411	238.00	107
43.00	2233	94.00	132480	152.00	779	239.00	65
44.00	9062	95.00	857152	153.00	980	247.00	336
45.00	12132	96.00	56088	154.00	519	249.00	302
46.00	1017	97.00	1234	155.00	2442	250.00	80
47.00	12999	98.00	337	156.00	411	251.00	152
48.00	8513	100.00	283	157.00	2127	252.00	44
49.00	59768	102.00	308	158.00	518	253.00	167
50.00	270208	103.00	989	159.00	1701	254.00	141
51.00	81032	104.00	6988	160.00	127	256.00	135
52.00	3543	105.00	1800	161.00	2191	260.00	529
53.00	234	106.00	6731	162.00	574	262.00	355
54.00	12	107.00	1133	164.00	361	263.00	71
55.00	3969	110.00	1151	166.00	332	265.00	401
56.00	20328	111.00	1540	167.00	759	266.00	127
57.00	37720	112.00	1386	168.00	436	267.00	182
58.00	1641	113.00	1763	169.00	528	268.00	225
59.00	565	115.00	1616	170.00	1170	269.00	58
60.00	11860	116.00	6776	171.00	1439	270.00	411
61.00	61768	117.00	9549	172.00	1195	278.00	87
62.00	60120	118.00	5709	174.00	524928	279.00	98
63.00	44344	119.00	7527	175.00	44488	281.00	180
64.00	4302	120.00	198	176.00	501632	282.00	432
65.00	1722	121.00	460	177.00	33512	287.00	86
66.00	509	122.00	275	178.00	1088	290.00	133
67.00	2916	124.00	418	179.00	101	292.00	43
68.00	112544	125.00	449	180.00	222	312.00	62
69.00	111656	126.00	594	182.00	60	315.00	100
70.00	7755	127.00	193	188.00	36	322.00	145

Date : 08-JUN-2015 14:41

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2299-791; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e060801.d

Spectrum: Avg. Scans 135-137 (6.22), Background Scan 128

Location of Maximum: 95.00

Number of points: 202

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	665	128.00	4670	189.00	223	324.00	39
72.00	5951	129.00	2244	190.00	169	325.00	293
73.00	51416	130.00	5474	191.00	656	326.00	104
74.00	193536	131.00	2455	192.00	9	327.00	122
75.00	513152	132.00	307	193.00	227	328.00	191
76.00	45776	133.00	668	194.00	102	329.00	97
77.00	4227	134.00	549	196.00	34	330.00	60
78.00	1899	135.00	3243	197.00	61	331.00	33
79.00	48408	136.00	395	200.00	80	335.00	34
80.00	12490	137.00	2937	203.00	195	336.00	119
81.00	50440	138.00	48	204.00	180	341.00	96
82.00	9948	139.00	531	205.00	51	342.00	189
83.00	1194	140.00	1086	206.00	81	344.00	309
84.00	132	141.00	17896	207.00	1066	345.00	27
85.00	386	142.00	2020	208.00	610		
86.00	345	143.00	19072	209.00	362		

Shipping/ Receiving Documents

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 Discrepancies below.

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

For corrections call: **Air Toxics, Ltd. 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.

CHAIN OF CUSTODY

SOIL GAS / AIR

Chain of Custody #: **1547**
Carbon Copies: White - Laboratory Yellow - Ahtna

Project Information:

Project Location: STE 12, MARINA CA Sampler/s: MARK FISHER

Project Name: STE 12 REFS Report To: DEBBIE LIEBERMAN

Project Number: 08055-01-05 E-Mail: Aliberman@ahana.com

Sampling Event: INDOOR AIR SWAB - Laboratory Laboratory: EVOCORNS

Analysis Requested

Lab Sample Receipt

Laboratory Sample Delivery

Group #: _____

Custody Seal: _____

Lab Number	Sample Number/Description	Sample Collection			SUMMA Canister Collection			Final Vacuum ("Hg)	TO-15	Notes
		Date	Time	Soil Gas	Matrix	Canister ID	Regulator ID			
1A	1522M212201F	5/29/15	0530	X		661294	FC00657	-50"	X	TO-15 LOW LEVEL
3A	1522M212202F		0715	X		3049	30746	8.0"	X	
5A	1522M212203D		0716	X		11517	30746	-8.0"	X	
4A	1522M212204F		0735			35138	FC00887	-7.5"	X	
5B	1522M212205D		0736			66006	FC00	-70"	X	
6A	1522M212206F		0913	X		35633	30508	-70"	X	
3A	1522M212207F		0942	X		37413	30568	-70"	X	
8A	1522M212208F		0937			54304	FC00670	-6.0"	X	
9A	1522M212209F		0950			921	FC00735	-70"	X	
10A	1522M212209F		0735			661294	FC00657	-6.5"	X	
11A	1522M212209F		0900	X		36499	30531	-6.5"	X	
6A	1522M212202F		0930	X		1591	FC0086	-70"	X	

Turnaround Time:	Standard	3-5 Day Rush	48 Hour Rush	24 Hour Rush	Shipment Method:	Tracking ID:
Comments:	OTHER SAMPLES = INDOOR AIR SOIL GAS = SOB-SLAB					
	NEW 1st CONSTRUCTION MONITOR ROAD PAVED. NEW ORN = 661292, NEW REG = FC00354					

Relinquished By: [Signature] Date/Time: 5/29/15 11:15

Received By: [Signature] Date/Time: 5-29-15 11:15

Relinquished By: [Signature] Date/Time: 5/29/15 11:15

Received By: [Signature] Date/Time: 5-29-15 11:15

12/24/2014

Air Toxics Ltd.

TO-14A/TO-15 LL SURR Control Limits

Effective Dates 12/24/14 - 06/24/15 For Instruments: msde.i,msdv.i

Data Point Analysis Dates 06/24/14 - 12/24/14

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
1,2-Dichloroethane-d4	125	80	133	72	118	88
4-Bromofluorobenzene	116	83	121	78	110	89
Toluene-d8	108	90	111	87	105	93

Table 42. Method RSK-175 Water Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
74-86-2	Acetylene	719	99.6	9.8	70	129
106-97-8	Butane	262	97.3	7.3	75	119
124-38-9	Carbon dioxide	441	100.8	6.9	80	122
74-84-0	Ethane	2240	102.6	9.6	74	131
74-85-1	Ethylene	2284	102.5	10.2	72	133
75-28-5	Isobutane	267	97.6	6.6	78	117
74-82-8	Methane	2459	99.2	8.7	73	125
74-98-6	Propane	900	98.1	8.2	74	123

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
630-20-6	1,1,1,2-Tetrachloroethane	1344	97.9	10.5	67	129
71-55-6	1,1,1-Trichloroethane	5436	96.7	9.5	68	125
79-34-5	1,1,2,2-Tetrachloroethane	5273	95.9	10.4	65	127
79-00-5	1,1,2-Trichloroethane	5332	95.9	7.7	73	119
76-13-1	1,1,2-Trifluoro-1,2,2-trichloroethane [Freon-113]	5351	96.1	10	66	126
75-34-3	1,1-Dichloroethane	5422	97	9.7	68	126
75-35-4	1,1-Dichloroethene	3503	97.3	11.9	61	133
96-18-4	1,2,3-Trichloropropane	465	99.6	8	76	124
120-82-1	1,2,4-Trichlorobenzene	4545	98.5	14.5	55	142
95-63-6	1,2,4-Trimethylbenzene	4699	99.2	11.1	66	132

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
106-93-4	1,2-Dibromoethane	4655	98.2	7.9	74	122
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	4572	92.4	9.7	63	121
95-50-1	1,2-Dichlorobenzene	4739	95.7	11	63	129
107-06-2	1,2-Dichloroethane	5467	96.8	10.5	65	128
78-87-5	1,2-Dichloropropane	4729	95.7	8.9	69	123
108-87-8	1,3,5-Trimethylbenzene	4679	98.3	10.4	67	130
106-99-0	1,3-Butadiene	3167	99.8	11.4	66	134
541-73-1	1,3-Dichlorobenzene	4737	97.1	10.9	65	130
142-28-9	1,3-Dichloropropane	165	105.2	14.4	62	148
542-75-6	1,3-Dichloropropene	560	100.7	8.1	77	125
106-46-7	1,4-Dichlorobenzene	4719	95.8	11.8	60	131
123-91-1	1,4-Dioxane	2656	96.5	8.6	71	122
540-84-1	2,2,4-Trimethylpentane [Isooctane]	3008	94.3	8.8	68	121
78-93-3	2-Butanone [MEK]	4635	98.4	10.4	67	130
95-49-8	2-Chlorotoluene	1092	101.9	9.2	74	130
591-78-6	2-Hexanone	4600	95.4	11	62	128
67-63-0	2-Propanol [Isopropyl alcohol]	3069	88.4	12.3	52	125
622-96-8	4-Ethyltoluene	4673	97.9	10.3	67	129
108-10-1	4-Methyl-2-pentanone [MIBK]	4646	98.5	10.5	67	130
67-64-1	Acetone	4600	92.7	11.6	58	128
75-05-8	Acetonitrile	1999	97.3	11.6	63	132
107-02-8	Acrolein [Propenal]	2469	93.8	10.6	62	126
107-13-1	Acrylonitrile	2105	103.7	10.9	71	137
107-05-1	Allyl chloride	2980	101.1	10.1	71	131

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
98-83-9	alpha-Methylstyrene	1976	97.3	10.2	67	128
71-43-2	Benzene	5436	93.8	8.4	69	119
100-44-7	Benzyl chloride	4419	98.7	16.2	50	147
75-27-4	Bromodichloromethane	4682	99.9	9.3	72	128
75-25-2	Bromoform	4638	102.3	12.1	66	139
74-83-9	Bromomethane	2657	98.6	11.8	63	134
106-97-8	Butane	587	96.2	10.9	64	129
75-15-0	Carbon disulfide	4756	95.6	12.7	57	134
56-23-5	Carbon tetrachloride	4202	99.6	10.7	68	132
108-90-7	Chlorobenzene	4652	94.5	8	70	119
124-48-1	Chlorodibromomethane	4628	99.9	10	70	130
75-45-6	Chlorodifluoromethane	559	102.1	14.3	59	145
75-00-3	Chloroethane	5370	94.7	10.6	63	127
67-66-3	Chloroform	5481	95.3	9.3	68	123
74-87-3	Chloromethane	4540	95.2	12.2	59	132
156-59-2	cis-1,2-Dichloroethene	5320	95.6	8.4	70	121
10061-01-5	cis-1,3-Dichloropropene	4691	98.8	9.7	70	128
110-82-7	Cyclohexane	3178	93.5	7.7	70	117
124-18-5	Decane	1982	93.8	7.9	70	118
75-71-8	Dichlorodifluoromethane [Freon-12]	5307	93.6	11.5	59	128
108-20-3	Diisopropyl ether	2309	93.5	8	70	117
64-17-5	Ethanol	2981	91.8	11.1	59	125
141-78-6	Ethyl acetate	2835	96.4	10.5	65	128
100-41-4	Ethylbenzene	5420	96.8	9	70	124
142-82-5	Heptane	3163	95.7	8.9	69	123

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
87-68-3	Hexachlorobutadiene	4551	96.7	13.7	56	138
110-54-3	Hexane	3150	91.6	9.5	63	120
98-82-8	Isopropylbenzene	3022	95.6	9.3	68	124
179601-23-1	m/p-Xylene [3/4-Xylene]	5019	97.3	12.3	61	134
80-62-6	Methyl methacrylate	3037	98.9	9.7	70	128
1634-04-4	Methyl tert-butyl ether [MTBE]	4681	95.5	10	66	126
75-09-2	Methylene chloride	5314	88.8	8.9	62	115
71-36-3	n-Butyl alcohol	1981	97.5	11.7	62	133
104-51-8	n-Butylbenzene	2656	97.7	10.6	66	130
112-40-3	n-Dodecane	1932	104.4	14.1	62	147
103-65-1	n-Propylbenzene	2570	95.7	9	69	123
91-20-3	Naphthalene	2439	97.5	13.4	57	138
111-84-2	Nonane	2617	95.4	10.8	63	128
95-47-6	o-Xylene	5334	96.3	9.7	67	125
111-65-9	Octane	2514	95	8.7	69	121
99-87-6	p-Isopropyltoluene [p-Cymene]	2694	98.1	10.5	67	130
109-66-0	Pentane	712	96.7	11.3	63	131
115-07-1	Propene	3193	96.6	13.3	57	136
135-98-8	sec-Butylbenzene	2665	96.4	9.6	68	125
100-42-5	Styrene	4735	100.1	9	73	127
75-65-0	tert-Butyl alcohol	2997	86.8	20.9	24	150
98-06-6	tert-Butylbenzene	2710	94.3	9.8	65	124
127-18-4	Tetrachloroethene	5432	95.2	9.7	66	124
109-99-9	Tetrahydrofuran	3192	93.7	9.8	64	123
108-88-3	Toluene	5406	92.7	8.8	66	119
156-60-5	trans-1,2-Dichloroethene	5411	95.5	9.5	67	124

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
10061-02-6	trans-1,3-Dichloropropene	4621	104	9.6	75	133
79-01-6	Trichloroethene	5478	96.7	8.7	71	123
75-69-4	Trichlorofluoromethane [Freon-11]	5376	93.7	10.6	62	126
1120-21-4	Undecane	1976	96.1	9	69	123
108-05-4	Vinyl acetate	4599	97.4	13.7	56	139
593-60-2	Vinyl bromide	1054	98.4	9.2	71	126
75-01-4	Vinyl chloride	5445	95.1	10.4	64	127

SAMPLE RECEIPT SUMMARY

WORKORDER 1506011A

Client

Ms. Holly Dillon
AHTNA
296 12th Street
Marina, CA 93933

Phone

831-384-3735

Fax

Date Promised: 06/11/15

Date Completed: 6/11/15

Date Received: 5/29/15

PO#: PO0500288

Project#: 05055.01.09 SITE 12 RIFS

Sales Rep: DV

Total \$: \$ 1,340.00

Logged By: DM

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Receipt Vac./Pres.</u>	<u>Amount\$</u>
01A	1522M212201F	Modified TO-15	5/27/2015	3.9 "Hg	\$90.00
04A	1522M212204F	Modified TO-15	5/27/2015	4.9 "Hg	\$90.00
05A	1522M212205D	Modified TO-15	5/27/2015	5.7 "Hg	\$90.00
05AA	1522M212205D Lab Duplicate	Modified TO-15	5/27/2015	5.7 "Hg	\$0.00
08A	1522M212208F	Modified TO-15	5/27/2015	4.1 "Hg	\$90.00
09A	1522M212209F	Modified TO-15	5/27/2015	5.5 "Hg	\$90.00
10A	1522M212210F	Modified TO-15	5/28/2015	4.9 "Hg	\$90.00
10AA	1522M212210F Lab Duplicate	Modified TO-15	5/28/2015	4.9 "Hg	\$0.00
12A	1522M212212F	Modified TO-15	5/28/2015	5.1 "Hg	\$90.00
13A	Lab Blank	Modified TO-15	NA	NA	\$0.00
13B	Lab Blank	Modified TO-15	NA	NA	\$0.00
14A	CCV	Modified TO-15	NA	NA	\$0.00
14B	CCV	Modified TO-15	NA	NA	\$0.00
15A	LCS	Modified TO-15	NA	NA	\$0.00
15AA	LCSD	Modified TO-15	NA	NA	\$0.00
15B	LCS	Modified TO-15	NA	NA	\$0.00
15BB	LCSD	Modified TO-15	NA	NA	\$0.00

Misc. Charges 1 Liter Summa Canister (1) @ \$15.00 each., Shipment 101433	\$15.00
1 Liter Summa Canister (7) @ \$15.00 each., Shipment 101742	\$105.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Fort Ord/20154

BILL TO: Accounts Payable
AHTNA
110 West 38th Ave
Suite 200A
Anchorage, AK 99503

Analysis Code: pptv

TERMS:

Reporting Method: Modified TO-15-LL (Sh)-PCE & TCE
180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

SAMPLE RECEIPT SUMMARY Continued

Client	Phone	Date Promised:
Ms. Holly Dillon	831-384-3735	Date Completed: 6/11/15
AHTNA		Date Received: 5/29/15
296 12th Street	Fax	PO#: PO0500288
Marina, CA 93933		Project#: 05055.01.09 SITE 12 RIFS
Sales Rep:		Total \$: \$ 1,340.00
		Logged By: DM

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Receipt Vac./Pres.</u>	<u>Amount\$</u>
	6 Liter Summa Canister (100% Certified) (8) @ \$35.00 each., Shipme				\$280.00
	Blue Body Flow Controller (100% Certified) (8) @ \$10.00 each., Ship				\$80.00
	Soil Gas Manifold (3) @ \$10.00 each., Shipment 100866				\$30.00
	Soil Gas Manifold (3) @ \$10.00 each., Shipment 101433				\$30.00
	Soil Gas Manifold (7) @ \$10.00 each., Shipment 101742				\$70.00
	Fitting w/ Pink Ferrule (17) @ \$4.00 each.				\$68.00
	Duplicate Sampling T (4) @ \$8.00 each.				\$32.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Fort Ord/20154

BILL TO: Accounts Payable
AHTNA
110 West 38th Ave
Suite 200A
Anchorage, AK 99503

Analysis Code: pptv

TERMS:

Reporting Method: Modified TO-15-LL (Sh)-PCE & TCE
180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

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	15 psi
	Final Pressure Dilution Factor	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	15 psi
	Final Pressure Dilution Factor	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		15 psi	
	Final Pressure Dilution Factor	Final Pressure Dilution Factor	Final Pressure Dilution Factor	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		15 psi	
	Final Pressure Dilution Factor	Final Pressure Dilution Factor	Final Pressure Dilution Factor	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

Modified TO-15-LL (Sh)-PCE & TCE

CAS Number	Compound	Detection Limit	Type
79-01-6	Trichloroethene	0.10	
127-18-4	Tetrachloroethene	0.10	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		

Kara McKiernan

From: Holly Dillon [hdillon@ahtna.net]
Sent: Tuesday, March 10, 2015 2:35 PM
To: Kyle Vagadori
Subject: RE: EATL Variance

Thanks I have no objections.

Holly Dillon | Environmental Scientist

Phone 831-384-3735 | Fax 831-384-3930 | Cell 831-324-3299 | hdillon@ahtna.net



Ahtna Engineering Services, LLC

296 12th street | Marina, CA 93933 | www.ahtnaes.com

This email may contain AES confidential, official use only, or proprietary information for the sole use of the intended recipient. Any review or distribution by others is strictly prohibited. Unless stated to the contrary, any opinions or comments are personal to the writer and do not represent the official view of AES. If you have received this e-mail in error, please notify the sender immediately by reply e-mail and then delete this message from your system.

From: Kyle Vagadori [mailto:KyleVagadori@eurofinsUS.com]
Sent: Tuesday, March 10, 2015 2:25 PM
To: Holly Dillon
Subject: EATL Variance

Hi Holly,

Thanks for speaking to me about the start of the project. Can you please confirm that Ahtna has no objections to the included variances?

Kyle Vagadori
Project Manager

Ask me about our new **Helium Shroud!**
<https://www.youtube.com/watch?v=gSc0iM6hY98>

PLEASE NOTE MY CURRENT WEEKLY SCHEDULE:

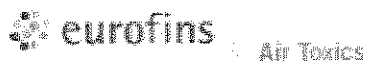
I will be out of the office on Thursdays. During that time my emails will be monitored.

Please contact one of our other Project Managers if you need immediate assistance:

Kelly Buettner (x3378, kellybuettner@eurofinsus.com)

Ausha Scott (x3344, aushascott@eurofinsus.com)

Brian Whittaker (x3355, brianwhittaker@eurofinsus.com)



Eurofins Air Toxics, Inc.
180 Blue Ravine Road, Suite B
Folsom, CA 95630
Direct | 916-605-3339
Tel | 1-800-985-5955 x3339

Please note my new email address: kylevagadori@eurofinsus.com

CONFIDENTIALITY NOTICE: This communication and any accompanying documents are confidential and

4/7/2015

privileged. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If you received this transmission in error, you are advised that any disclosure, copying, distribution, or the taking of any action in reliance upon the communication is strictly prohibited. If you have received this communication in error, please contact Eurofins Air Toxics, Inc. at (916)-985-1000.

Notify us [here](#) to report this email as spam.



Air Toxics

Media Certification Report

Canister Number: 6L#6L1294 w/11.5ml#FC00697
Can#: 101742-6L1294
Date : 05/18/15 15:52
Data File: o051812.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	98.00	% Recovery



Air Toxics

Media Certification Report

Canister Number: 6L#35138 w/11.5ml#FC00287

Can#: 101742-35138

Date : 05/18/15 15:22

Data File: o051811.d

www.airtoxics.com

1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	102.00	% Recovery



Air Toxics

Media Certification Report

Canister Number: 6L#6L0006 w/11.5ml#FC00662

Can#: 101742-6L0006

Date : 05/18/15 17:22

Data File: o051815.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	100.00	% Recovery



Air Toxics

Media Certification Report

Canister Number: 6L#34229 w/11.5ml#FC00670
Can#: 101742-34229
Date : 05/18/15 18:46
Data File: o051818.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	100.00	% Recovery



Air Toxics

Media Certification Report

Canister Number: 6L#921 w/11.5ml#FC00739

Can#: 101742-921

Date : 05/18/15 16:51

Data File: o051814.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	103.00	% Recovery



Air Toxics

Media Certification Report

Canister Number: 6L#6L1252 w/11.5ml#FC00324
Can#: 101742-6L1252
Date : 05/18/15 16:22
Data File: o051813.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	103.00	% Recovery



Air Toxics

Media Certification Report

Canister Number: 6L#1591 w/11.5ml#FC00986

Can#: 101742-1591

Date : 05/18/15 18:17

Data File: o051817.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Tetrachloroethene	127-18-4	0.10	ND	ppbv
Trichloroethene	79-01-6	0.10	ND	ppbv
4-Bromofluorobenzene	460-00-4	0.10	104.00	% Recovery

S	S	S	S	D	Section 1 - Spec Out				
1	2	3	4	D	Initials/Instrument/Date	S1: <i>MSSE 6/8/15</i>	S2: <i>ED 6/8/15</i>	S3:	S4:
X	✓	✓	✓	✓	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
X	✓	✓	✓	✓	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
NA	✓	✓	✓	✓	Manual Integrations included and approved				
X	✓	✓	✓	✓	Chain of Custody verified for special comments (add comments below)				
NA	✓	✓	✓	✓	Non-standard Target sublist printed				

Profile, analyses, reporting, special notes and unusual circumstances:
J. Fly to LOD. in house QC for spec, DoD control limits for LCS/LOD. ϕ out in QC. DUT/Break
Successes of 70-30 per mL. 7 mL

A	A	A	A	D	Section 2 - Sample Analysis				
1	2	3	4	D	Initials/Date	A1: <i>MS 6/8/15</i>	A2: <i>ED 6/8/15</i>	A3: <i>AS 6/9/15</i>	A4:
✓	✓	✓	✓	✓	Internal Standard/Surrogate Recoveries, Dilution Factors, Load Volumes, Initial/Final Pressures, and Canister #s Verified				
NA	NA	NA	NA	NA	a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg of instrument				
NA	NA	NA	NA	NA	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
X	✓	✓	✓	✓	12/24 Hr clock time & Hold Time met for all samples				
X	✓	✓	✓	✓	Re-analysis of sample(s) have been evaluated for comparability and/or samples have been checked for trends (Inf/Eff).				
X	✓	✓	✓	✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds etc)				

Analytical and special notes:
21204A, 05A, 08A - Full LODS
ORA-70A + DUT
A3: 12A - Full load

D	D	D	D	T	3	Section 3 - Target		Technical Review Needed?		T:
1	2	3	4	T	T	Data Reduction		Circle one: Yes/No		
NA	NA	NA	NA	NA	NA	Initials/Instrument/Date	D1: <i>MC 6/11/15</i>	D2: <i>MC 6/11/15</i>	D3:	D4:
NA	NA	NA	NA	NA	NA	CAR # (if applicable)				
✓	✓	✓	✓	✓	✓	Spectra Verified (documentation of spectral defense included if applicable)				
NA	NA	NA	NA	NA	NA	TICs resemble reference spectra/ TICs between sample dups. are consistent (if applicable)				
NA	NA	NA	NA	NA	NA	Lab Narrative is correct				
NA	NA	NA	NA	NA	NA	TPH/NMOC calculations complete and included in folder				

Special notes:
1. J Fly to LOD
2. 1st Sure out in-house CL within 70-30 LCS/ Lab BK 01A, 05A, 050A, 09A
3. 2nd Sure ↓ Lab BK 06/08/15

A	3	Section 4- Atlas Data Entry			Lumen verified and included in folder		Circle one: Yes/No	
1	T	Initials/Date:	<i>MC 6/11/15</i>		3 rd Tier: (needed only for DOD or per client request)		<i>EA 6/11/15</i>	
NA	NA	Sample Discrepancy Report (SDR) complete and approved (if applicable)						
NA	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
	Form F 1.27	Revision #8	Revision date 01/29/14	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 <i>* 3rd Tier Report Review is for DoD & Client Specific projects only</i> (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 <i>* 3rd Tier Report Review is for DoD & Client Specific projects only</i> (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



eurofins

Air Toxics

Electronic Comprehensive Validation Package (eCVP)

COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15 (5&20 ppbv)

INVENTORY SHEET

Work Order #: 1506011BR1

	Page Nos.	
	From	To
1. Work Order Cover Page & Laboratory Narrative	1	5
a. <u>Lumen Validation Report</u>	--	--
2. Sample Results and Raw Data (Organized by Sample)	6	47
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)	48	54
b. Surrogate Recover Summary Form (If Applicable)	55	55
c. Internal Standard Summary Form (If Applicable)	56	56
d. Duplicate Results Summary Sheet	57	58
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data)	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	59	289
g. MDL Study (If Applicable)	290	315
h. Continuing Calibration Verification Data (Summary Sheet	316	330
i. Second Source LCS(Summary + Raw Data)	331	356
i. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	357	358
l. GC/MS Tune (Results + Raw Data)	359	370
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	371	372
b. Chain-of-Custody Records	373	379
c. Sample Log-In Sheet	380	380
d. Misc Shipping/Receiving Records (list of individual records)		
<u>Sample Receipt Discrepancy Report</u>	--	--
5. Other Records (describe or list)		
a. <u>Manual Spectral Defense</u>	--	--
b. <u>Manual Integrations</u>	--	--
c. <u>Manual Calculations</u>	--	--
d. <u>Canister Dilution Factors</u>	381	383
e. <u>Laboratory Corrective Action Request</u>	--	--
f. <u>CAS Number Reference</u>	384	384
g. <u>Variance Table</u>	385	386
h. <u>Canister Certification</u>	--	--
i. <u>Data Review Check Sheet</u>	387	388

Comments:

Completed by:

Vera Belitsky

(Signature)

Vera Belitsky / Document Control

(Print Name & Title)

9/4/15

(Date)

CONFIDENTIALITY NOTICE: This communication and any accompanying documents are confidential and privileged. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If you received this transmission in error, you are advised that any disclosure, copying, distribution, or the taking of any action in reliance upon the communication is strictly prohibited. If you have received this communication in error, please contact Eurofins Air Toxics, Inc. at (916)-985-1000.

WORK ORDER #: 1506011BR1

Work Order Summary

CLIENT:	Ms. Holly Dillon AHTNA 296 12th Street Marina, CA 93933	BILL TO:	Accounts Payable AHTNA 110 West 38th Ave Suite 200A Anchorage, AK 99503
PHONE:	831-384-3735	P.O. #	PO0500288
FAX:		PROJECT #	05055.01.09 SITE 12 RIFS
DATE RECEIVED:	05/29/2015	CONTACT:	Kyle Vagadori
DATE COMPLETED:	06/11/2015		
DATE REISSUED:	09/01/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
02A	1522M212202F	Modified TO-15 (5&20 ppbv)	5.9 "Hg	14.9 psi
02AA	1522M212202F Lab Duplicate	Modified TO-15 (5&20 ppbv)	5.9 "Hg	14.9 psi
03A	1522M212203D	Modified TO-15 (5&20 ppbv)	5.5 "Hg	15 psi
06A	1522M212206F	Modified TO-15 (5&20 ppbv)	5.9 "Hg	15.8 psi
07A	1522M212207F	Modified TO-15 (5&20 ppbv)	5.3 "Hg	14.9 psi
11A	1522M212211F	Modified TO-15 (5&20 ppbv)	5.9 "Hg	14.7 psi
12A	Lab Blank	Modified TO-15 (5&20 ppbv)	NA	NA
13A	CCV	Modified TO-15 (5&20 ppbv)	NA	NA
14A	LCS	Modified TO-15 (5&20 ppbv)	NA	NA
14AA	LCSD	Modified TO-15 (5&20 ppbv)	NA	NA

CERTIFIED BY: 
 Technical Director

DATE: 09/01/15

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.
 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9562
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
DoD QSM 5.0 - TO-15
AHTNA
Workorder# 1506011BR1

Five 1 Liter Summa Canister samples were received on May 29, 2015. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

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.

Modifications to DoD QSM 5.0 requirements are listed in the table below.

<i>Requirement</i>	<i>TO-15 DoD QSM 5.0</i>	<i>ATL Modifications</i>
DoD QSM 5.0 Module 4 (1.7.1.1.j, 1.5.2.1.b, 1.5.2.2.c) Surrogates	Quantification of surrogates requires a multi-point calibration and determination of DL and LOQ.	Quantification achieved using a multipoint calibration at a single concentration, analogous to internal standards. DLs and LOQs are not established.
DoD QSM 5.0 Section 2.2.1 PT Requirement	Two PT samples per year for each analyte-matrix-method combination are required.	Not all analyte-matrix-method combinations on the scope of accreditation are available from the current PT providers.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The workorder was reissued on 09/01/15 to report estimated values for target compound hits that are below the reporting limit but greater than the method detection limit. Concentrations that are below the level at which the canister was certified may be false positives.

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	Sample Extract		Sample Condition
					Holding Time (Days)	Date Analyzed	Holding Time (Days)	
1522M212202F	1506011BR1-02A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212202F Lab Duol	1506011BR1-02A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212203D	1506011BR1-03A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212206F	1506011BR1-06A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212207F	1506011BR1-07A	5/27/2015	5/29/2015	NA	9	6/ 5/2015	NA	Good
1522M212211F	1506011BR1-11A	5/28/2015	5/29/2015	NA	8	6/ 5/2015	NA	Good
Lab Blank	1506011BR1-12A	NA	NA	NA	NA	6/ 5/2015	NA	Good
CCV	1506011BR1-13A	NA	NA	NA	NA	6/ 5/2015	NA	Good
LCS	1506011BR1-14A	NA	NA	NA	NA	6/ 5/2015	NA	Good
LCSD	1506011BR1-14A	NA	NA	NA	NA	6/ 5/2015	NA	Good

Sample Results and Raw Data

EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	1522M212202F	Date/Time Analyzed:	6/5/15 02:17 PM
Lab ID:	1506011BR1-02A	Dilution Factor:	2.51
Date/Time Collected:	5/27/15 07:15 AM	Instrument/Filename:	msd14.i / 14060515r1
Media:	1 Liter Summa Canister		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	22	51	85	520
Trichloroethene	79-01-6	14	40	67	Not Detected U

U = The analyte was not detected above the MDL.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	100
4-Bromofluorobenzene	460-00-4	79-116	99
Toluene-d8	2037-26-5	87-110	99

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060515r1.d
 Lab Smp Id: 1506011BR1-02A
 Inj Date : 05-JUN-2015 14:17
 Operator : mjs Inst ID: msd14.i
 Smp Info : 50ml #3049
 Misc Info : 5.9"Hg->14.9psi
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 01-Sep-2015 06:31 mchen Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1
 Dil Factor: 2.51000
 Integrator: HP RTE Compound Sublist: AHT20154mdl.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.51000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.753	4.739 (1.000)	130	106918 400.000		70.00- 130.00	100.00
4.753	4.739 (1.000)	128	84282		48.08- 108.08	78.83
4.739	4.739 (1.000)	49	154665		116.54- 176.54	144.66

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.858	5.844 (1.000)	114	463839 400.000		70.00- 130.00	100.00
5.844	5.844 (1.000)	88	73320		0.00- 45.72	15.81

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	414200 400.000		70.00- 130.00	100.00
9.832	9.832 (1.000)	82	231024		25.58- 85.58	55.78

\$ 117 1,2-Dichloroethane-d4				CAS #: 17060-07-0		
5.396	5.382 (1.135)	65	159975 399.818	399.82	70.00- 130.00	100.00
5.396	5.382 (1.135)	67	82071		23.57- 83.57	51.30

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 227523 395.603 395.60 70.00- 130.00 100.00
10.951 10.951 (1.114) 95 299784 102.26- 162.26 131.76
10.951 10.951 (1.114) 176 217523 66.15- 126.15 95.60

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.303) 98 457138 397.038 397.04 70.00- 130.00 100.00
7.635 7.635 (1.303) 70 51295 0.00- 41.05 11.22
7.635 7.635 (1.303) 100 307280 38.18- 98.18 67.22

156 Tetrachloroethene CAS #: 127-18-4
8.628 8.629 (0.878) 166 22200 30.8719 77.488 70.00- 130.00 100.00
8.628 8.629 (0.878) 129 18300 46.67- 106.67 82.43
8.628 8.629 (0.878) 131 17513 42.30- 102.30 78.89

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060515r1.d

Calibration Time: 07:00

Lab Smp Id: 1506011BR1-02A

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: mjs

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 5.9"Hg->14.9psi

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	106918	-10.96
123 1,4-Difluorobenze	525212	315127	735297	463839	-11.69
163 Chlorobenzene-d5	460332	276199	644465	414200	-10.02

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.75	0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011BR1-02A
Level: LOW Operator: mjs
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: 5.9"Hg->14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	399.82	99.95	68-138
\$ 177 4-Bromofluorobenze	400.00	395.60	98.90	79-116
\$ 146 Toluene-d8	400.00	397.04	99.26	87-110

Data File: /chem/msd14.i/05jun15.b/14060515r-1.d

Date : 05-JUN-2015 14:17

Client ID:

Sample Info: 50ml #3049

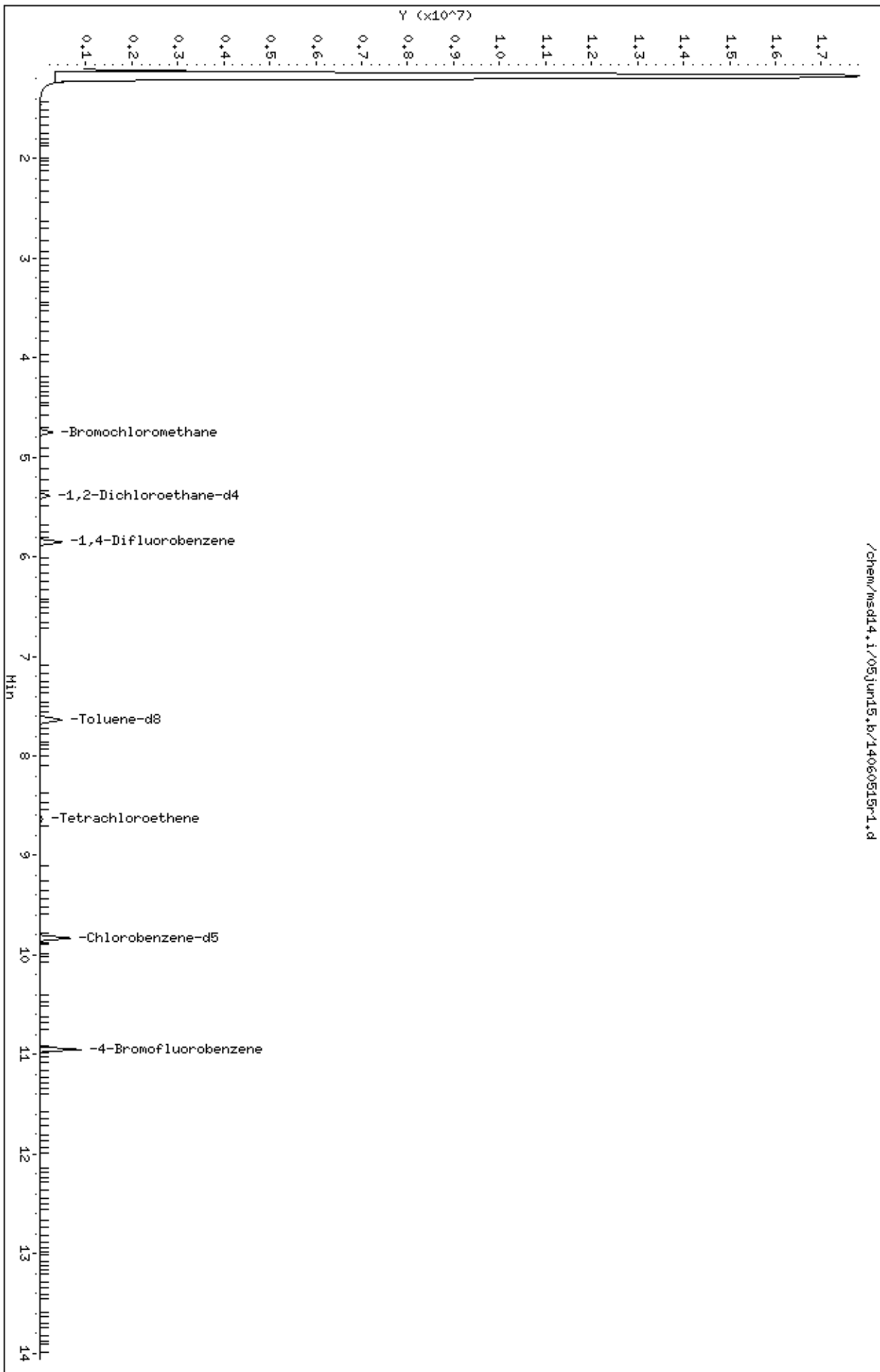
Column phase: RTX-624

Instrument: msd14.1

Operator: m.js

Column diameter: 0.18

/chem/msd14.i/05jun15.b/14060515r-1.d



Date : 05-JUN-2015 14:17

Client ID:

Instrument: msd14.i

Sample Info: 50ml #3049

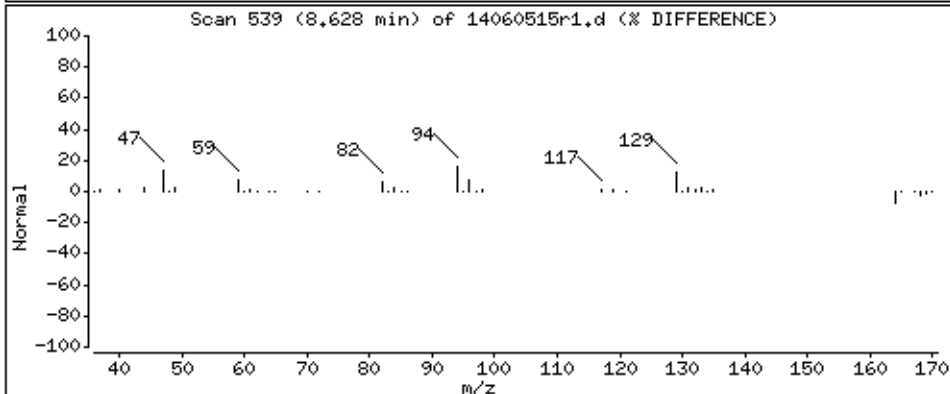
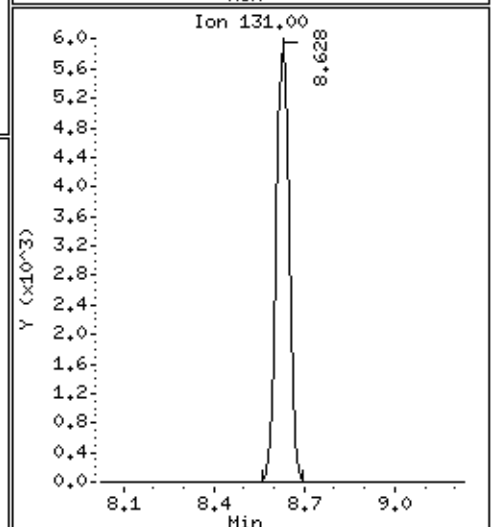
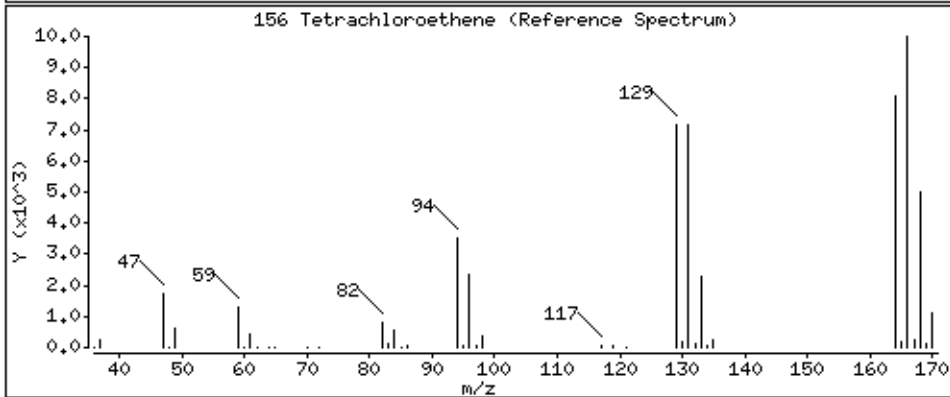
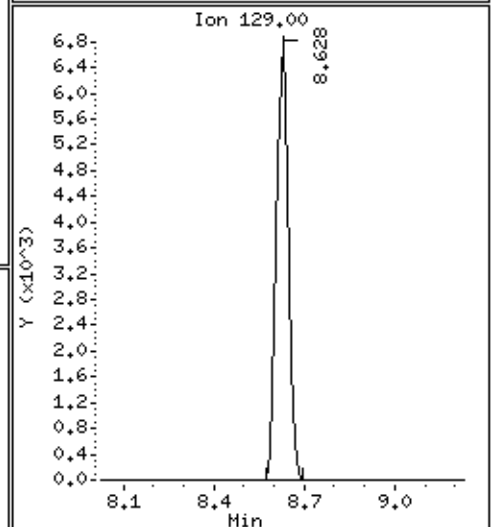
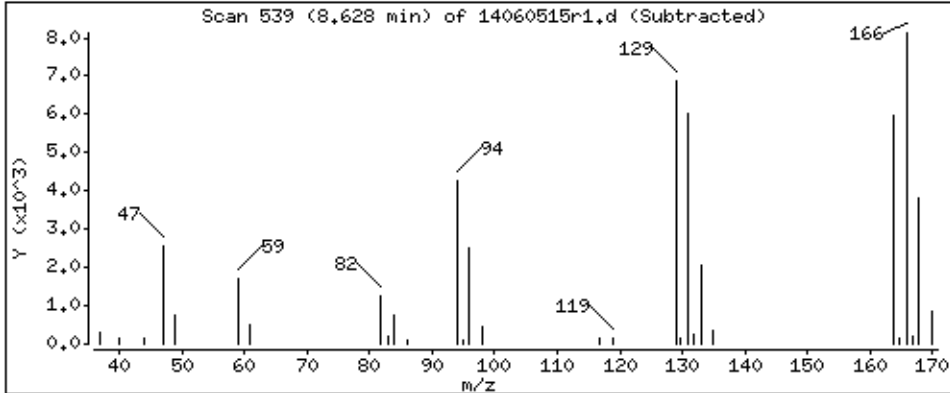
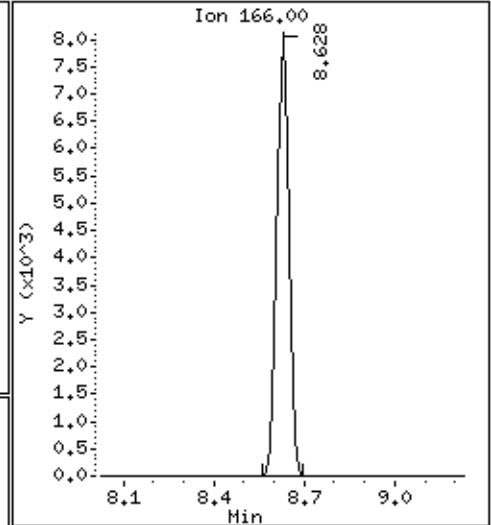
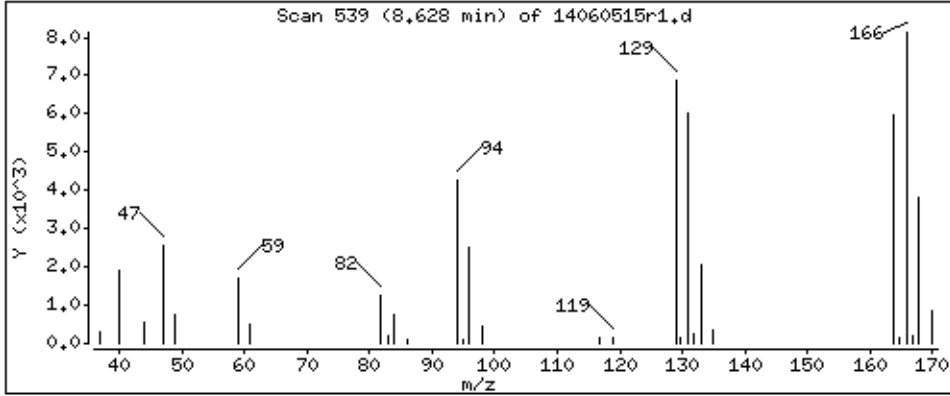
Operator: mjs

Column phase: RTX-624

Column diameter: 0.18

156 Tetrachloroethene

Concentration: 77.488 PPBV



EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	1522M212202F Lab Duplicate	Date/Time Analyzed:	6/5/15 03:20 PM
Lab ID:	1506011BR1-02AA	Dilution Factor:	2.51
Date/Time Collected:	5/27/15 07:15 AM	Instrument/Filename:	msd14.i / 14060516r1
Media:	1 Liter Summa Canister		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	22	51	85	520
Trichloroethene	79-01-6	14	40	67	Not Detected U

U = The analyte was not detected above the MDL.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	99
4-Bromofluorobenzene	460-00-4	79-116	100
Toluene-d8	2037-26-5	87-110	100

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060516r1.d

Lab Smp Id: 1506011BR1-02AA

Inj Date : 05-JUN-2015 15:20

Operator : mjs

Inst ID: msd14.i

Smp Info : 50ml #3049

Misc Info : 5.9"Hg->14.9psi

Comment : 5 and 20 - GC/MS

Method : /chem/msd14.i/05jun15.b/14550601b.m

Meth Date : 01-Sep-2015 06:31 mchen

Quant Type: ISTD

Cal Date : 04-JUN-2015 14:50

Cal File: 14060408.d

Als bottle: 1

Dil Factor: 2.51000

Integrator: HP RTE

Compound Sublist: AHT20154mdl.sub

Target Version: 3.50

Sample Matrix: AIR

Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.51000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.753	4.739 (1.000)	130	111451 400.000		70.00- 130.00	100.00
4.753	4.739 (1.000)	128	85470		48.08- 108.08	76.69
4.739	4.739 (1.000)	49	161490		116.54- 176.54	144.90

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.858	5.844 (1.000)	114	473422 400.000		70.00- 130.00	100.00
5.844	5.844 (1.000)	88	76719		0.00- 45.72	16.21

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	427388 400.000		70.00- 130.00	100.00
9.832	9.832 (1.000)	82	233241		25.58- 85.58	54.57

§ 117 1,2-Dichloroethane-d4				CAS #: 17060-07-0		
5.396	5.382 (1.135)	65	164596 394.636	394.64	70.00- 130.00	100.00
5.396	5.382 (1.135)	67	83888		23.57- 83.57	50.97

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 237145 399.609 399.61 70.00- 130.00 100.00
10.951 10.951 (1.114) 95 312760 102.26- 162.26 131.89
10.951 10.951 (1.114) 176 227446 66.15- 126.15 95.91

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.303) 98 471954 401.609 401.61 70.00- 130.00 100.00
7.635 7.635 (1.303) 70 52573 0.00- 41.05 11.14
7.635 7.635 (1.303) 100 310102 38.18- 98.18 65.71

156 Tetrachloroethene CAS #: 127-18-4
8.628 8.629 (0.878) 166 22516 30.3452 76.166 70.00- 130.00 100.00
8.628 8.629 (0.878) 129 17961 46.67- 106.67 79.77
8.628 8.629 (0.878) 131 17403 42.30- 102.30 77.29

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060516r1.d

Calibration Time: 07:00

Lab Smp Id: 1506011BR1-02AA

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: mjs

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 5.9"Hg->14.9psi

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	111451	-7.19
123 1,4-Difluorobenze	525212	315127	735297	473422	-9.86
163 Chlorobenzene-d5	460332	276199	644465	427388	-7.16

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.75	0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011BR1-02AA
Level: LOW Operator: mjs
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: 5.9"Hg->14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	394.64	98.66	68-138
\$ 177 4-Bromofluorobenze	400.00	399.61	99.90	79-116
\$ 146 Toluene-d8	400.00	401.61	100.40	87-110

Data File: /chem/msd14.i/05jun15.b/14060516r1.d

Date : 05-JUN-2015 15:20

Client ID:

Sample Info: Som1 #3049

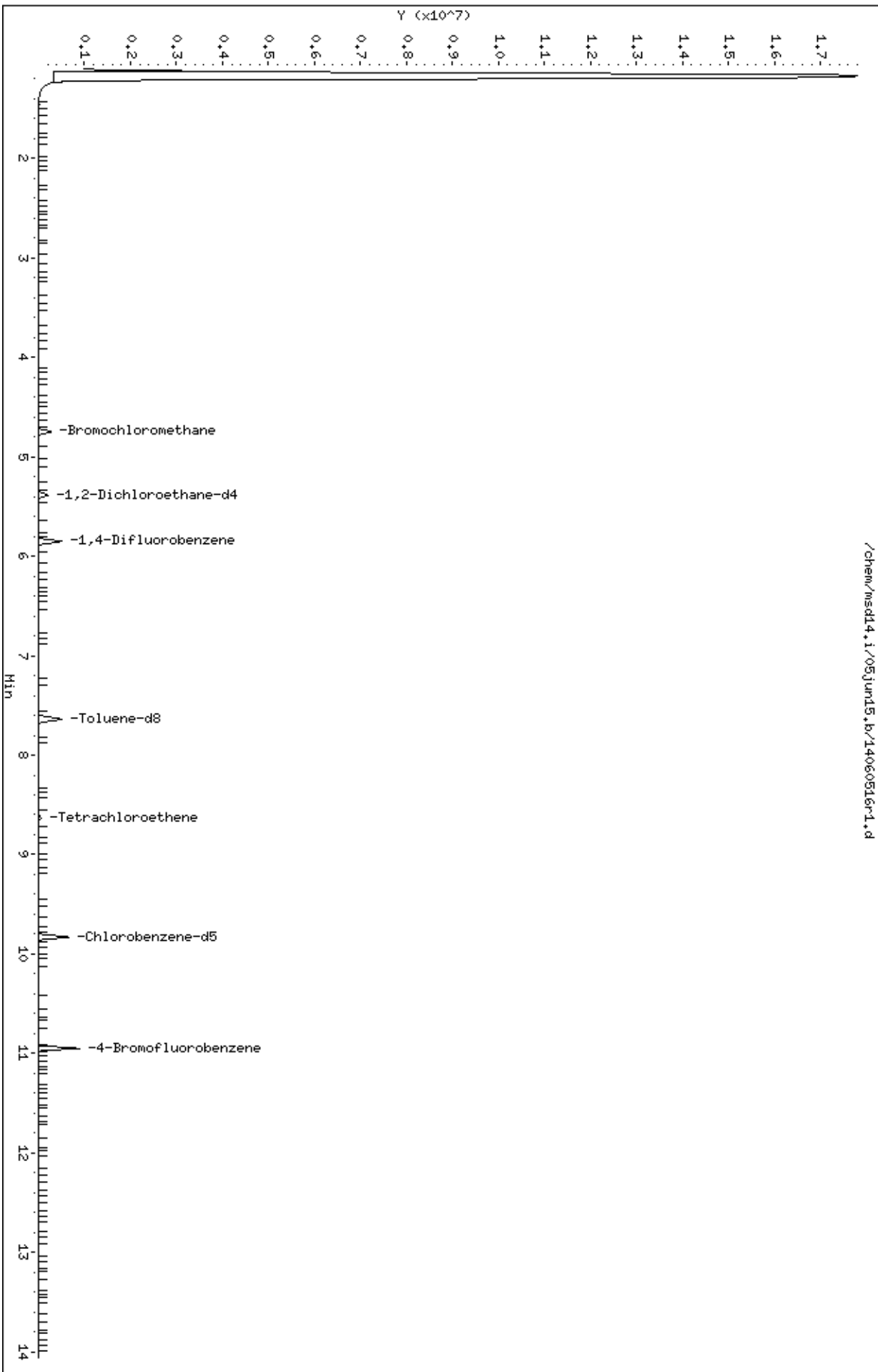
Column phase: RTX-624

Instrument: msd14.1

Operator: m.js

Column diameter: 0.18

/chem/msd14.i/05jun15.b/14060516r1.d



Date : 05-JUN-2015 15:20

Client ID:

Instrument: msd14.i

Sample Info: 50ml #3049

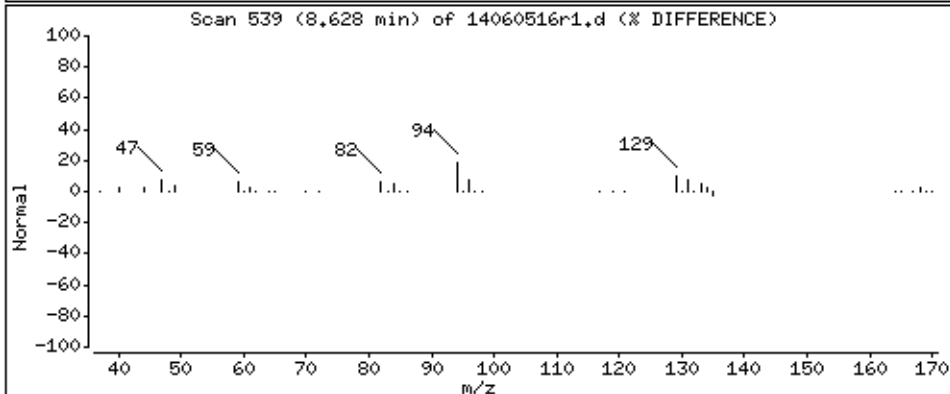
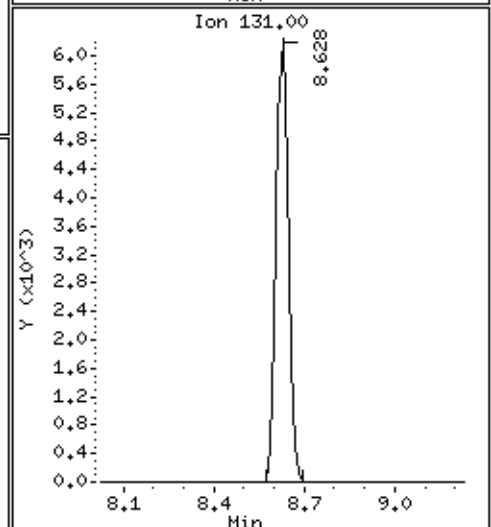
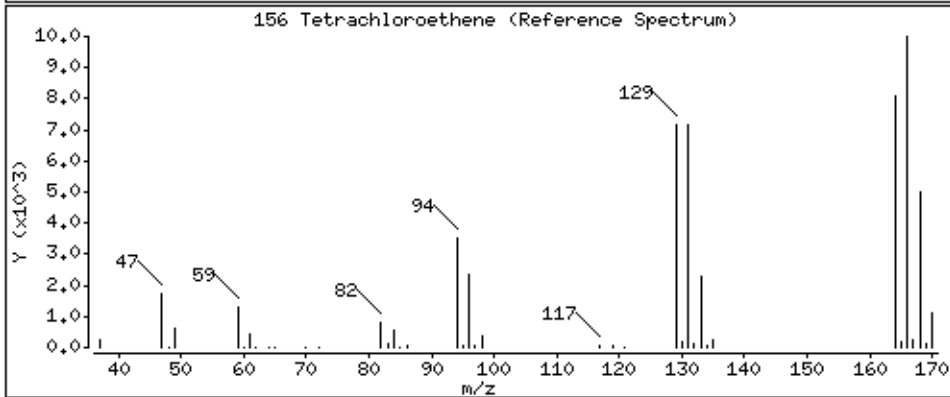
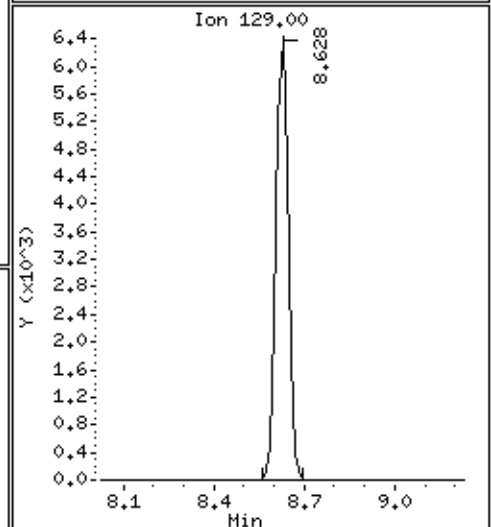
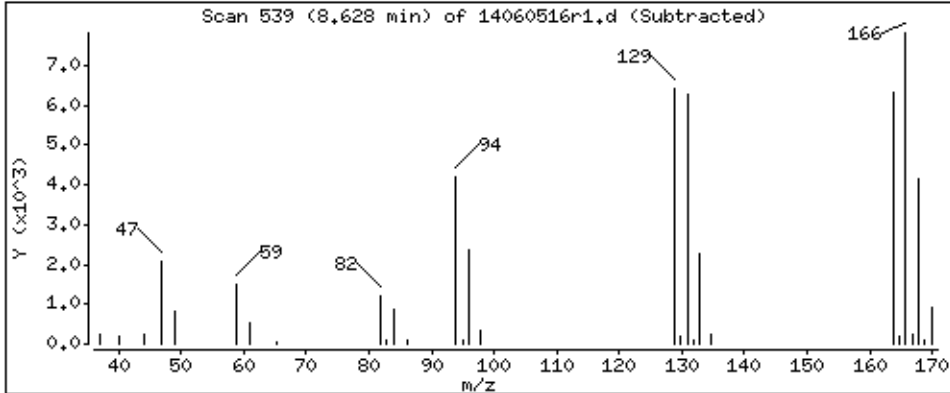
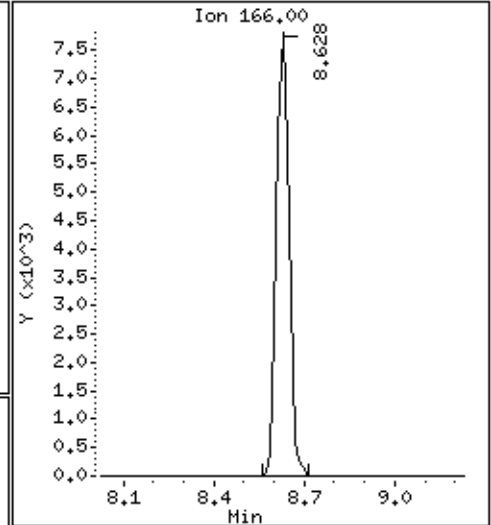
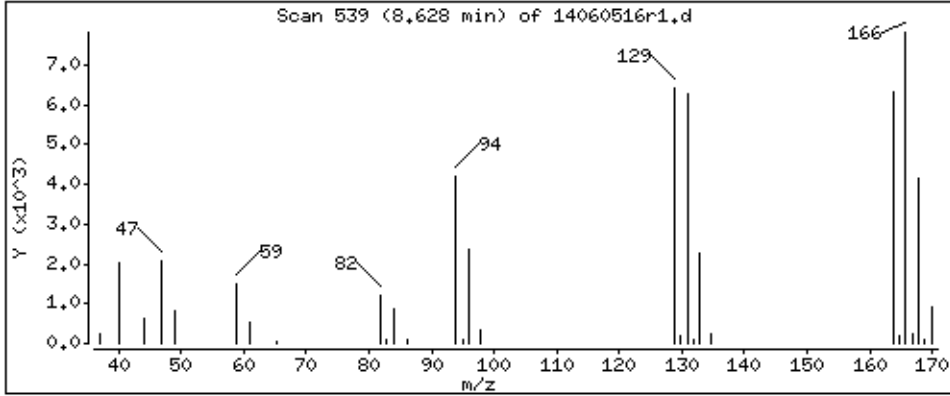
Operator: mjs

Column phase: RTX-624

Column diameter: 0.18

156 Tetrachloroethene

Concentration: 76.166 PPBV



EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	1522M212203D	Date/Time Analyzed:	6/5/15 03:50 PM
Lab ID:	1506011BR1-03A	Dilution Factor:	2.48
Date/Time Collected:	5/27/15 07:16 AM	Instrument/Filename:	msd14.i / 14060517r1
Media:	1 Liter Summa Canister		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	21	50	84	530
Trichloroethene	79-01-6	14	40	67	Not Detected U

U = The analyte was not detected above the MDL.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	98
4-Bromofluorobenzene	460-00-4	79-116	99
Toluene-d8	2037-26-5	87-110	99

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060517r1.d
 Lab Smp Id: 1506011BR1-03A
 Inj Date : 05-JUN-2015 15:50
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #1L1517
 Misc Info : 5.5"Hg->15psi
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 01-Sep-2015 06:31 mchen Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1
 Dil Factor: 2.48000
 Integrator: HP RTE Compound Sublist: AHT20154mdl.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.48000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.753	4.739 (1.000)	130	109926 400.000		70.00- 130.00	100.00
4.753	4.739 (1.000)	128	85526		48.08- 108.08	77.80
4.739	4.739 (1.000)	49	157401		116.54- 176.54	143.19

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.858	5.844 (1.000)	114	471236 400.000		70.00- 130.00	100.00
5.844	5.844 (1.000)	88	75481		0.00- 45.72	16.02

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	422607 400.000		70.00- 130.00	100.00
9.832	9.832 (1.000)	82	233669		25.58- 85.58	55.29

\$ 117 1,2-Dichloroethane-d4				CAS #: 17060-07-0		
5.396	5.382 (1.135)	65	161559 392.728	392.73	70.00- 130.00	100.00
5.396	5.382 (1.135)	67	83054		23.57- 83.57	51.41

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 233016 397.094 397.09 70.00- 130.00 100.00
10.951 10.951 (1.114) 95 304685 102.26- 162.26 130.76
10.951 10.951 (1.114) 176 220834 66.15- 126.15 94.77

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.303) 98 464506 397.105 397.10 70.00- 130.00 100.00
7.635 7.635 (1.303) 70 52406 0.00- 41.05 11.28
7.635 7.635 (1.303) 100 308351 38.18- 98.18 66.38

156 Tetrachloroethene CAS #: 127-18-4
8.629 8.629 (0.878) 166 23307 31.7666 78.781 70.00- 130.00 100.00
8.629 8.629 (0.878) 129 16626 46.67- 106.67 71.34
8.629 8.629 (0.878) 131 15886 42.30- 102.30 68.16

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060517r1.d

Calibration Time: 07:00

Lab Smp Id: 1506011BR1-03A

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: md

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 5.5"Hg->15psi

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	109926	-8.46
123 1,4-Difluorobenze	525212	315127	735297	471236	-10.28
163 Chlorobenzene-d5	460332	276199	644465	422607	-8.20

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.75	0.30
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011BR1-03A
Level: LOW Operator: md
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: 5.5"Hg->15psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	392.73	98.18	68-138
\$ 177 4-Bromofluorobenze	400.00	397.09	99.27	79-116
\$ 146 Toluene-d8	400.00	397.10	99.28	87-110

Data File: /chem/msd14.i/05jun15.b/14060517-1.d

Date : 05-JUN-2015 15:50

Client ID:

Sample Info: 50ml #111517

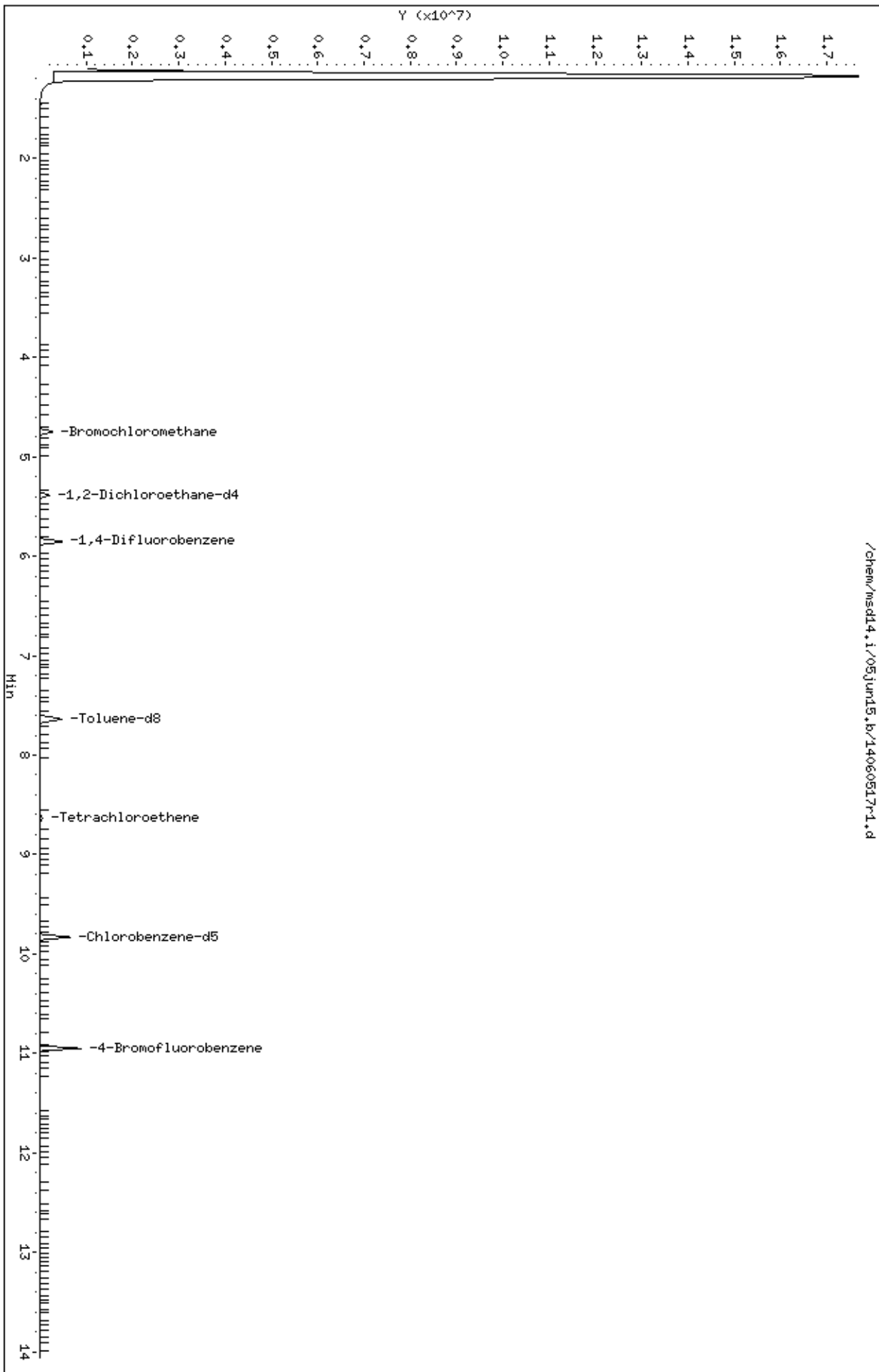
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.i/05jun15.b/14060517-1.d



Date : 05-JUN-2015 15:50

Client ID:

Instrument: msd14.i

Sample Info: 50ml #1L1517

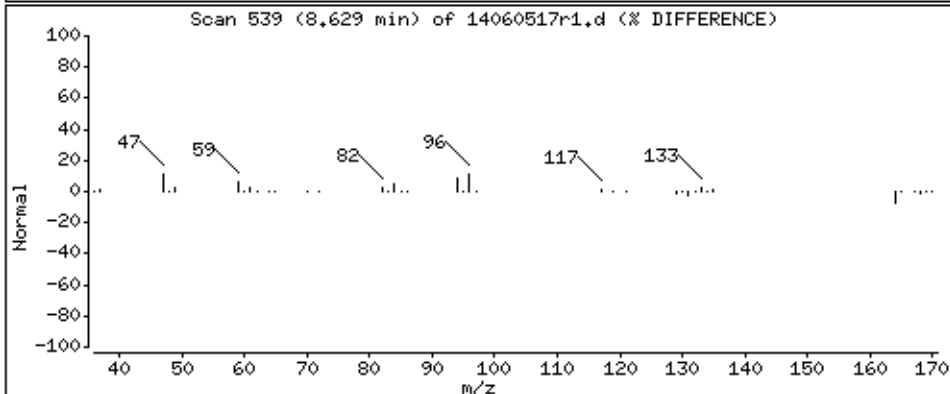
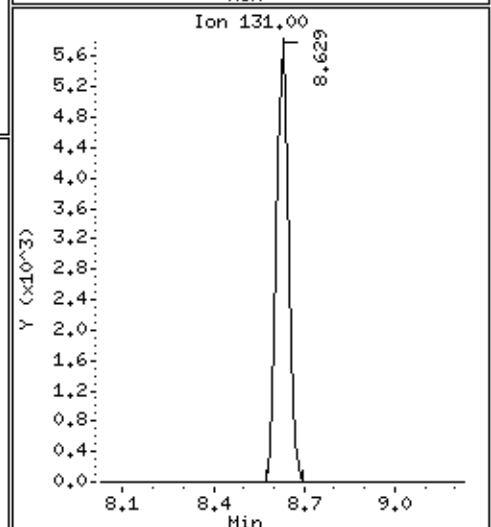
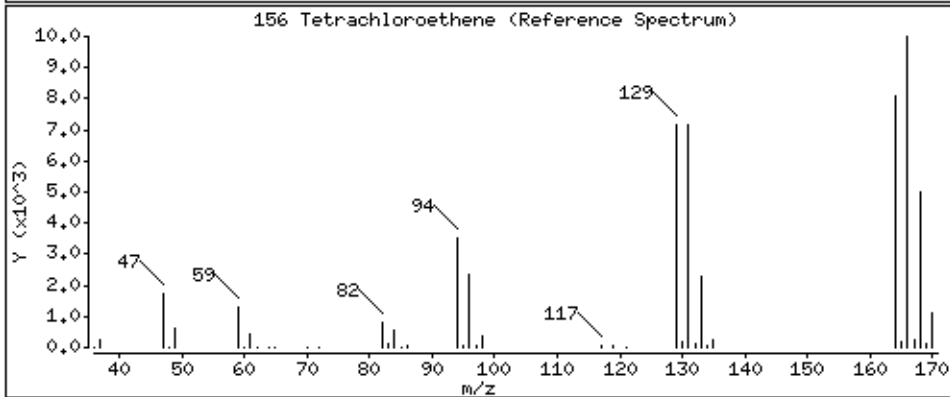
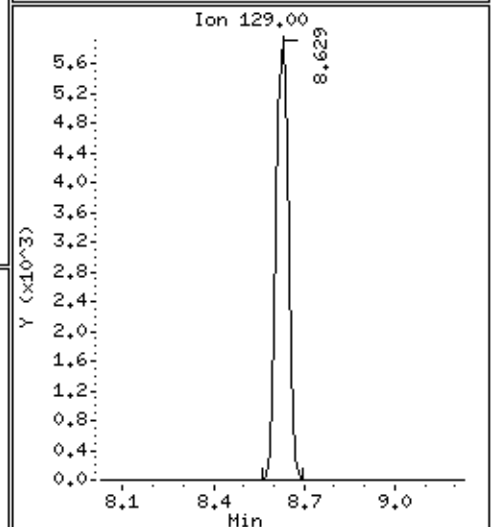
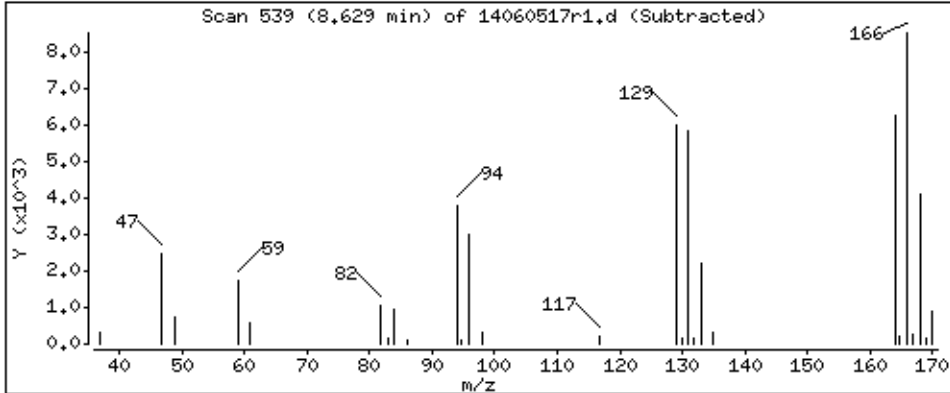
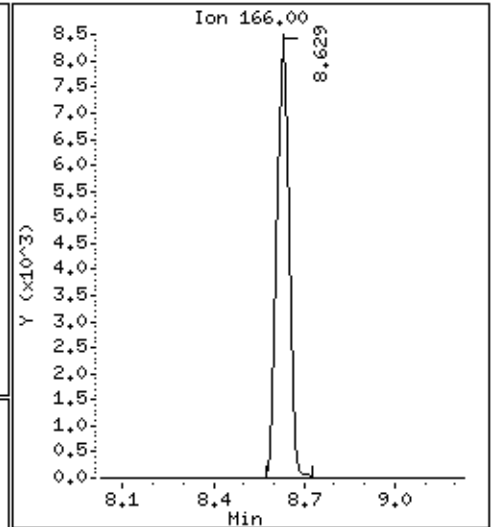
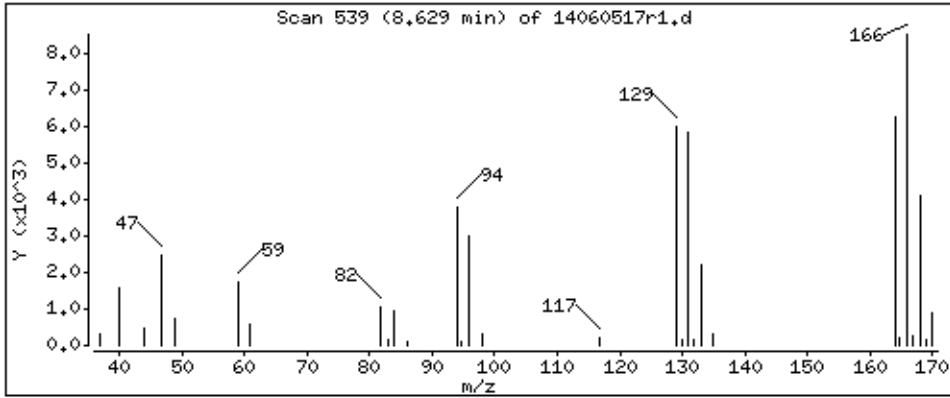
Operator: md

Column phase: RTX-624

Column diameter: 0.18

156 Tetrachloroethene

Concentration: 78,781 PPBV



EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	1522M212206F	Date/Time Analyzed:	6/5/15 04:11 PM
Lab ID:	1506011BR1-06A	Dilution Factor:	2.58
Date/Time Collected:	5/27/15 09:13 AM	Instrument/Filename:	msd14.i / 14060518r1
Media:	1 Liter Summa Canister		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	22	52	88	120
Trichloroethene	79-01-6	14	42	69	Not Detected U

U = The analyte was not detected above the MDL.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	99
4-Bromofluorobenzene	460-00-4	79-116	98
Toluene-d8	2037-26-5	87-110	100

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060518r1.d

Lab Smp Id: 1506011BR1-06A

Inj Date : 05-JUN-2015 16:11

Operator : md

Inst ID: msd14.i

Smp Info : 50ml #35633

Misc Info : 5.9"Hg->15.8psi

Comment : 5 and 20 - GC/MS

Method : /chem/msd14.i/05jun15.b/14550601b.m

Meth Date : 01-Sep-2015 06:31 mchen

Quant Type: ISTD

Cal Date : 04-JUN-2015 14:50

Cal File: 14060408.d

Als bottle: 1

Dil Factor: 2.58000

Integrator: HP RTE

Compound Sublist: AHT20154mdl.sub

Target Version: 3.50

Sample Matrix: AIR

Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.58000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.753	4.739 (1.000)	130	108752 400.000		70.00- 130.00	100.00
4.753	4.739 (1.000)	128	84628		48.08- 108.08	77.82
4.739	4.739 (1.000)	49	152555		116.54- 176.54	140.28

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.858	5.844 (1.000)	114	458691 400.000		70.00- 130.00	100.00
5.858	5.844 (1.000)	88	74051		0.00- 45.72	16.14

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	417532 400.000		70.00- 130.00	100.00
9.832	9.832 (1.000)	82	227218		25.58- 85.58	54.42

§ 117 1,2-Dichloroethane-d4				CAS #: 17060-07-0		
5.396	5.382 (1.135)	65	161194 396.071	396.07	70.00- 130.00	100.00
5.396	5.382 (1.135)	67	79210		23.57- 83.57	49.14

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 227883 393.067 393.07 70.00- 130.00 100.00
10.951 10.951 (1.114) 95 303177 102.26- 162.26 133.04
10.951 10.951 (1.114) 176 220025 66.15- 126.15 96.55

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.303) 98 454897 399.526 399.52 70.00- 130.00 100.00
7.635 7.635 (1.303) 70 52105 0.00- 41.05 11.45
7.635 7.635 (1.303) 100 301032 38.18- 98.18 66.18

156 Tetrachloroethene CAS #: 127-18-4
8.628 8.629 (0.878) 166 4803 6.62588 17.095 70.00- 130.00 100.00
8.628 8.629 (0.878) 129 3549 46.67- 106.67 73.90
8.628 8.629 (0.878) 131 3400 42.30- 102.30 70.80

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060518r1.d

Calibration Time: 07:00

Lab Smp Id: 1506011BR1-06A

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: md

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 5.9"Hg->15.8psi

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	108752	-9.44
123 1,4-Difluorobenze	525212	315127	735297	458691	-12.67
163 Chlorobenzene-d5	460332	276199	644465	417532	-9.30

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.75	0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011BR1-06A
Level: LOW Operator: md
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: 5.9"Hg->15.8psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	396.07	99.02	68-138
\$ 177 4-Bromofluorobenze	400.00	393.07	98.27	79-116
\$ 146 Toluene-d8	400.00	399.52	99.88	87-110

Data File: /chem/msd14.i/05jun15.b/14060518r-1.d

Date : 05-JUN-2015 16:11

Client ID:

Sample Info: 50ml #35633

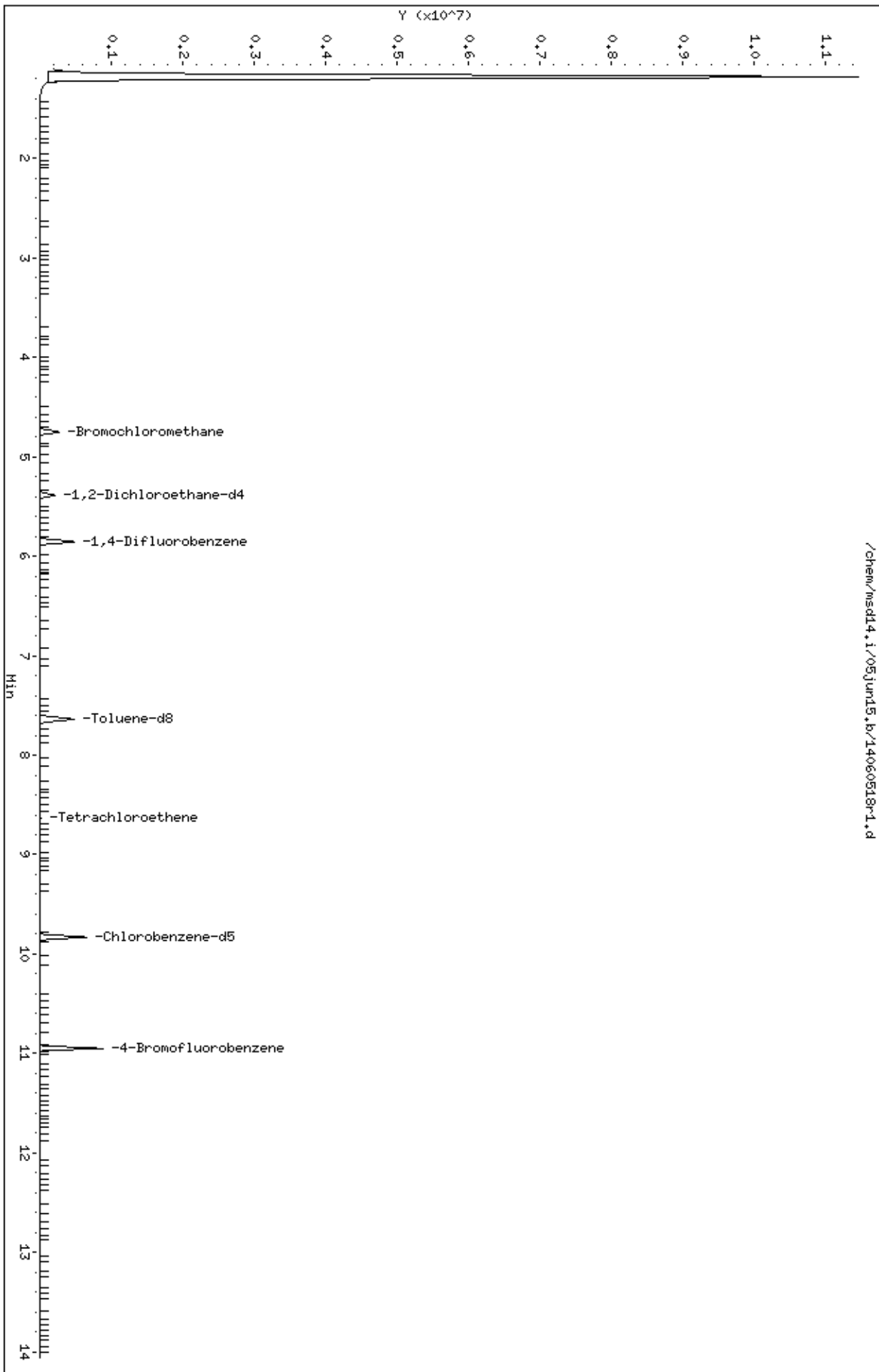
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.i/05jun15.b/14060518r-1.d



Date : 05-JUN-2015 16:11

Client ID:

Instrument: msd14.i

Sample Info: 50ml #35633

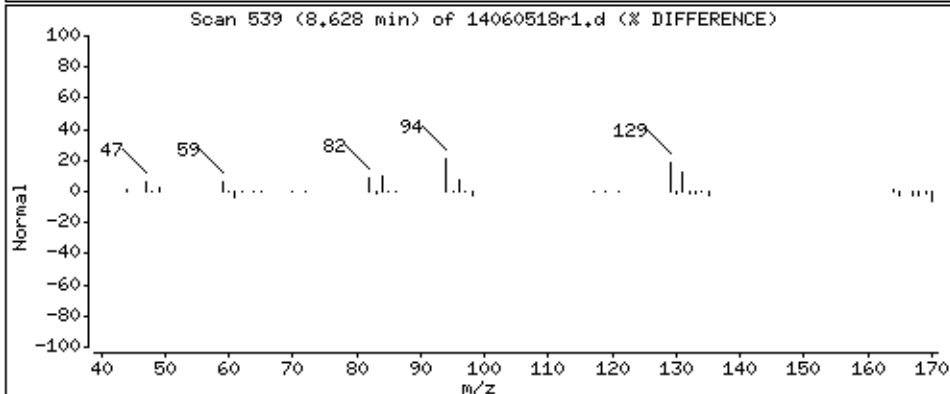
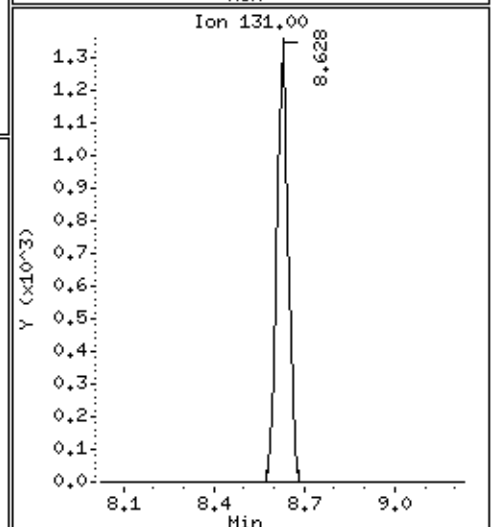
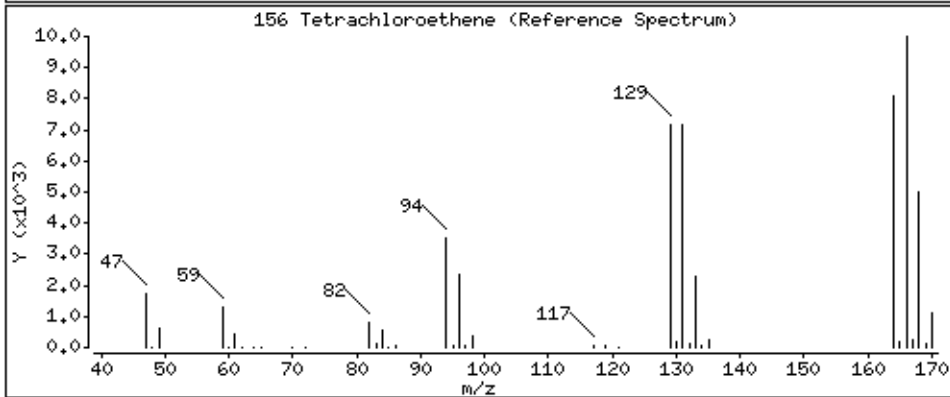
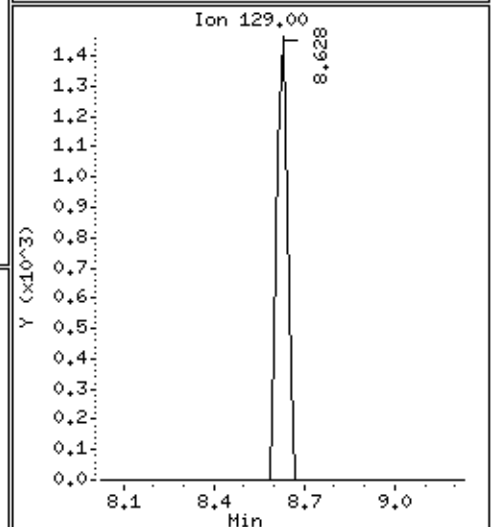
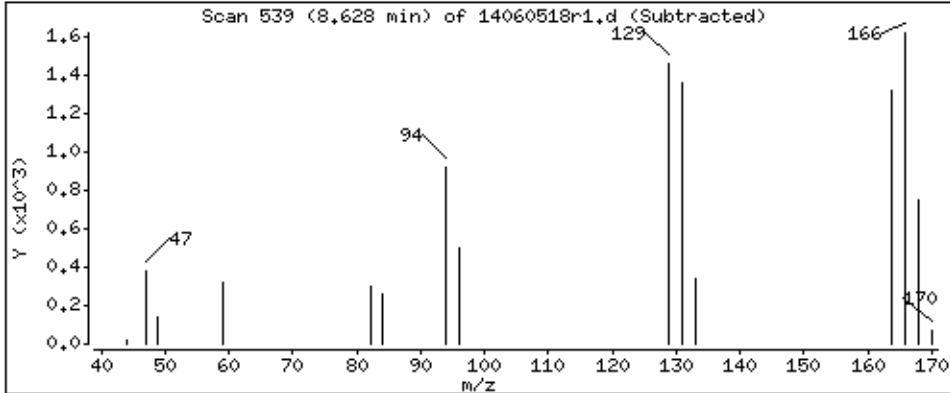
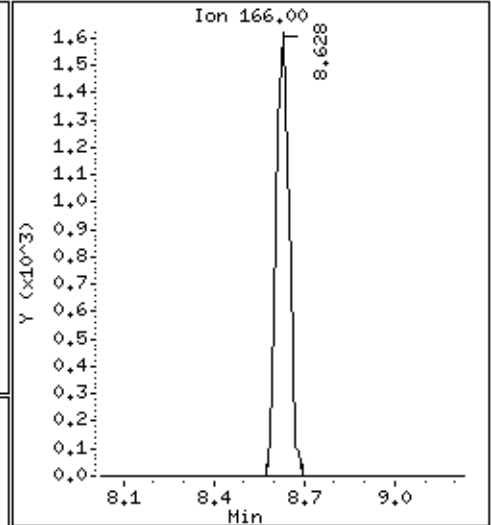
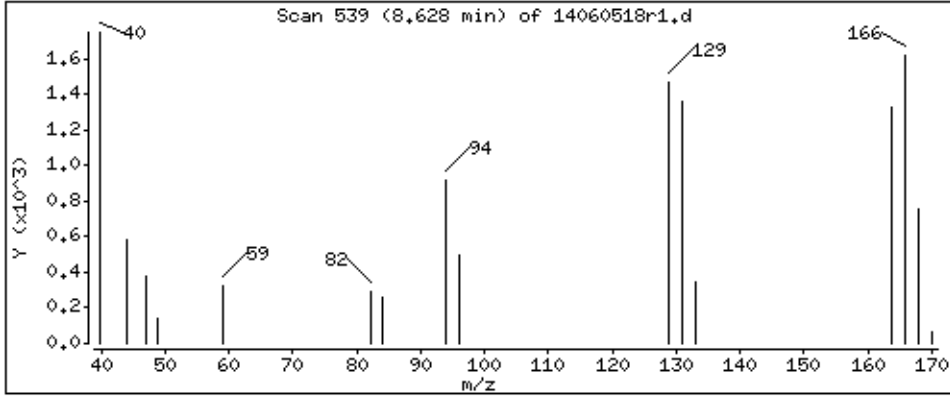
Operator: md

Column phase: RTX-624

Column diameter: 0.18

156 Tetrachloroethene

Concentration: 17.095 PPBV



EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	1522M212207F	Date/Time Analyzed:	6/5/15 04:30 PM
Lab ID:	1506011BR1-07A	Dilution Factor:	2.45
Date/Time Collected:	5/27/15 09:42 AM	Instrument/Filename:	msd14.i / 14060519r1
Media:	1 Liter Summa Canister		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	21	50	83	Not Detected U
Trichloroethene	79-01-6	14	39	66	Not Detected U

U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	97
4-Bromofluorobenzene	460-00-4	79-116	101
Toluene-d8	2037-26-5	87-110	98

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060519r1.d

Lab Smp Id: 1506011BR1-07A

Inj Date : 05-JUN-2015 16:30

Operator : md

Inst ID: msd14.i

Smp Info : 50ml #37432

Misc Info : 5.3"Hg->14.9psi

Comment : 5 and 20 - GC/MS

Method : /chem/msd14.i/05jun15.b/14550601b.m

Meth Date : 01-Sep-2015 06:31 mchen

Quant Type: ISTD

Cal Date : 04-JUN-2015 14:50

Cal File: 14060408.d

Als bottle: 1

Dil Factor: 2.45000

Integrator: HP RTE

Compound Sublist: AHT20154mdl.sub

Target Version: 3.50

Sample Matrix: AIR

Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.45000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane					CAS #: 74-97-5	
4.753	4.739 (1.000)	130	112105	400.000	70.00- 130.00	100.00
4.753	4.739 (1.000)	128	85227		48.08- 108.08	76.02
4.753	4.739 (1.000)	49	158131		116.54- 176.54	141.06

* 123 1,4-Difluorobenzene					CAS #: 540-36-3	
5.858	5.844 (1.000)	114	478598	400.000	70.00- 130.00	100.00
5.858	5.844 (1.000)	88	75155		0.00- 45.72	15.70

* 163 Chlorobenzene-d5					CAS #: 3114-55-4	
9.832	9.832 (1.000)	117	424318	400.000	70.00- 130.00	100.00
9.832	9.832 (1.000)	82	233682		25.58- 85.58	55.07

§ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0	
5.396	5.382 (1.135)	65	163468	389.645	389.64 70.00- 130.00	100.00
5.396	5.382 (1.135)	67	82525		23.57- 83.57	50.48

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 238979 405.613 405.61 70.00- 130.00 100.00
10.951 10.951 (1.114) 95 309196 102.26- 162.26 129.38
10.951 10.951 (1.114) 176 227123 66.15- 126.15 95.04

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.303) 98 464669 391.133 391.13 70.00- 130.00 100.00
7.635 7.635 (1.303) 70 51904 0.00- 41.05 11.17
7.635 7.635 (1.303) 100 311825 38.18- 98.18 67.11

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060519r1.d

Calibration Time: 07:00

Lab Smp Id: 1506011BR1-07A

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: md

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 5.3"Hg->14.9psi

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	112105	-6.64
123 1,4-Difluorobenze	525212	315127	735297	478598	-8.88
163 Chlorobenzene-d5	460332	276199	644465	424318	-7.82

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.75	0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011BR1-07A
Level: LOW Operator: md
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: 5.3"Hg->14.9psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	389.64	97.41	68-138
\$ 177 4-Bromofluorobenze	400.00	405.61	101.40	79-116
\$ 146 Toluene-d8	400.00	391.13	97.78	87-110

Data File: /chem/msd14.i/05jun15.b/14060519r1.d

Date : 05-JUN-2015 16:30

Client ID:

Sample Info: 50ml #37432

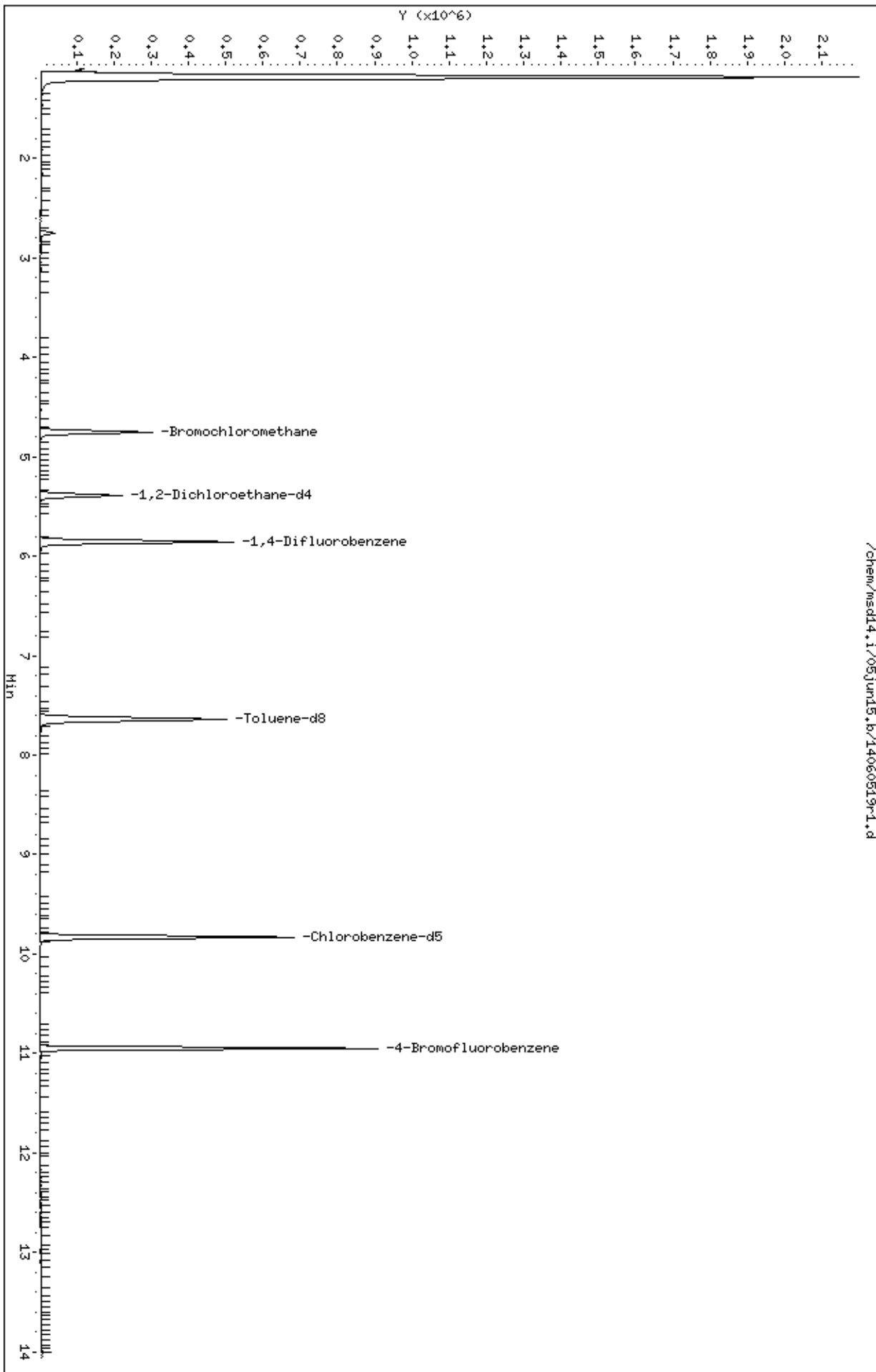
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.i/05jun15.b/14060519r1.d



EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	1522M212211F	Date/Time Analyzed:	6/5/15 04:49 PM
Lab ID:	1506011BR1-11A	Dilution Factor:	2.49
Date/Time Collected:	5/28/15 09:20 AM	Instrument/Filename:	msd14.i / 14060520r1
Media:	1 Liter Summa Canister		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	21	51	84	42 J
Trichloroethene	79-01-6	14	40	67	Not Detected U

U = The analyte was not detected above the MDL.

J = Estimated value.

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	99
4-Bromofluorobenzene	460-00-4	79-116	101
Toluene-d8	2037-26-5	87-110	100

Report Date: 01-Sep-2015 06:39

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060520r1.d
 Lab Smp Id: 1506011BR1-11A
 Inj Date : 05-JUN-2015 16:49
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #36499
 Misc Info : 5.9"Hg->14.7psi
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 01-Sep-2015 06:31 mchen Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1
 Dil Factor: 2.49000
 Integrator: HP RTE Compound Sublist: AHT20154mdl.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.49000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.753	4.739 (1.000)	130	101884 400.000		70.00- 130.00	100.00
4.753	4.739 (1.000)	128	79557		48.08- 108.08	78.09
4.739	4.739 (1.000)	49	147954		116.54- 176.54	145.22

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.858	5.844 (1.000)	114	440031 400.000		70.00- 130.00	100.00
5.858	5.844 (1.000)	88	69289		0.00- 45.72	15.75

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	394282 400.000		70.00- 130.00	100.00
9.818	9.832 (1.000)	82	218914		25.58- 85.58	55.52

\$ 117 1,2-Dichloroethane-d4				CAS #: 17060-07-0		
5.396	5.382 (1.135)	65	151237 396.655	396.66	70.00- 130.00	100.00
5.396	5.382 (1.135)	67	76031		23.57- 83.57	50.27

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 220948 403.578 403.58 70.00- 130.00 100.00
10.937 10.951 (1.112) 95 286629 102.26- 162.26 129.73
10.951 10.951 (1.114) 176 209550 66.15- 126.15 94.84

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.303) 98 434858 398.122 398.12 70.00- 130.00 100.00
7.635 7.635 (1.303) 70 49010 0.00- 41.05 11.27
7.635 7.635 (1.303) 100 289075 38.18- 98.18 66.48

156 Tetrachloroethene CAS #: 127-18-4
8.629 8.629 (0.878) 166 1689 2.46742 6.144 70.00- 130.00 100.00(a)
8.615 8.629 (0.876) 129 919 46.67- 106.67 54.40
8.615 8.629 (0.876) 131 1211 42.30- 102.30 71.68

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 01-Sep-2015 06:39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060520r1.d

Calibration Time: 07:00

Lab Smp Id: 1506011BR1-11A

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: md

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 5.9"Hg->14.7psi

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	101884	-15.16
123 1,4-Difluorobenze	525212	315127	735297	440031	-16.22
163 Chlorobenzene-d5	460332	276199	644465	394282	-14.35

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.75	0.30
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1506011BR1-11A
Level: LOW Operator: md
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: 5.9"Hg->14.7psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	396.66	99.16	68-138
\$ 177 4-Bromofluorobenze	400.00	403.58	100.89	79-116
\$ 146 Toluene-d8	400.00	398.12	99.53	87-110

Data File: /chem/msd14.i/05jun15.b/14060520r1.d

Date : 05-JUN-2015 16:49

Client ID:

Sample Info: Som1 #36499

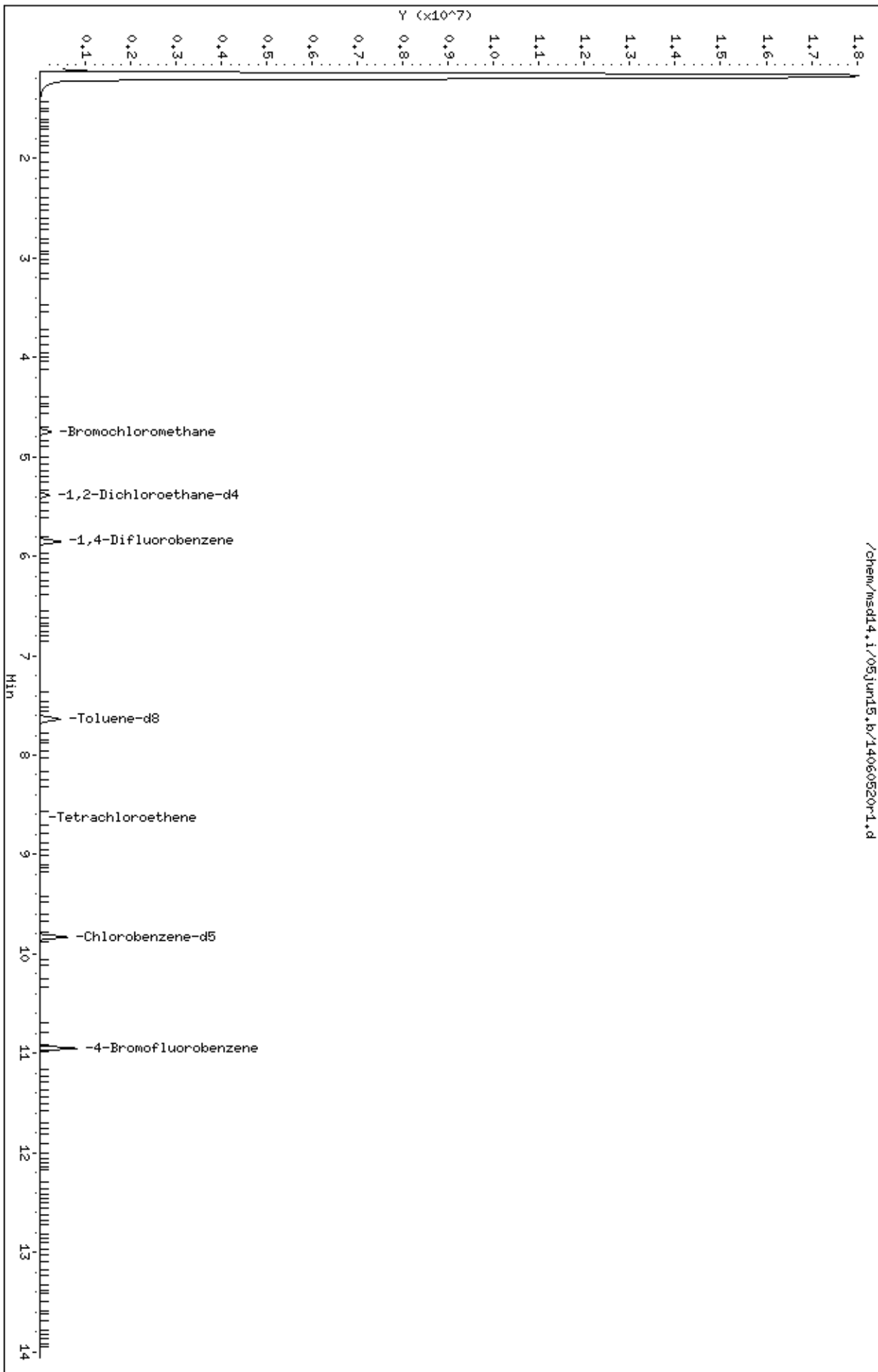
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.i/05jun15.b/14060520r1.d



Date : 05-JUN-2015 16:49

Client ID:

Instrument: msd14.i

Sample Info: 50ml #36499

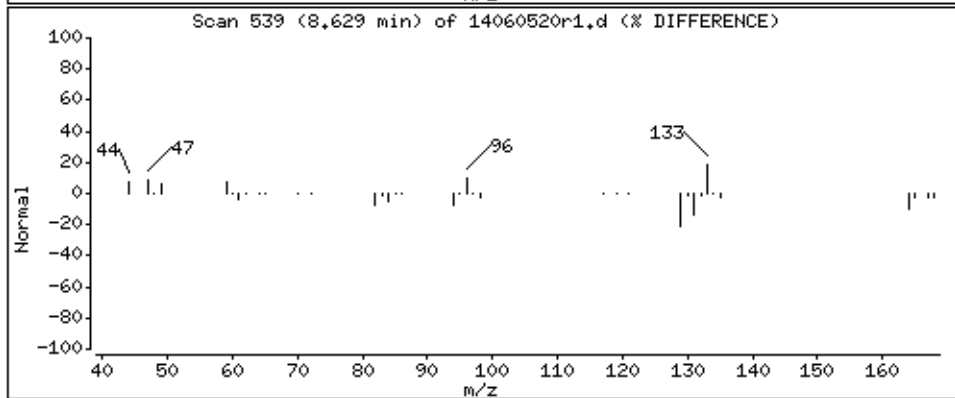
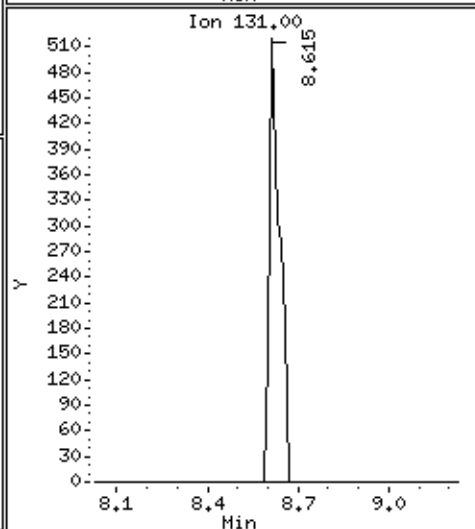
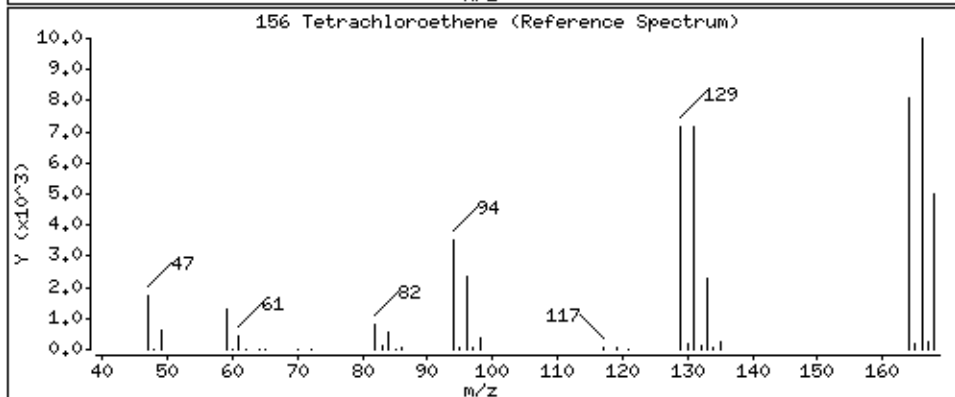
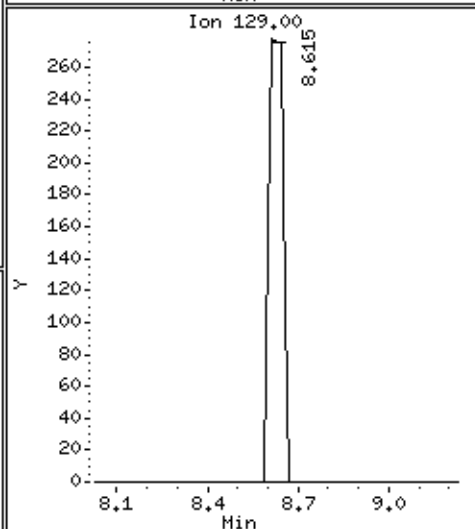
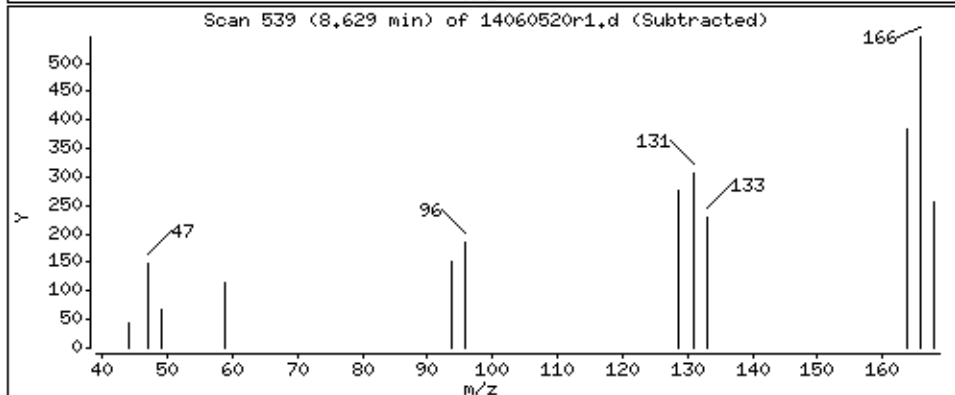
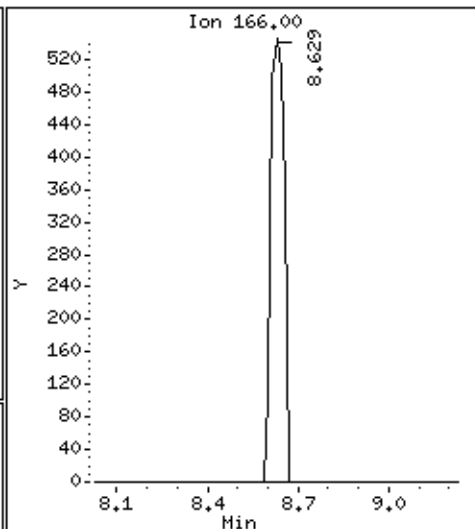
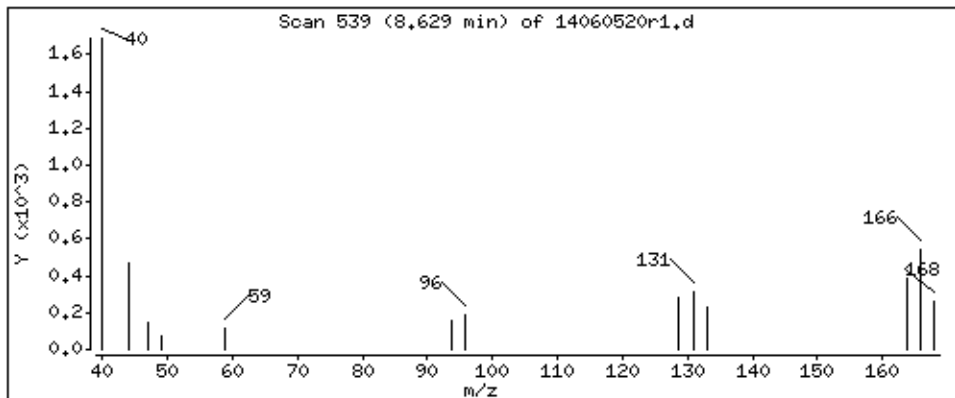
Operator: md

Column phase: RTX-624

Column diameter: 0.18

156 Tetrachloroethene

Concentration: 6.144 PPBV



QC Results and Raw Data

EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	Lab Blank	Date/Time Analyzed:	6/5/15 10:42 AM
Lab ID:	1506011BR1-12A	Dilution Factor:	1.00
Date/Time Collected:	NA - Not Applicable	Instrument/Filename:	msd14.i / 14060507cr1
Media:	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	127-18-4	8.6	20	34	Not Detected U
Trichloroethene	79-01-6	5.6	16	27	Not Detected U

U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	97
4-Bromofluorobenzene	460-00-4	79-116	96
Toluene-d8	2037-26-5	87-110	101

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060507cr1.d
 Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
 Inj Date : 05-JUN-2015 10:42
 Operator : mjs Inst ID: msd14.i
 Smp Info : 50ml #34343
 Misc Info : Humid
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 01-Sep-2015 06:31 mchen Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AHT20154mdl.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane CAS #: 74-97-5

4.739	4.739 (1.000)	130	116990	400.000	70.00- 130.00	100.00
4.739	4.739 (1.000)	128	92211		48.08- 108.08	78.82
4.739	4.739 (1.000)	49	168287		116.54- 176.54	143.85

* 123 1,4-Difluorobenzene CAS #: 540-36-3

5.844	5.844 (1.000)	114	498123	400.000	70.00- 130.00	100.00
5.844	5.844 (1.000)	88	83174		0.00- 45.72	16.70

* 163 Chlorobenzene-d5 CAS #: 3114-55-4

9.832	9.832 (1.000)	117	453505	400.000	70.00- 130.00	100.00
9.818	9.832 (1.000)	82	252264		25.58- 85.58	55.63

§ 117 1,2-Dichloroethane-d4 CAS #: 17060-07-0

5.382	5.382 (1.136)	65	170621	389.713	389.71 70.00- 130.00	100.00
5.382	5.382 (1.136)	67	84851		23.57- 83.57	49.73

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
== =====

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
10.951 10.951 (1.114) 174 242700 385.418 385.42 70.00- 130.00 100.00
10.937 10.951 (1.112) 95 331382 102.26- 162.26 136.54
10.951 10.951 (1.114) 176 231295 66.15- 126.15 95.30

\$ 146 Toluene-d8 CAS #: 2037-26-5
7.635 7.635 (1.306) 98 499285 403.798 403.80 70.00- 130.00 100.00
7.635 7.635 (1.306) 70 55968 0.00- 41.05 11.21
7.635 7.635 (1.306) 100 330875 38.18- 98.18 66.27

Report Date: 01-Sep-2015 06:38

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060507cr1.d

Calibration Time: 07:00

Lab Smp Id: Lab Blank

Client Smp ID: Lab Blank

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: mjs

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: Humid

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	116990	-2.58
123 1,4-Difluorobenze	525212	315127	735297	498123	-5.16
163 Chlorobenzene-d5	460332	276199	644465	453505	-1.48

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Level: LOW Operator: mjs
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 2926Spectra.spk Quant Type: ISTD
Sublist File: AHT20154mdl.sub
Method File: /chem/msd14.i/05jun15.b/14550601b.m
Misc Info: Humid

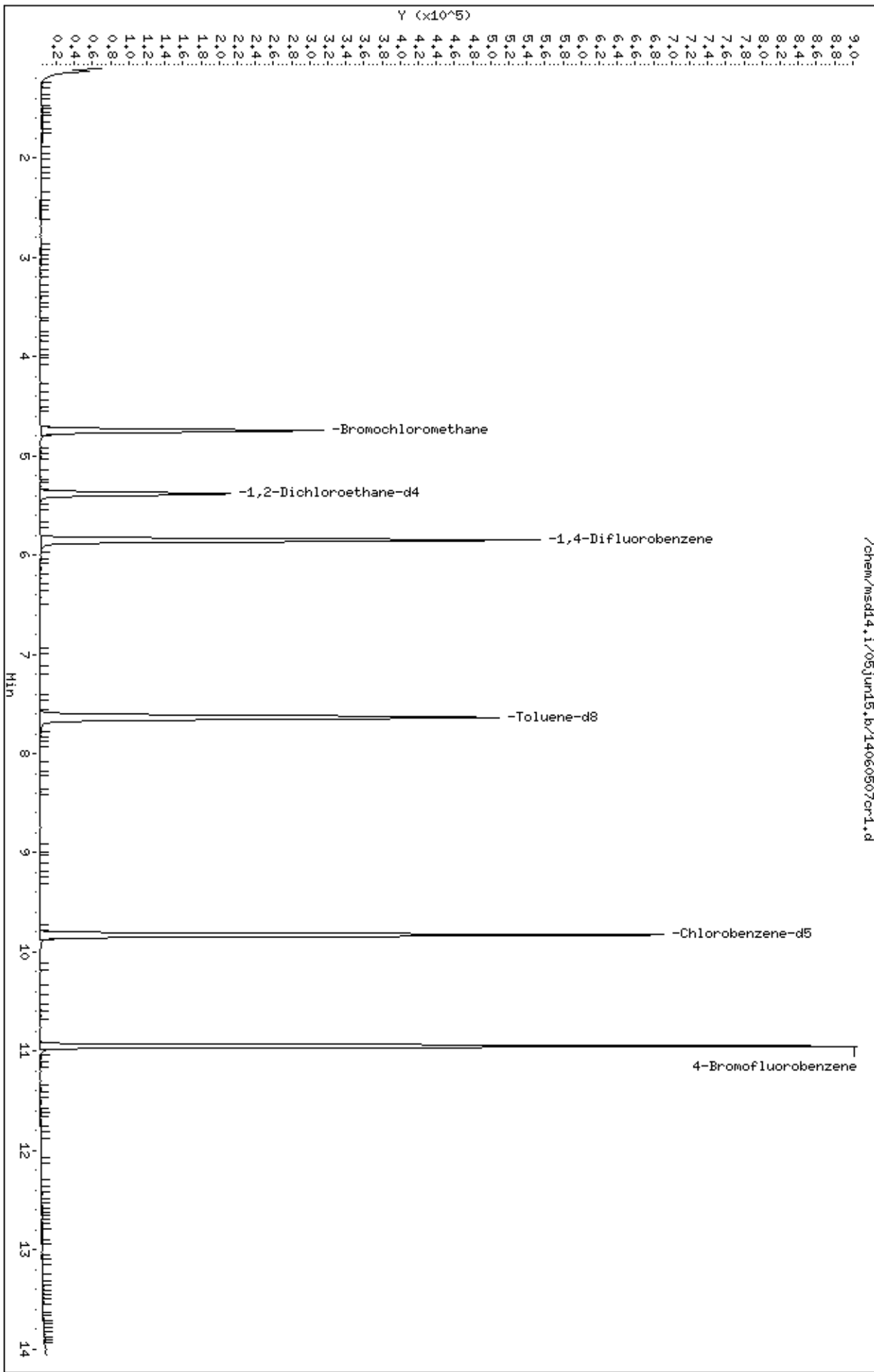
SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	389.71	97.43	68-138
\$ 177 4-Bromofluorobenze	400.00	385.42	96.35	79-116
\$ 146 Toluene-d8	400.00	403.80	100.95	87-110

Data File: /chem/msd14.1/05jun15.b/14060507cr1.d
Date : 05-JUN-2015 10:42
Client ID: Lab Blank
Sample Info: 50ml #34343

Column phase: RTX-624

Instrument: msd14.1
Operator: mjs
Column diameter: 0.18

/chem/msd14.1/05jun15.b/14060507cr1.d



LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED.

SDG No.: 1506011BR1

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY						TOTAL OUT
		1,2-Dichloroethane-d 4	#	Toluene-d8	#	4-Bromofluorobenze ne	#	
01	1522M212202F	100		99		99		0
02	1522M212202F Lab Duplicate	99		100		100		0
03	1522M212203D	98		99		99		0
04	1522M212206F	99		100		98		0
05	1522M212207F	97		98		101		0
06	1522M212211F	99		100		101		0
07	Lab Blank	97		101		96		0
08	CCV	96		100		100		0
09	LCS	98		102		100		0
10	LCSD	98		100		101		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 68 - 138

Toluene-d8 87 - 110

4-Bromofluorobenzene 79 - 116

* 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
 Lab File ID: 14060502a.d
 Instrument ID: msd14.i

SDG No: 1506011BR1
 Date Analyzed: 06/05/2015
 Time Analyzed: 07:00 AM

		Chlorobenzene-d5		1,4-Difluorobenzene		Bromochloromethane	
		Area	RT	Area	RT	Area	RT
		#	#	#	#	#	#
24-HOUR STD		460332	9.83	525212	5.84	120084	4.74
UPPER LIMIT		644465	10.16	735297	06.17	168118	05.07
LOWER LIMIT		276199	09.50	315127	05.51	72050	04.41
CLIENT SAMPLE NO							
01	1522M212202F	414200	9.83	463839	5.86	106918	4.75
02	1522M212202F Lab Duplicate	427388	9.83	473422	5.86	111451	4.75
03	1522M212203D	422607	9.83	471236	5.86	109926	4.75
04	1522M212206F	417532	9.83	458691	5.86	108752	4.75
05	1522M212207F	424318	9.83	478598	5.86	112105	4.75
06	1522M212211F	394282	9.83	440031	5.86	101884	4.75
07	Lab Blank	453505	9.83	498123	5.84	116990	4.74
08	CCV	460332	9.83	525212	5.84	120084	4.74
09	LCS	456148	9.83	509338	5.84	116711	4.74
10	LCSD	452957	9.83	514333	5.84	117039	4.74
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

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.
Lab Sample ID: 02A & 02AA
Client Sample ID: &

Lab File ID: 14060516r1.d & 14060515r1.d
Dilution: 2.51 & 2.51
Date Analyzed: 6/5/15 & 6/5/15

CAS Number	Compound	Original		Duplicate		RPD	Result Less Than 5X RL
		Amount	Flags	Amount	Flags		
127-18-4	Tetrachloroethene	77.488		76.166		1.7	
79-01-6	Trichloroethene	ND	U	ND	U	0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.
Lab Sample ID: &
Client Sample ID: LCS & LCSD

Lab File ID: 14060504a.d & 14060503a.d
Dilution: 1.00 & 1.00
Date Analyzed: 6/5/15 & 6/5/15

CAS Number	Compound	Original		Duplicate		RPD	Result Less Than 5X RL
		Amount	Flags	Amount	Flags		
127-18-4	Tetrachloroethene	96		96		0	
79-01-6	Trichloroethene	106		103		2.9	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Calibration File Names:

- Level 1: /chem/msd14.i/01jun15.b/14060107.d
- Level 2: /chem/msd14.i/01jun15.b/14060108.d
- Level 3: /chem/msd14.i/04jun15.b/14060405.d
- Level 4: /chem/msd14.i/01jun15.b/14060110.d
- Level 5: /chem/msd14.i/04jun15.b/14060406.d
- Level 6: /chem/msd14.i/04jun15.b/14060407.d
- Level 7: /chem/msd14.i/04jun15.b/14060408.d
- Level 8: /chem/msd14.i/01jun15.b/14060117.d
- Level 9: /chem/msd14.i/01jun15.b/14060118.d

Compound	3.000	5.000	20.000	50.000	100.000	200.000	___	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
6 Freon 143a	+++++	+++++	1.39661	+++++	1.55291	1.48601		
	+++++	+++++	+++++				1.47851	5.304
7 Freon 134a	+++++	+++++	1.00296	+++++	1.12290	1.05142		
	+++++	+++++	+++++				1.05909	5.697

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
9 Propylene	+++++	+++++	1.03847	1.10386	1.22093	1.09482		
	1.37157	1.24026	1.14476				1.17352	9.593
10 1,1-Difluoroethane	+++++	+++++	0.54817	+++++	0.59238	0.57069		
	0.61982	+++++	+++++				0.58277	5.250
11 Freon 12	+++++	4.31554	3.41906	3.49361	4.00743	3.59192		
	4.59355	4.10680	3.73988				3.90847	10.701
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
13 Chlorodifluoromethane	+++++	+++++	0.23581	+++++	0.26676	0.26217		
	+++++	+++++	+++++				0.25491	6.553
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
15 Freon 114	+++++	2.87577	2.36227	2.48999	2.66633	2.49827		
	3.18170	2.94004	2.69935				2.71422	10.031
16 Freon 142b	+++++	+++++	1.94285	+++++	2.37140	2.23816		
	+++++	+++++	+++++				2.18414	10.042
17 Chloromethane	+++++	+++++	1.40625	1.45369	1.36638	1.31070		
	1.58666	1.41335	1.32177				1.40840	6.652

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Bromomethane	+++++	0.99427	0.63815	0.76388	0.97276	0.91393	0.93108	19.298
30 Chloroethane	+++++	+++++	0.76492	0.66893	0.75419	0.69926	0.74472	7.934
31 Isopentane	+++++	+++++	1.51283	1.68768	1.76219	1.65019	1.72743	8.531
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 Freon 11	+++++	4.54545	3.67242	3.57918	3.84311	3.68339	4.00873	11.118
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 Dichlorofluoromethane	+++++	+++++	2.16569	+++++	2.40221	2.25668	2.27486	5.244

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
48 Freon 123	+++++	+++++	2.26065	+++++	2.71769	2.56998		
	+++++	+++++	+++++				2.51611	9.270
49 Freon 113	+++++	2.63983	2.15323	2.34216	2.42166	2.35482		
	2.99465	2.52497	2.34835				2.47246	10.302
50 1,1-Dichloroethene	+++++	2.88180	2.16856	2.33127	2.48029	2.38295		
	3.07981	2.64793	2.49622				2.55860	11.714
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
52 Acetone	+++++	+++++	0.70060	0.63723	0.75059	0.71600		
	0.90769	0.80579	0.76094				0.75412	11.393
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
56 Carbon Disulfide	+++++	4.27333	3.82013	3.78064	4.21679	4.04469		
	5.20294	4.49089	4.26310				4.26156	10.547
57 2-Propanol	+++++	+++++	1.81910	2.06890	2.20936	2.23750		
	3.15014	2.83684	2.70538				2.43246	19.495

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	---	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			
	1000.000	2500.000	5000.000						
	Level 7	Level 8	Level 9						
58 3-Chloropropene	+++++	+++++	0.45660	0.52042	0.62545	0.60880			
	0.84042	0.73222	0.69542				0.63990	20.262	
59 Cyclopentene	+++++	+++++	2.09124	+++++	2.30019	2.23976			
	+++++	+++++	+++++				2.21040	4.865	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
66 Methylene Chloride	+++++	2.24408	1.84546	1.72559	1.86650	1.76091			
	2.29086	1.97059	1.84780				1.94397	10.951	
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
71 tert-Butyl alcohol	+++++	+++++	1.25499	1.41238	1.72844	1.67469		
	+++++	+++++	+++++				1.51763	14.693
72 Methyl tert-butyl ether	+++++	2.59385	2.32880	2.56126	3.22130	3.16605		
	4.49530	4.18530	4.05529				3.32589	24.870
73 trans-1,2-Dichloroethene	+++++	1.43449	1.48871	1.36245	1.51770	1.47039		
	1.88780	1.54249	1.44720				1.51890	10.459
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	---	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
78 Hexane	+++++	2.04131	2.18670	2.08388	2.41018	2.32711		
	3.13881	2.86331	2.70248				2.46922	16.004
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
82 1,1-Dichloroethane	+++++	2.93155	2.47071	2.52487	2.77662	2.62491		
	3.40505	3.01204	2.84653				2.82403	10.717
83 Isopropyl ether	+++++	+++++	4.21914	4.51811	5.13563	4.91438		
	+++++	+++++	+++++				4.69682	8.692
84 1-Propanol	+++++	+++++	0.13822	+++++	0.18705	0.19099		
	+++++	+++++	+++++				0.17209	17.080
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
86 Vinyl Acetate	+++++	+++++	0.36236	0.01695	0.08311	0.14919		
	0.33666	0.38705	0.40663				0.24885	64.749 <-
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
88 Ethyl-tert-butyl ether	+++++	+++++	2.72108	3.07721	3.74106	3.75494		
	+++++	+++++	+++++				3.32357	15.382
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
90 2,2-Dichloropropane	+++++	+++++	0.68377	+++++	1.28753	1.39548		
	+++++	+++++	+++++				1.12226	34.178 <-
91 cis-1,2-Dichloroethene	+++++	2.34132	1.77834	1.97918	2.16176	2.08999		
	2.70660	2.61174	2.44955				2.26481	14.111
92 2-Butanone	+++++	+++++	0.51830	0.61037	0.67911	0.71811		
	0.93338	0.85101	0.79946				0.72996	19.590
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
113 2,2,4-Trimethylpentane	+++++	8.19991	6.74071	6.72176	7.76375	7.40701		
	10.03593	9.13799	8.57803				8.07314	14.353
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
115 Isobutanol	+++++	+++++	0.18266	+++++	0.23203	0.23231		
	+++++	+++++	+++++				0.21567	13.256
116 Benzene	1.30491	1.09546	0.92467	0.95821	1.06918	1.01880		
	1.29728	1.18921	1.11210				1.10776	12.232
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
119 tert-Amyl methyl ether	+++++	+++++	2.62721	2.69410	3.38740	3.33571		
	+++++	+++++	+++++				3.01111	13.488
120 1,2-Dichloroethane	+++++	0.52335	0.45283	0.43361	0.47387	0.44295		
	0.56670	0.52034	0.48409				0.48722	9.477

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
132 1,2-Dichloropropane	+++++	0.42970	0.38137	0.35904	0.38491	0.37599		
	0.48800	0.45052	0.42519				0.41184	10.671
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
136 1,4-Dioxane	+++++	+++++	0.19303	0.20784	0.22922	0.22465		
	0.28614	0.28157	0.24702				0.23850	14.807
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
138 Bromodichloromethane	+++++	0.82560	0.67596	0.72454	0.78549	0.75202		
	0.97544	0.91111	0.85470				0.81311	12.210
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
140 bis(chloromethyl) Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 Chlorobenzene	+++++	1.27467	1.12879	1.10069	1.19252	1.15657	1.21568	8.394
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 Ethyl Benzene	+++++	0.62003	0.48013	0.49690	0.56481	0.55380	0.58346	13.293
168 1,1,1,2-Tetrachloroethane	+++++	+++++	0.43093	+++++	0.46132	0.44188	0.44471	3.460
169 m,p-Xylene	+++++	0.72151	0.61353	0.64742	0.69096	0.69826	0.72116	11.793
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
171 o-Xylene	+++++	0.55715	0.56727	0.60559	0.64211	0.64096	0.66177	14.302
172 Styrene	+++++	1.01082	0.90712	0.94883	1.05791	1.08884	1.09706	15.791
173 2-Heptanone	+++++	+++++	+++++	+++++	0.44427	0.48701	0.46564	6.491

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
174 Bromoform	+++++	0.81543	0.72560	0.76558	0.81927	0.81183		
	1.03191	0.88240	0.82838				0.83505	10.996
175 Cumene	+++++	2.04652	1.81142	1.82839	2.06202	2.10009		
	2.64237	2.24888	2.08320				2.10286	12.425
176 Cyclohexanone	+++++	+++++	0.34872	+++++	0.36260	0.38172		
	+++++	+++++	+++++				0.36434	4.548
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
180 Bromobenzene	+++++	+++++	0.41601	+++++	0.47404	0.45995		
	+++++	+++++	+++++				0.45000	6.727
181 1,1,2,2-Tetrachloroethane	+++++	0.96128	0.96020	0.99583	1.04554	1.07263		
	1.31024	1.13220	+++++				1.06828	11.563
182 Propylbenzene	+++++	2.73659	2.35746	2.35540	2.54114	2.54490		
	3.19456	2.69362	2.41399				2.60471	10.668
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
184 trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
185 1,2,3-Trichloropropane	+++++	+++++	0.23641	+++++	0.25838	0.25530		
	+++++	+++++	+++++				0.25003	4.757
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
188 4-Ethyltoluene	+++++	1.89868	1.82198	1.85821	2.01981	2.04576		
	2.57232	2.16009	1.94151				2.03980	11.843
189 2-Chlorotoluene	+++++	+++++	0.33981	+++++	0.38186	0.37671		
	+++++	+++++	+++++				0.36612	6.265
190 1,3,5-Trimethylbenzene	+++++	1.55902	1.63828	1.65934	1.76213	1.81386		
	2.17218	1.54159	+++++				1.73520	12.484
191 4-Chlorotoluene	+++++	+++++	0.33810	+++++	0.37286	0.36783		
	+++++	+++++	+++++				0.35960	5.224
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
195 tert-Butylbenzene	+++++	+++++	1.00886	+++++	1.23869	1.23456		
	+++++	+++++	+++++				1.16070	11.331
196 1,2,4-Trimethylbenzene	+++++	1.40819	1.48137	1.45222	1.53846	1.61374		
	2.04759	1.58427	+++++				1.58940	13.506
197 Pentachloroethane	+++++	+++++	0.25982	+++++	0.33636	0.34789		
	+++++	+++++	+++++				0.31469	15.211
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
203 sec-Butylbenzene	+++++	+++++	1.50338	+++++	1.88652	1.91757		
	+++++	+++++	+++++				1.76916	13.040
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
206 bis(2-Chloroethyl) Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
207 p-Cymene	+++++	+++++	1.11604	+++++	1.48934	1.53198	1.37912	16.592
208 1,3-Dichlorobenzene	+++++	1.13021	1.10387	1.09904	1.09878	1.14429	1.15427	8.438
209 1,4-Dichlorobenzene	+++++	1.06813	1.11767	1.11354	1.07701	1.14084	1.14393	8.986
210 1,2,3-Trimethylbenzene	+++++	+++++	0.45505	+++++	0.57508	0.60839	0.54618	14.767
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
212 alpha-Chlorotoluene	+++++	0.87034	0.87063	1.03431	1.08945	1.30350	1.14423	27.528
213 Butylbenzene	+++++	+++++	0.24845	+++++	0.34761	0.36244	0.31950	19.399
214 1,2-Dichlorobenzene	+++++	1.03928	1.01839	1.00400	0.98643	1.04815	1.05036	7.566

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
216 4-Ethyl-1,2-dimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
220 1,2,4,5-tetramethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
221 1,2-Dibromo-3-chloropropane	+++++	+++++	0.21177	+++++	0.28352	0.35063		
	+++++	+++++	+++++				0.28197	24.627
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	—	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
226 1,2,4-Trichlorobenzene	+++++	+++++	0.35572	0.59329	0.31534	0.56011		
	0.50289	+++++	+++++				0.46547	26.591
227 Hexachlorobutadiene	+++++	+++++	0.31791	0.49502	0.29118	0.46867		
	0.38919	+++++	+++++				0.39239	22.849
228 Naphthalene	+++++	+++++	0.58891	1.05698	0.48356	1.03552		
	+++++	0.57704	0.84097				0.76383	32.585
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	___	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
245 TPH reference MineralSpirits	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
246 TPH reference to Stoddard	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
247 TVOC reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
248 TVOC reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
249 TVOC reference to Toluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
250 TVOC reference to Toluene-d8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
251 NMOC reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
252 NMOC reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
253 NMOC reference to Toluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:50 HR8M
 Curve Type : Average

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
265 C10-C12 Aliphatic ref Dodecan	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,2,3-TMB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,4,5-TMB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 117 1,2-Dichloroethane-d4	1.55411	1.50264	1.48133	1.44391	1.46542	1.47271	1.49692	2.635
	1.51754	1.47700	1.55764					
\$ 146 Toluene-d8	0.99946	0.98033	0.97385	0.97108	0.99923	0.99726	0.99291	1.440
	1.01266	0.99905	1.00324					
\$ 177 4-Bromofluorobenzene	0.57566	0.54781	0.54572	0.56130	0.56755	0.56752	0.55541	2.524
	0.55862	0.53467	0.53988					

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
End Cal Date : 04-JUN-2015 14:50
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd14.i/04jun15.b/14550601b.m
Cal Date : 04-Jun-2015 16:50 HR8M
Curve Type : Average

Average %RSD Results.	
=====	
Calculated Average %RSD = 13.3130445	
Maximum Average %RSD = 30	
* Passed Average %RSD Test.	

Calibration History

Method : /chem/msd14.i/04jun15.b/14550601b.m
 Start Cal Date: 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 3.00000		
01-JUN-2015 15:03	Benzene	/chem/msd14.i/01jun15.b/14060107.d
Cal Level: 2 , Cal Amount: 5.00000		
01-JUN-2015 15:28	Level2	/chem/msd14.i/01jun15.b/14060108.d
Cal Level: 3 , Cal Amount: 20.00000		
04-JUN-2015 13:22	AT1curve	/chem/msd14.i/04jun15.b/14060405.d
01-JUN-2015 15:50	AT12mdl	/chem/msd14.i/01jun15.b/14060109.d
Cal Level: 4 , Cal Amount: 50.00000		
01-JUN-2015 16:17	AT12mdl	/chem/msd14.i/01jun15.b/14060110.d
Cal Level: 5 , Cal Amount: 100.00000		
04-JUN-2015 13:42	AT1curve	/chem/msd14.i/04jun15.b/14060406.d
01-JUN-2015 16:35	AT12	/chem/msd14.i/01jun15.b/14060111.d
Cal Level: 6 , Cal Amount: 200.00000		
04-JUN-2015 14:00	AT1curve	/chem/msd14.i/04jun15.b/14060407.d
01-JUN-2015 16:54	AT12	/chem/msd14.i/01jun15.b/14060112.d
Cal Level: 7 , Cal Amount: 1000.00000		
04-JUN-2015 14:50	Fr152acr v	/chem/msd14.i/04jun15.b/14060408.d
01-JUN-2015 20:48	AT12NoOxyNaph	/chem/msd14.i/01jun15.b/14060121.d
01-JUN-2015 20:48	AT12	/chem/msd14.i/01jun15.b/14060121.d

```

+-----+-----+-----+
| Cal Level: 8 , Cal Amount: 2500.00000 |
+=====+=====+=====+
| 01-JUN-2015 18:32 | NaphICAL | /chem/msd14.i/01jun15.b/14060117.d |
| 01-JUN-2015 17:34 | AT12NoOxyNaph | /chem/msd14.i/01jun15.b/14060114.d |
| 01-JUN-2015 17:34 | AT12 | /chem/msd14.i/01jun15.b/14060114.d |
+-----+-----+-----+

```

```

+-----+-----+-----+
| Cal Level: 9 , Cal Amount: 5000.00000 |
+=====+=====+=====+
| 01-JUN-2015 18:56 | NaphICAL | /chem/msd14.i/01jun15.b/14060118.d |
| 01-JUN-2015 18:13 | AT12NoOxyNaph | /chem/msd14.i/01jun15.b/14060116.d |
| 01-JUN-2015 18:13 | AT12 | /chem/msd14.i/01jun15.b/14060116.d |
+-----+-----+-----+

```

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 5

```

+-----+-----+-----+
| Ccal Level: 5 , Ccal Amount: 100.00 |
+=====+=====+=====+
| 04-JUN-2015 13:42 | AT1ccv | /chem/msd14.i/04jun15.b/14060406a.d |
+-----+-----+-----+

```

```

| Ccal Level: 5 , Ccal Amount: 100.00 |
+=====+=====+=====+
| 04-JUN-2015 13:42 | AT1curve | /chem/msd14.i/04jun15.b/14060406.d |
+-----+-----+-----+

```

```

| Ccal Level: 6 , Ccal Amount: 200.00 |
+=====+=====+=====+
| 04-JUN-2015 11:46 | AT12 | /chem/msd14.i/04jun15.b/14060402.d |
+-----+-----+-----+

```

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2015 15:03
 End Cal Date : 04-JUN-2015 14:50
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/msd14.i/04jun15.b/14550601b.m
 Cal Date : 04-Jun-2015 16:19 HR8M
 Curve Type : Average

Calibration File Names:

- Level 1: /chem/msd14.i/01jun15.b/14060107.d
- Level 2: /chem/msd14.i/01jun15.b/14060108.d
- Level 3: /chem/msd14.i/04jun15.b/14060405.d
- Level 4: /chem/msd14.i/01jun15.b/14060110.d
- Level 5: /chem/msd14.i/04jun15.b/14060406.d
- Level 6: /chem/msd14.i/04jun15.b/14060407.d
- Level 7: /chem/msd14.i/04jun15.b/14060408.d
- Level 8: /chem/msd14.i/01jun15.b/14060117.d
- Level 9: /chem/msd14.i/01jun15.b/14060118.d

Please see Calibration History page(s)
 for all the calibration files.

Handwritten: 4/4/15

Compound	3.000	5.000	20.000	50.000	100.000	200.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	1000.000	2500.000	5000.000					
	Level 7	Level 8	Level 9					
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
6 Freon 143a	+++++	+++++	1.39661	+++++	1.55291	1.48601	1.47851	5.304
7 Freon 134a	+++++	+++++	1.00296	+++++	1.12290	1.05142	1.05909	5.697

14550601B.M
Initial Calibration Narrative

A calibration curve was performed 06/01/15

ICAL: **1 out: 2-Hexanone @ 30.8%**

No Vinyl Acetate.

ICV: **0 out:** (File: #14060124)

1000 ppbv was reanalyzed due to non-linearity

For AFCEE 3.1, AFCEE 4.0, and DOD evaluate per project.

MDL: 5/26/15 and 5/27/15; Naphthalene MDL analyzed 6/3/14. **No MDL for Vinyl Acetate.**

1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, alpha-Chlorotoluene, 1,2,4-Trichlorobenzene, and Hexachlorobutadiene were calibrated to 1000ppbv.

Bromomethane, 1,1,2,2-Trichloroethane, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene were calibrated to 2500ppbv

Naphthalene calibrated at 2, 5, 10, 20, 250, and 500ppbv.

Benzene was calibrated with a special R.L. of 3.0ppbv.

Oxygenates were calibrated at 20, 50, 100 and 200ppbv.

BFB Tune File: #14060106 and 14060401

A 3 point AT-1 curve was analyzed on 6/4/15 at 20ppbv, 100ppbv, and 200ppbv: 0-out

A 4 point curve was analyzed for Fr152A on 6/4/15 at 20ppbv, 100ppbv, 200ppbv, and 1000ppbv

BFB Verification of 176/174 m/z Ratio: 122500/23490
Tekmar Purge Flow: <u>N/A</u>
Vacuum: <u>3.76 X 10⁻⁶</u>

IS/Std. #: 2736-31	Exp. Date: 9/1/15
BCM	110855
14-DFB	489861
CB-d5	420158

Verified CCV IS vs ICAL mid-point (-40% D): 99

File ID: <u>14040112</u>
Compound: <u>tol-dk</u>
Initials: <u>BY</u>

Calculation Check:
 ppbv of compound = $\text{Area}_{\text{Sample}} \times \text{Conc}_{\text{IS}} = (488819) \times (400.00) = 400.00$
 Area IS RRF $(489861) (0.992911)$

SOP# (Circle one): 6/83/38/61/109
 Method Name: 145506019.M

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

Reported Result: 400.00

Use	File	Lab ID#	Can#	Pressure	Amnt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	14060106	3FB Tune Check	2799-293	50mg	2.0ul	1.00	MS	6/1/15	1444	BY	
✓	14060105	ICAL Level #1	2730-28	3.0ppbv	30ml		BY		1503	BY	Exp: 8/1/15
✓	14060107	ICAL Level #1	2710-281	5.0ppbv	50ml		BY		1528	BY	Exp: 8/1/15
✓	09			20 ppbv	5.0ml		BY		1580	BY	
✓	10			50 ppbv	12.5ml		BY		1617	BY	
✓	11			100 ppbv	25ml		BY		1635	BY	
✓	12			200 ppbv	50ml		BY		1654	BY	
✓	13			1000 ppbv	50ml		BY		1713	BY	Exp: 9/1/15
✓	14			2500 ppbv	25ml		BY		1734	BY	Exp: 8/23/15
✓	15			Humid	50ml		BY		1753	BY	
✓	16			5000 ppbv	50ml		BY		1813	BY	Exp: 8/23/15
✓	17			250 ppbv	25ml		BY		1832	BY	
✓	18			500 ppbv	50ml		BY		1851	BY	
✓	19			Humid	50ml		BY		1925	BY	

Reviewed

Date

BY
6/1/15

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	140001	20	System blank	34343	Humid	50ml	100	SP	6/11/15	SP	2029 Exp: 9/11/15
✓		21	1 cad level #7	2130-32	1000ppbv	50ml		SP	21/16	SP	2048 Exp: 9/11/15
X		22	System blank	34343	Humid	50ml		SP	21/16	SP	2126
✓		23	System blank	34343	Humid	50ml		SP	21/16	SP	Exp: 8/12/15
✓		24	1cv (200ppbv)	2110-297	200ppbv	50ml		SP	22/06	SP	
		25									
		26									
		27									
		28									
		29									
		30									
		31									
		32									
		33									
		34									
		35									
		36									

Reviewed MS Date 6/2/15

MS 6/2/15

BFB Verification of 176/174 m/z Ratio: $(21280/25469) * 100 = 95.338$
 Tekmar Purge Flow: NA
 Vacuum: 3.78×10^6

IS/Std. #: 2736-31	Exp. Date: 9/1/15
BCM	120869
1,4-DFB	534316
CB-d5	462191

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

File ID: 14060403
 Compound: Toluene-d8
 Initials: MS

Calculation Check:
 ppbv of compound = $\frac{\text{Area}_{\text{Sample}}}{\text{Area}_{\text{IS}}} \times \text{Conc}_{\text{IS}} = \frac{(528051) \times (400.00)}{(525130) (0.99291)} = 405.10$

Reported Result: 405.10

SOP# (Circle one): 6/83/38/91/109 Method (Circle one): TO-14A/TO-15/TO-17
 Method Name: 14550601B M

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	14060401	BFB Tune Check	2299-793	50mg	2.0ul	1.00	MS	6/4/15	1131	MS	
✓	02	CCV (200ppb)	2716-881	200ppb	50ul	1.00	MS		1146	MS	Exp 8/6/15 Scott Nova
✓	03	LCS (200ppb)	2716-297	200ppb	50ul	1.00	MS		1230	MS	Exp 8/11/15 Scott
✓	04	LSD	2736-10				MS		1257	MS	Exp 8/11/15 AT-1
✓	05	ICAL Level #3	2736-10	200ppb	50ml	1.00	MS		1322	MS	
✓	06		#5	100ppb	25ml	1.00	MS		1342	MS	
✓	07		#6	200ppb	50ul	1.00	MS		1400	MS	
✓	08		#7	100ppb	50ml	1.00	MS		1450	MS	Exp 8/11/15 ATI
✓	09	system blank	343-13	Humid	50ml	1.00	MS				
	10	MDL# 1									
	11										
	12										
	13										
	14										

Reviewed: MS Date: 6/4/15

Air Toxics Ltd.
 Modified EPA Methods TO-14A/TO-15
 Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Freon 12
Freon 114
Chloromethane
Vinyl Chloride
1,3-Butadiene
Bromomethane
Chloroethane
Freon 11
Ethanol
Freon 113
1,1-Dichloroethene
Acetone
2-Propanol
Carbon Disulfide
3-Chloropropene
Methylene Chloride
Methyl tert-butyl ether
trans-1,2-Dichloroethene
Hexane
1,1-Dichloroethane
2-Butanone (Methyl Ethyl Ketone)
cis-1,2-Dichloroethene
Tetrahydrofuran
Chloroform
1,1,1-Trichloroethane
Cyclohexane
Carbon Tetrachloride
2,2,4-Trimethylpentane
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Heptane
Trichloroethene
1,2-Dichloropropane
1,4-Dioxane
Bromodichloromethane
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethene
2-Hexanone
Dibromochloromethane
1,2-Dibromoethane (EDB)
Chlorobenzene
Ethyl Benzene
m,p-Xylene
o-Xylene
Styrene
Bromoform
Cumene
1,1,2,2-Tetrachloroethane
Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
alpha-Chlorotoluene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Surrogates:
Bromofluorobenzene

Report Date: 02-Jun-2015 06:33

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060124.d
 Lab Smp Id: ICV Client Smp ID: ICV
 Inj Date : 01-JUN-2015 22:06
 Operator : md Inst ID: msd14.i
 Smp Info : 50mL #2716-297
 Misc Info : 200ppbv (200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:52 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 16:35 Cal File: 14060111.d
 Als bottle: 1 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====
* 98 Bromochloromethane CAS #: 74-97-5						
4.739	4.753 (1.000)	130	110554 400.000		70.00- 130.00	100.00
4.739	4.753 (1.000)	128	86905		48.08- 108.08	78.61
4.739	4.753 (1.000)	49	158772		116.54- 176.54	143.61
* 123 1,4-Difluorobenzene CAS #: 540-36-3						
5.844	5.844 (1.000)	114	487673 400.000		70.00- 130.00	100.00
5.844	5.844 (1.000)	88	77460		0.00- 45.72	15.88
* 163 Chlorobenzene-d5 CAS #: 3114-55-4						
9.832	9.832 (1.000)	117	431874 400.000		70.00- 130.00	100.00
9.818	9.832 (1.000)	82	238082		25.58- 85.58	55.13
§ 117 1,2-Dichloroethane-d4 CAS #: 17060-07-0						
5.382	5.382 (1.136)	65	163125 394.282	394.28	70.00- 130.00	100.00
5.382	5.382 (1.136)	67	85817		23.57- 83.57	52.61

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
 == == ===== == ===== ===== =====

\$ 146 Toluene-d8 CAS #: 2037-26-5
 7.635 7.635 (1.306) 98 488664 403.677 403.68 70.00- 130.00 100.00
 7.635 7.635 (1.306) 70 54198 0.00- 41.05 11.09
 7.635 7.635 (1.306) 100 340931 38.18- 98.18 69.77

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
 10.951 10.951 (1.114) 174 240890 401.704 401.70 70.00- 130.00 100.00
 10.937 10.951 (1.112) 95 325219 102.26- 162.26 135.01
 10.951 10.951 (1.114) 176 233840 66.15- 126.15 97.07

9 Propylene CAS #: 115-07-1
 1.241 1.227 (0.262) 41 62103 191.472 191.47 70.00- 130.00 100.00
 1.241 1.227 (0.262) 42 41782 34.95- 94.95 67.28
 1.241 1.227 (0.262) 39 43701 42.16- 102.16 70.37

11 Freon 12 CAS #: 75-71-8
 1.269 1.269 (0.268) 85 215944 199.903 199.90 70.00- 130.00 100.00
 1.269 1.269 (0.268) 87 70680 3.05- 63.05 32.73

15 Freon 114 CAS #: 76-14-2
 1.353 1.353 (0.285) 135 152401 203.156 203.16 70.00- 130.00 100.00
 1.353 1.353 (0.285) 137 49499 1.48- 61.48 32.48

17 Chloromethane CAS #: 74-87-3
 1.423 1.423 (0.300) 50 75186 193.151 193.15 70.00- 130.00 100.00
 1.423 1.423 (0.300) 52 24733 1.15- 61.15 32.90

23 Butane CAS #: 106-97-8
 1.479 1.478 (0.312) 58 18563 203.488 203.49 70.00- 130.00 100.00
 1.479 1.478 (0.312) 43 121787 680.52- 740.52 656.07

25 Vinyl Chloride CAS #: 75-01-4
 1.521 1.506 (0.321) 62 76057 190.826 190.82 70.00- 130.00 100.00
 1.521 1.506 (0.321) 64 24439 0.94- 60.94 32.13

26 1,3-Butadiene CAS #: 106-99-0
 1.521 1.520 (0.321) 54 60064 196.464 196.46 70.00- 130.00 100.00
 1.521 1.520 (0.321) 39 58902 66.21- 126.21 98.07

29 Bromomethane CAS #: 74-83-9
 1.814 1.814 (0.383) 94 50601 196.635 196.63 70.00- 130.00 100.00
 1.814 1.814 (0.383) 96 48302 64.87- 124.87 95.46
 1.814 1.814 (0.383) 79 8560 0.00- 46.18 16.92

30 Chloroethane CAS #: 75-00-3
 1.898 1.898 (0.401) 64 42648 207.202 207.20 70.00- 130.00 100.00

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
 == == ===== == ===== ===== =====

30 Chloroethane (continued)

1.898 1.898 (0.401) 66 12639 0.00- 59.89 29.64

31 Isopentane CAS #: 78-78-4

1.912 1.912 (0.404) 43 96861 202.878 202.88 70.00- 130.00 100.00

1.912 1.912 (0.404) 57 68156 39.30- 99.30 70.36

1.912 1.912 (0.404) 72 8228 0.00- 38.88 8.49

35 Freon 11 CAS #: 75-69-4

2.094 2.094 (0.442) 101 221508 199.925 199.92 70.00- 130.00 100.00

2.094 2.094 (0.442) 103 144195 34.32- 94.32 65.10

42 Ethanol CAS #: 64-17-5

2.360 2.360 (0.498) 45 35551 210.773 210.77 70.00- 130.00 100.00

2.360 2.360 (0.498) 43 7250 0.00- 50.94 20.39

2.360 2.360 (0.498) 46 14785 13.63- 73.63 41.59

49 Freon 113 CAS #: 76-13-1

2.584 2.584 (0.545) 151 134045 196.158 196.16 70.00- 130.00 100.00

2.584 2.584 (0.545) 153 86622 34.22- 94.22 64.62

2.584 2.584 (0.545) 101 180943 102.57- 162.57 134.99

50 1,1-Dichloroethene CAS #: 75-35-4

2.612 2.612 (0.551) 61 141847 200.587 200.59 70.00- 130.00 100.00

2.612 2.612 (0.551) 96 80631 27.93- 87.93 56.84

2.612 2.612 (0.551) 98 52629 6.48- 66.48 37.10

52 Acetone CAS #: 67-64-1

2.738 2.738 (0.578) 58 40841 195.948 195.95 70.00- 130.00 100.00

2.738 2.738 (0.578) 43 132684 289.79- 349.79 324.88

56 Carbon Disulfide CAS #: 75-15-0

2.794 2.808 (0.590) 76 208459 176.985 176.98 70.00- 130.00 100.00

57 2-Propanol CAS #: 67-63-0

2.878 2.878 (0.607) 45 141133 209.927 209.93 70.00- 130.00 100.00

2.878 2.878 (0.607) 43 30270 0.00- 50.97 21.45

2.878 2.878 (0.607) 59 5964 0.00- 33.89 4.23

58 3-Chloropropene CAS #: 107-05-1

3.004 3.004 (0.634) 76 33191 187.669 187.67 70.00- 130.00 100.00

3.004 3.004 (0.634) 41 92638 247.13- 307.13 279.11

66 Methylene Chloride CAS #: 75-09-2

3.158 3.157 (0.666) 49 102818 191.366 191.36 70.00- 130.00 100.00

3.172 3.157 (0.669) 84 75221 43.35- 103.35 73.16

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE	(PPEV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

66 Methylene Chloride (continued)

3.158	3.157 (0.666)	51	30803			0.70- 60.70	29.96
-------	---------------	----	-------	--	--	-------------	-------

72 Methyl tert-butyl ether CAS #: 1634-04-4

3.354	3.353 (0.708)	73	178101	193.751	193.75	70.00- 130.00	100.00
3.354	3.353 (0.708)	57	44330			0.00- 54.09	24.89
3.354	3.353 (0.708)	41	44031			0.00- 55.75	24.72

73 trans-1,2-Dichloroethene CAS #: 156-60-5

3.382	3.381 (0.714)	96	74731	178.015	178.01	70.00- 130.00	100.00
3.382	3.381 (0.714)	61	107147			117.22- 177.22	143.38
3.382	3.381 (0.714)	98	47757			31.31- 91.31	63.91

78 Hexane CAS #: 110-54-3

3.577	3.577 (0.755)	57	138289	202.634	202.63	70.00- 130.00	100.00
3.577	3.577 (0.755)	43	88036			33.82- 93.82	63.66
3.577	3.577 (0.755)	86	24285			0.00- 47.96	17.56

82 1,1-Dichloroethane CAS #: 75-34-3

3.871	3.871 (0.817)	63	156285	200.232	200.23	70.00- 130.00	100.00
3.871	3.871 (0.817)	65	48890			0.83- 60.83	31.28

86 Vinyl Acetate CAS #: 108-05-4

3.913	3.913 (0.826)	86	6899	100.308	100.31	70.00- 130.00	100.00(R)
3.913	3.913 (0.826)	43	72716			1031.22-1091.22	1054.01
3.913	3.913 (0.826)	42	6431			62.99- 122.99	93.22

91 cis-1,2-Dichloroethene CAS #: 156-59-2

4.487	4.487 (0.947)	61	132707	212.006	212.00	70.00- 130.00	100.00
4.487	4.487 (0.947)	96	97912			44.12- 104.12	73.78
4.487	4.487 (0.947)	98	62022			18.04- 78.04	46.74

92 2-Butanone CAS #: 78-93-3

4.515	4.515 (0.953)	72	41008	203.261	203.26	70.00- 130.00	100.00
4.515	4.515 (0.953)	43	168192			384.18- 444.18	410.14
4.515	4.515 (0.953)	57	13154			3.18- 63.18	32.08

99 Tetrahydrofuran CAS #: 109-99-9

4.725	4.725 (0.997)	42	94610	198.828	198.83	70.00- 130.00	100.00
4.725	4.725 (0.997)	71	36179			6.63- 66.63	38.24
4.725	4.725 (0.997)	72	39663			9.95- 69.95	41.92

100 Chloroform CAS #: 67-66-3

4.823	4.823 (1.018)	83	179571	197.118	197.12	70.00- 130.00	100.00
4.823	4.823 (1.018)	85	115239			36.11- 96.11	64.17

CONCENTRATIONS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL (PPEV)	FINAL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		
102 Cyclohexane						CAS #:	110-82-7			
4.921	4.920	(1.038)	84	118993	202.128	202.13	70.00- 130.00	100.00		
4.921	4.920	(1.038)	56	141313			92.51- 152.51	118.76		
4.921	4.920	(1.038)	41	74899			36.86- 96.86	62.94		

103 1,1,1-Trichloroethane						CAS #:	71-55-6			
4.949	4.948	(1.044)	97	176827	196.681	196.68	70.00- 130.00	100.00		
4.949	4.948	(1.044)	99	113218			34.93- 94.93	64.03		

106 Carbon Tetrachloride						CAS #:	56-23-5			
5.089	5.088	(1.074)	119	177125	205.921	205.92	70.00- 130.00	100.00		
5.089	5.088	(1.074)	117	181297			76.39- 136.39	102.36		

113 2,2,4-Trimethylpentane						CAS #:	540-84-1			
5.326	5.326	(1.124)	57	444495	199.210	199.21	70.00- 130.00	100.00		
5.326	5.326	(1.124)	56	151116			3.74- 63.74	34.00		
5.326	5.326	(1.124)	41	110288			0.00- 55.31	24.81		

116 Benzene						CAS #:	71-43-2			
5.354	5.354	(0.916)	78	266737	197.501	197.50	70.00- 130.00	100.00		
5.354	5.354	(0.916)	77	62716			0.00- 53.58	23.51		

120 1,2-Dichloroethane						CAS #:	107-06-2			
5.480	5.480	(0.938)	62	117742	198.217	198.22	70.00- 130.00	100.00		
5.480	5.480	(0.938)	64	37334			2.61- 62.61	31.71		

121 Heptane						CAS #:	142-82-5			
5.564	5.564	(0.952)	71	91813	199.228	199.23	70.00- 130.00	100.00		
5.564	5.564	(0.952)	43	161268			146.34- 206.34	175.65		
5.564	5.564	(0.952)	100	32955			3.46- 63.46	35.89		

125 Trichloroethene						CAS #:	79-01-6			
6.082	6.082	(1.041)	95	132436	207.085	207.08	70.00- 130.00	100.00		
6.082	6.082	(1.041)	130	135256			73.37- 133.37	102.13		
6.082	6.082	(1.041)	97	86911			35.35- 95.35	65.62		

127 Methylcyclohexane						CAS #:	108-87-2			
6.194	6.194	(1.060)	83	156952	195.610	195.61	70.00- 130.00	100.00		
6.194	6.194	(1.060)	98	77950			19.87- 79.87	49.66		
6.194	6.194	(1.060)	55	131320			54.72- 114.72	83.67		

132 1,2-Dichloropropane						CAS #:	78-87-5			
6.404	6.404	(1.096)	63	101094	201.339	201.34	70.00- 130.00	100.00		
6.404	6.404	(1.096)	62	69705			40.76- 100.76	68.95		
6.390	6.404	(1.093)	41	54776			26.03- 86.03	54.18		

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPEV)	(PPBV)				
==	=====	=====	=====	=====	=====	=====	=====	=====	=====

136	1,4-Dioxane					CAS #: 123-91-1			
6.530	6.530	(1.117)	88	56753	195.182	195.18	70.00-	130.00	100.00
6.530	6.530	(1.117)	58	40729			42.35-	102.35	71.77
6.530	6.530	(1.117)	57	12905			0.00-	53.99	22.74

138	Bromodichloromethane					CAS #: 75-27-4			
6.726	6.725	(1.151)	83	199526	201.272	201.27	70.00-	130.00	100.00
6.726	6.725	(1.151)	85	127238			32.51-	92.51	63.77

144	cis-1,3-Dichloropropene					CAS #: 10061-01-5			
7.341	7.341	(1.256)	75	139069	197.430	197.43	70.00-	130.00	100.00
7.341	7.341	(1.256)	77	43134			0.58-	60.58	31.02
7.327	7.341	(1.254)	39	67984			18.98-	78.98	48.89

145	4-Methyl-2-pentanone					CAS #: 108-10-1			
7.565	7.565	(1.294)	85	33322	211.105	211.10	70.00-	130.00	100.00
7.565	7.565	(1.294)	43	209344			626.54-	686.54	628.25
7.565	7.565	(1.294)	58	83532			227.69-	287.69	250.68

147	Toluene					CAS #: 108-88-3			
7.733	7.733	(1.323)	91	316508	195.138	195.14	70.00-	130.00	100.00
7.733	7.733	(1.323)	92	184477			28.44-	88.44	58.29

150	trans-1,3-Dichloropropene					CAS #: 10061-02-6			
8.293	8.293	(0.843)	75	123862	198.297	198.30	70.00-	130.00	100.00
8.293	8.293	(0.843)	77	38768			1.11-	61.11	31.30
8.293	8.293	(0.843)	39	57136			14.88-	74.88	46.13

155	1,1,2-Trichloroethane					CAS #: 79-00-5			
8.614	8.614	(0.876)	97	107507	191.950	191.95	70.00-	130.00	100.00
8.614	8.614	(0.876)	99	67521			32.09-	92.09	62.81
8.614	8.614	(0.876)	83	96698			58.01-	118.01	89.95

156	Tetrachloroethene					CAS #: 127-18-4			
8.628	8.628	(0.878)	166	144657	192.932	192.93	70.00-	130.00	100.00
8.628	8.628	(0.878)	129	113969			46.67-	106.67	78.79
8.628	8.628	(0.878)	131	107157			42.30-	102.30	74.08

158	2-Hexanone					CAS #: 591-78-6			
9.006	9.006	(0.916)	58	104326	208.604	208.60	70.00-	130.00	100.00
9.006	9.006	(0.916)	43	192865			165.25-	225.25	184.87
9.006	9.006	(0.916)	100	21875			0.00-	52.77	20.97

160	Dibromochloromethane					CAS #: 124-48-1			
9.160	9.160	(0.932)	129	198156	200.478	200.48	70.00-	130.00	100.00
9.160	9.160	(0.932)	127	154359			47.21-	107.21	77.90

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPEV)	(PPBV)				
==	=====	=====	=====	=====	=====	=====	=====	=====	=====

161	1,2-Dibromoethane (EDB)						CAS #: 106-93-4		
9.300	9.300	(0.946)	107	170340	198.499	198.50	70.00-	130.00	100.00
9.300	9.300	(0.946)	109	160743			63.74-	123.74	94.37

165	Chlorobenzene						CAS #: 108-90-7		
9.860	9.860	(1.003)	112	252585	192.439	192.44	70.00-	130.00	100.00
9.860	9.860	(1.003)	114	80190			2.02-	62.02	31.75
9.860	9.860	(1.003)	77	150398			30.14-	90.14	59.54

167	Ethyl Benzene						CAS #: 100-41-4		
9.958	9.958	(1.013)	106	126379	200.618	200.62	70.00-	130.00	100.00
9.958	9.958	(1.013)	91	410415			306.11-	366.11	324.75

169	m,p-Xylene						CAS #: 108-38-3		
10.084	10.083	(1.026)	106	155806	200.104	200.10	70.00-	130.00	100.00
10.084	10.083	(1.026)	91	321396			174.24-	234.24	206.28

171	o-Xylene						CAS #: 95-47-6		
10.461	10.461	(1.064)	106	148319	207.584	207.58	70.00-	130.00	100.00
10.461	10.461	(1.064)	91	318512			191.30-	251.30	214.75

172	Styrene						CAS #: 100-42-5		
10.489	10.489	(1.067)	104	252133	212.865	212.86	70.00-	130.00	100.00
10.489	10.489	(1.067)	78	125334			19.95-	79.95	49.71

174	Bromoform						CAS #: 75-25-2		
10.671	10.671	(1.085)	173	182392	202.301	202.30	70.00-	130.00	100.00
10.671	10.671	(1.085)	171	92680			23.00-	83.00	50.81

175	Cumene						CAS #: 98-82-8		
10.783	10.783	(1.097)	105	463248	204.036	204.04	70.00-	130.00	100.00
10.783	10.783	(1.097)	120	120171			0.00-	56.04	25.94
10.769	10.783	(1.095)	51	48822			0.00-	40.17	10.54

181	1,1,2,2-Tetrachloroethane						CAS #: 79-34-5		
11.105	11.105	(1.129)	83	210793	182.758	182.76	70.00-	130.00	100.00
11.105	11.105	(1.129)	85	137916			35.69-	95.69	65.43

182	Propylbenzene						CAS #: 103-65-1		
11.105	11.105	(1.129)	91	582384	207.087	207.09	70.00-	130.00	100.00
11.105	11.105	(1.129)	120	129666			0.00-	51.76	22.26
11.105	11.105	(1.129)	105	21522			0.00-	33.53	3.70

188	4-Ethyltoluene						CAS #: 622-96-8		
11.203	11.203	(1.139)	105	459496	208.640	208.64	70.00-	130.00	100.00
11.203	11.203	(1.139)	120	134050			0.00-	59.33	29.17

CONCENTRATIONS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPEV)	FINAL	(PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	=====	

190	1,3,5-Trimethylbenzene					CAS #: 108-67-8				
11.245	11.245	(1.144)	105	400792	213.931	213.93	70.00-	130.00	100.00	
11.245	11.245	(1.144)	120	189305			16.85-	76.85	47.23	

196	1,2,4-Trimethylbenzene					CAS #: 95-63-6				
11.511	11.511	(1.171)	105	362791	211.410	211.41	70.00-	130.00	100.00	
11.511	11.511	(1.171)	120	161590			15.19-	75.19	44.54	

208	1,3-Dichlorobenzene					CAS #: 541-73-1				
11.707	11.707	(1.191)	146	248234	199.185	199.18	70.00-	130.00	100.00	
11.707	11.707	(1.191)	148	160103			33.74-	93.74	64.50	
11.707	11.707	(1.191)	111	101156			10.77-	70.77	40.75	

209	1,4-Dichlorobenzene					CAS #: 106-46-7				
11.763	11.762	(1.196)	146	242258	196.147	196.15	70.00-	130.00	100.00	
11.763	11.762	(1.196)	148	155043			33.86-	93.86	64.00	
11.763	11.762	(1.196)	111	97154			10.30-	70.30	40.10	

212	alpha-Chlorotoluene					CAS #: 100-44-7				
11.861	11.860	(1.206)	91	294544	238.418	238.42	70.00-	130.00	100.00	
11.861	11.860	(1.206)	126	60743			0.00-	50.90	20.62	

214	1,2-Dichlorobenzene					CAS #: 95-50-1				
11.986	11.986	(1.219)	146	223726	197.280	197.28	70.00-	130.00	100.00	
11.986	11.986	(1.219)	148	140919			33.29-	93.29	62.99	
11.986	11.986	(1.219)	111	96843			12.93-	72.93	43.29	

226	1,2,4-Trichlorobenzene					CAS #: 120-82-1				
12.840	12.840	(1.306)	180	100278	199.533	199.53	70.00-	130.00	100.00	
12.840	12.840	(1.306)	182	97469			66.09-	126.09	97.20	

227	Hexachlorobutadiene					CAS #: 87-68-3				
12.896	12.896	(1.312)	225	86563	204.322	204.32	70.00-	130.00	100.00	
12.896	12.896	(1.312)	223	54150			33.17-	93.17	62.56	

228	Naphthalene					CAS #: 91-20-3				
12.966	12.966	(1.319)	128	15507	18.8033	18.803	70.00-	130.00	100.00(a)	
12.966	12.966	(1.319)	127	2250			0.00-	41.17	14.51	

QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Report Date: 02-Jun-2015 06:33

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060124.d
 Lab Smp Id: ICV
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md
 Method File: /chem/msd14.i/01jun15.b/14550601a.m
 Misc Info: 200ppbv (200ppbv)

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICV
 Level: LOW
 Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	110554	-0.27
123 1,4-Difluorobenze	489861	293917	685805	487673	-0.45
163 Chlorobenzene-d5	420158	252095	588221	431874	2.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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.

Eurofins Air Toxics Inc.

RECOVERY REPORT

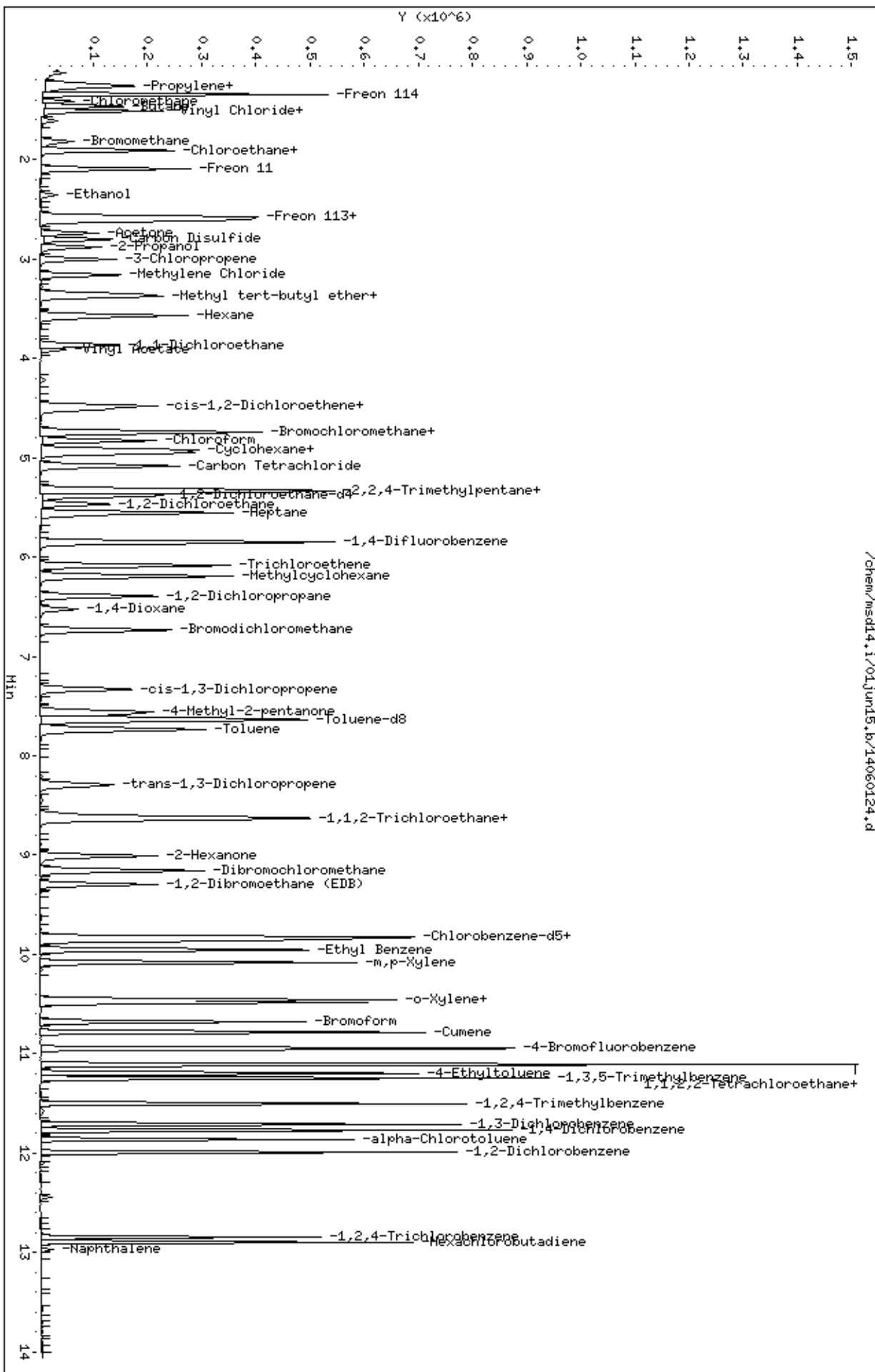
Client Name: Client SDG: 01jun15
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: ICV Client Smp ID: ICV
 Level: LOW Operator: md
 Data Type: MS DATA SampleType: LCS
 SpikeList File: 2926Spectra.spk Quant Type: ISTD
 Sublist File: AT12.sub
 Method File: /chem/msd14.i/01jun15.b/14550601a.m
 Misc Info: 200ppbv (200ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	200.00	191.47	95.74	60-140
11 Freon 12	200.00	199.90	99.95	70-130
15 Freon 114	200.00	203.16	101.58	70-130
17 Chloromethane	200.00	193.15	96.58	70-130
23 Butane	200.00	203.49	101.74	60-140
25 Vinyl Chloride	200.00	190.82	95.41	70-130
26 1,3-Butadiene	200.00	196.46	98.23	70-130
29 Bromomethane	200.00	196.63	98.32	70-130
30 Chloroethane	200.00	207.20	103.60	70-130
31 Isopentane	200.00	202.88	101.44	60-140
35 Freon 11	200.00	199.92	99.96	70-130
42 Ethanol	200.00	210.77	105.39	70-130
49 Freon 113	200.00	196.16	98.08	70-130
50 1,1-Dichloroethene	200.00	200.59	100.29	70-130
52 Acetone	200.00	195.95	97.97	70-130
56 Carbon Disulfide	200.00	176.98	88.49	70-130
57 2-Propanol	200.00	209.93	104.96	70-130
58 3-Chloropropene	200.00	187.67	93.83	70-130
66 Methylene Chloride	200.00	191.36	95.68	70-130
72 Methyl tert-butyl	200.00	193.75	96.88	70-130
73 trans-1,2-Dichloro	200.00	178.01	89.01	70-130
78 Hexane	200.00	202.63	101.32	70-130
82 1,1-Dichloroethane	200.00	200.23	100.12	70-130
86 Vinyl Acetate	200.00	100.31	50.15*	60-140
91 cis-1,2-Dichloroet	200.00	212.00	106.00	70-130
92 2-Butanone	200.00	203.26	101.63	70-130
99 Tetrahydrofuran	200.00	198.83	99.41	70-130
100 Chloroform	200.00	197.12	98.56	70-130
103 1,1,1-Trichloroeth	200.00	196.68	98.34	70-130
106 Carbon Tetrachlori	200.00	205.92	102.96	70-130
102 Cyclohexane	200.00	202.13	101.06	70-130
113 2,2,4-Trimethylpen	200.00	199.21	99.60	70-130
116 Benzene	200.00	197.50	98.75	70-130

Report Date: 02-Jun-2015 06:33

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	200.00	198.22	99.11	70-130
121 Heptane	200.00	199.23	99.61	70-130
125 Trichloroethene	200.00	207.08	103.54	70-130
127 Methylcyclohexane	200.00	195.61	97.80	60-140
132 1,2-Dichloropropan	200.00	201.34	100.67	70-130
136 1,4-Dioxane	200.00	195.18	97.59	70-130
138 Bromodichlorometha	200.00	201.27	100.64	70-130
144 cis-1,3-Dichloropr	200.00	197.43	98.71	70-130
145 4-Methyl-2-pentano	200.00	211.10	105.55	70-130
147 Toluene	200.00	195.14	97.57	70-130
150 trans-1,3-Dichloro	200.00	198.30	99.15	70-130
155 1,1,2-Trichloroeth	200.00	191.95	95.97	70-130
156 Tetrachloroethene	200.00	192.93	96.47	70-130
158 2-Hexanone	200.00	208.60	104.30	70-130
160 Dibromochlorometha	200.00	200.48	100.24	70-130
161 1,2-Dibromoethane	200.00	198.50	99.25	70-130
165 Chlorobenzene	200.00	192.44	96.22	70-130
167 Ethyl Benzene	200.00	200.62	100.31	70-130
169 m,p-Xylene	200.00	200.10	100.05	70-130
171 o-Xylene	200.00	207.58	103.79	70-130
172 Styrene	200.00	212.86	106.43	70-130
174 Bromoform	200.00	202.30	101.15	70-130
175 Cumene	200.00	204.04	102.02	70-130
181 1,1,2,2-Tetrachlor	200.00	182.76	91.38	70-130
182 Propylbenzene	200.00	207.09	103.54	70-130
188 4-Ethyltoluene	200.00	208.64	104.32	70-130
190 1,3,5-Trimethylben	200.00	213.93	106.97	70-130
196 1,2,4-Trimethylben	200.00	211.41	105.70	70-130
208 1,3-Dichlorobenzen	200.00	199.18	99.59	70-130
209 1,4-Dichlorobenzen	200.00	196.15	98.07	70-130
212 alpha-Chlorotoluen	200.00	238.42	119.21	70-130
214 1,2-Dichlorobenzen	200.00	197.28	98.64	70-130
226 1,2,4-Trichloroben	200.00	199.53	99.77	70-130
227 Hexachlorobutadien	200.00	204.32	102.16	70-130
228 Naphthalene	20.000	18.803	94.02	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	394.28	98.57	70-130
\$ 146 Toluene-d8	400.00	403.68	100.92	70-130
\$ 177 4-Bromofluorobenze	400.00	401.70	100.43	70-130



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

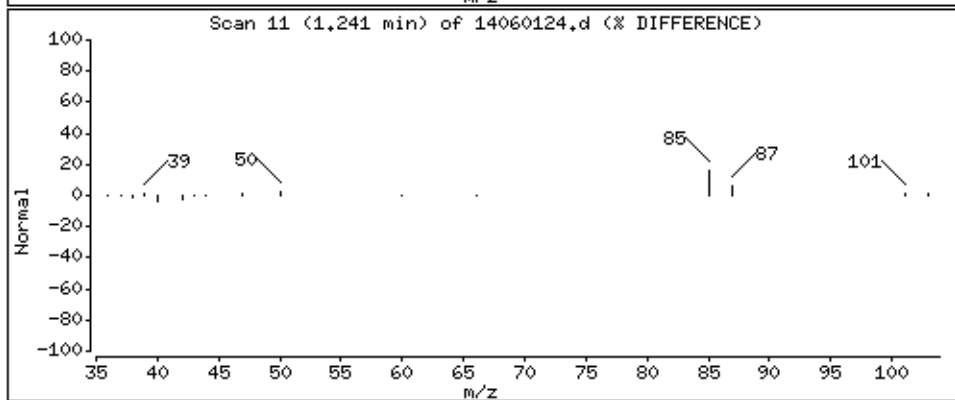
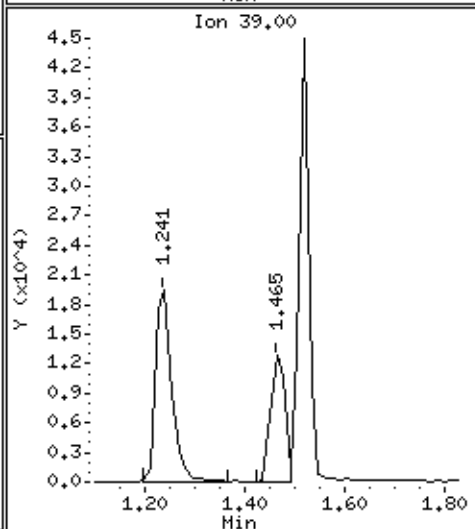
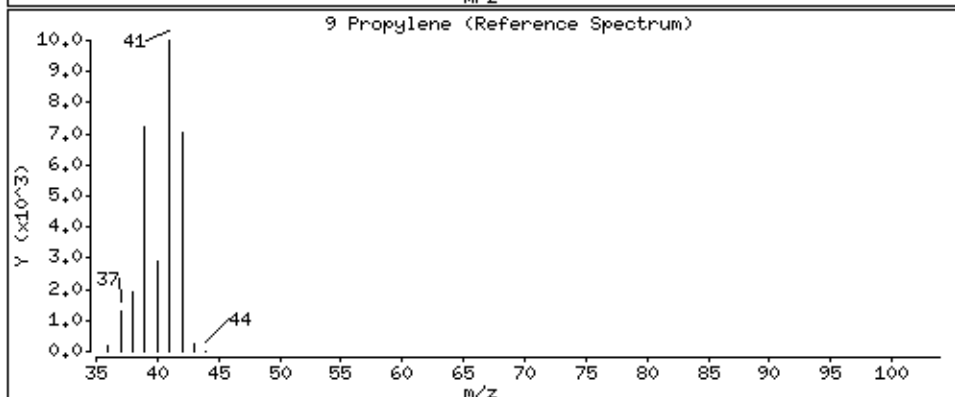
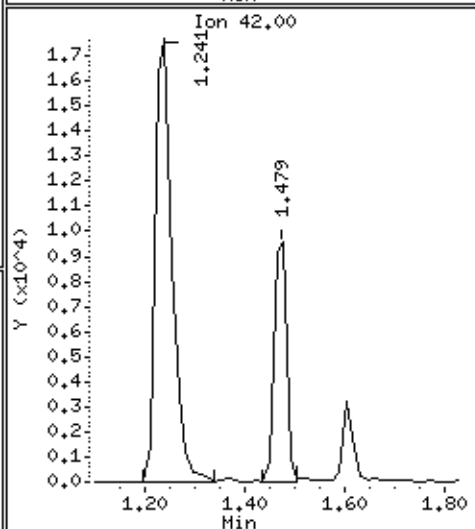
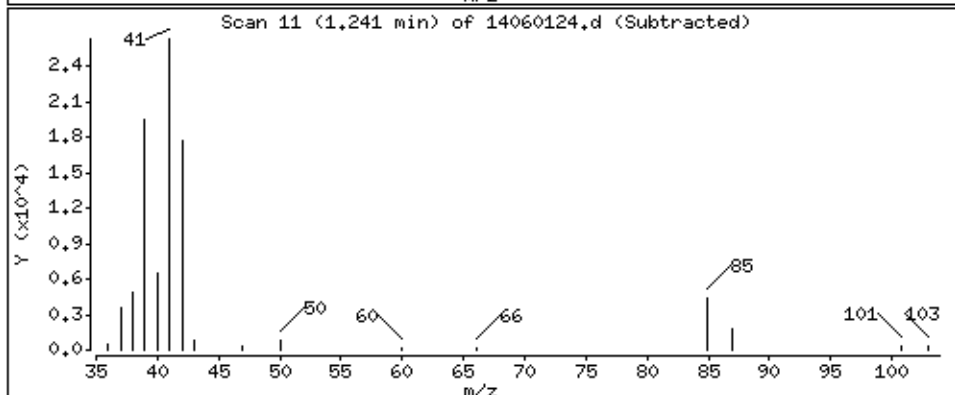
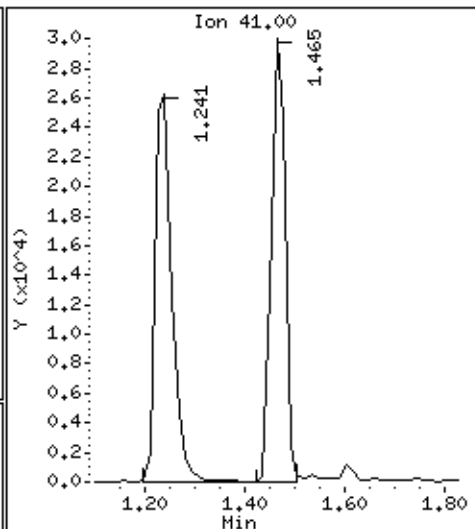
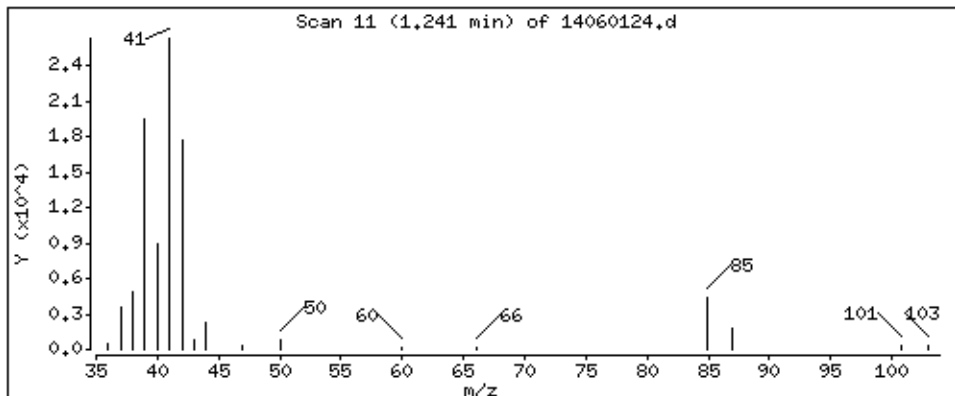
Operator: md

Column phase: RTX-624

Column diameter: 0.18

9 Propylene

Concentration: 191.47 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

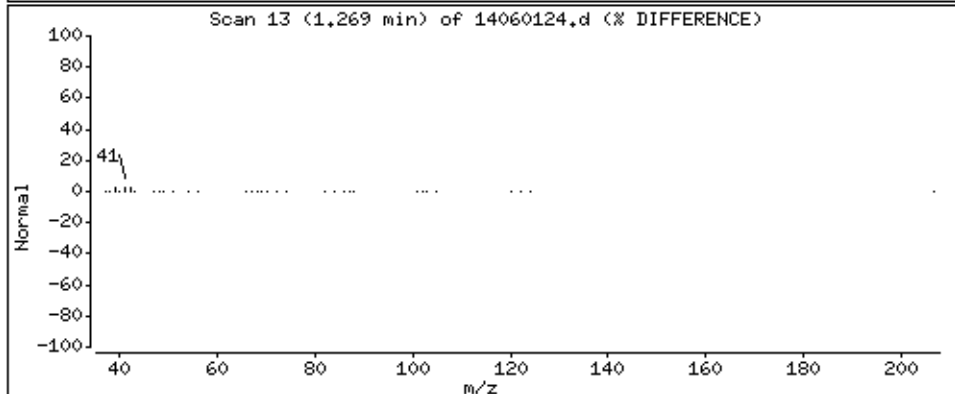
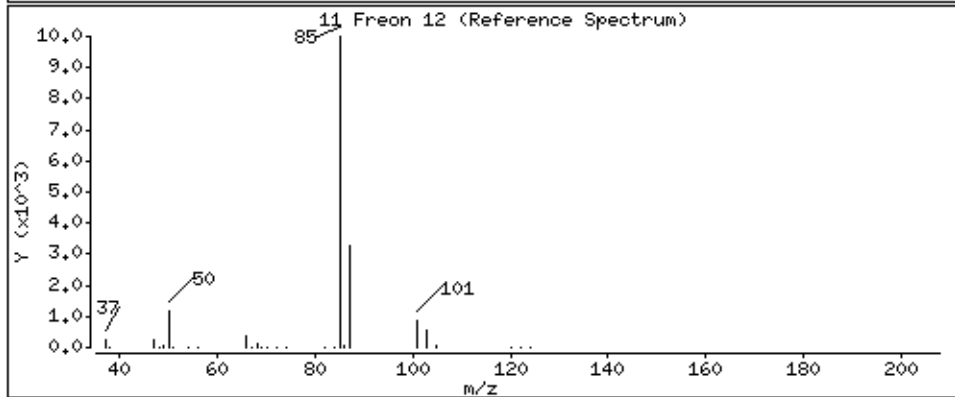
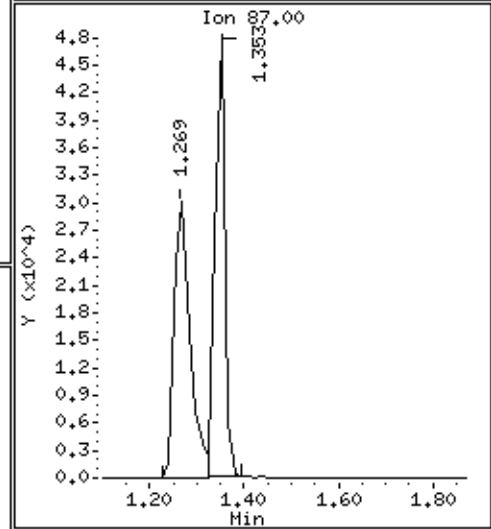
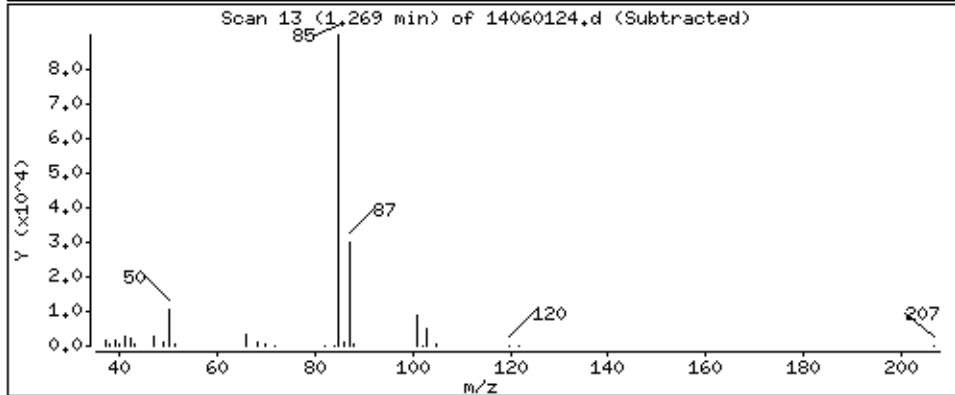
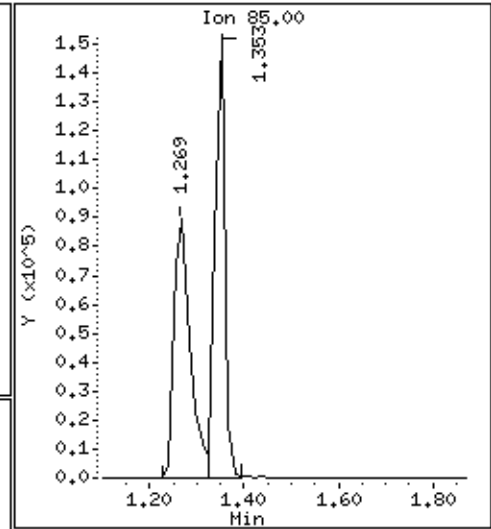
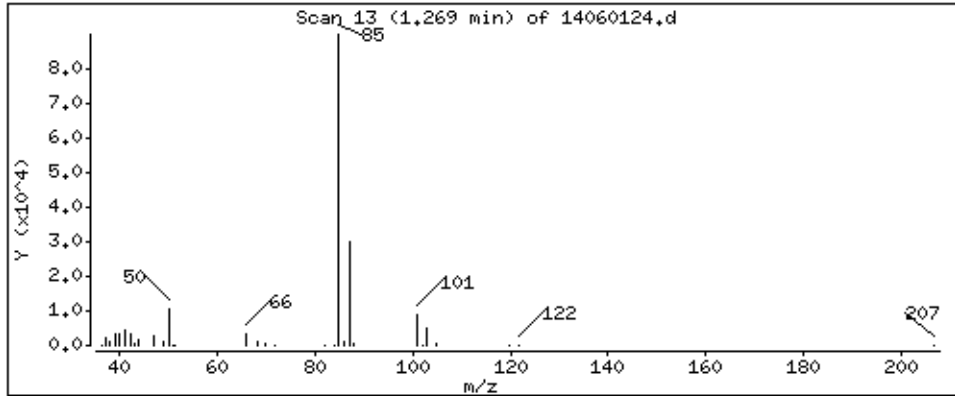
Operator: md

Column phase: RTX-624

Column diameter: 0.18

11 Freon 12

Concentration: 199.90 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

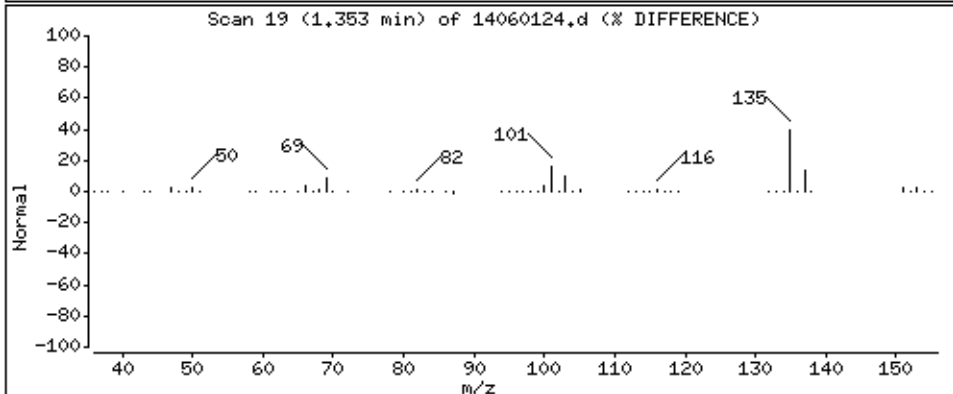
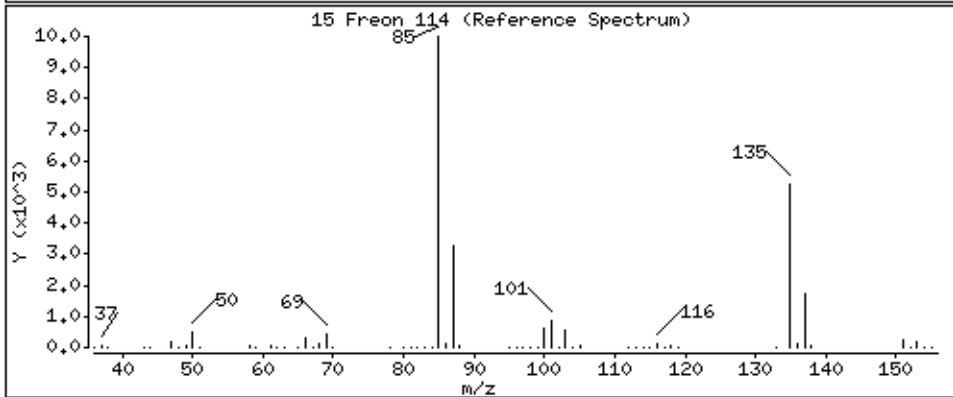
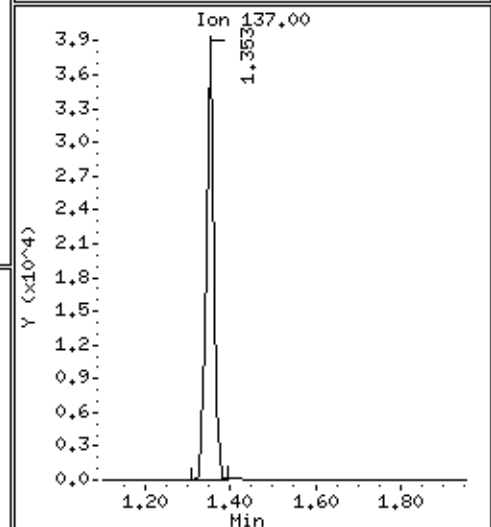
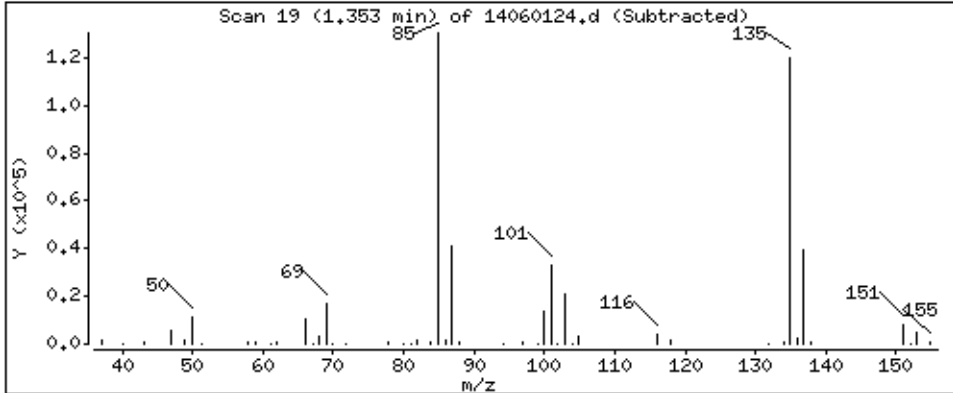
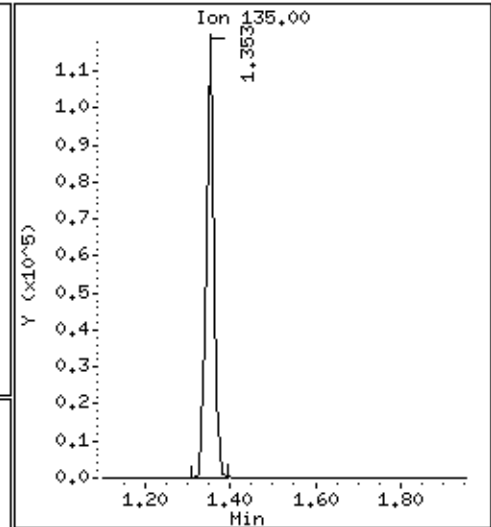
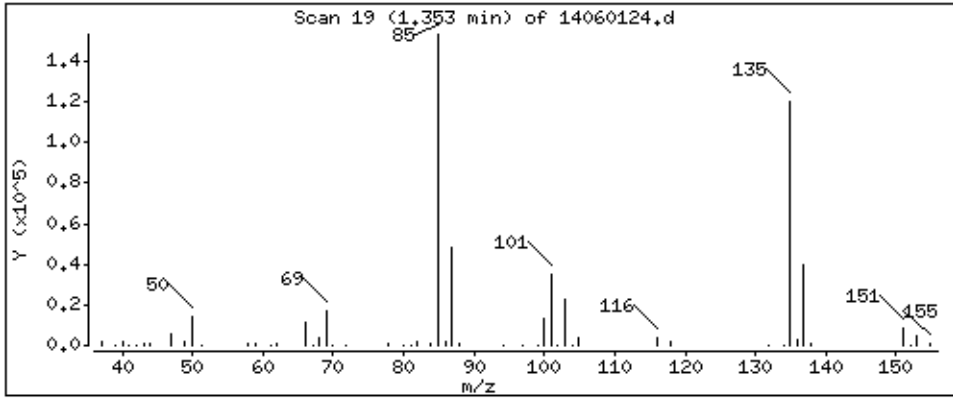
Operator: md

Column phase: RTX-624

Column diameter: 0.18

15 Freon 114

Concentration: 203.16 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

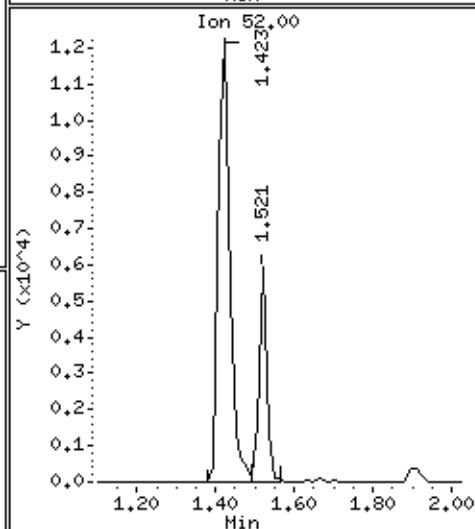
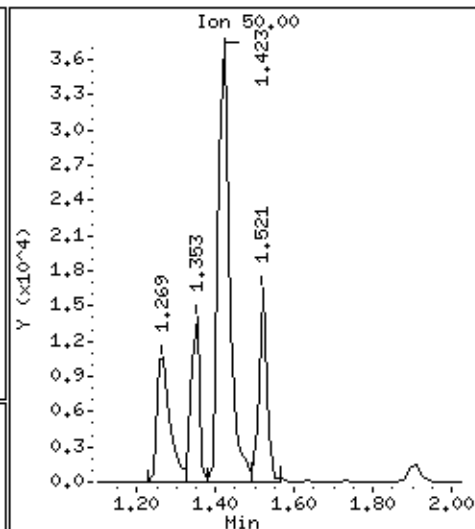
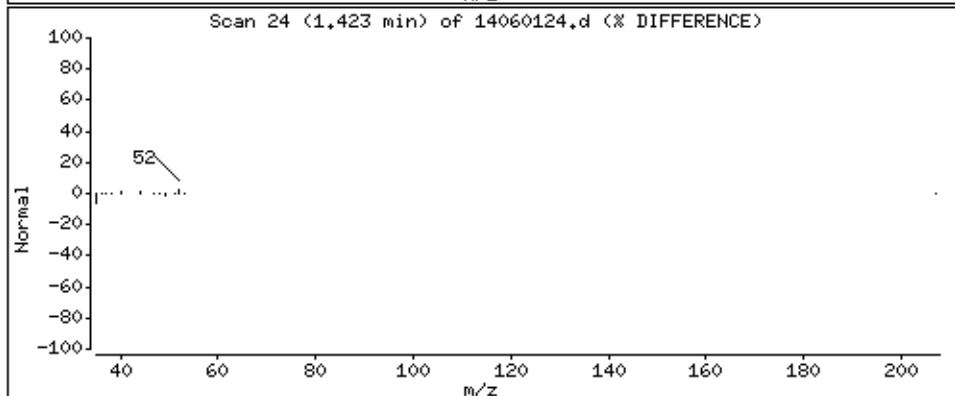
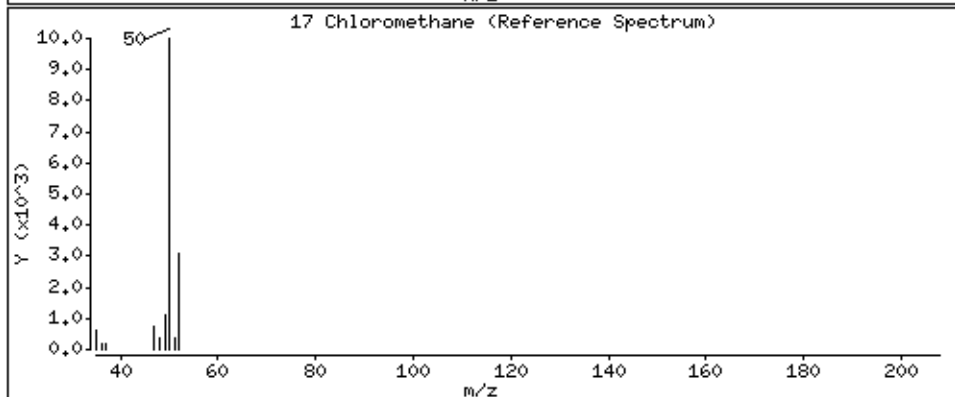
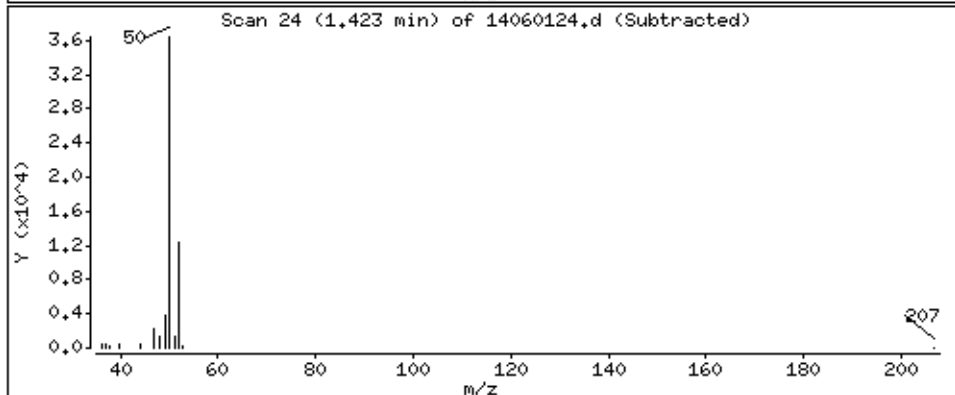
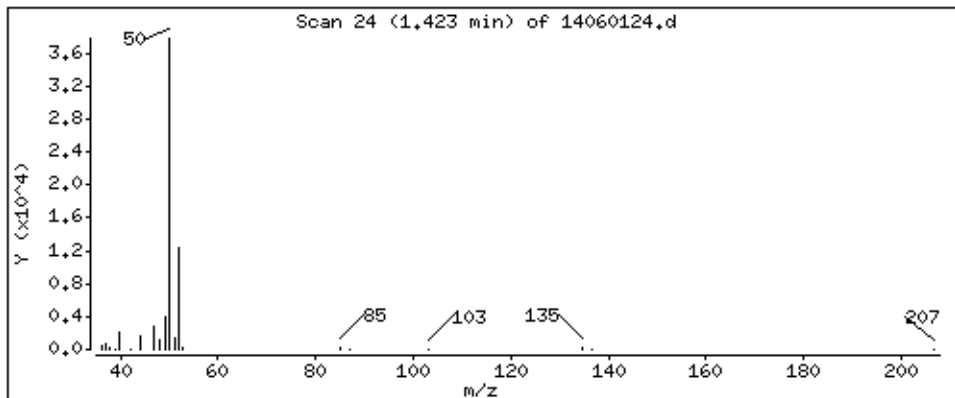
Operator: md

Column phase: RTX-624

Column diameter: 0.18

17 Chloromethane

Concentration: 193.15 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

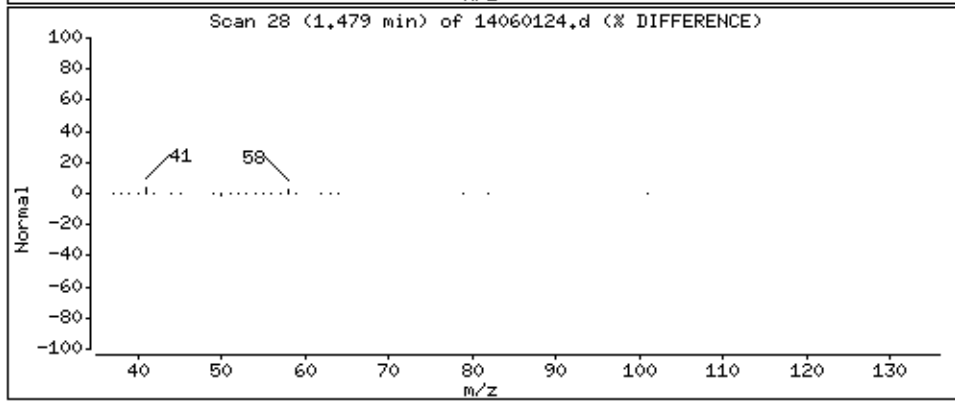
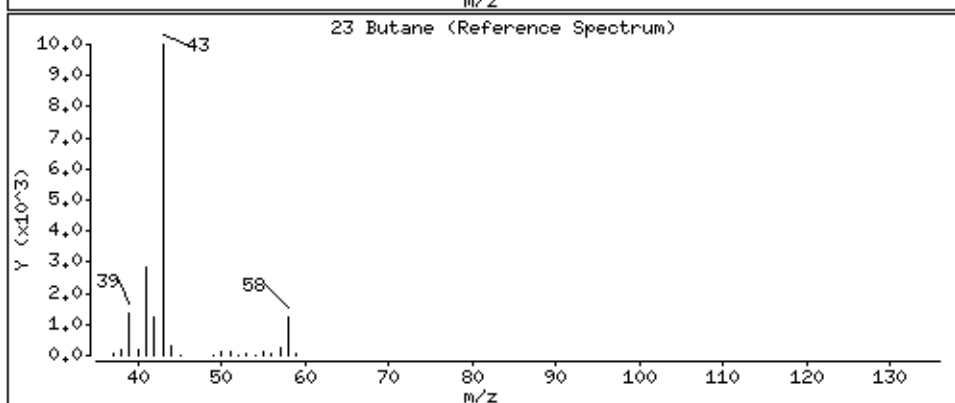
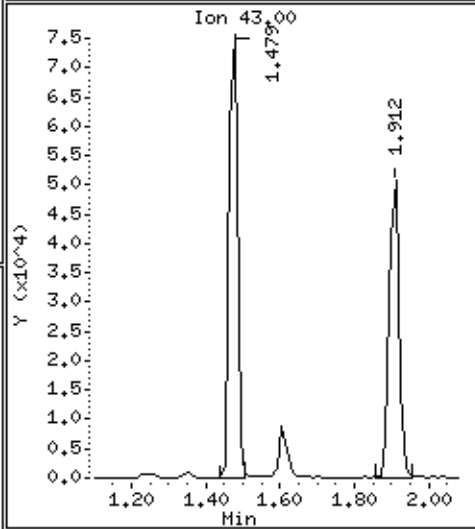
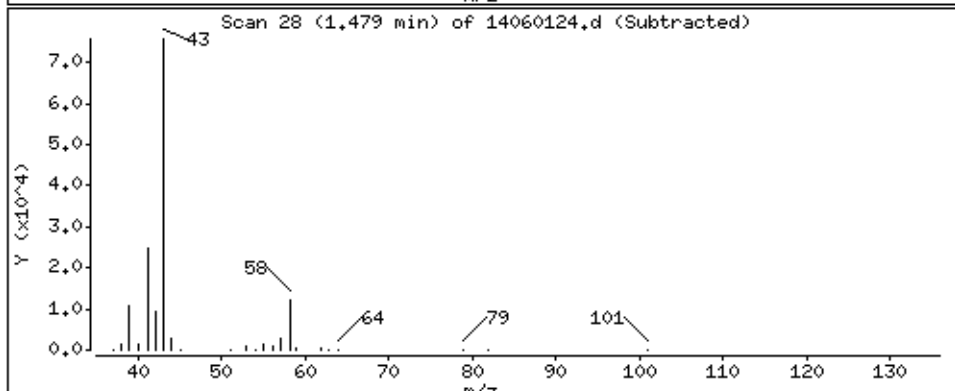
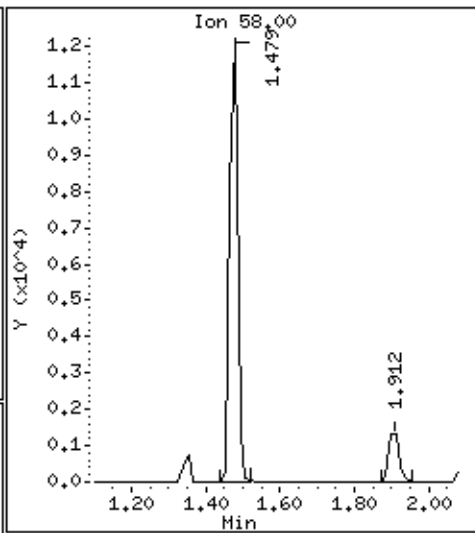
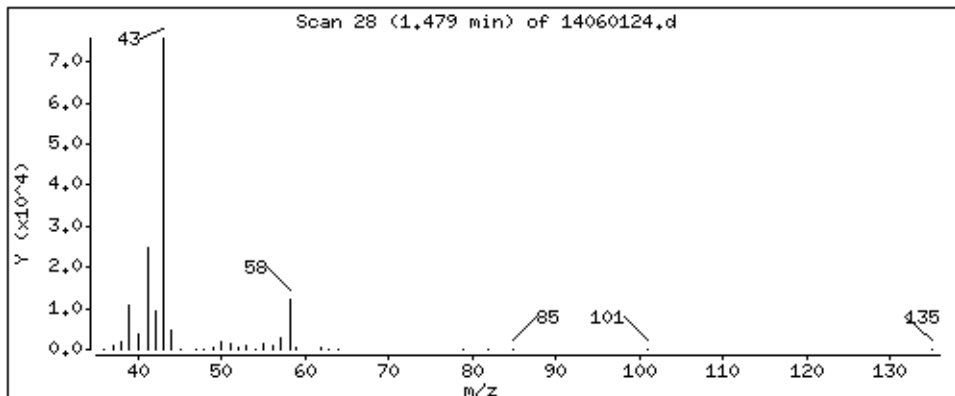
Operator: md

Column phase: RTX-624

Column diameter: 0.18

23 Butane

Concentration: 203.49 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

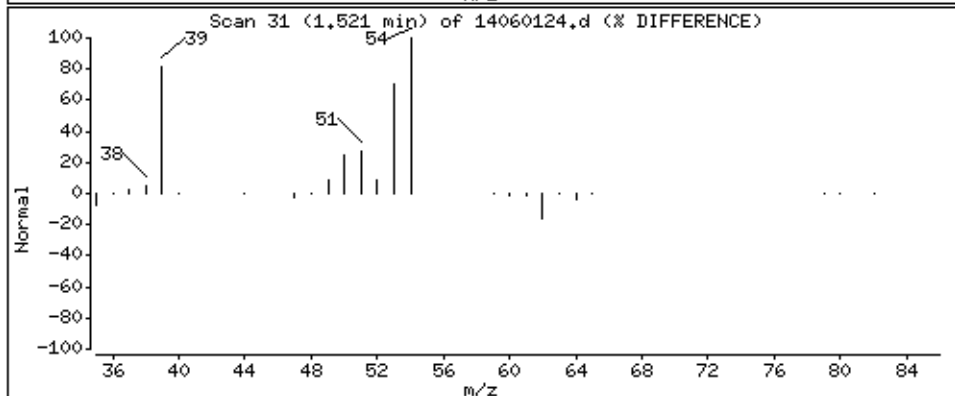
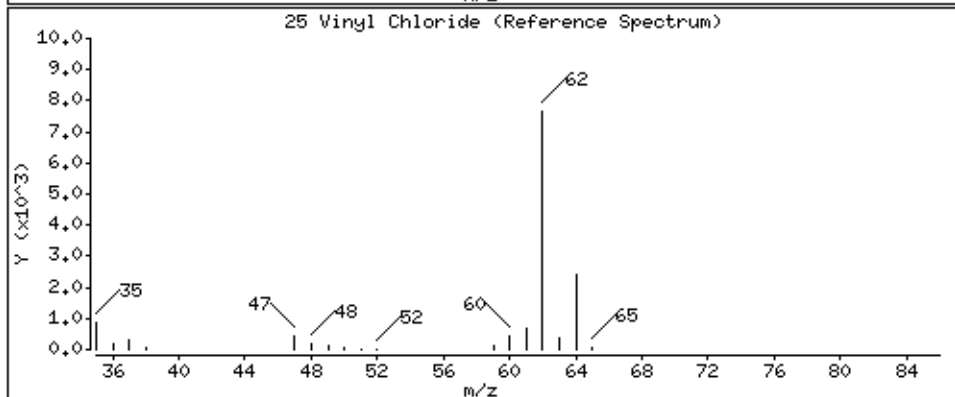
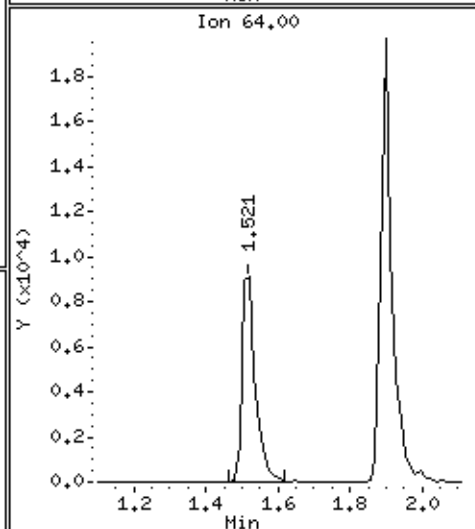
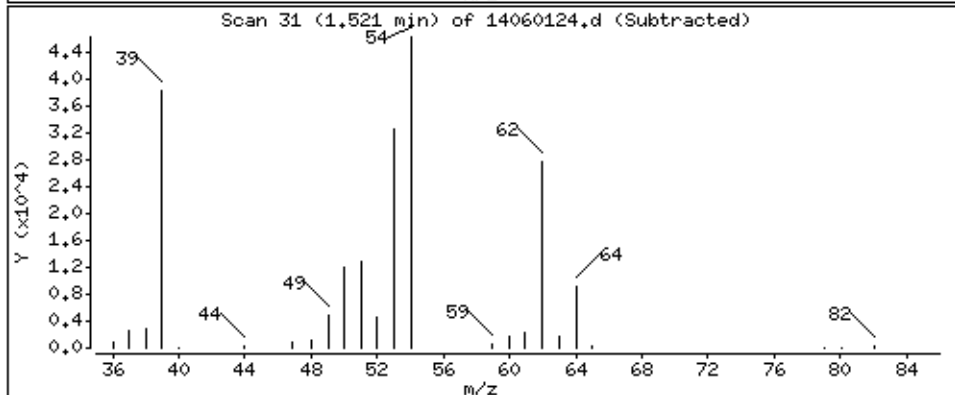
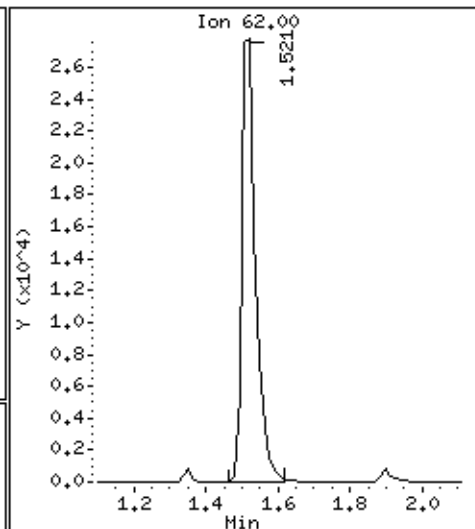
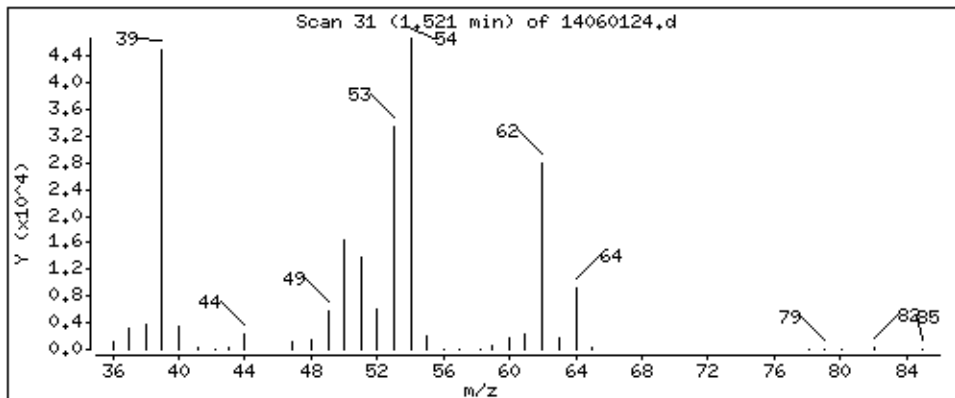
Operator: md

Column phase: RTX-624

Column diameter: 0.18

25 Vinyl Chloride

Concentration: 190.82 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

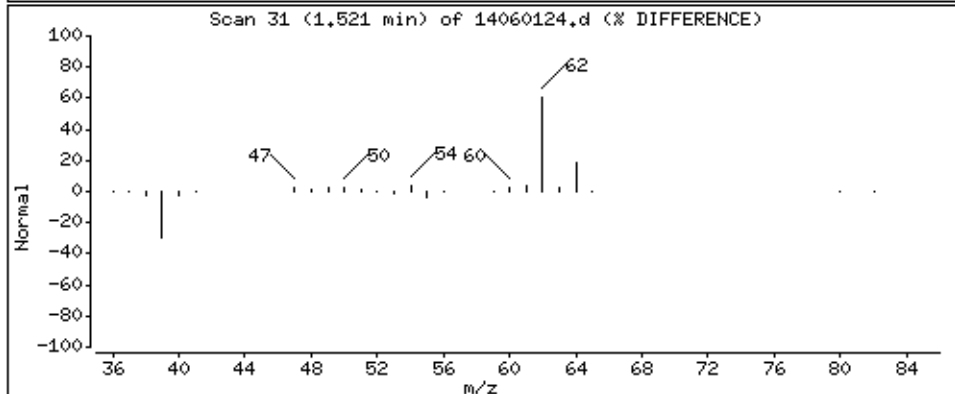
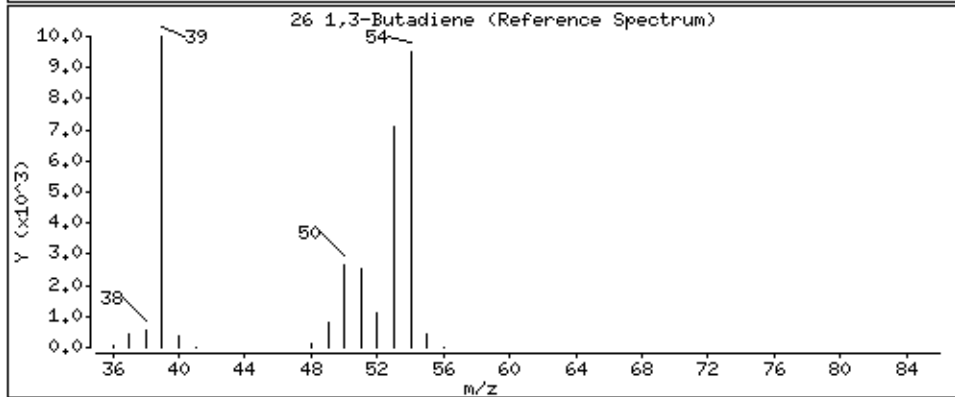
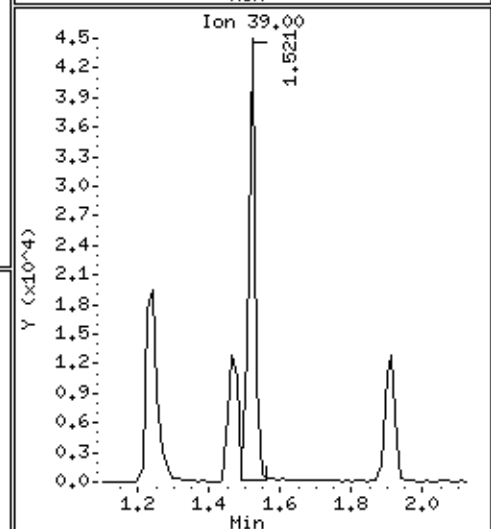
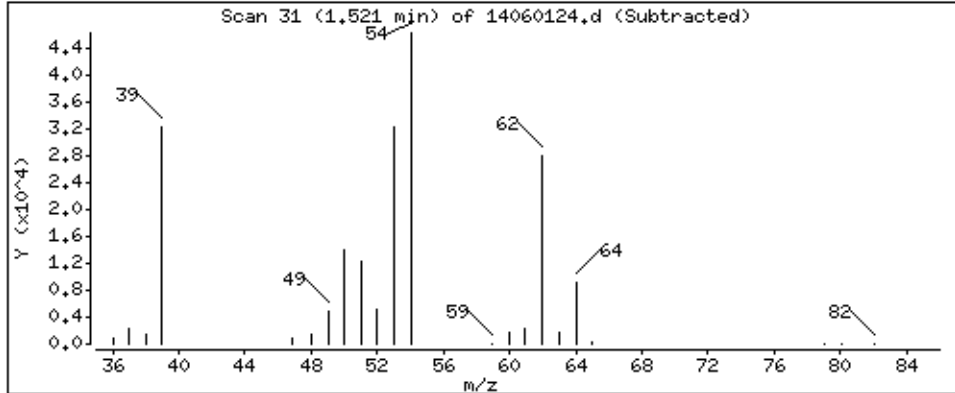
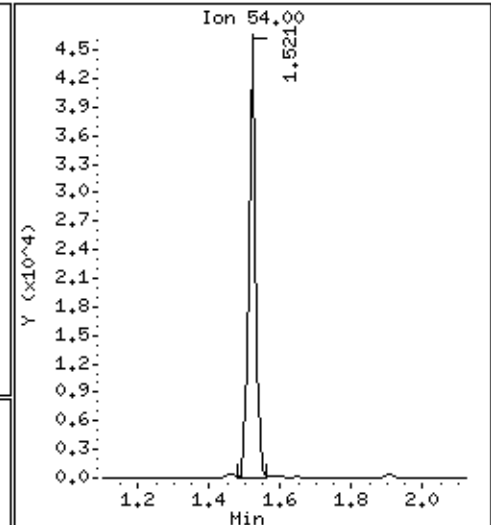
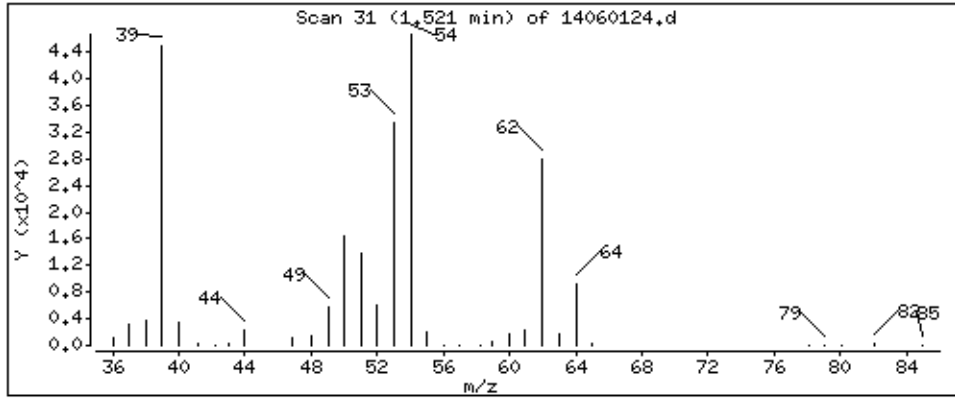
Operator: md

Column phase: RTX-624

Column diameter: 0.18

26 1,3-Butadiene

Concentration: 196.46 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

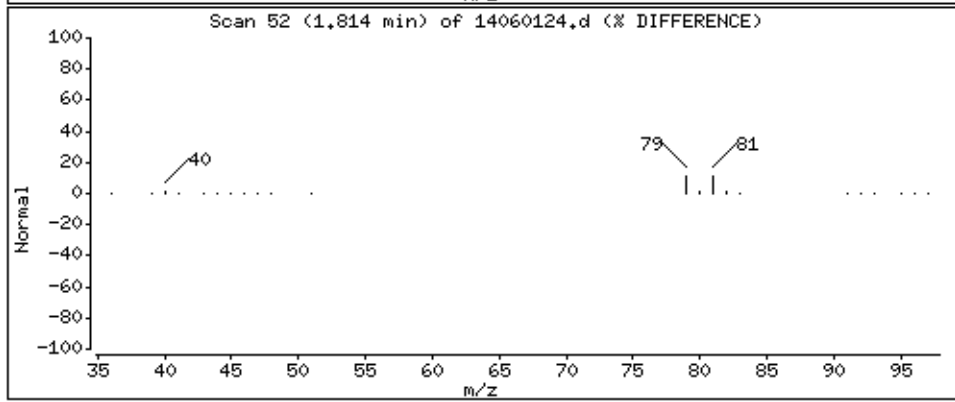
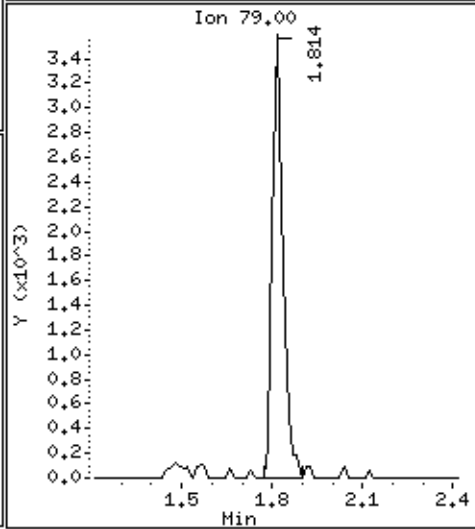
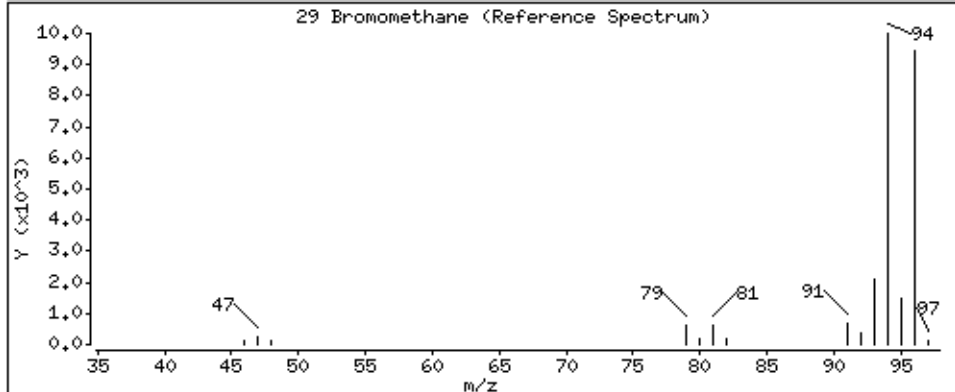
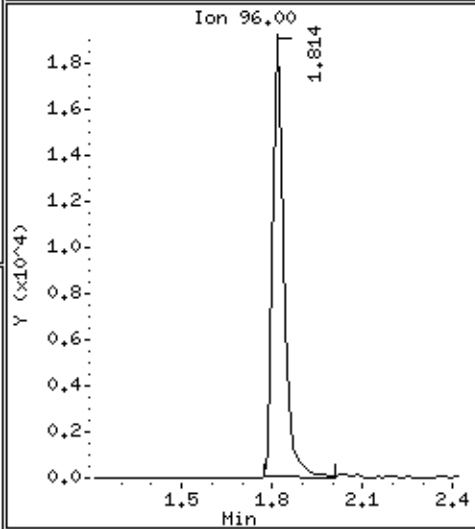
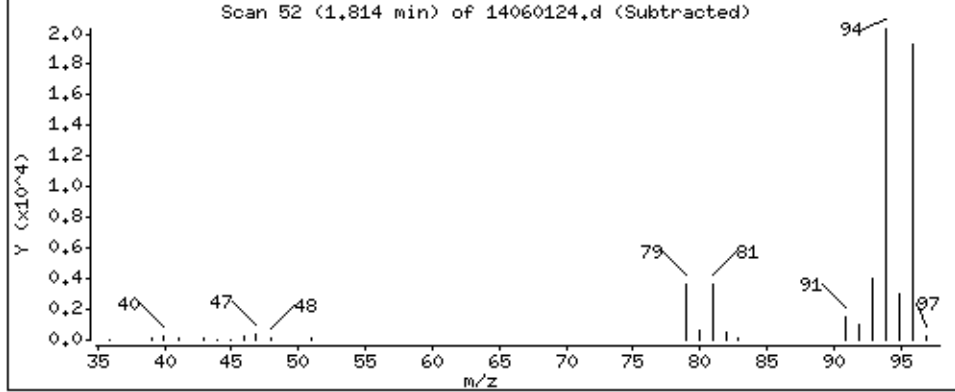
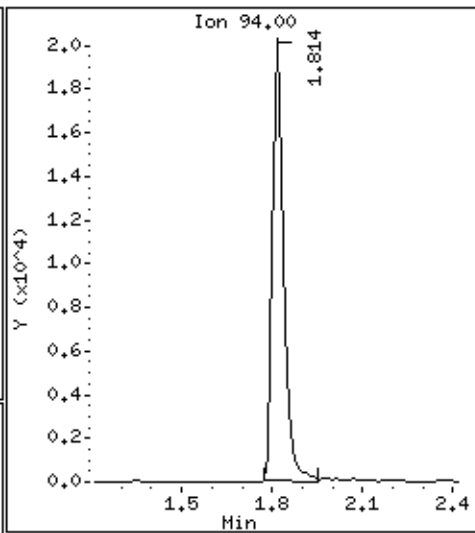
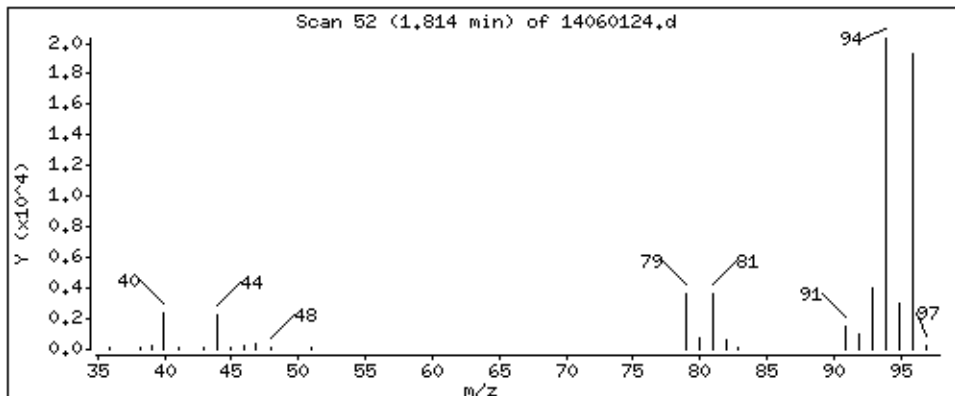
Operator: md

Column phase: RTX-624

Column diameter: 0.18

29 Bromomethane

Concentration: 196.63 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

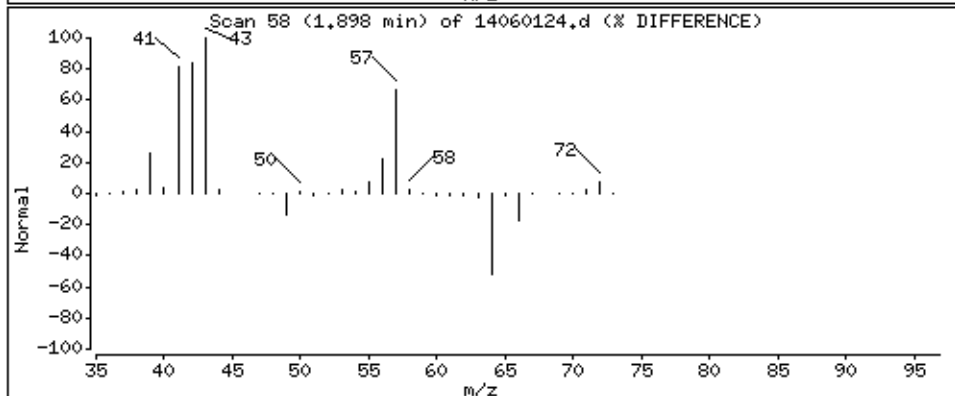
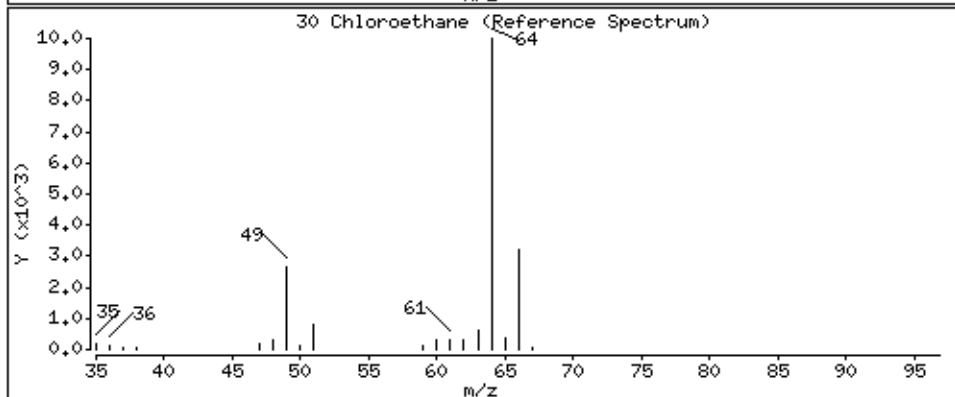
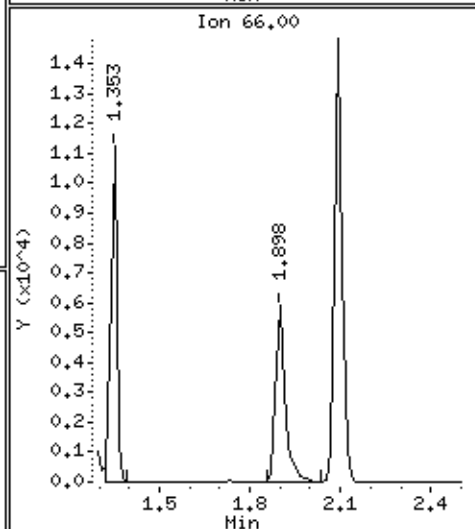
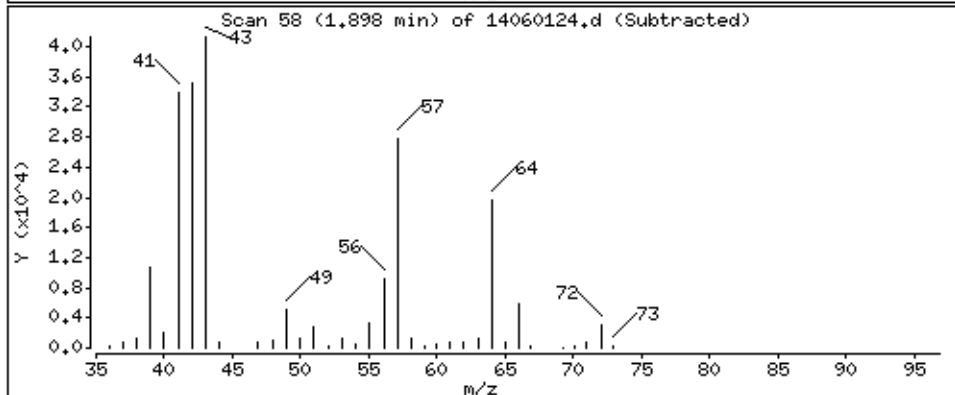
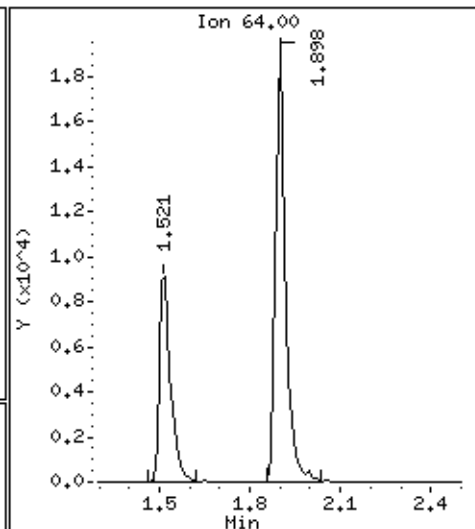
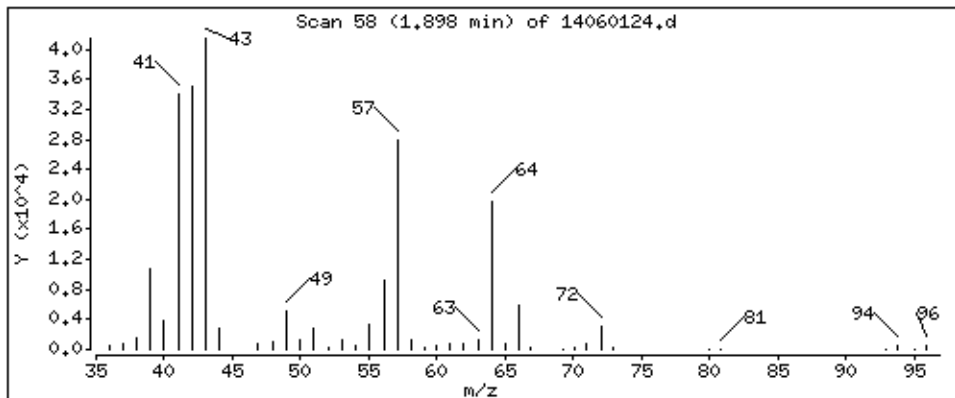
Operator: md

Column phase: RTX-624

Column diameter: 0.18

30 Chloroethane

Concentration: 207.20 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

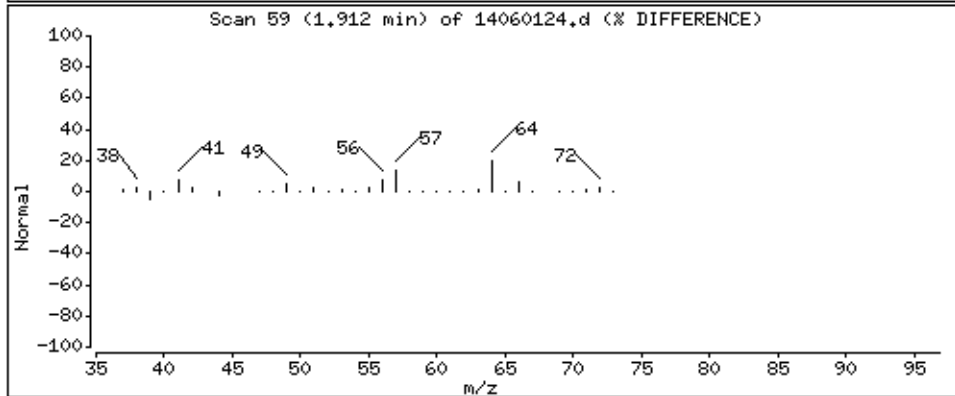
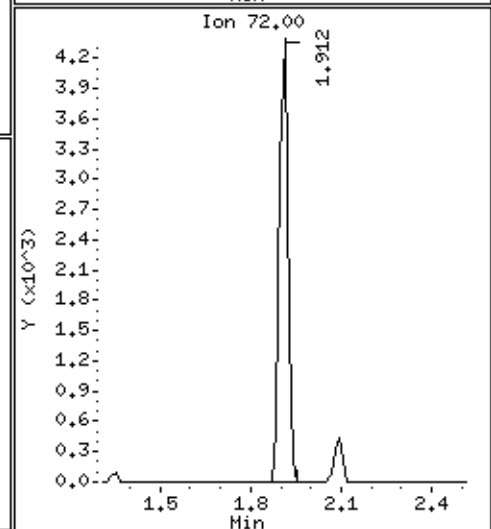
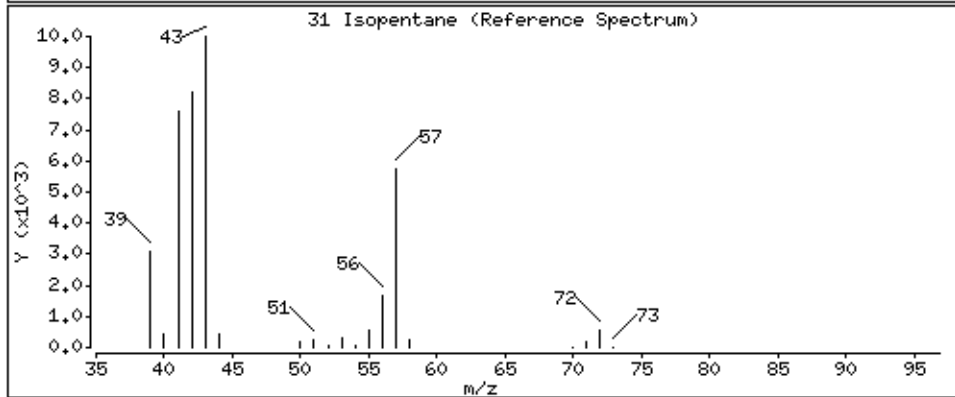
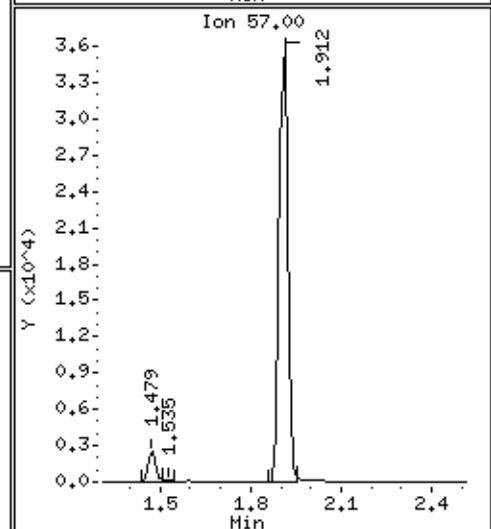
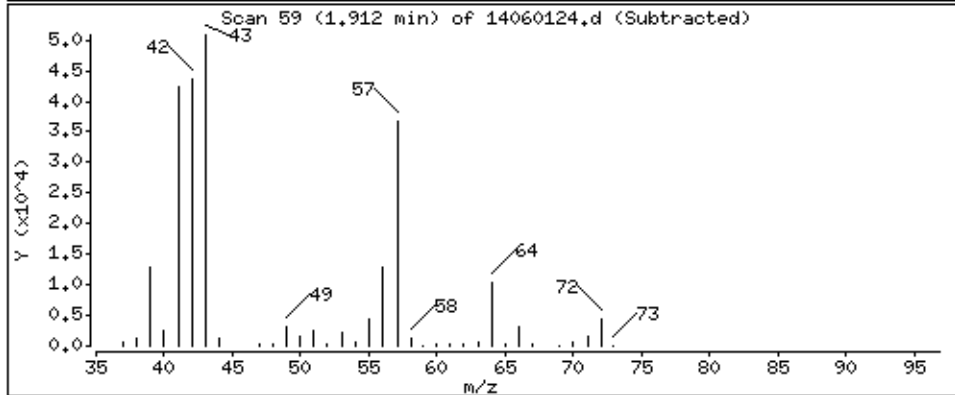
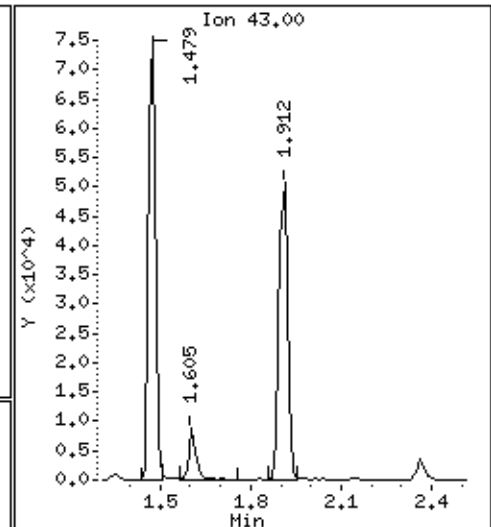
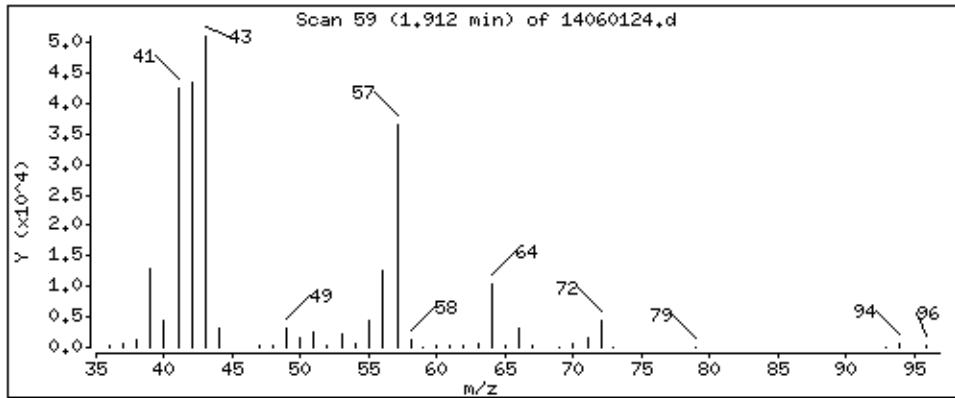
Operator: md

Column phase: RTX-624

Column diameter: 0.18

31 Isopentane

Concentration: 202.88 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

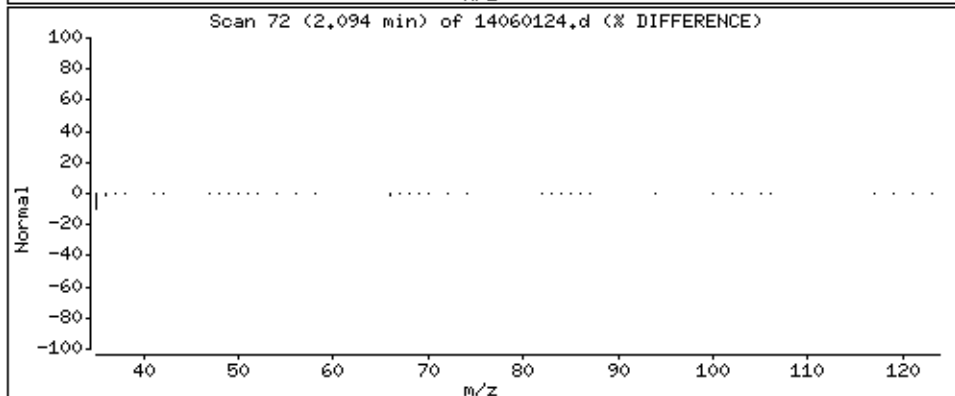
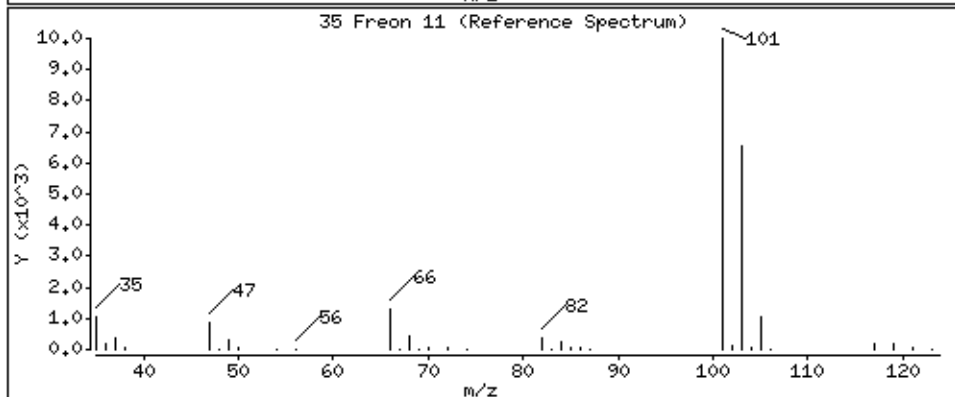
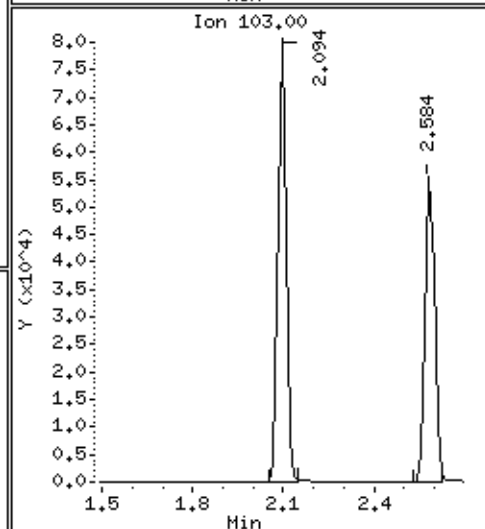
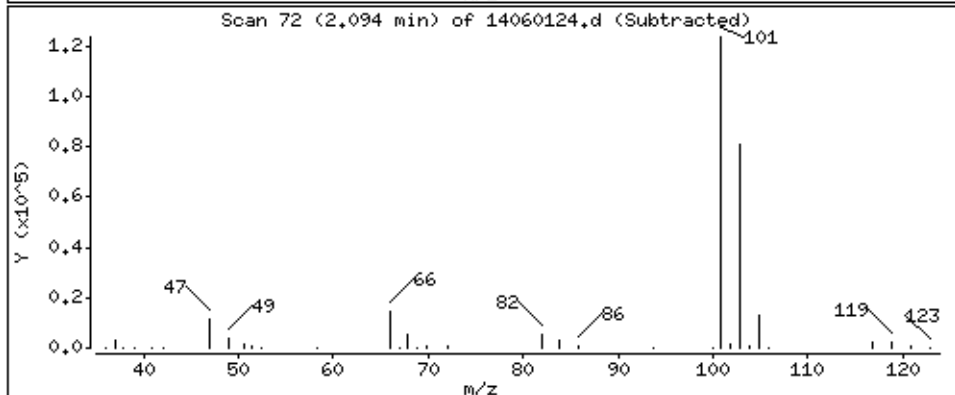
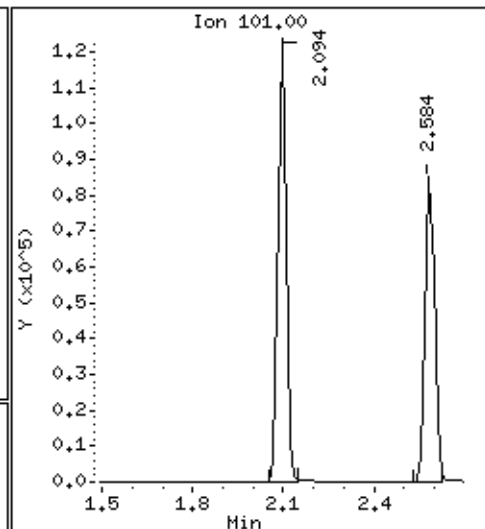
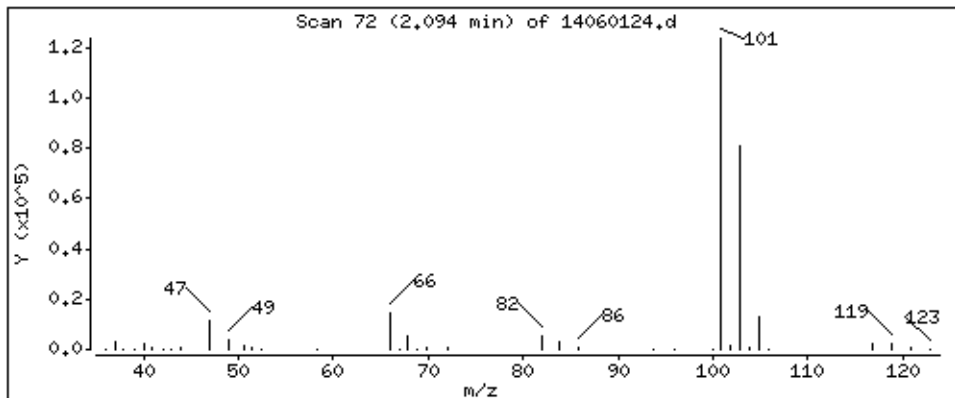
Operator: md

Column phase: RTX-624

Column diameter: 0.18

35 Freon 11

Concentration: 199.92 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

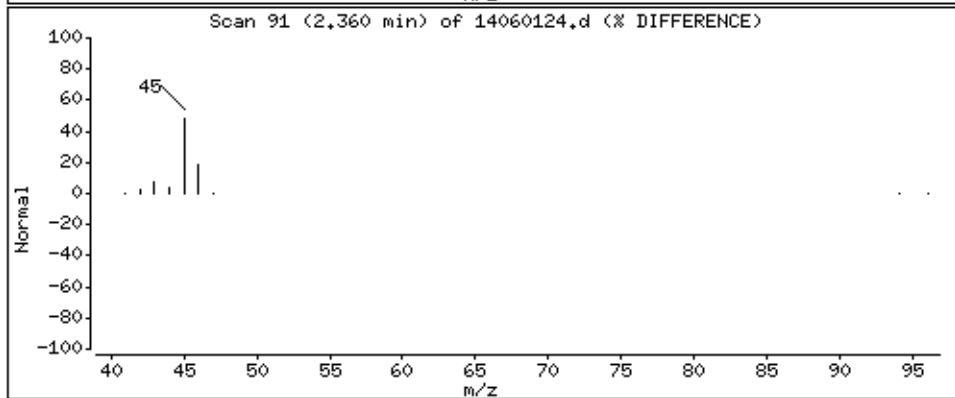
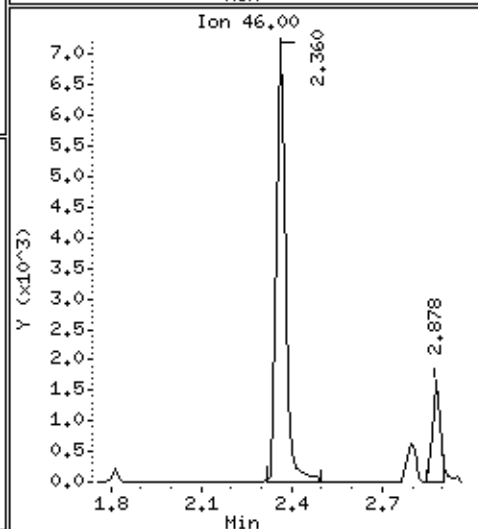
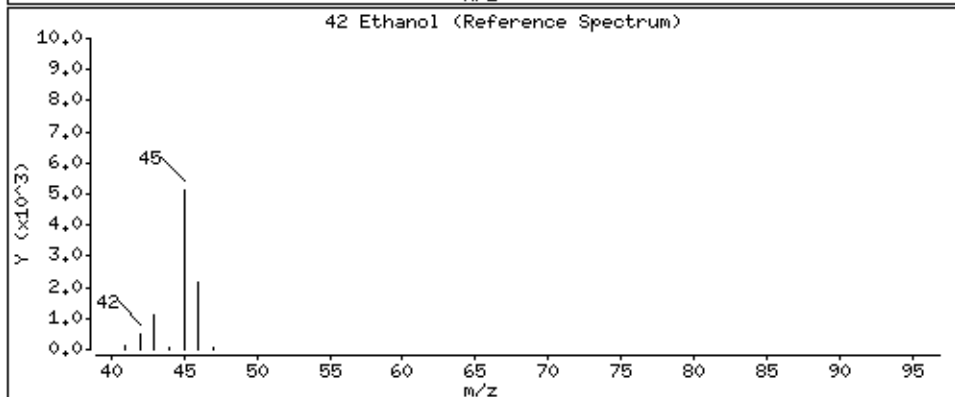
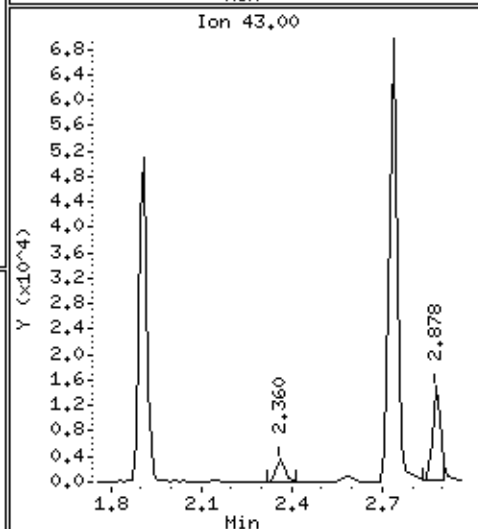
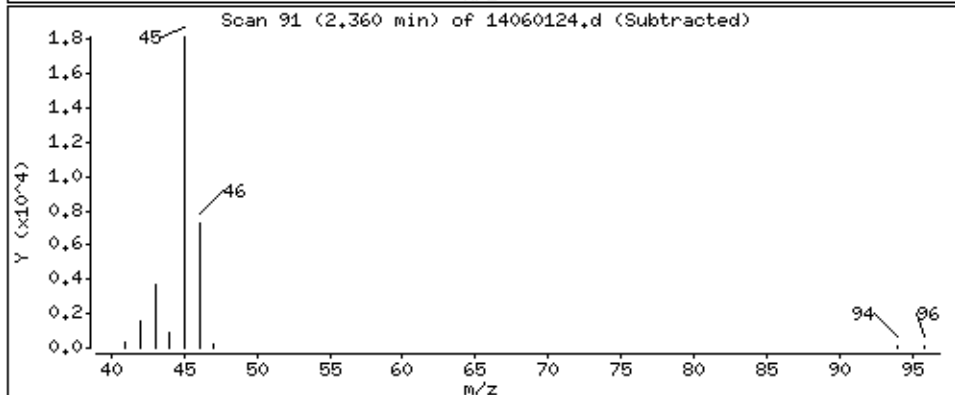
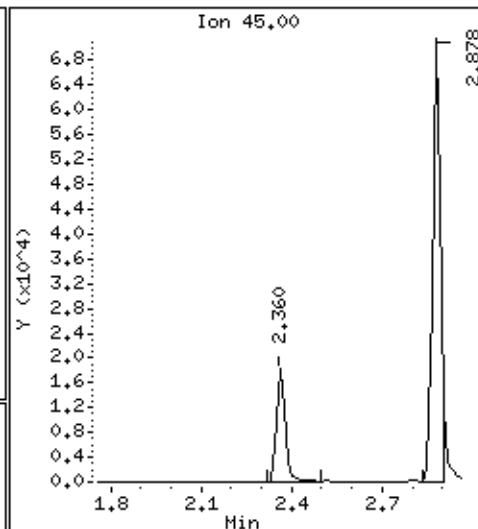
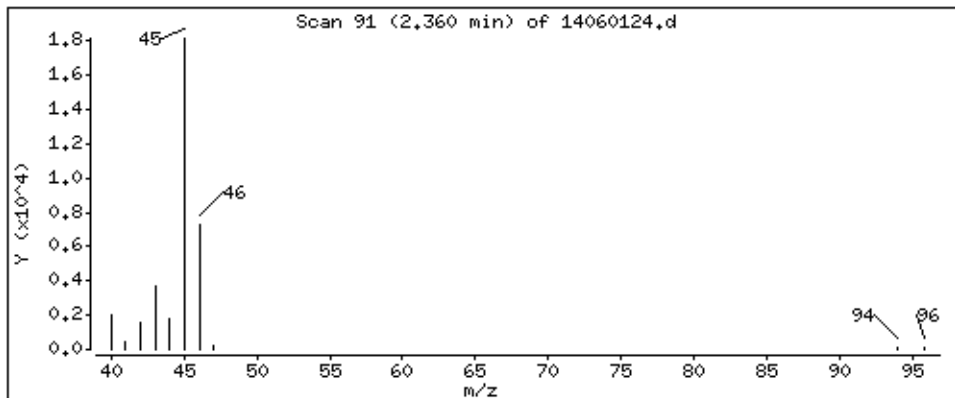
Operator: md

Column phase: RTX-624

Column diameter: 0.18

42 Ethanol

Concentration: 210.77 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

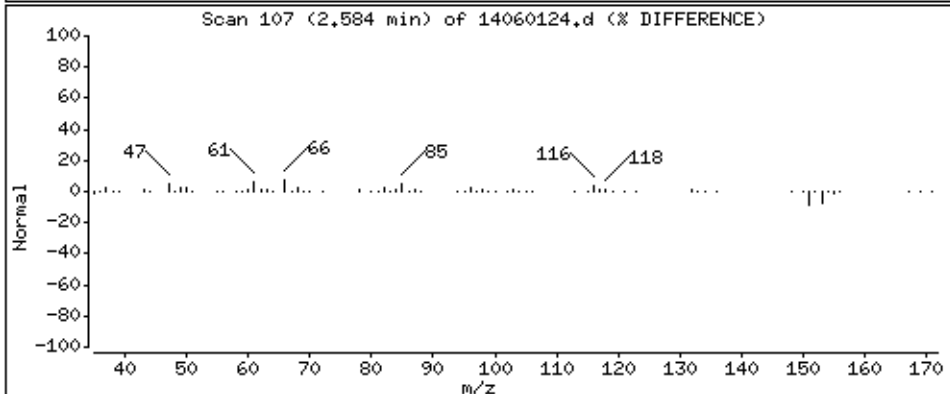
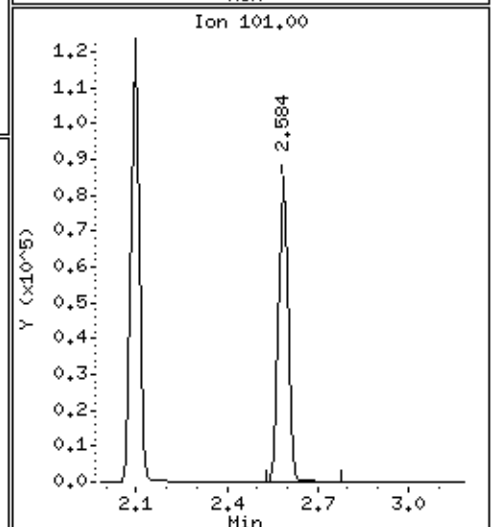
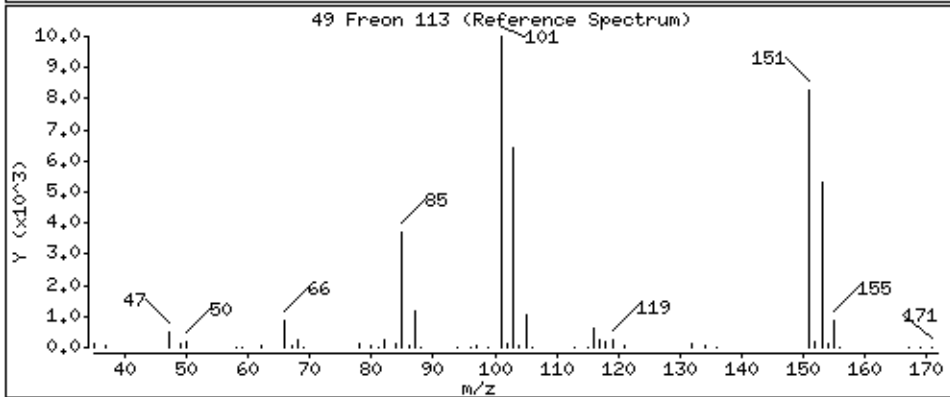
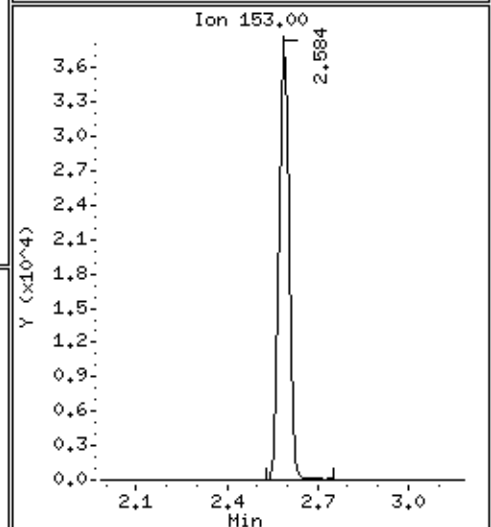
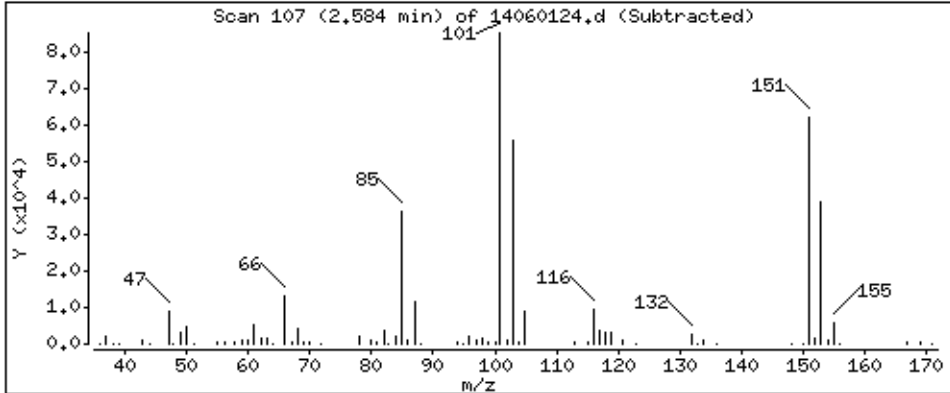
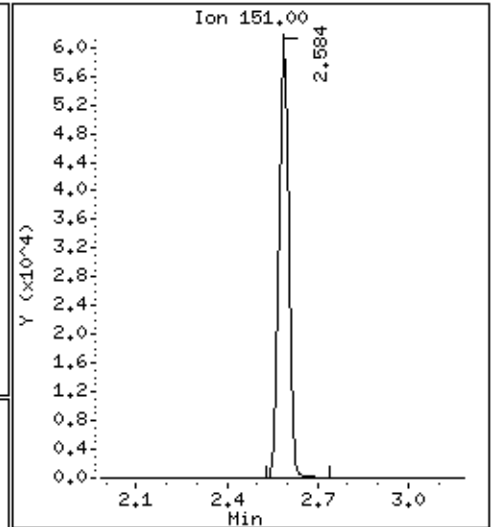
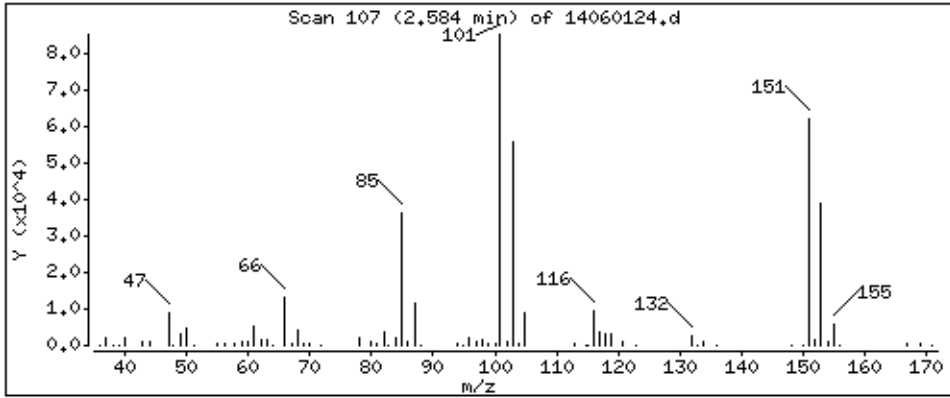
Operator: md

Column phase: RTX-624

Column diameter: 0.18

49 Freon 113

Concentration: 196.16 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

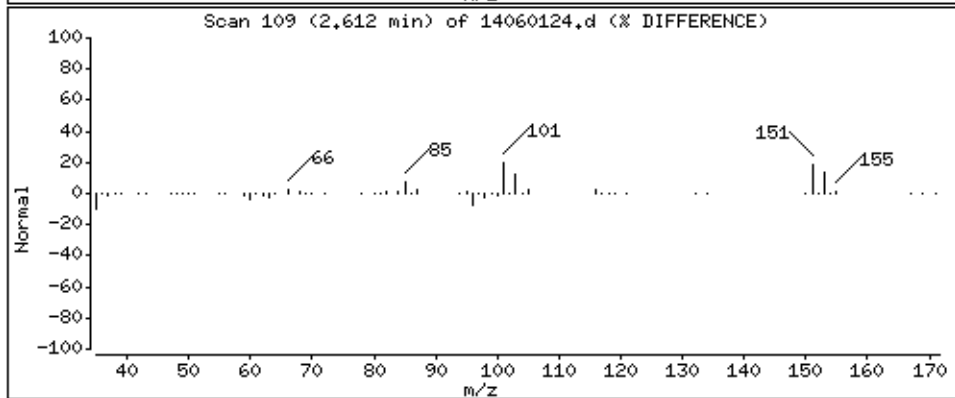
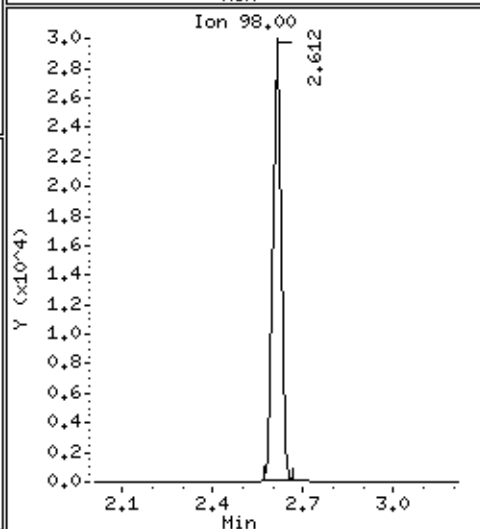
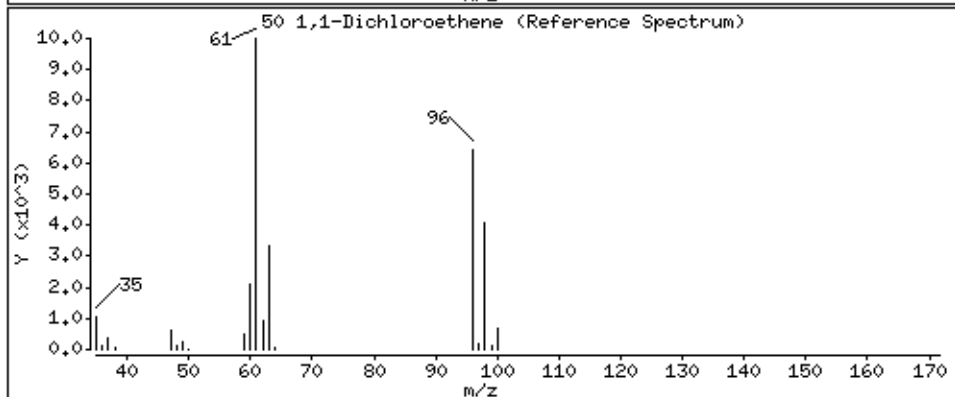
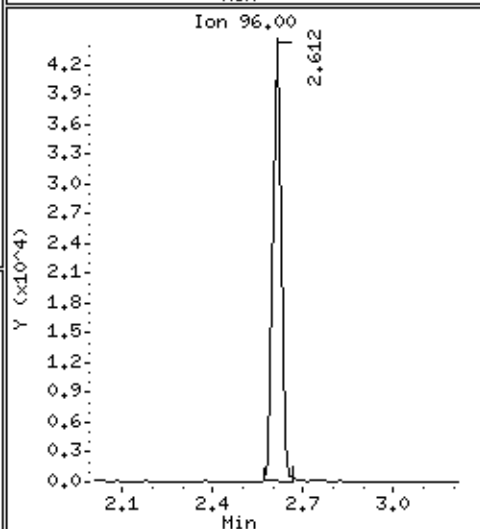
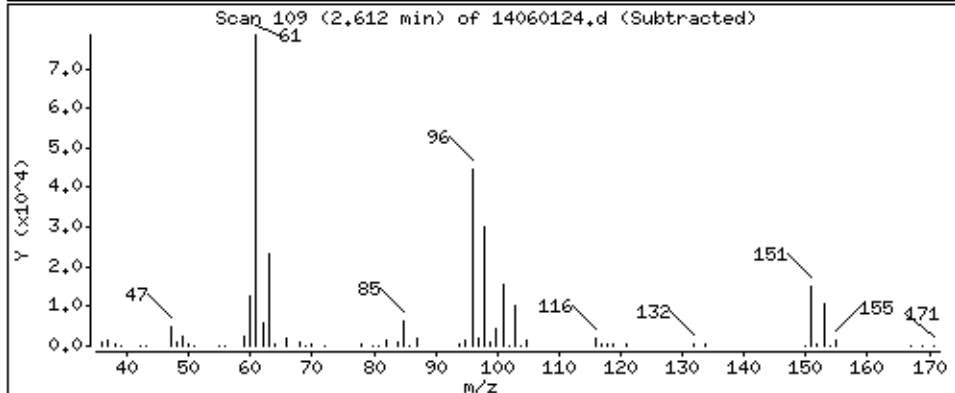
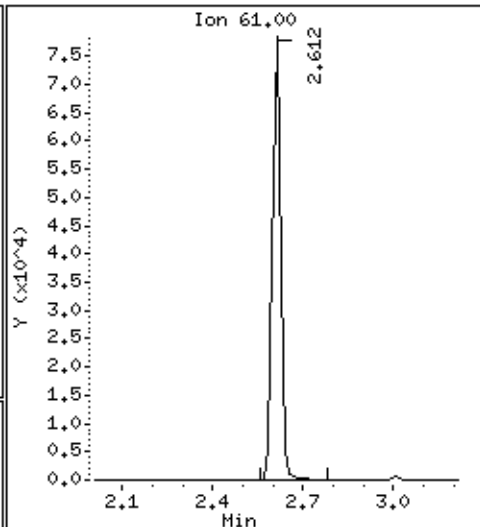
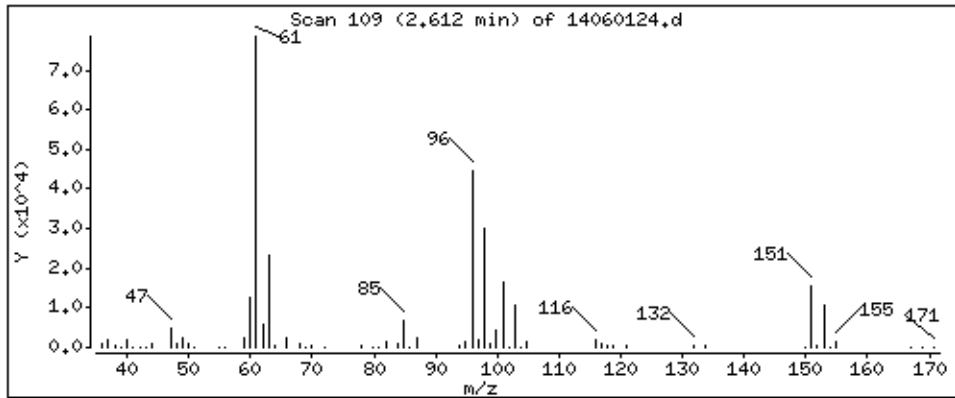
Operator: md

Column phase: RTX-624

Column diameter: 0.18

50 1,1-Dichloroethene

Concentration: 200.59 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

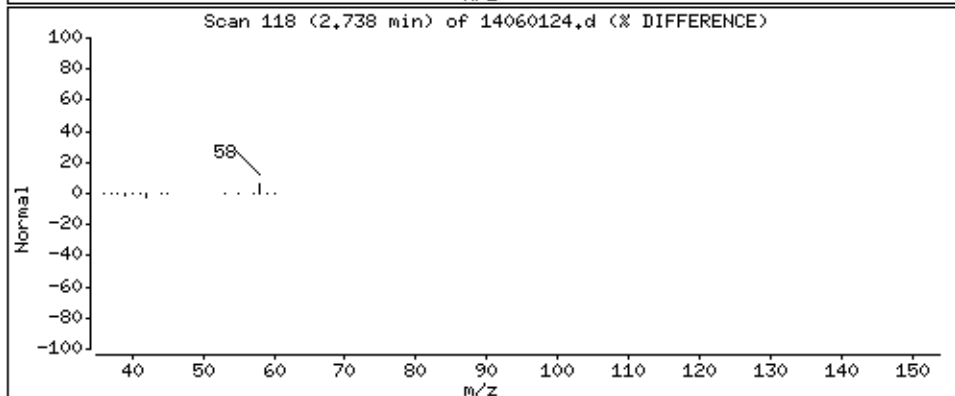
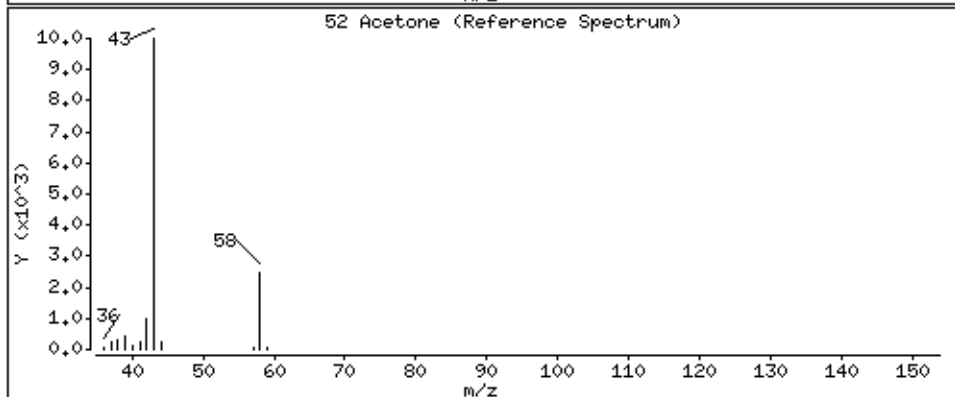
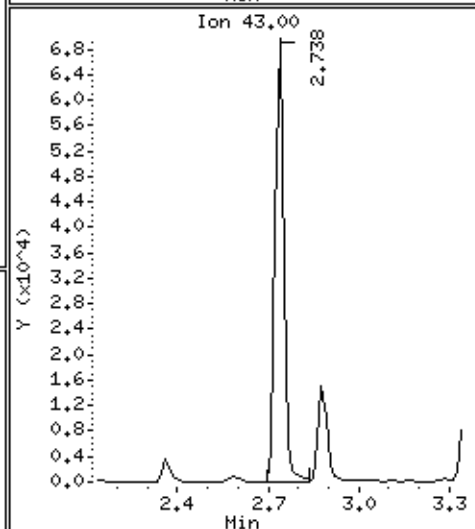
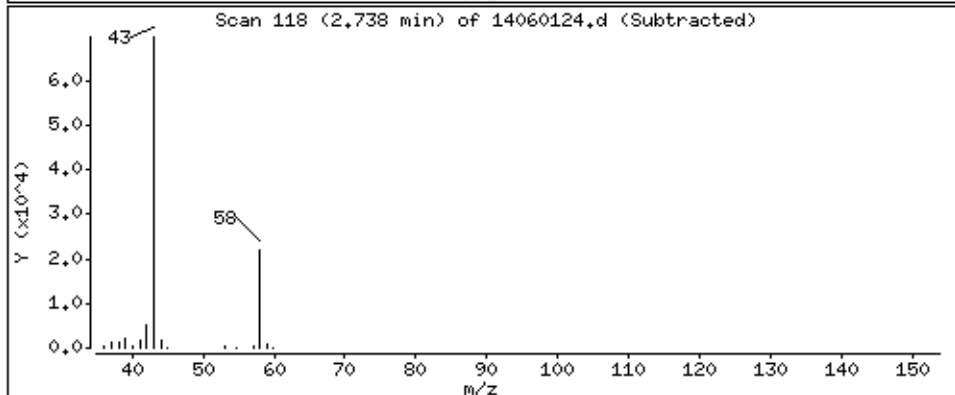
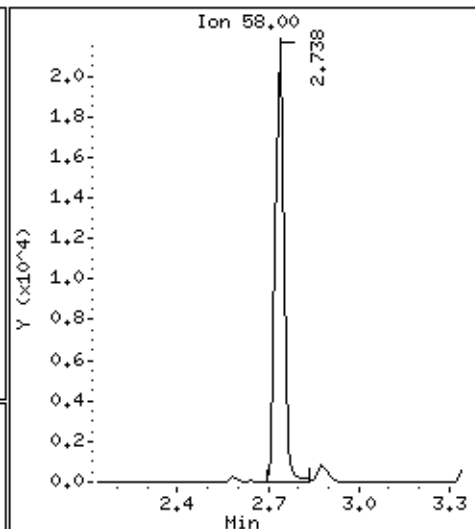
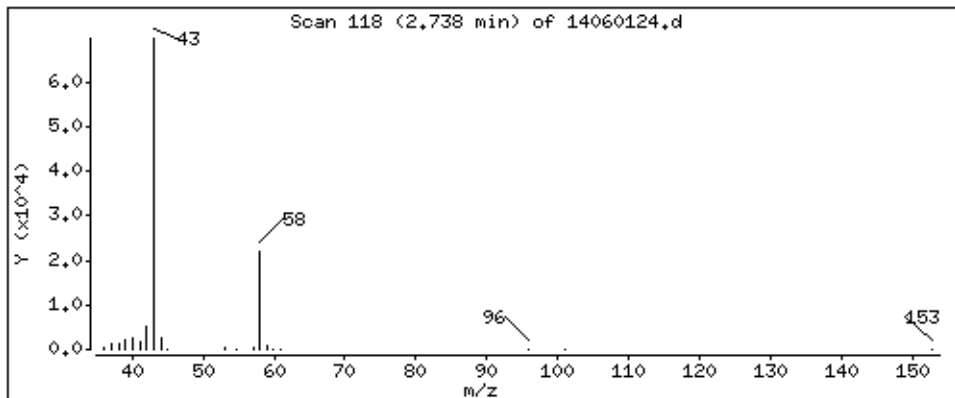
Operator: md

Column phase: RTX-624

Column diameter: 0.18

52 Acetone

Concentration: 195.95 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

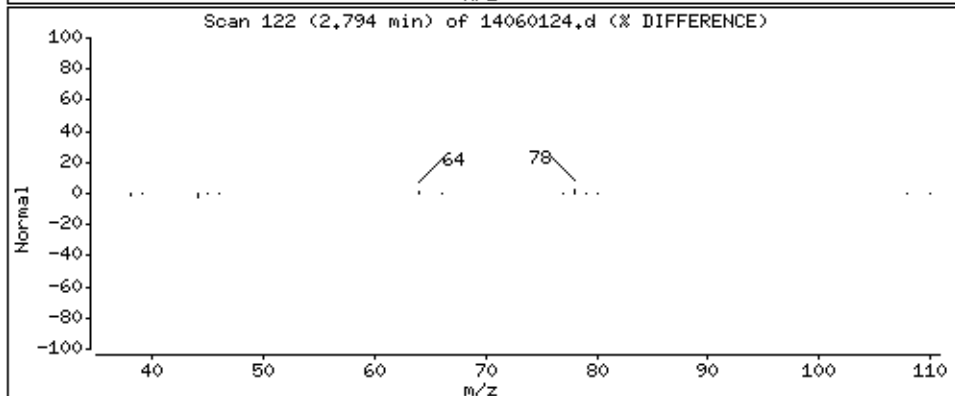
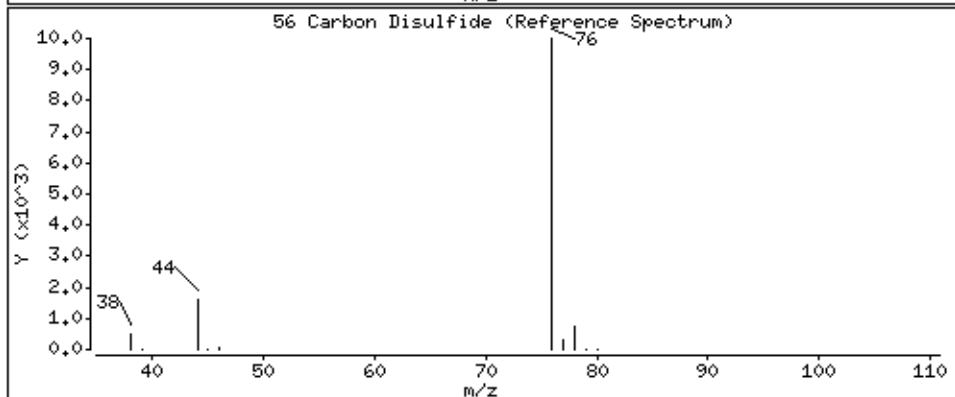
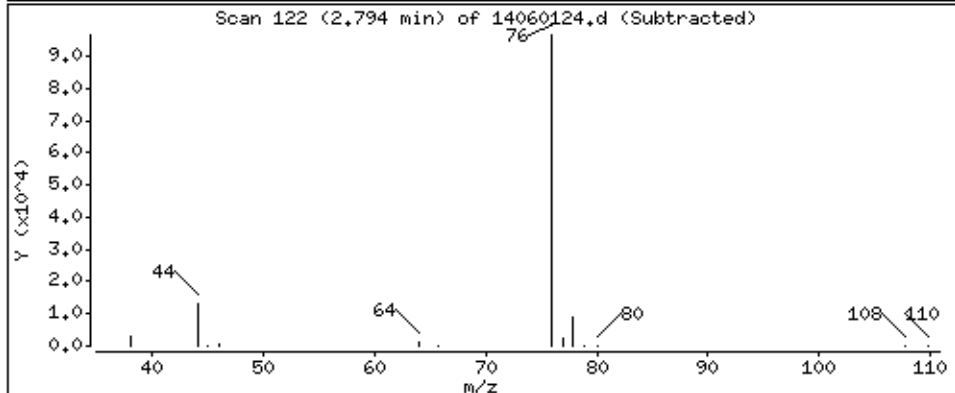
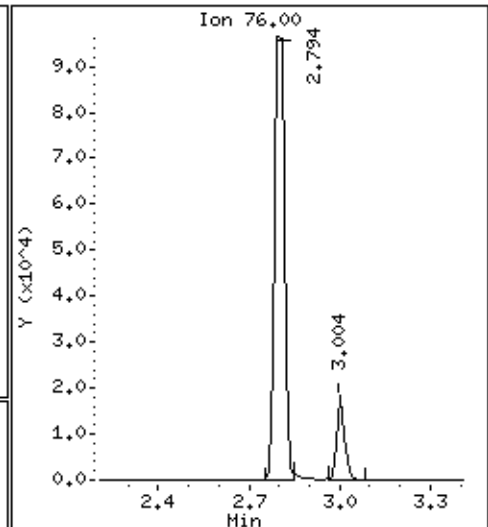
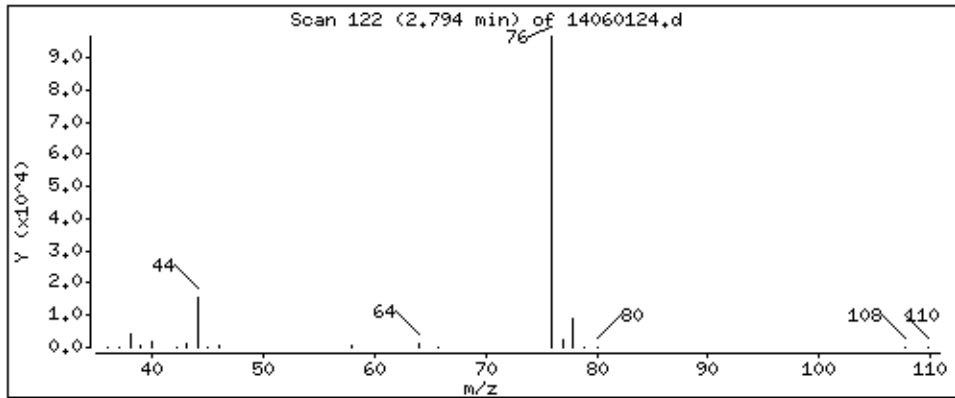
Operator: md

Column phase: RTX-624

Column diameter: 0.18

56 Carbon Disulfide

Concentration: 176.98 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

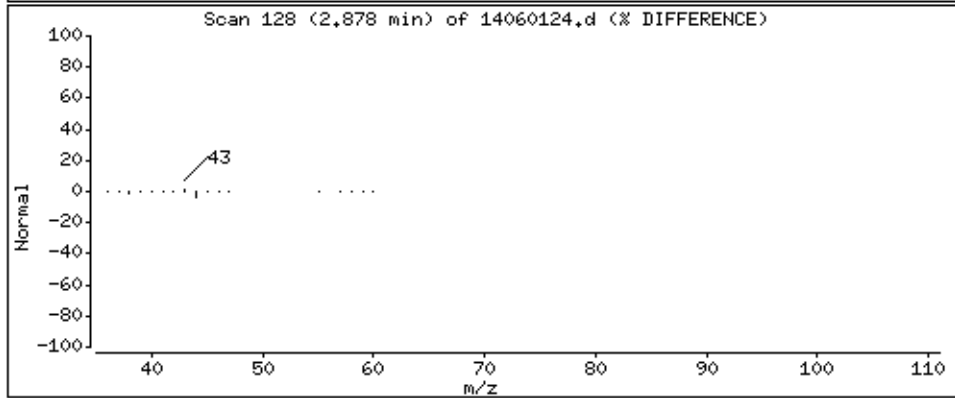
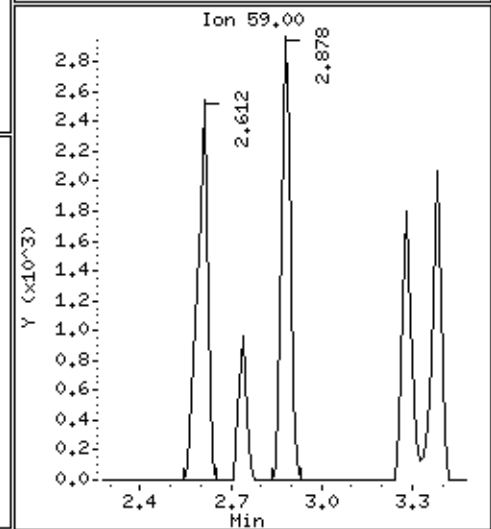
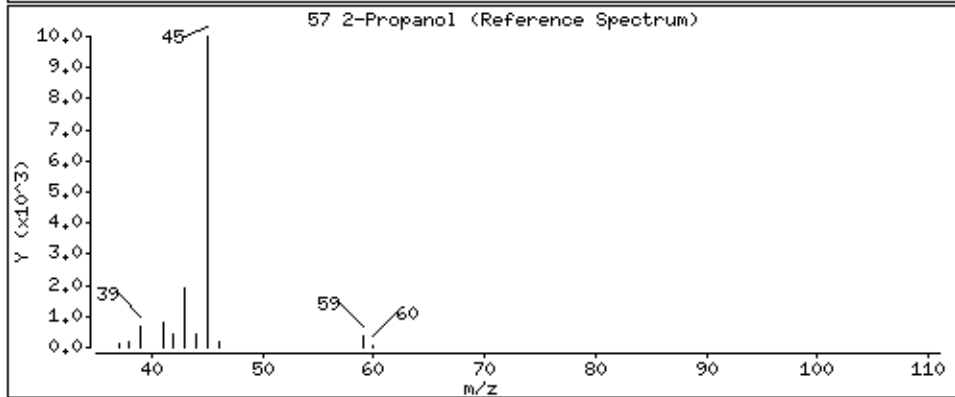
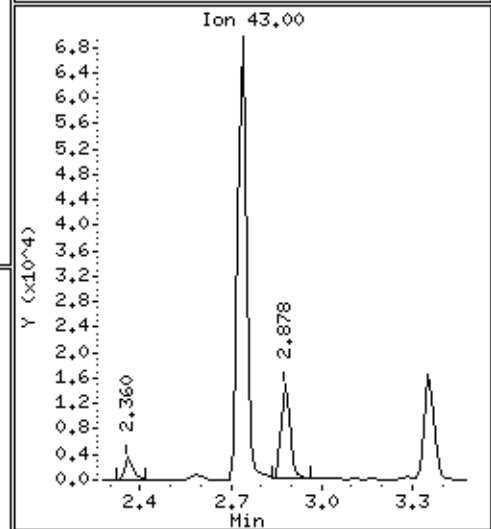
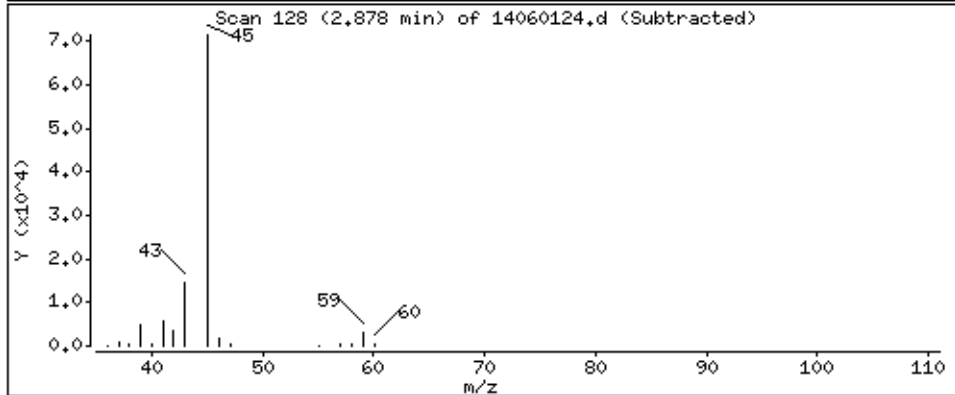
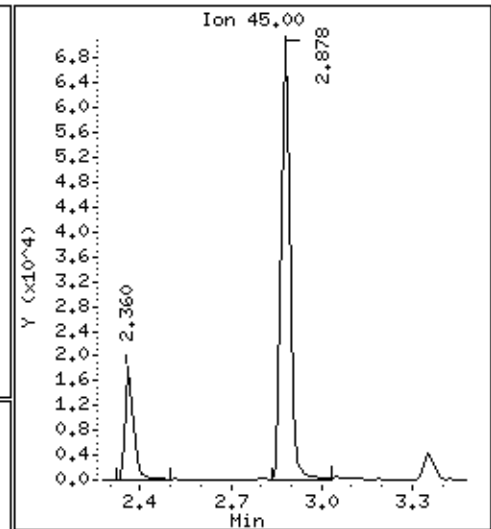
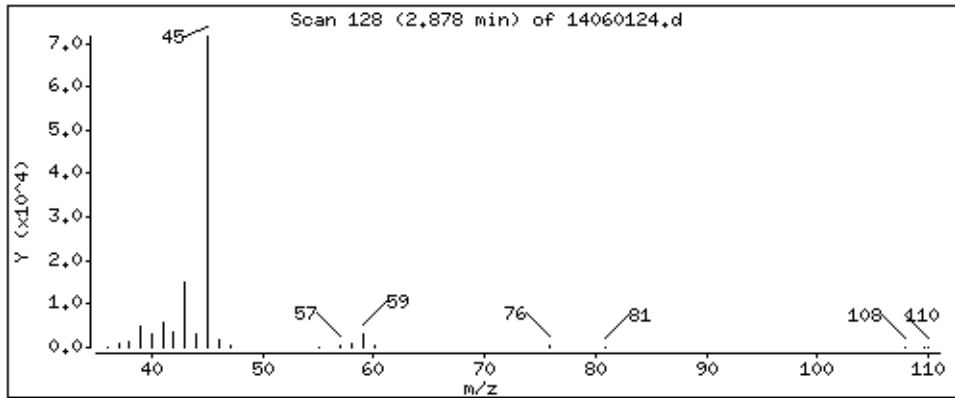
Operator: md

Column phase: RTX-624

Column diameter: 0.18

57 2-Propanol

Concentration: 209.93 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

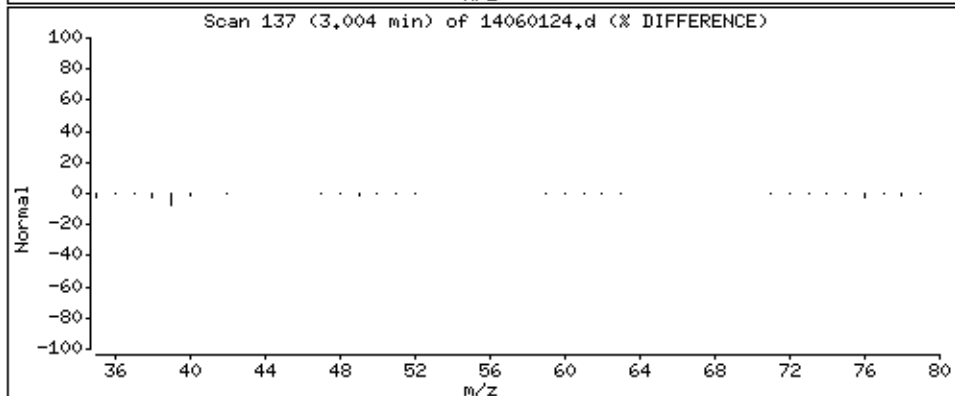
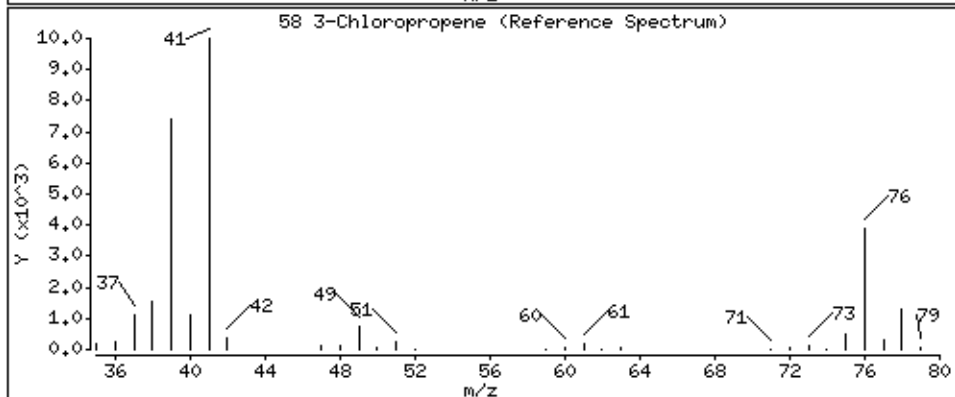
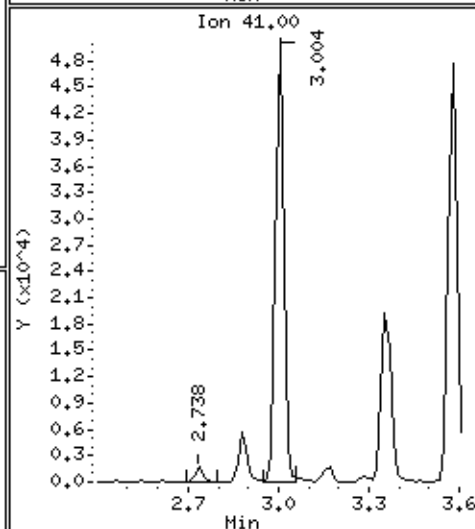
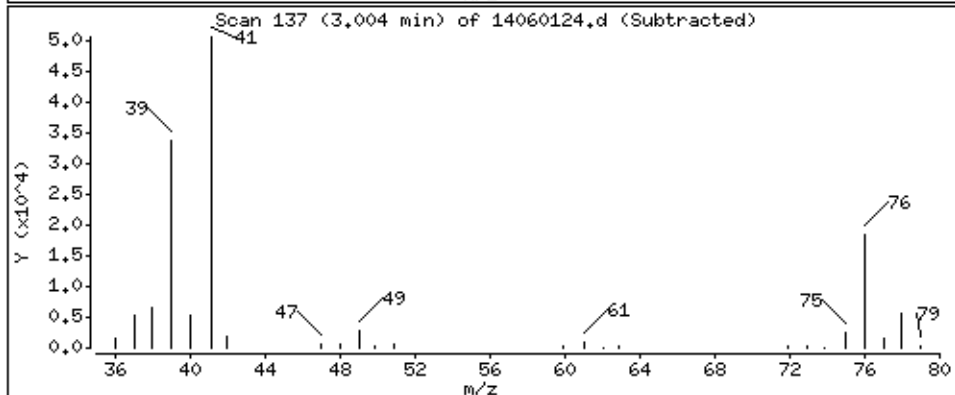
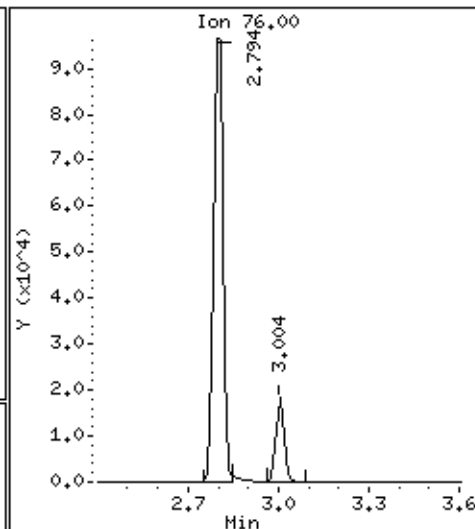
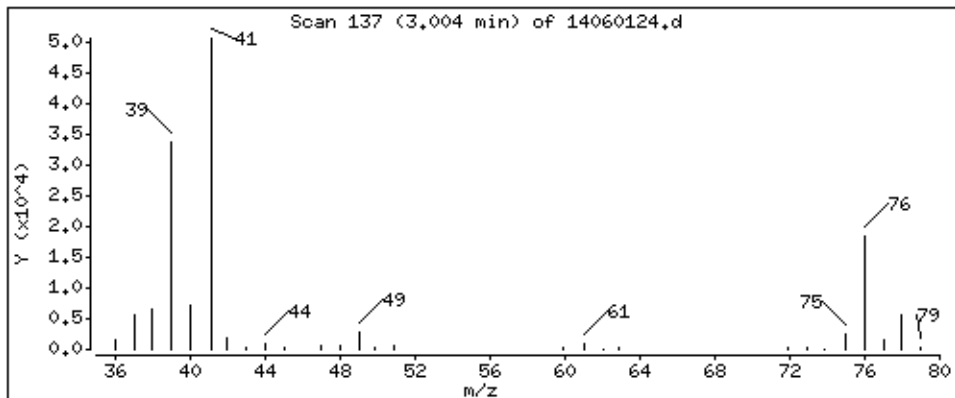
Operator: md

Column phase: RTX-624

Column diameter: 0.18

58 3-Chloropropene

Concentration: 187.67 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

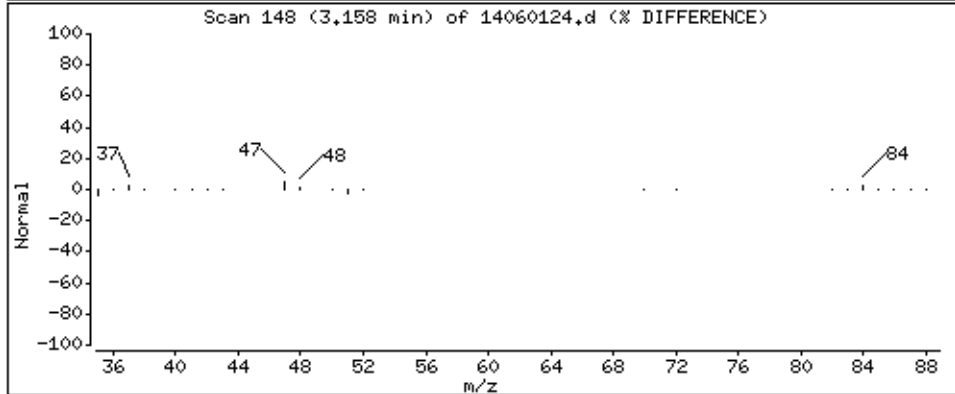
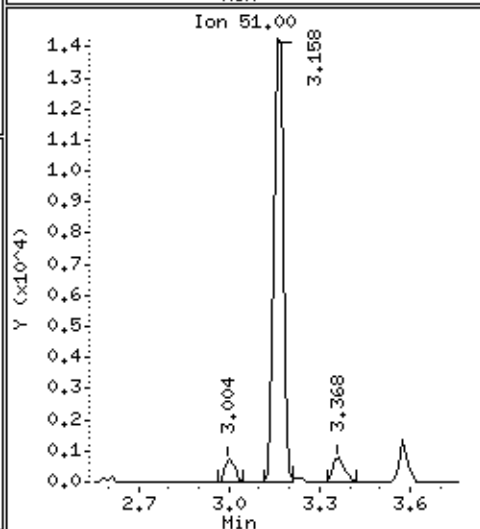
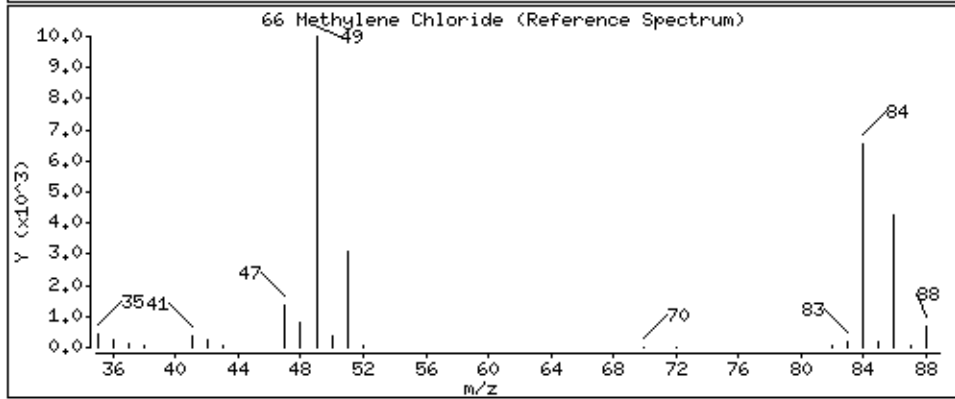
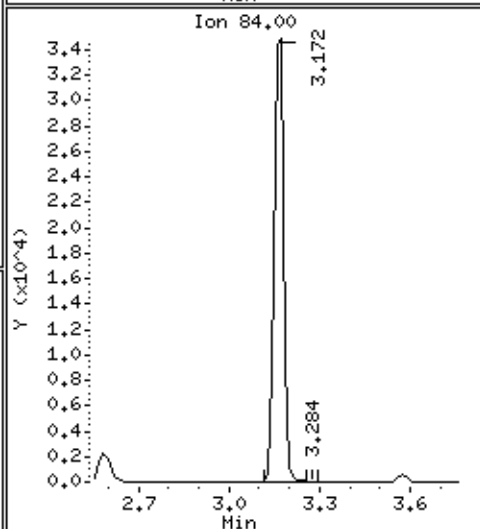
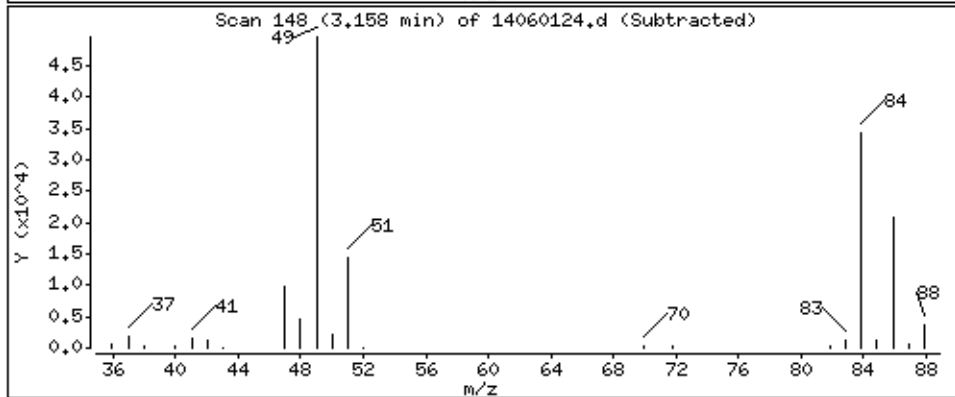
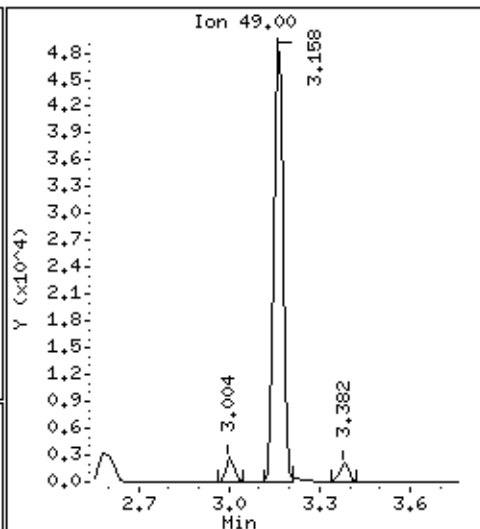
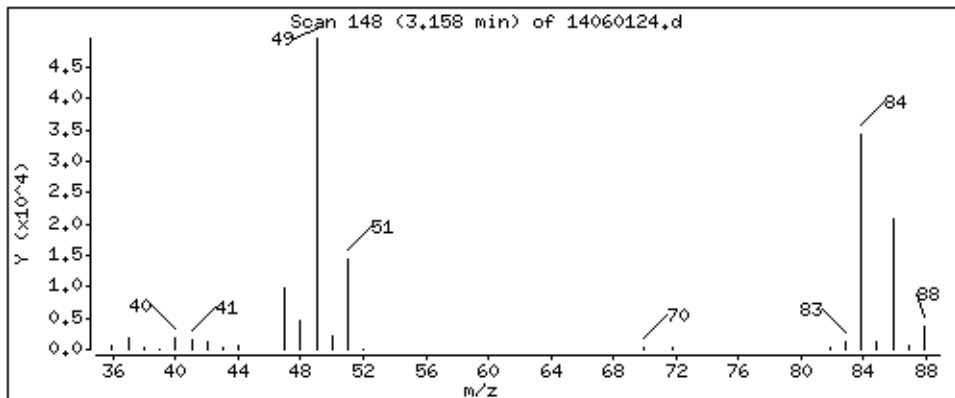
Operator: md

Column phase: RTX-624

Column diameter: 0.18

66 Methylene Chloride

Concentration: 191.36 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

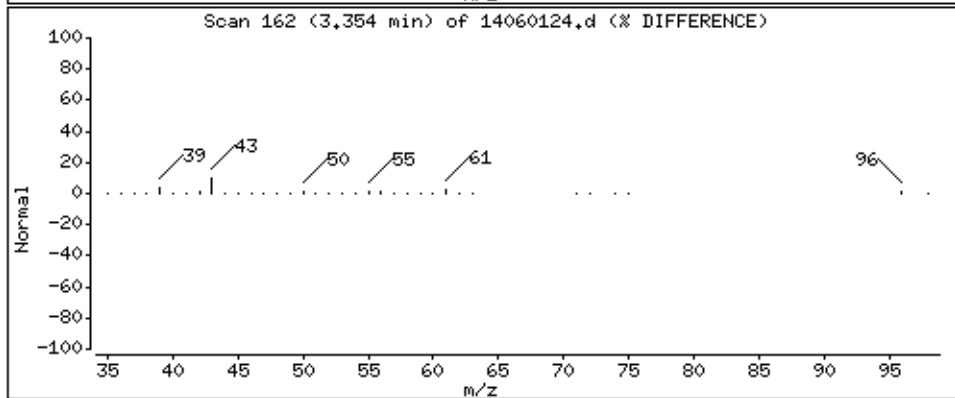
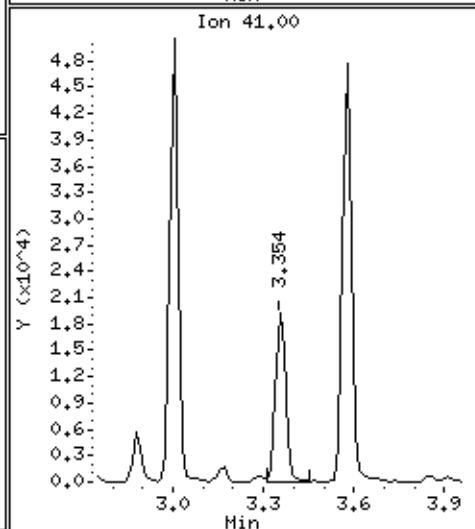
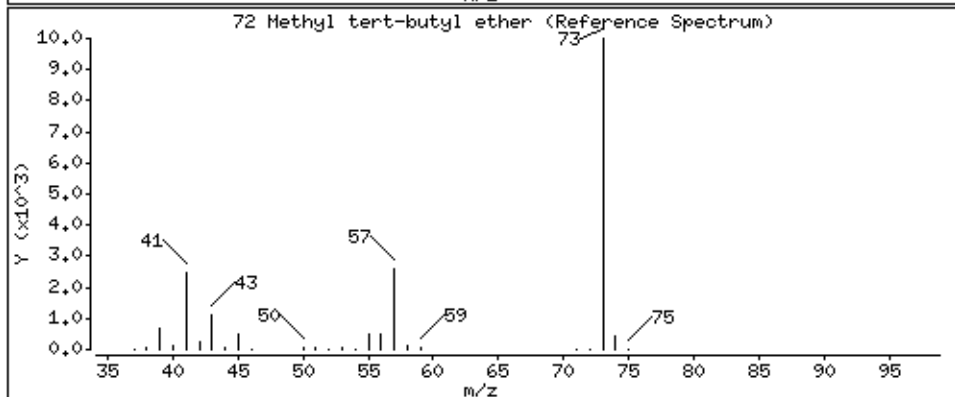
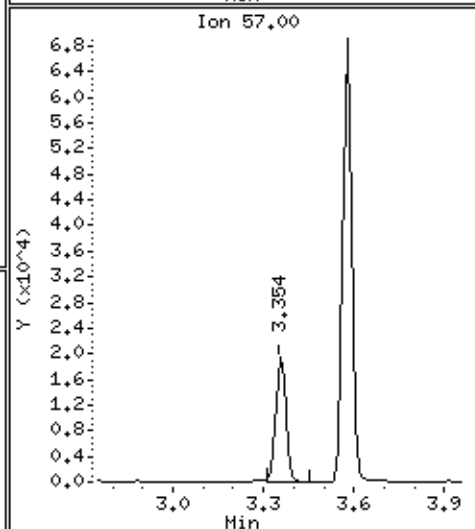
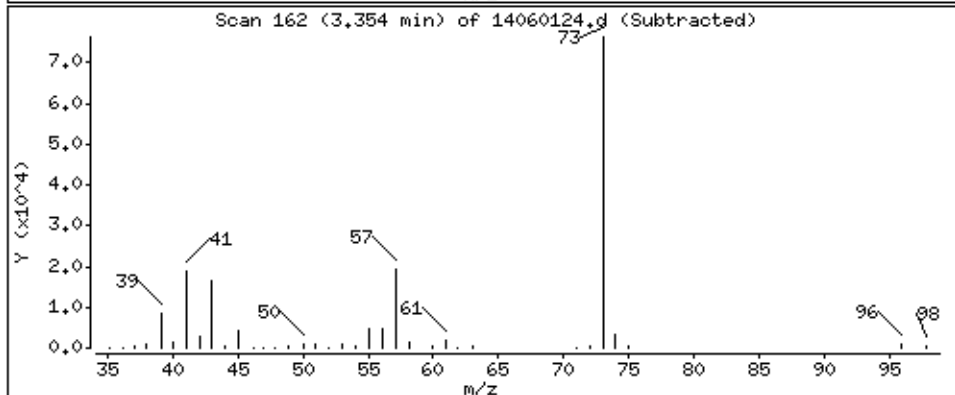
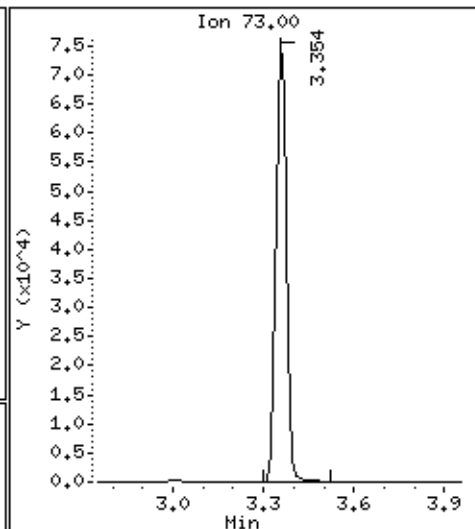
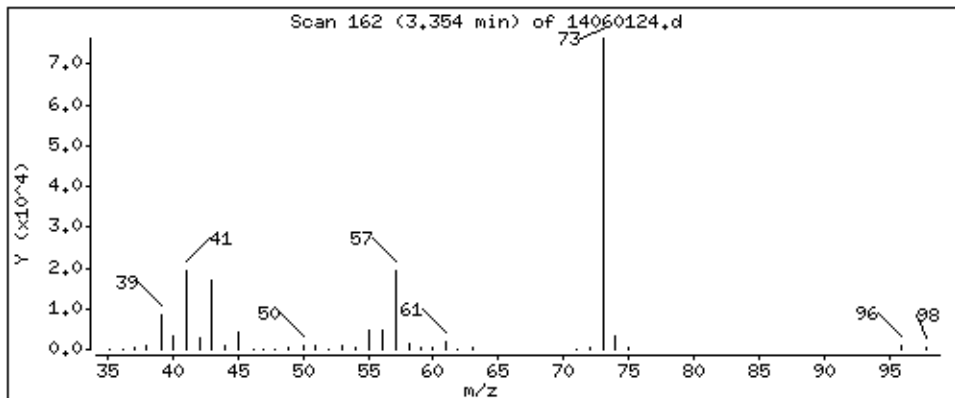
Operator: md

Column phase: RTX-624

Column diameter: 0.18

72 Methyl tert-butyl ether

Concentration: 193.75 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

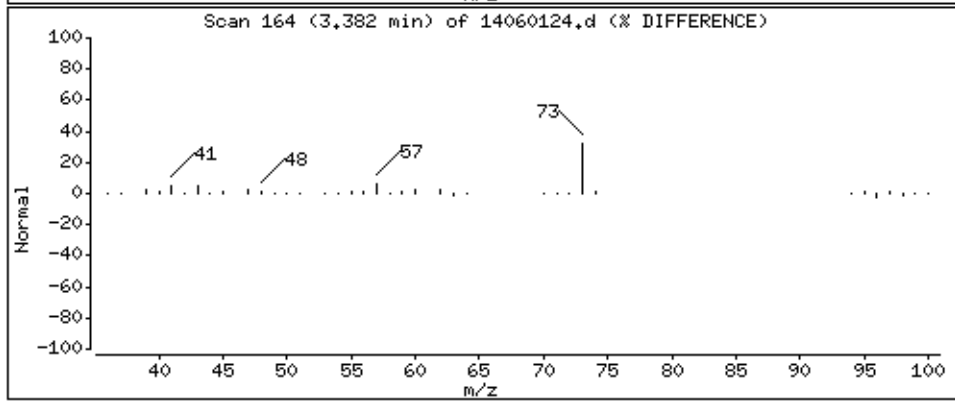
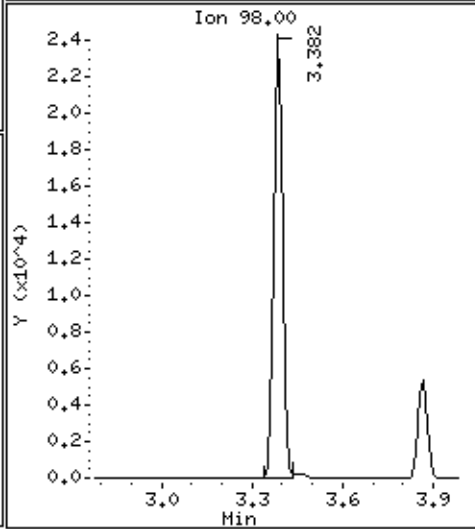
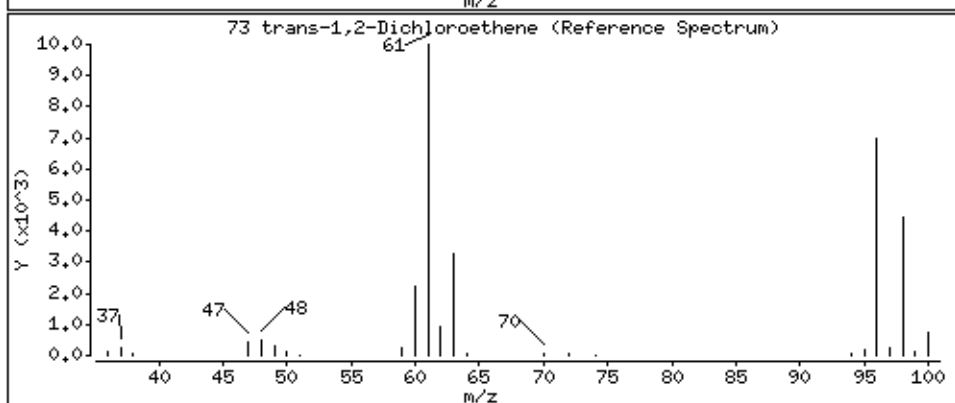
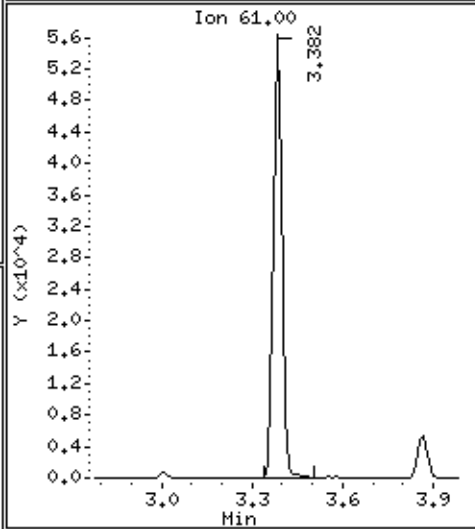
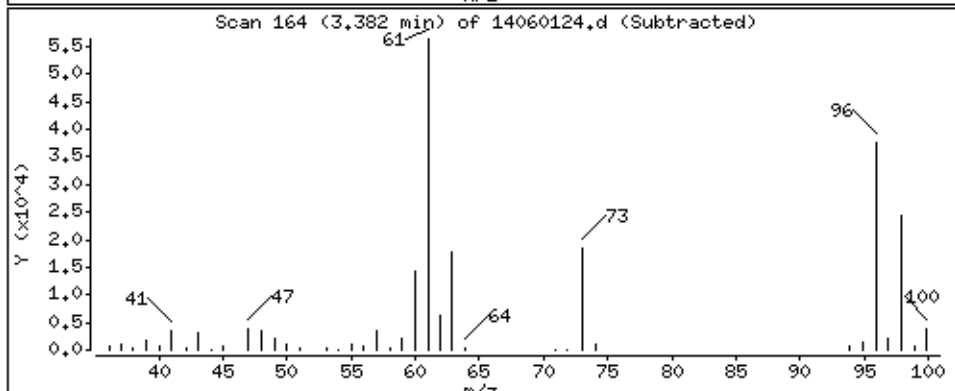
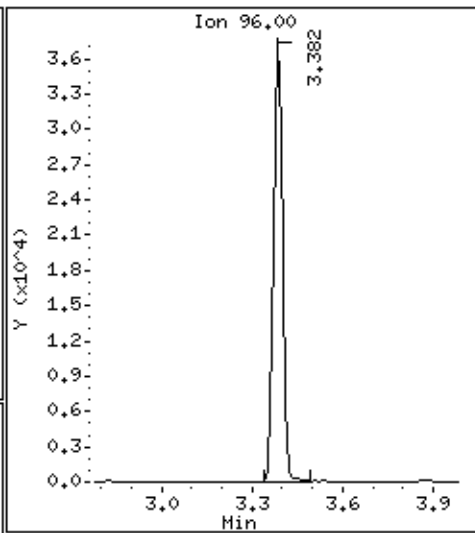
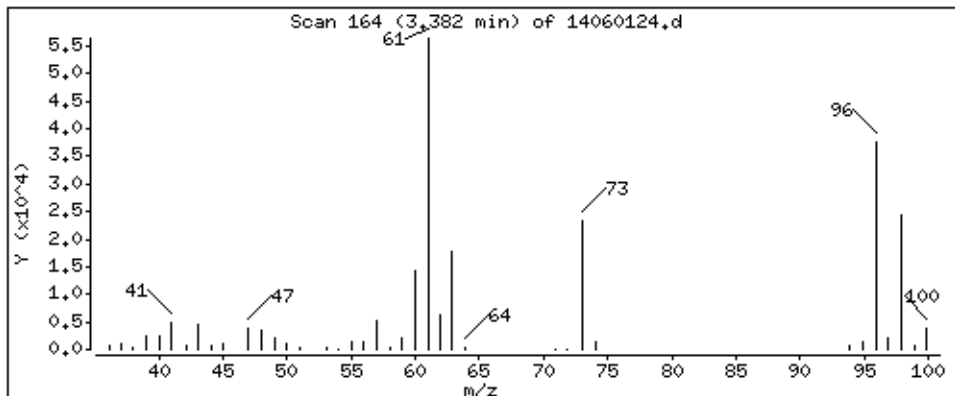
Operator: md

Column phase: RTX-624

Column diameter: 0.18

73 trans-1,2-Dichloroethene

Concentration: 178.01 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

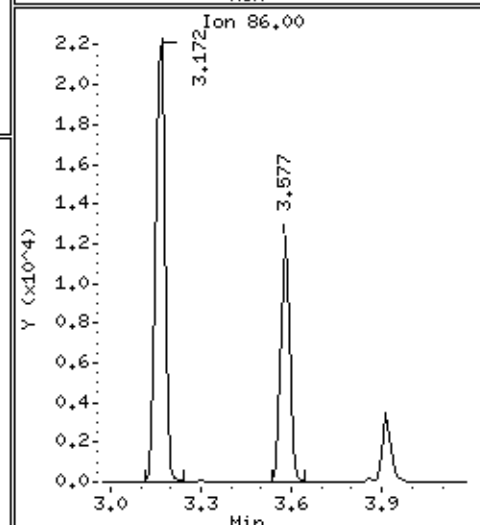
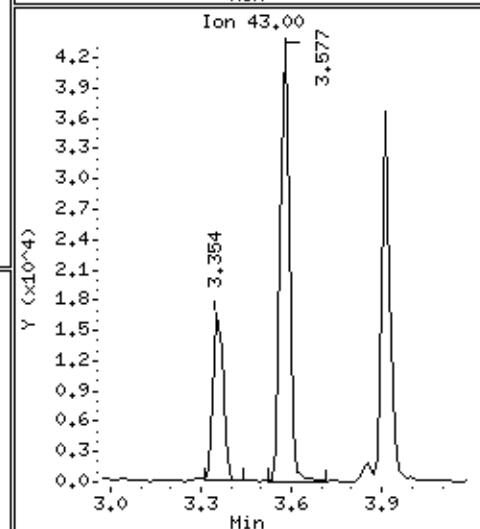
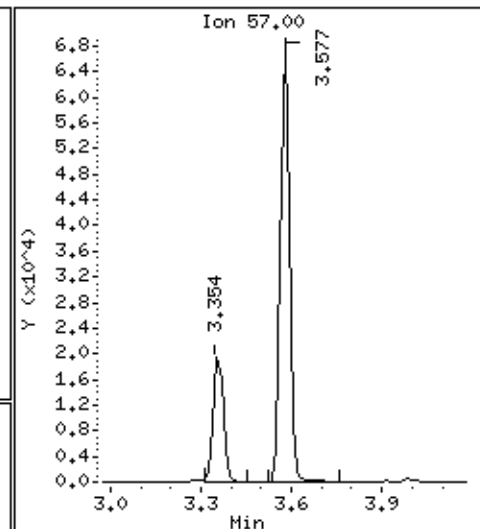
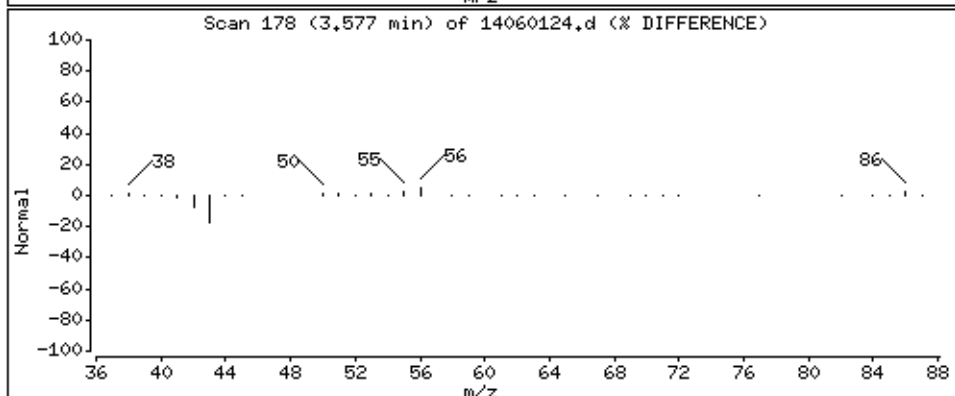
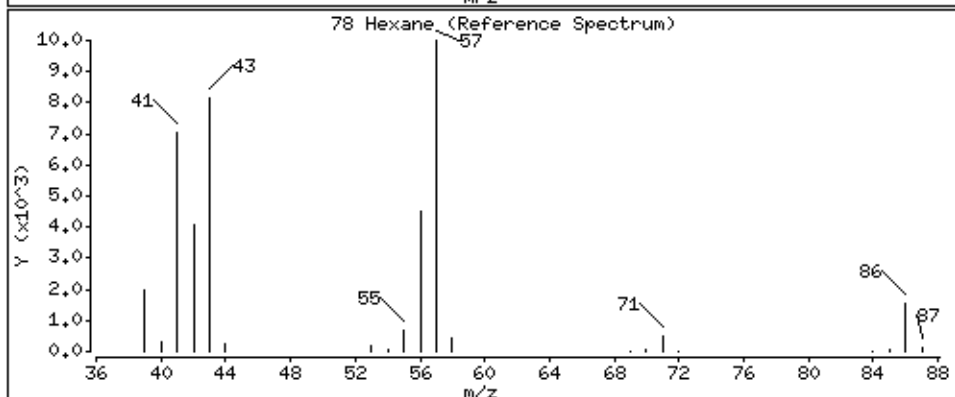
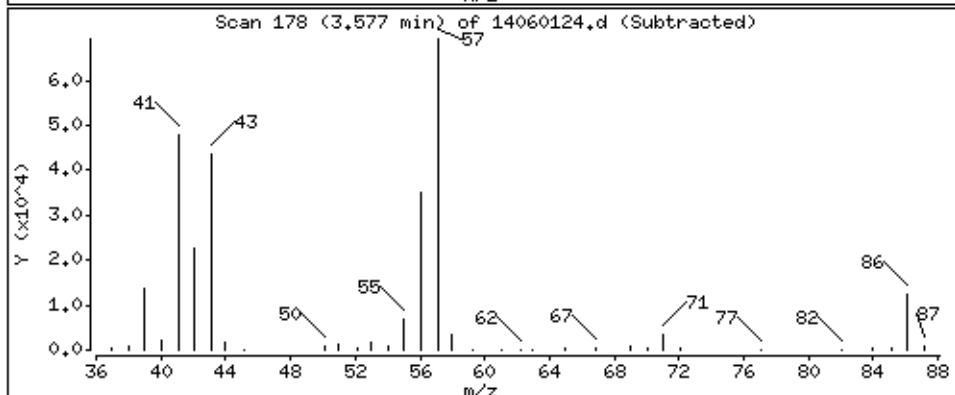
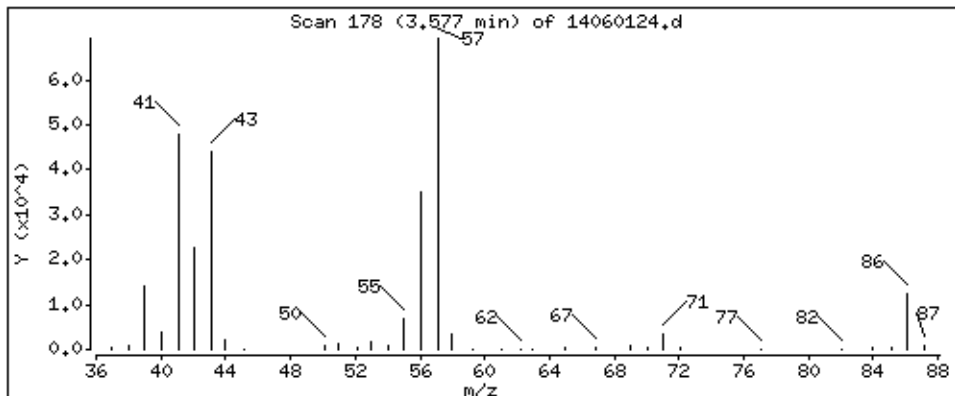
Operator: md

Column phase: RTX-624

Column diameter: 0.18

78 Hexane

Concentration: 202.63 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

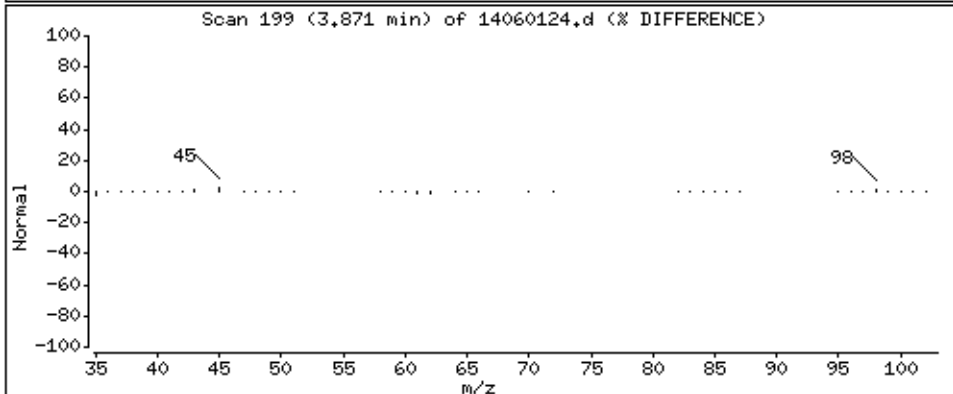
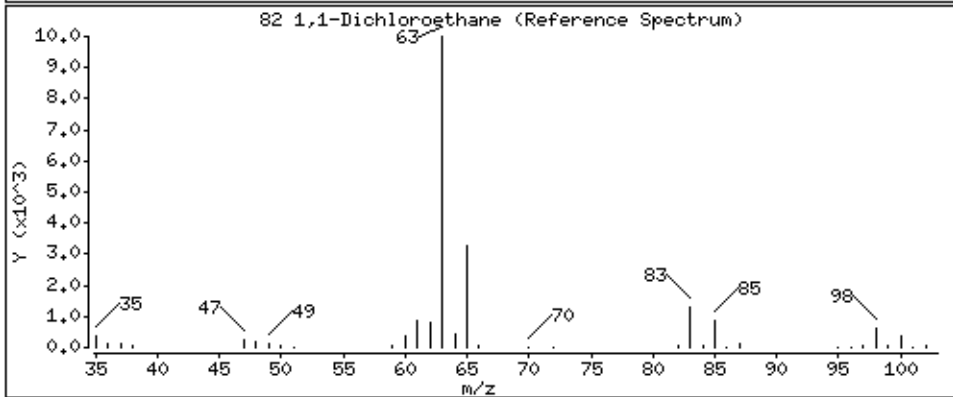
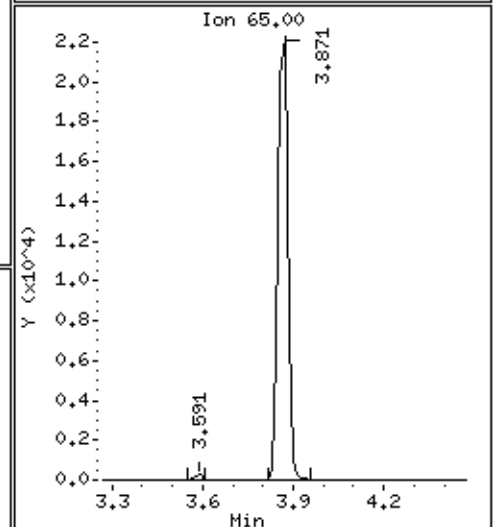
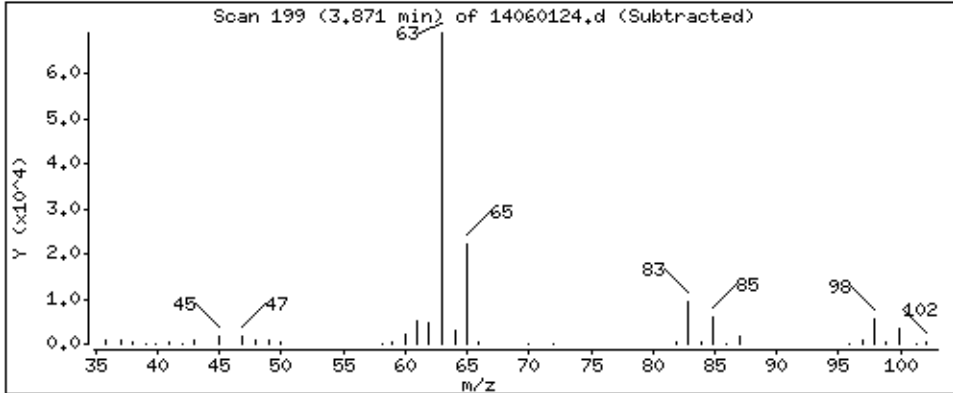
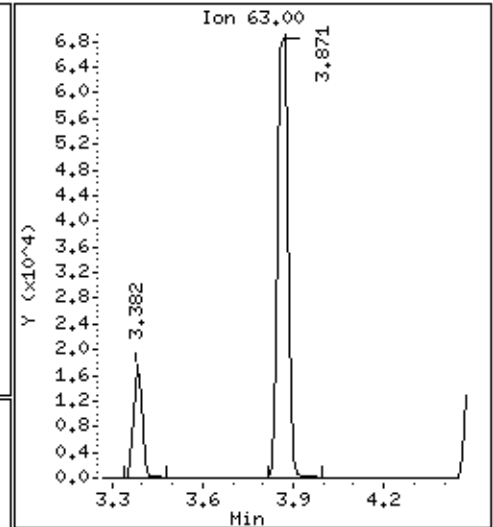
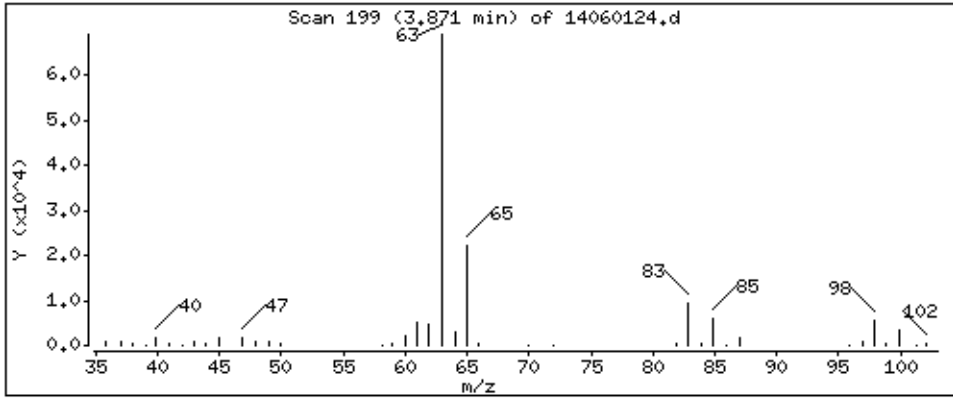
Operator: md

Column phase: RTX-624

Column diameter: 0.18

82 1,1-Dichloroethane

Concentration: 200.23 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

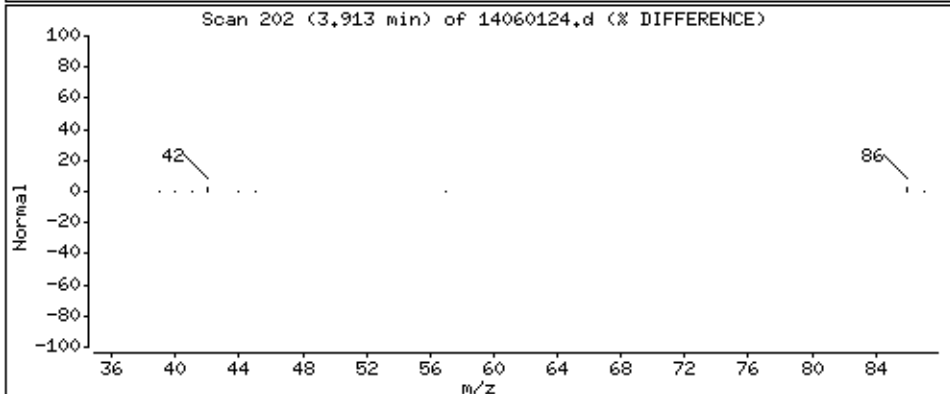
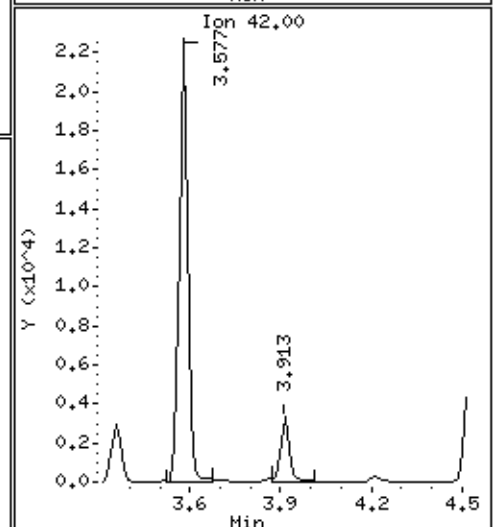
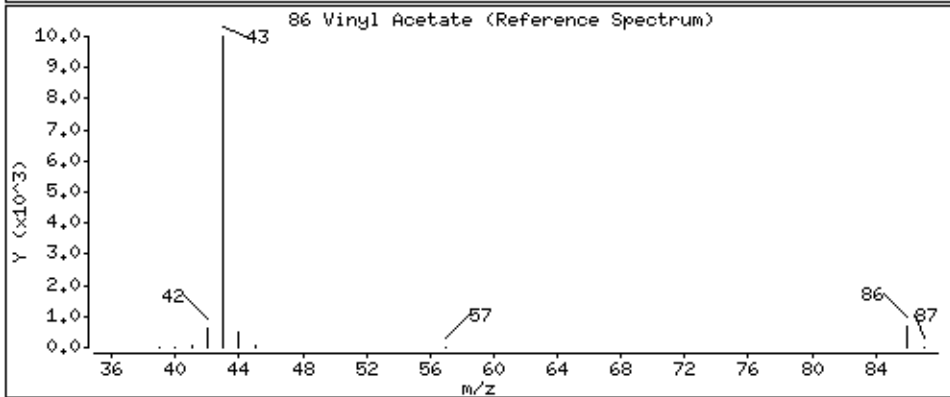
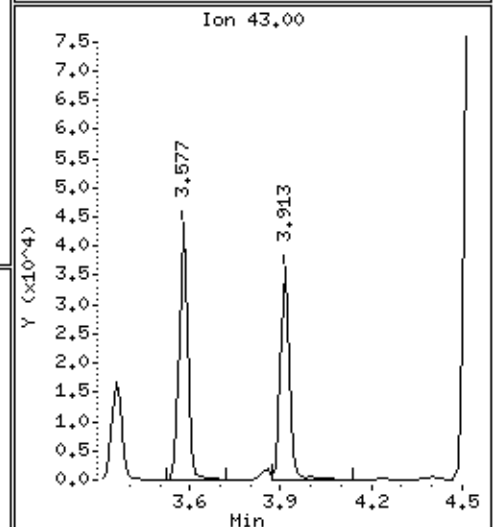
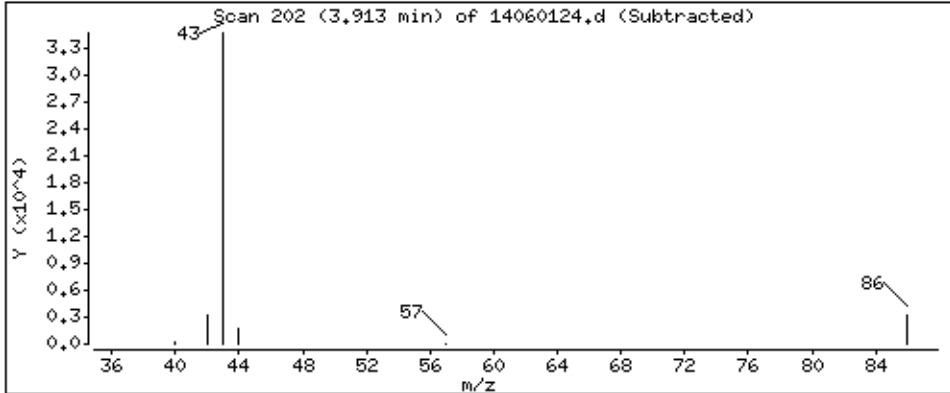
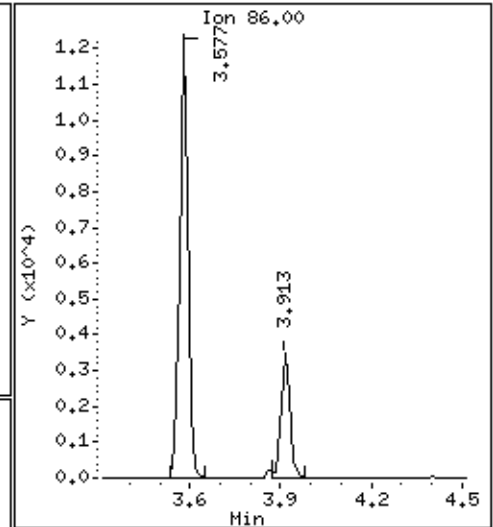
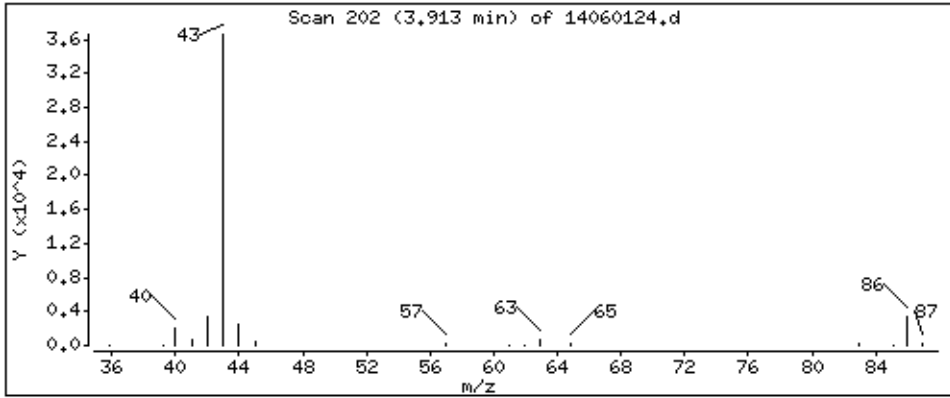
Operator: md

Column phase: RTX-624

Column diameter: 0.18

86 Vinyl Acetate

Concentration: 100.31 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

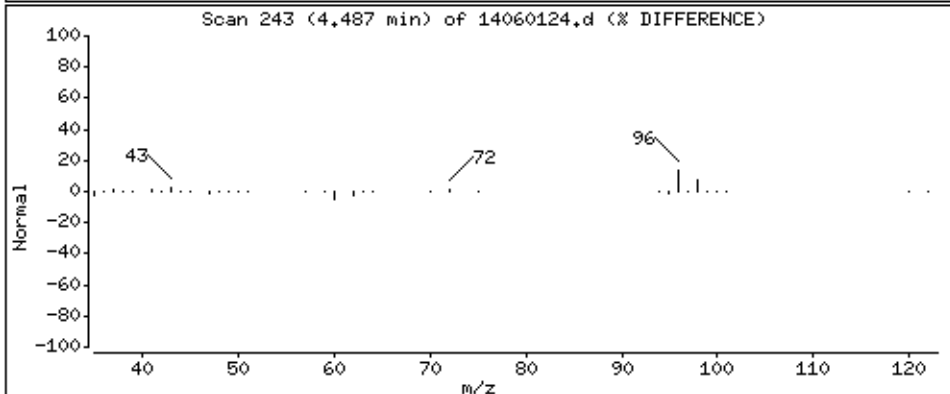
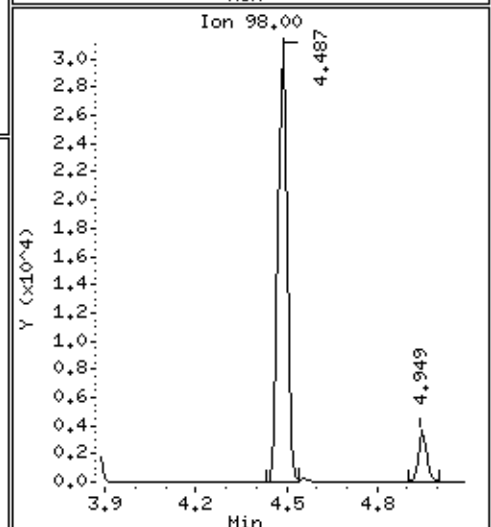
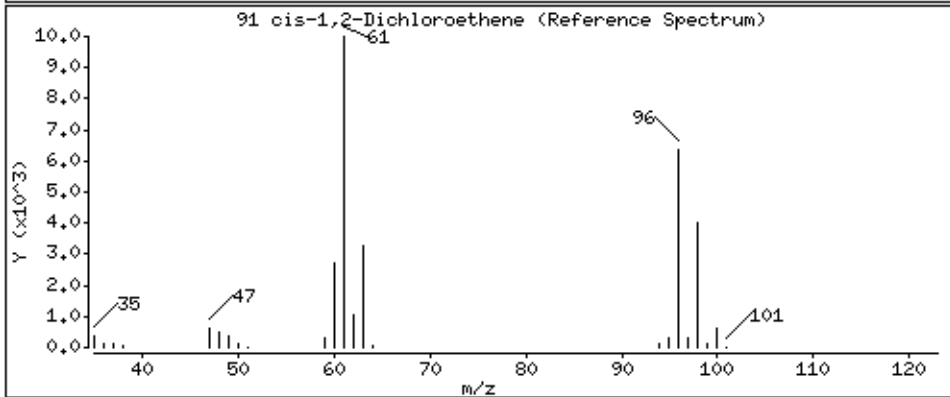
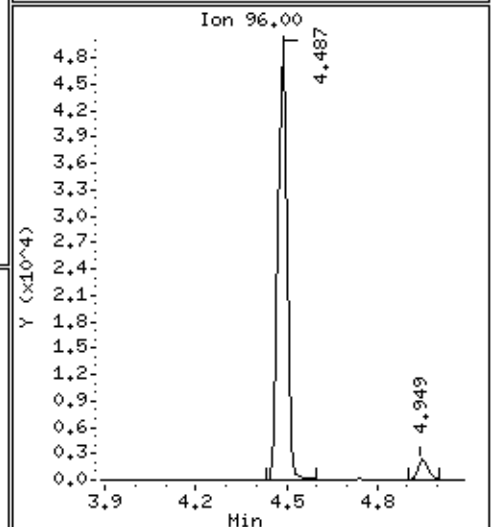
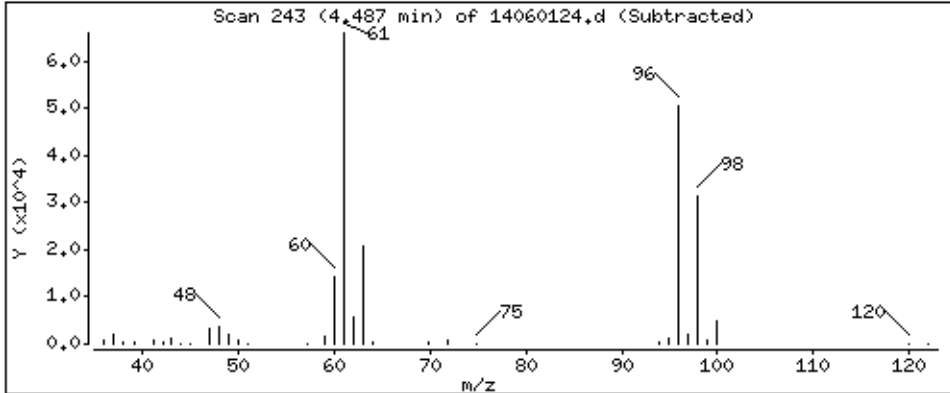
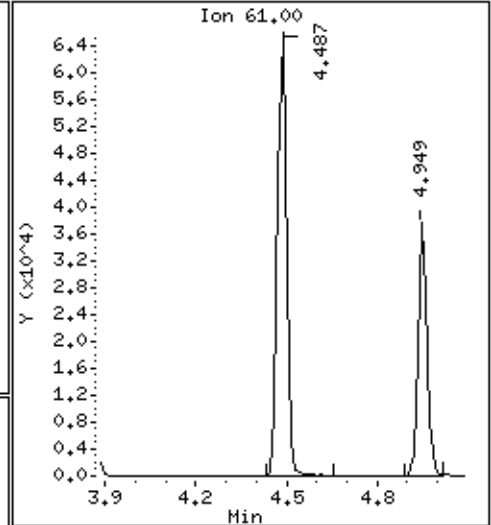
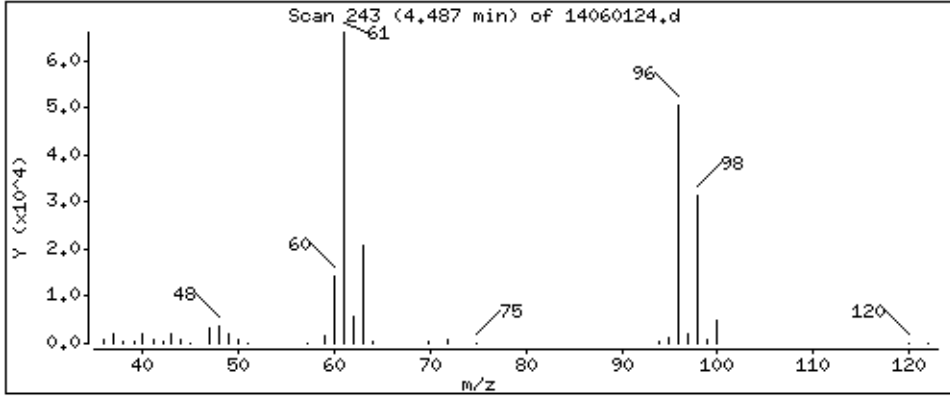
Operator: md

Column phase: RTX-624

Column diameter: 0.18

91 cis-1,2-Dichloroethene

Concentration: 212.00 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

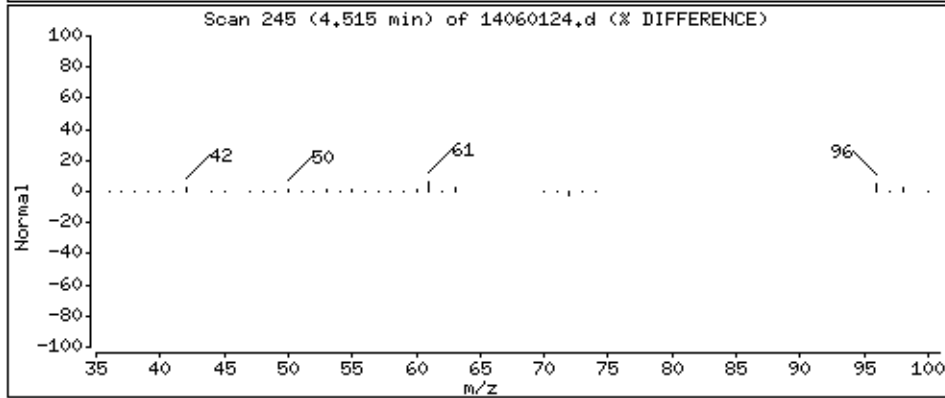
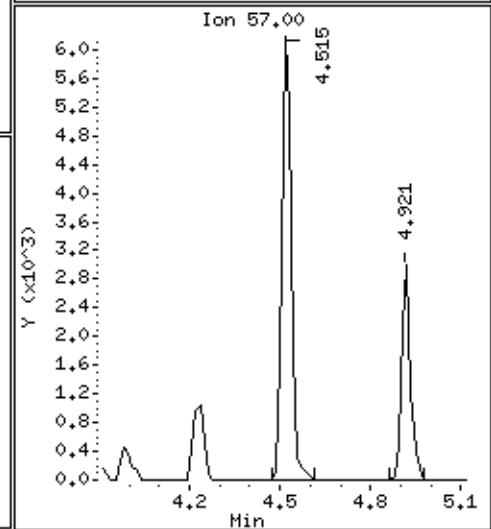
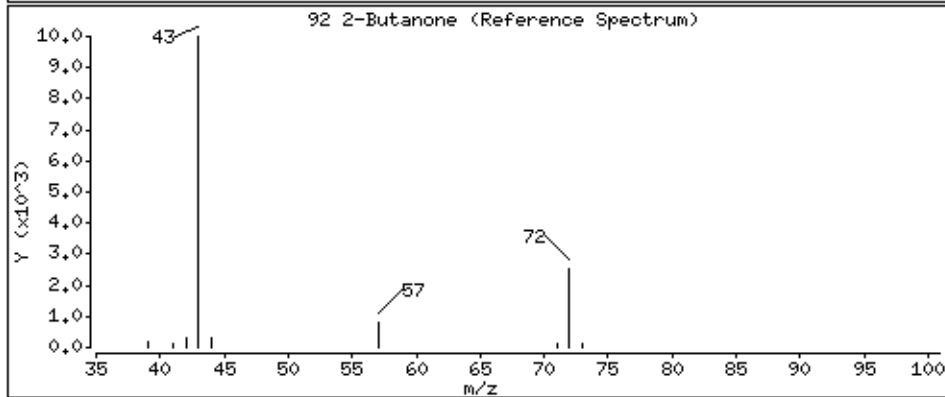
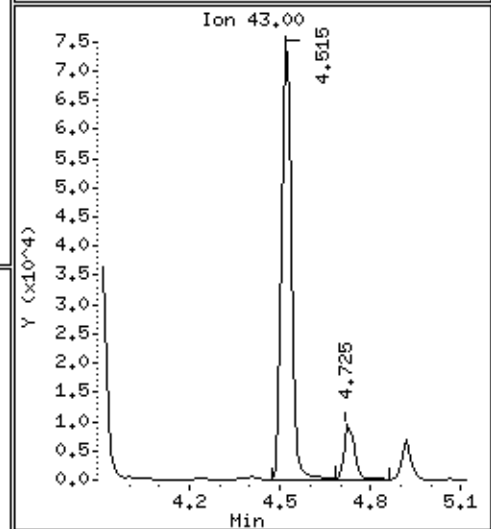
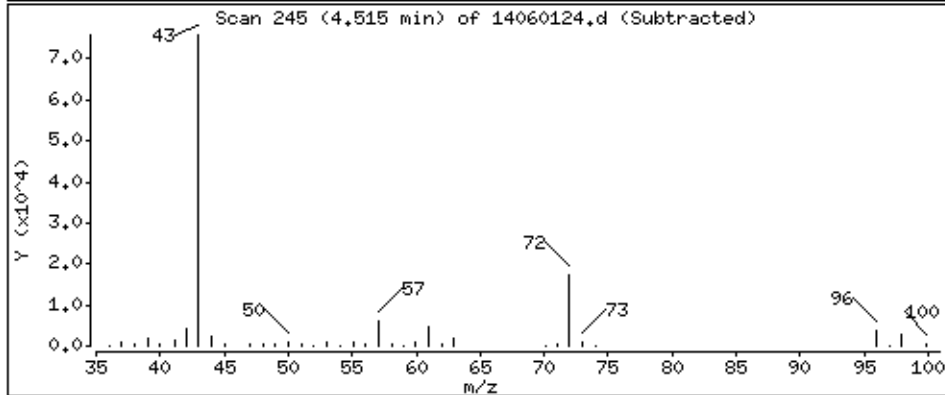
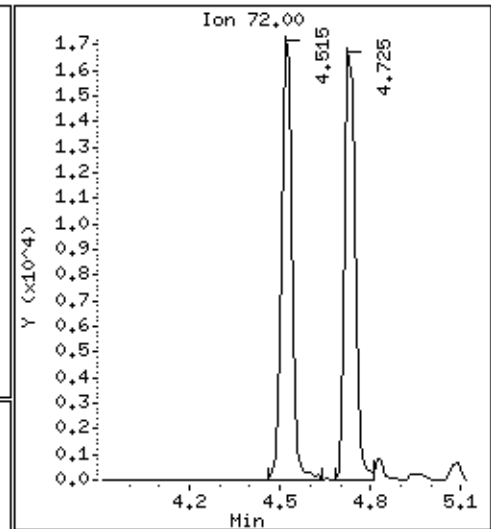
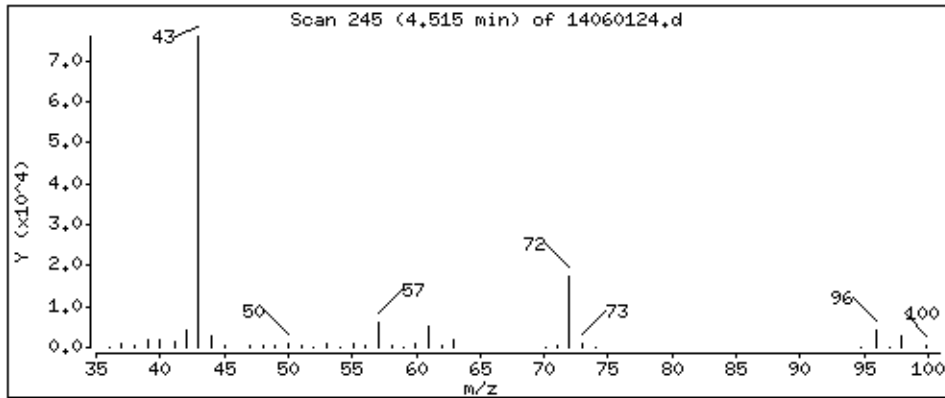
Operator: md

Column phase: RTX-624

Column diameter: 0.18

92 2-Butanone

Concentration: 203.26 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

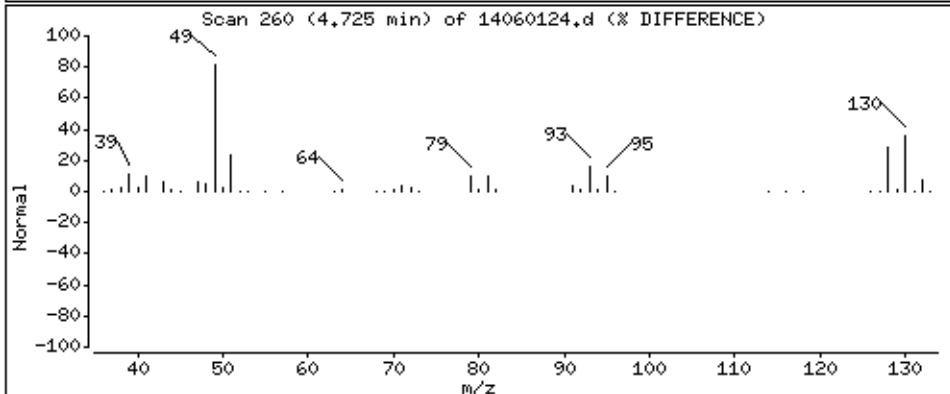
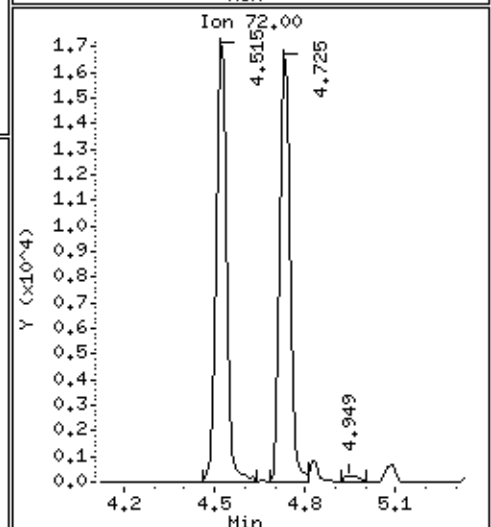
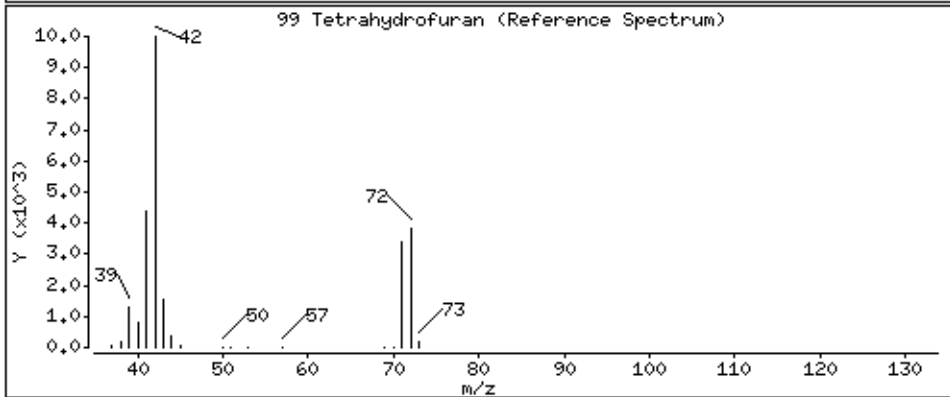
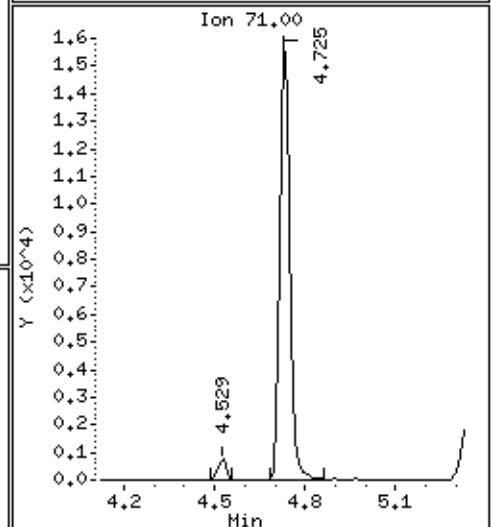
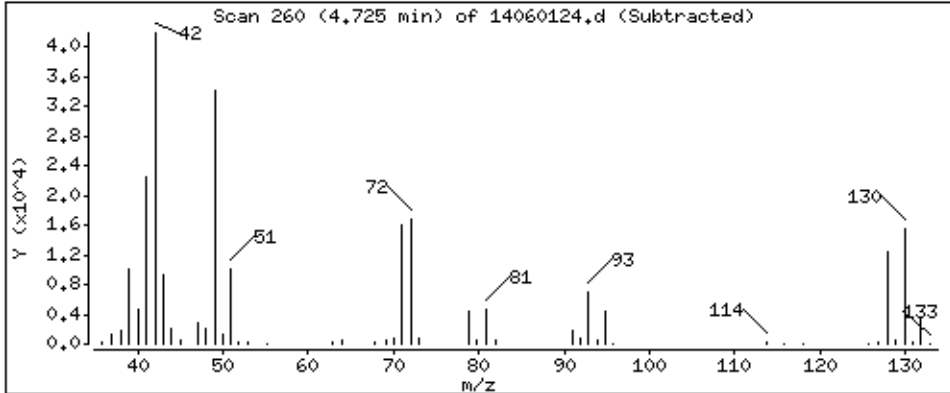
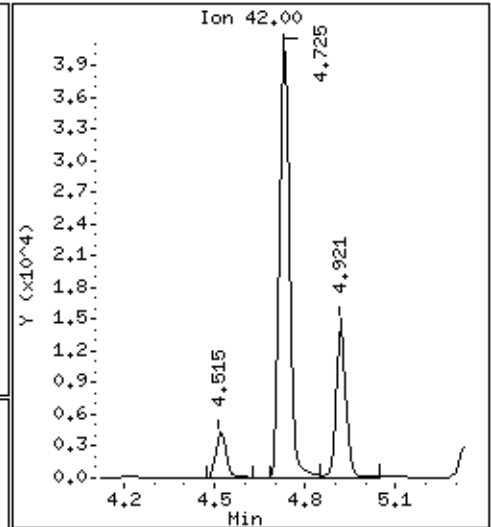
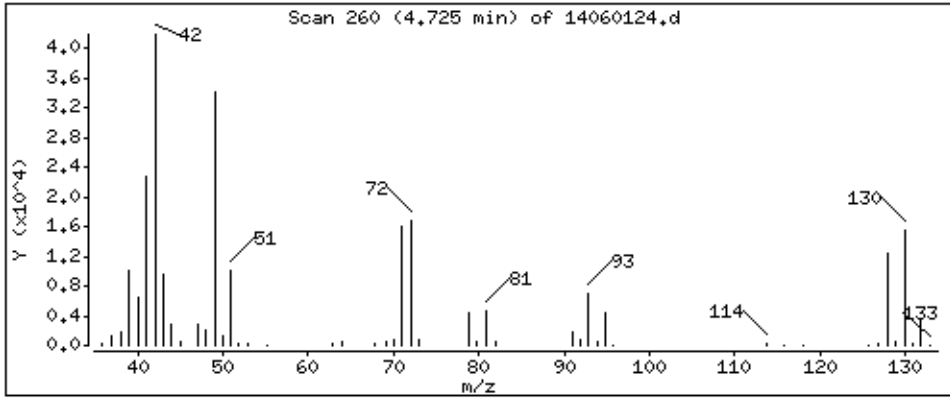
Operator: md

Column phase: RTX-624

Column diameter: 0.18

99 Tetrahydrofuran

Concentration: 198.83 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

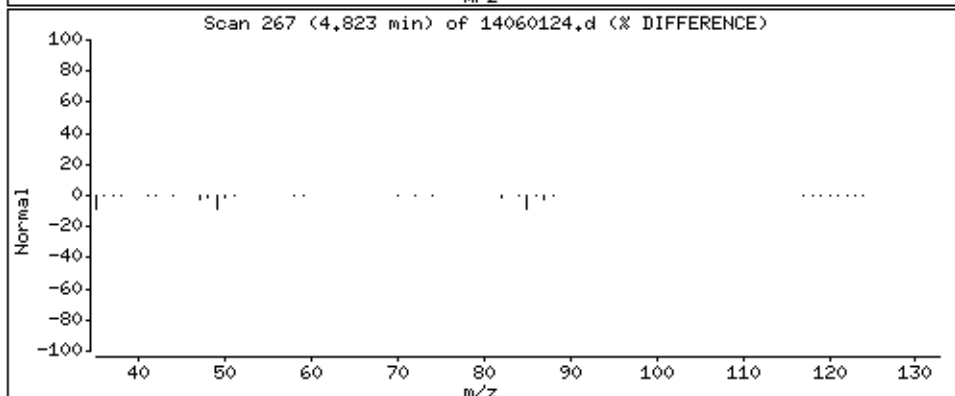
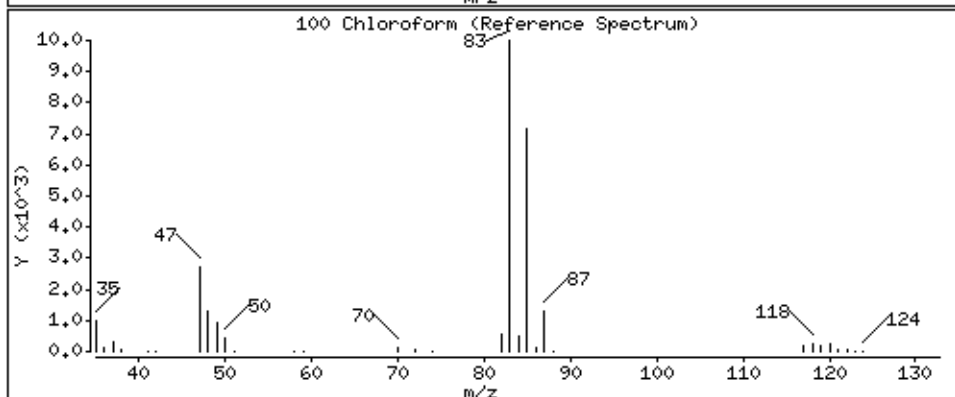
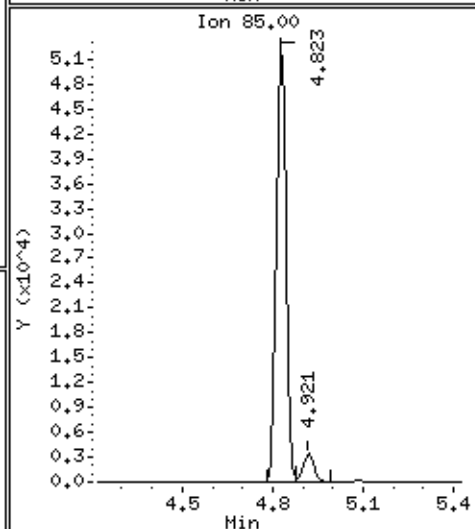
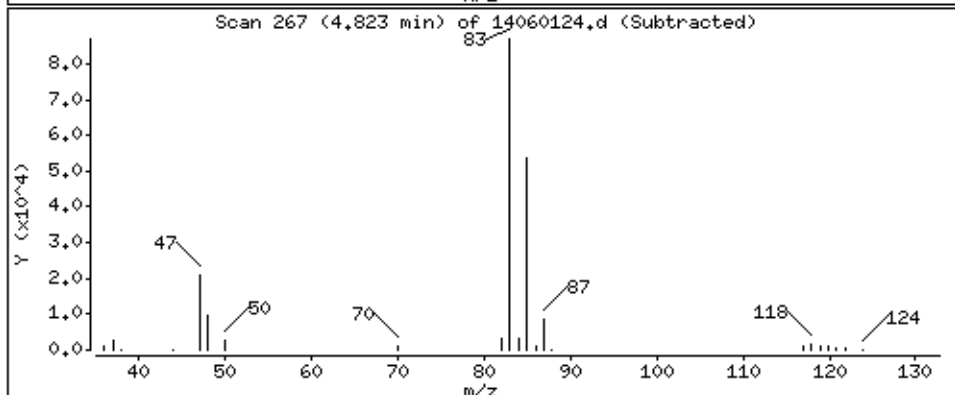
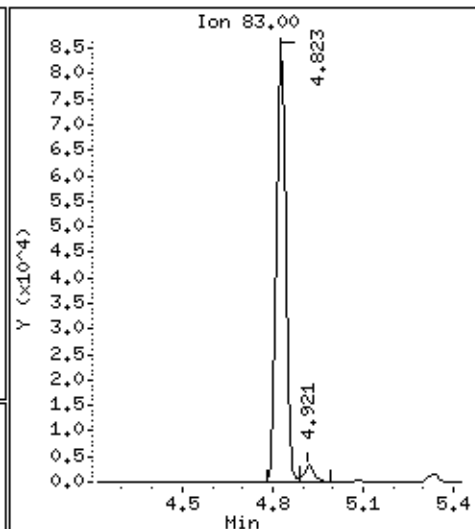
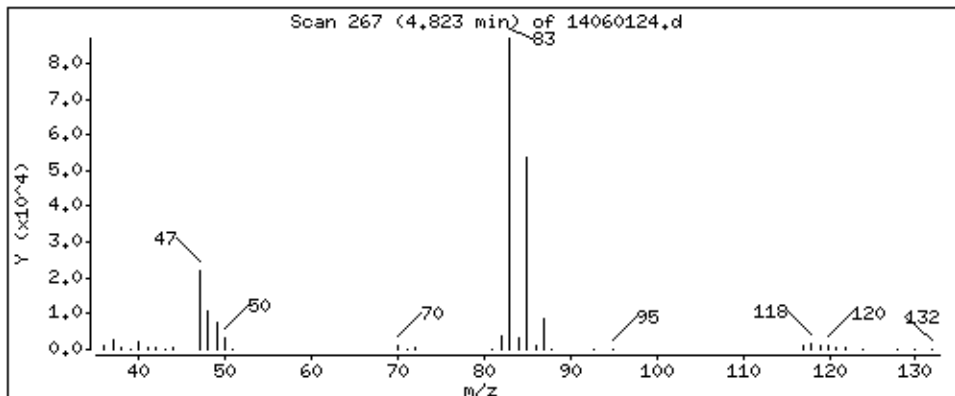
Operator: md

Column phase: RTX-624

Column diameter: 0.18

100 Chloroform

Concentration: 197.12 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

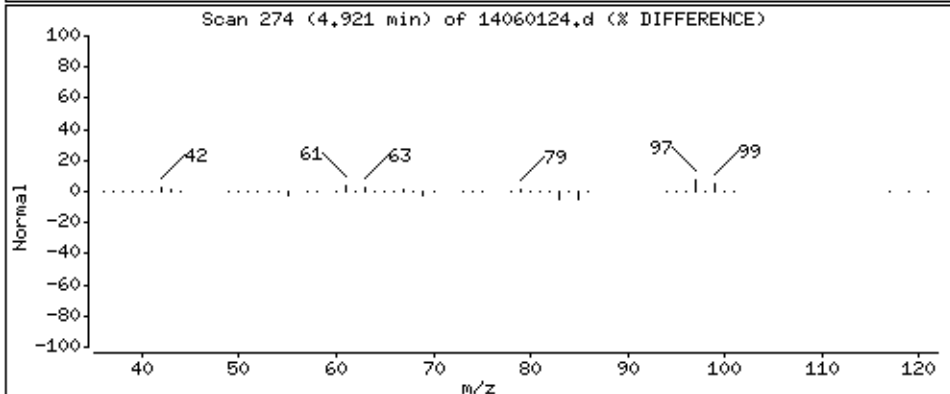
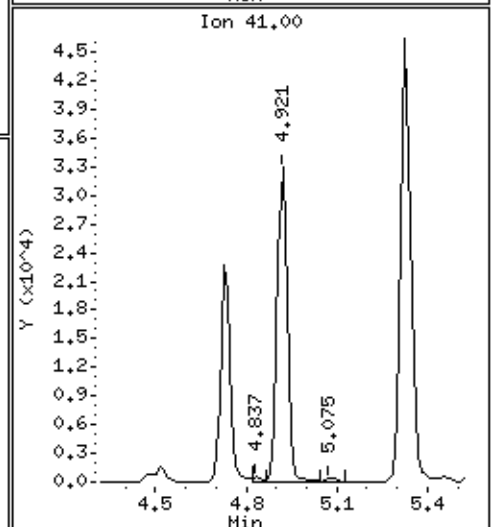
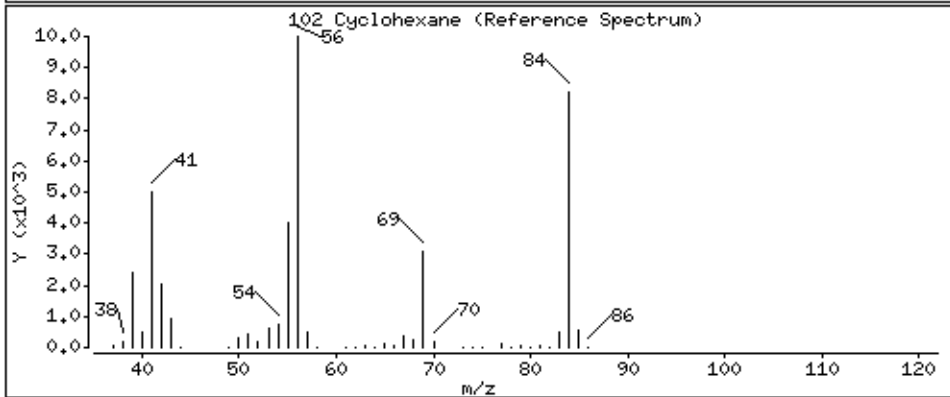
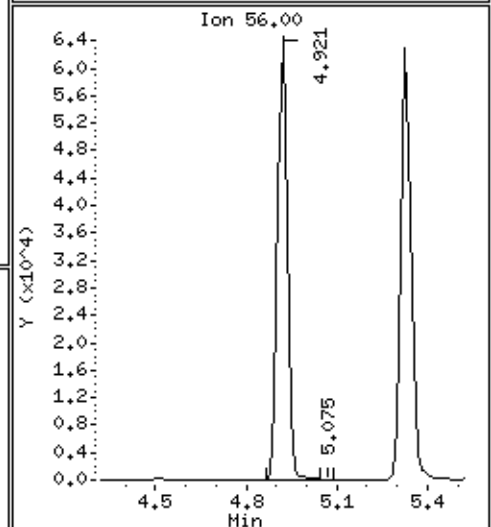
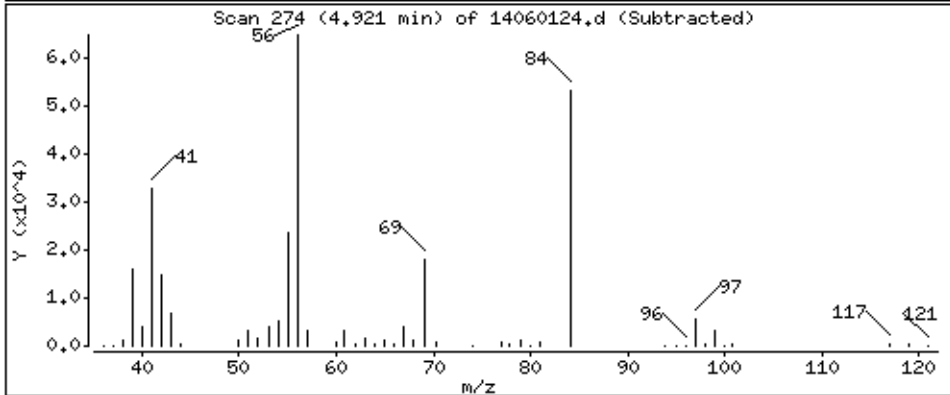
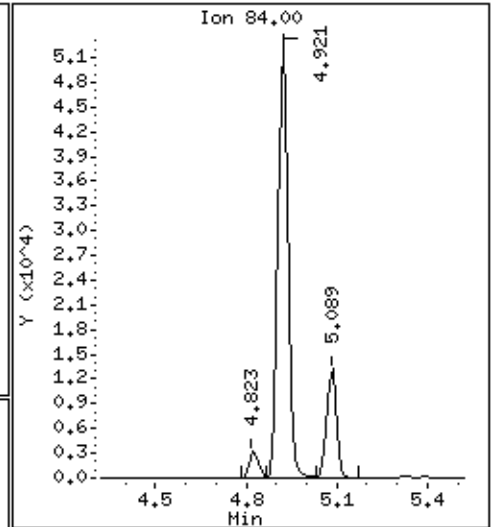
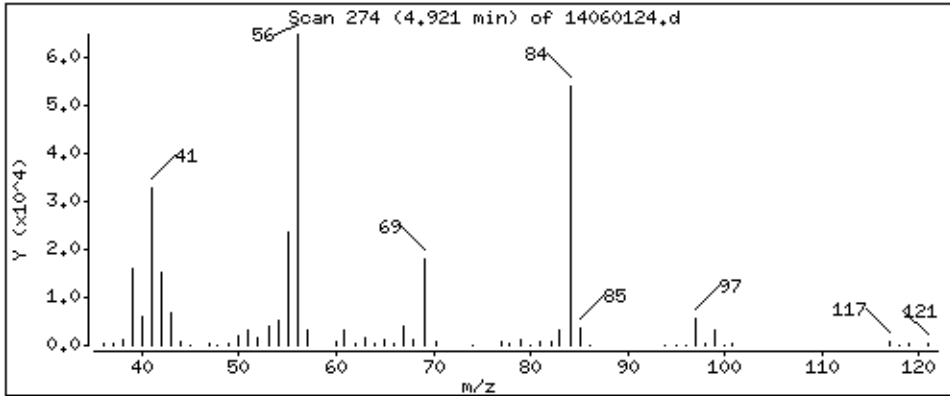
Operator: md

Column phase: RTX-624

Column diameter: 0.18

102 Cyclohexane

Concentration: 202.13 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

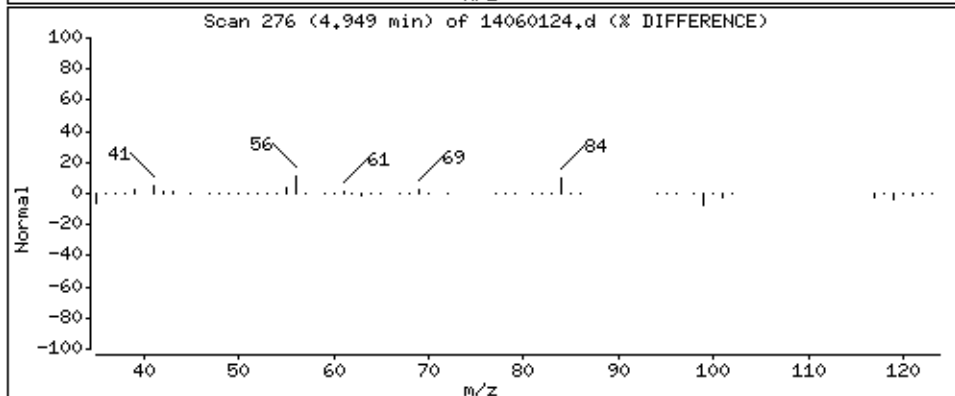
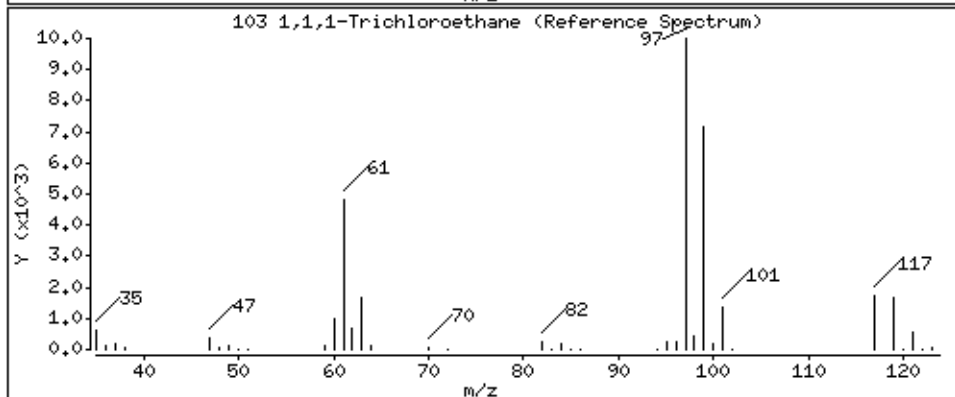
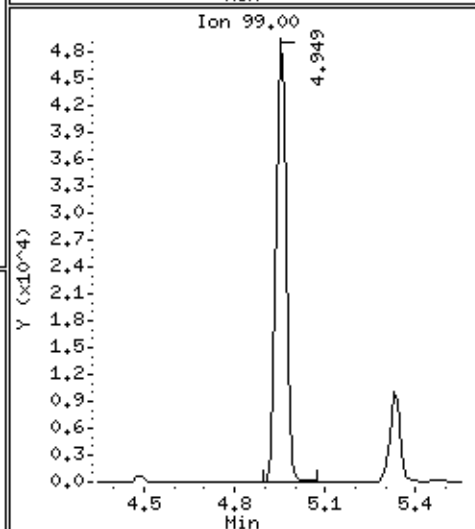
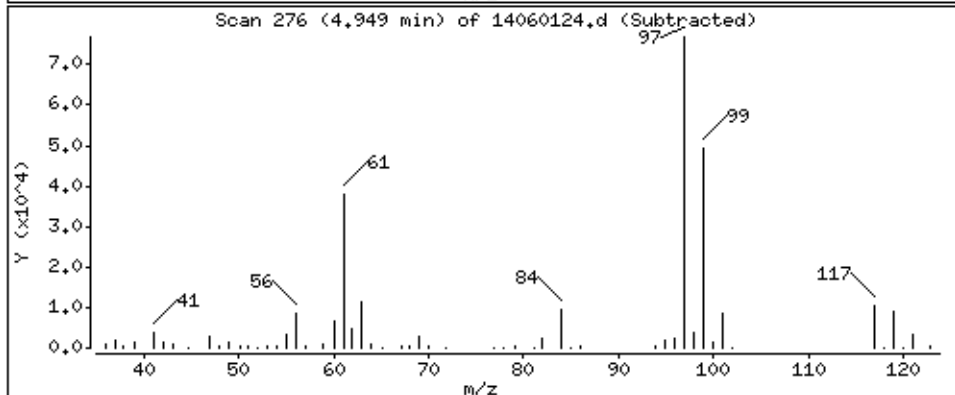
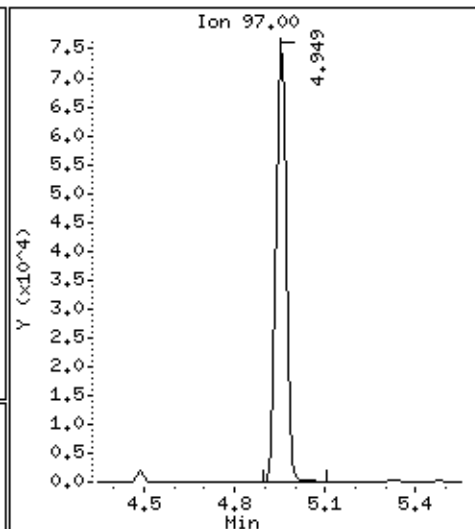
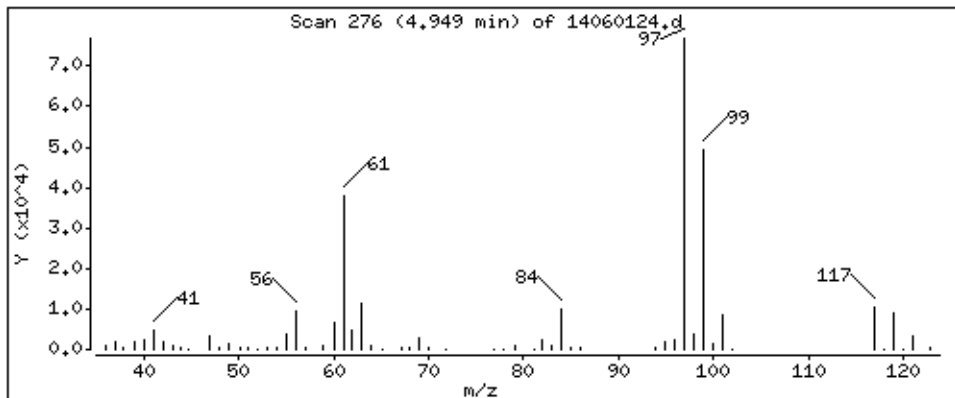
Operator: md

Column phase: RTX-624

Column diameter: 0.18

103 1,1,1-Trichloroethane

Concentration: 196.68 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

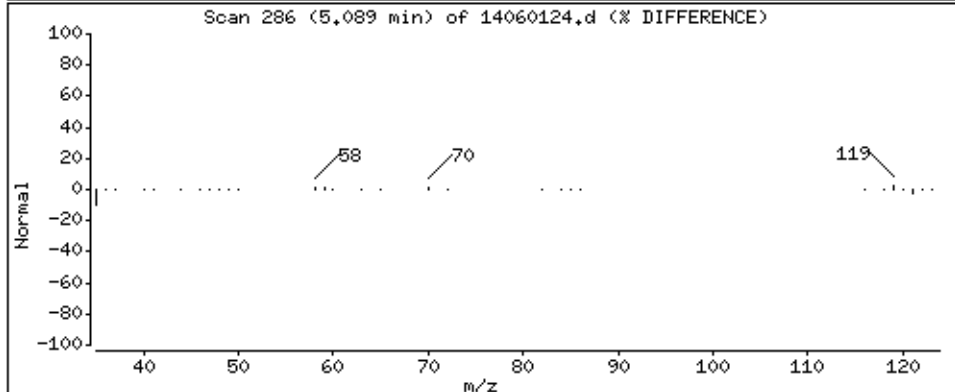
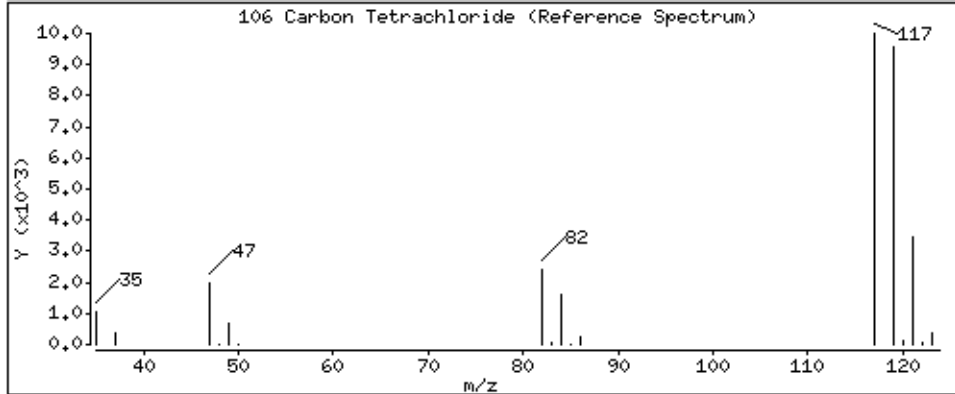
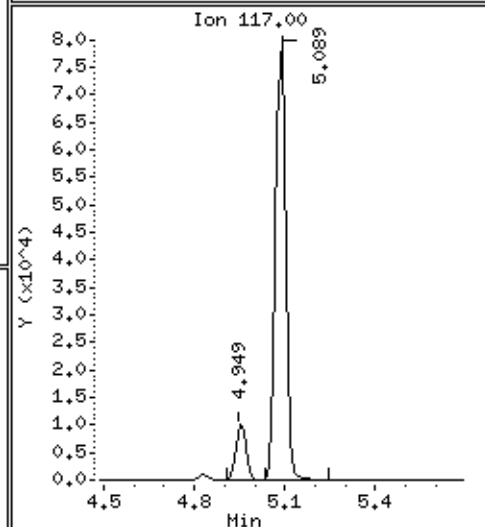
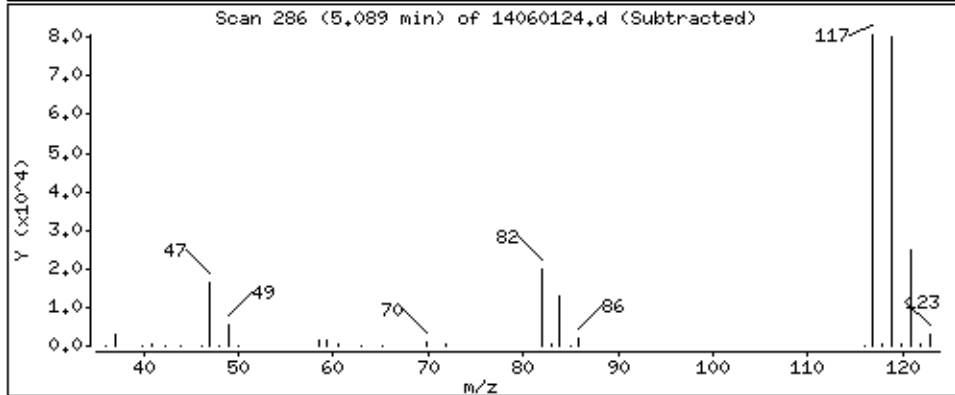
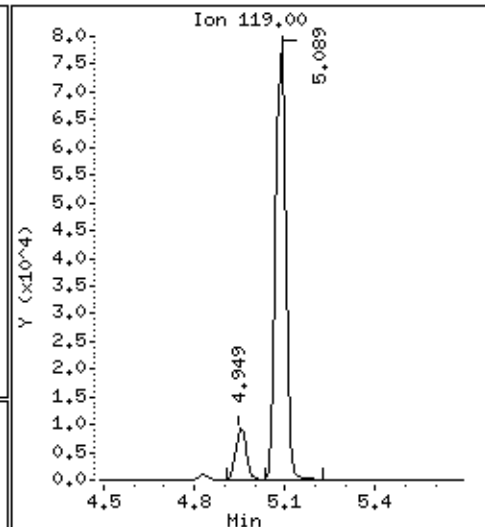
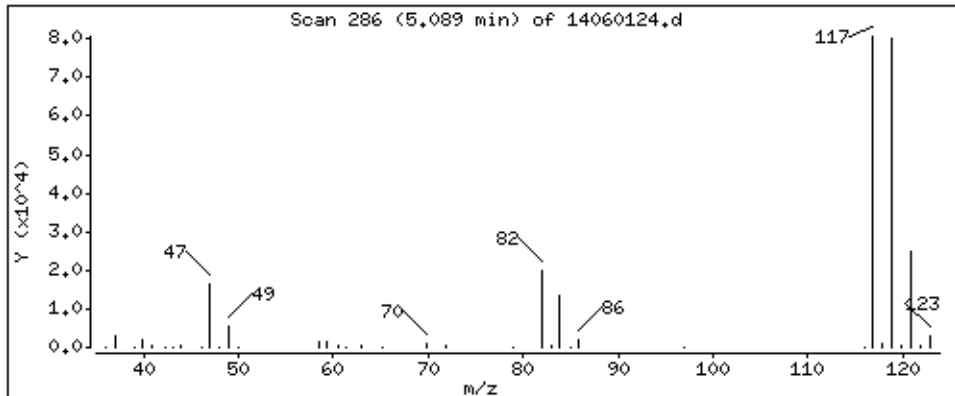
Operator: md

Column phase: RTX-624

Column diameter: 0.18

106 Carbon Tetrachloride

Concentration: 205.92 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

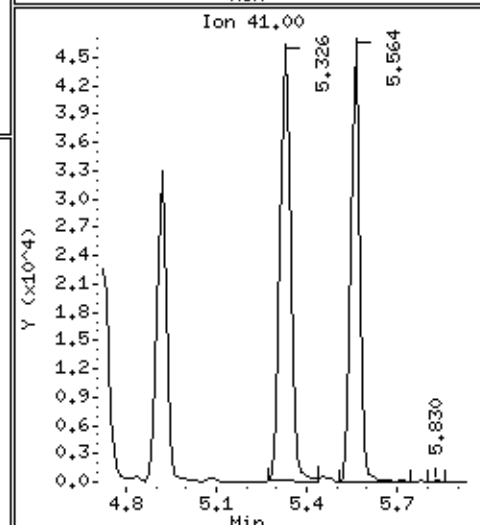
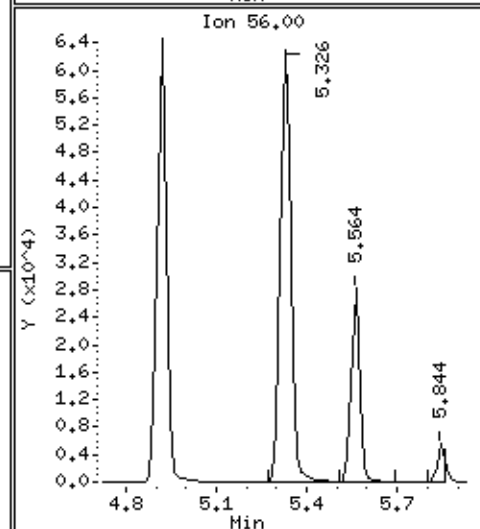
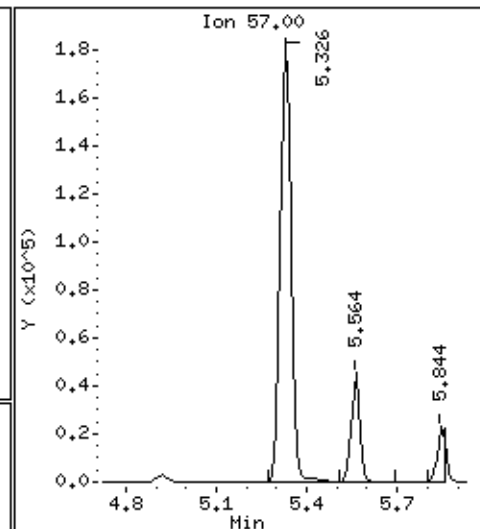
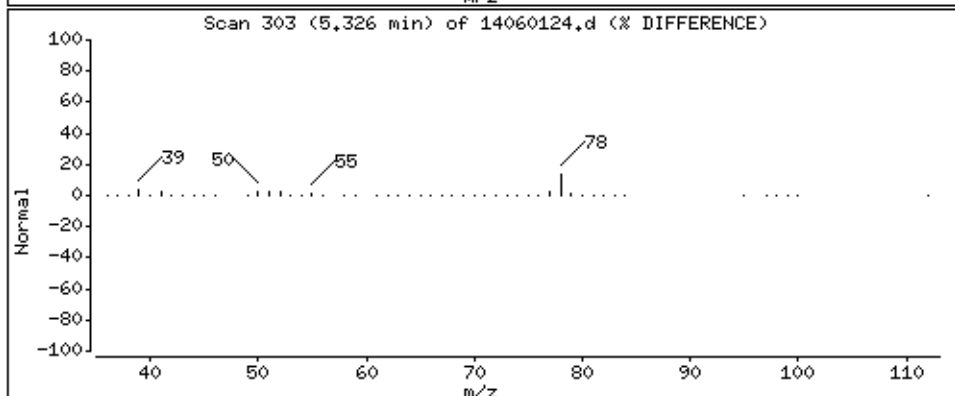
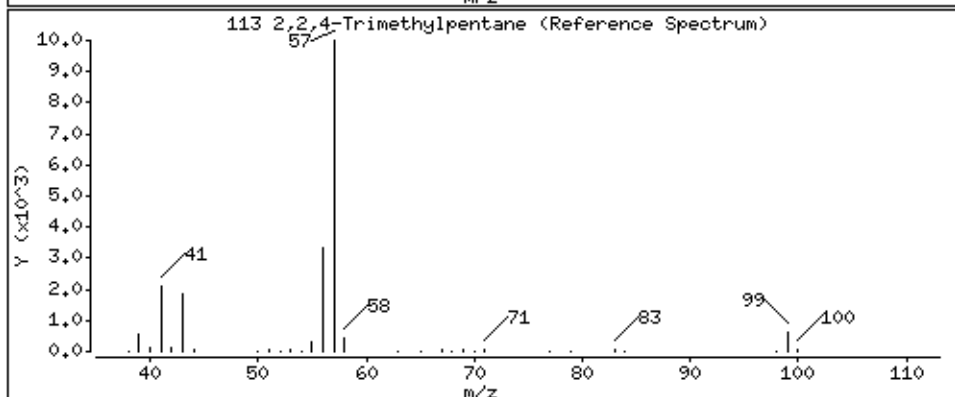
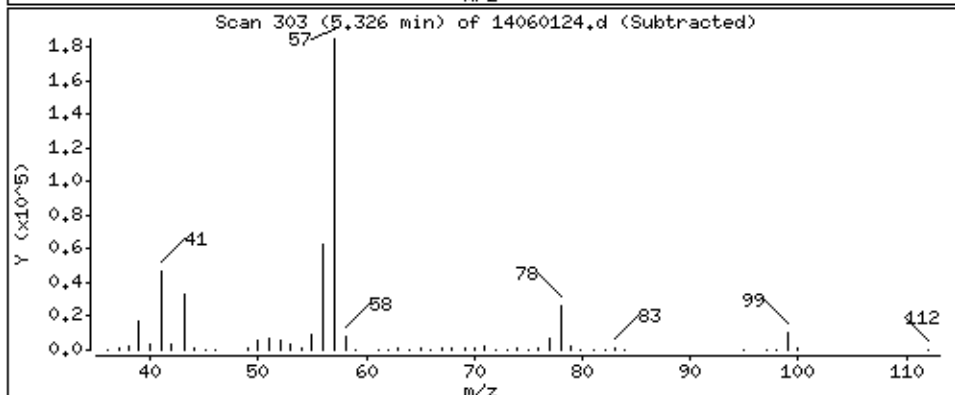
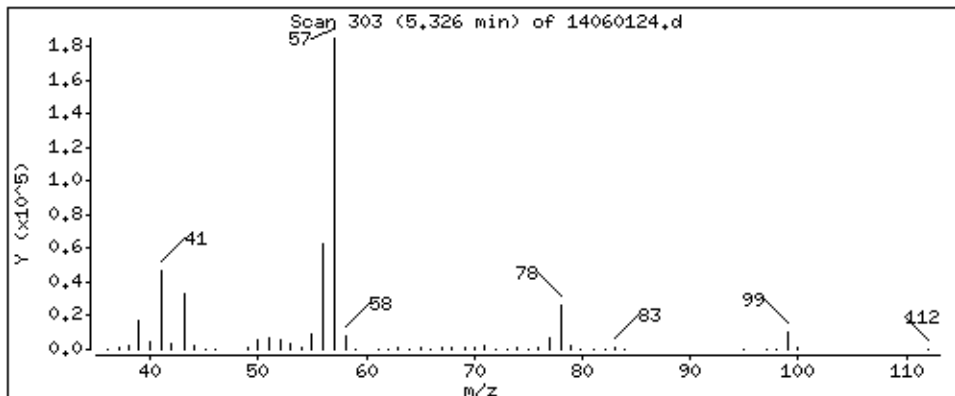
Operator: md

Column phase: RTX-624

Column diameter: 0.18

113 2,2,4-Trimethylpentane

Concentration: 199.21 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

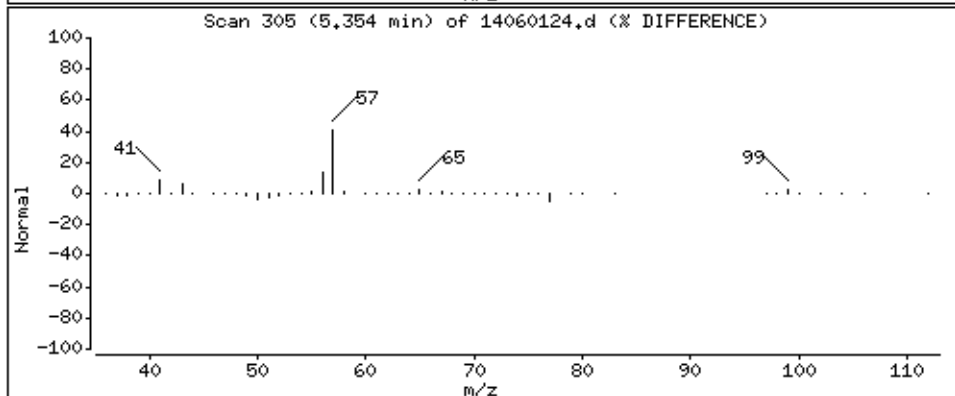
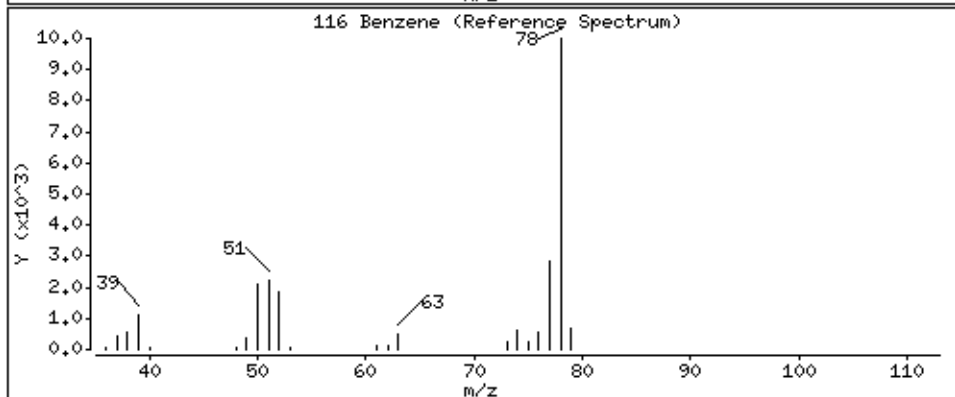
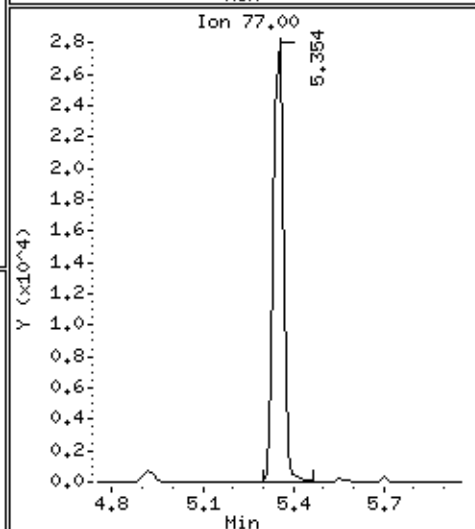
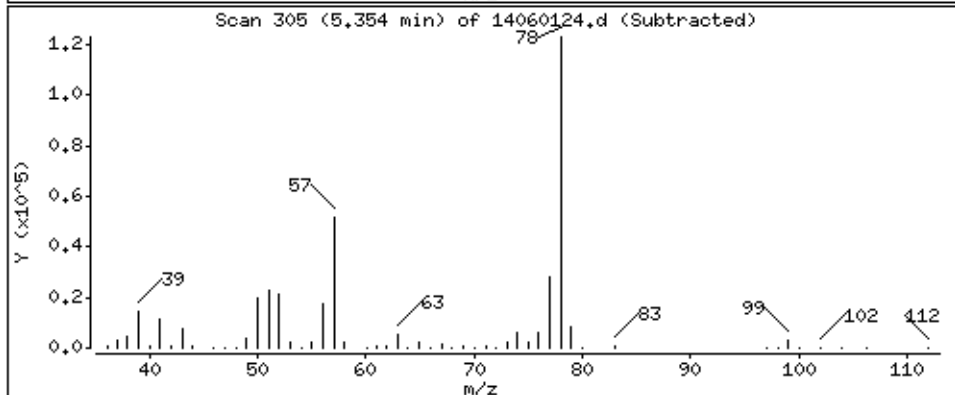
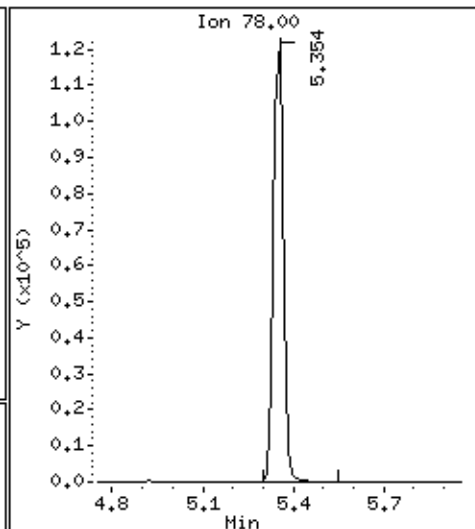
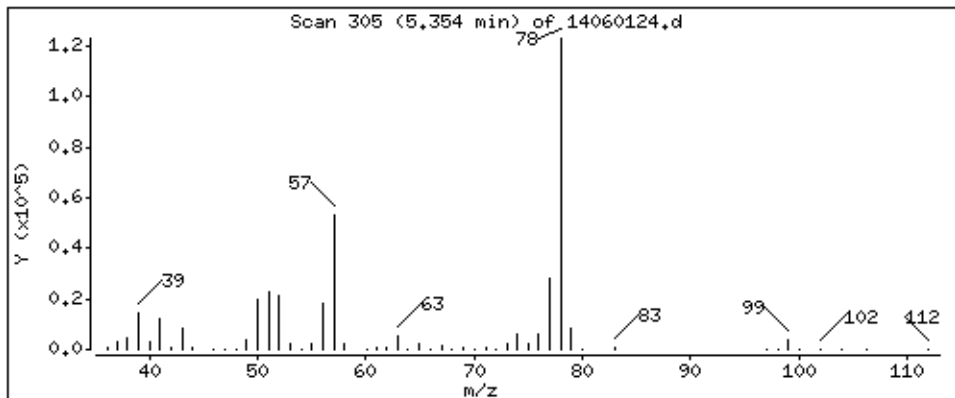
Operator: md

Column phase: RTX-624

Column diameter: 0.18

116 Benzene

Concentration: 197.50 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

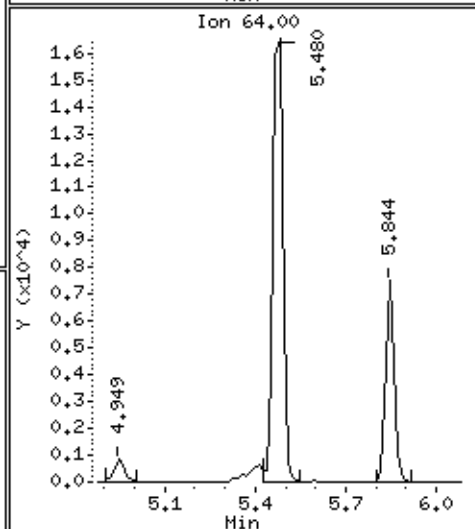
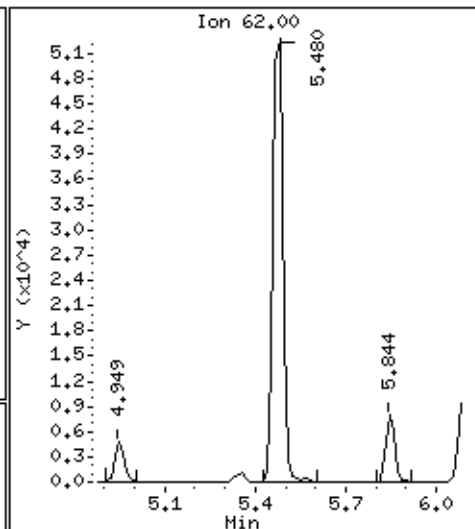
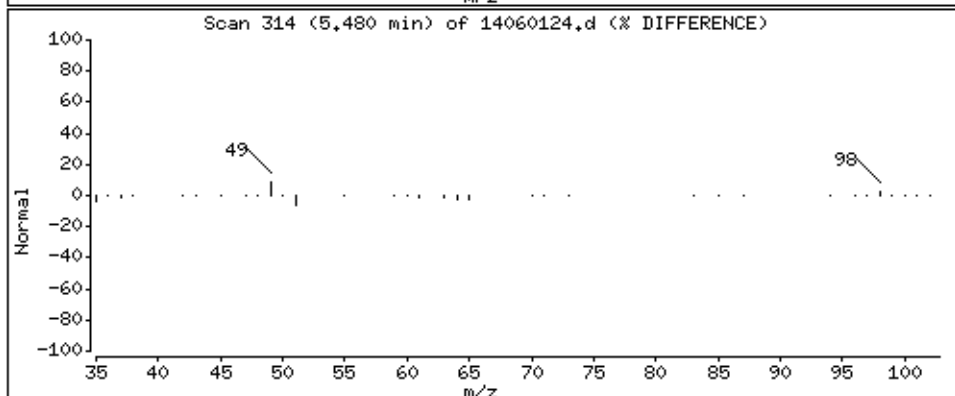
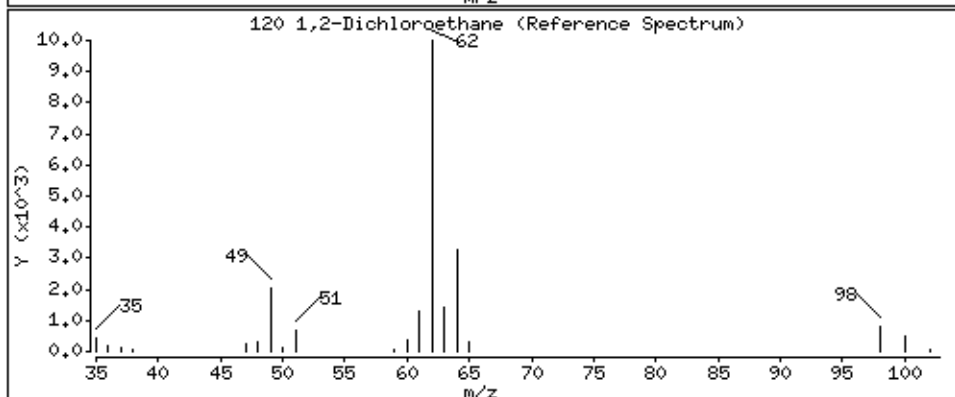
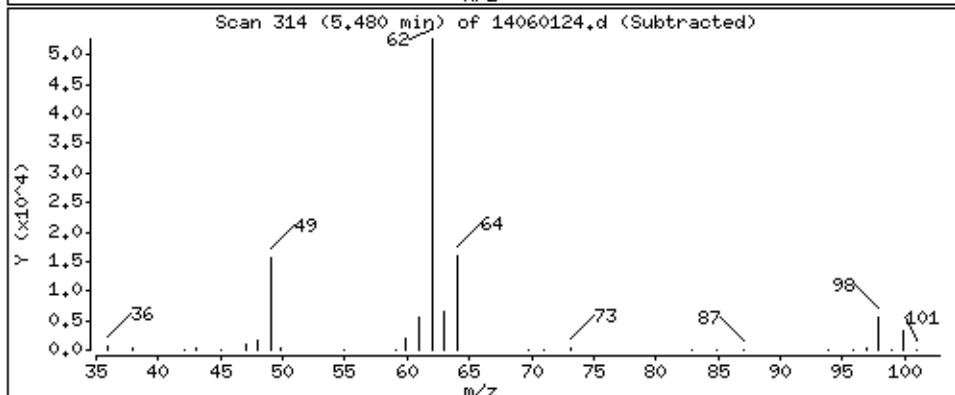
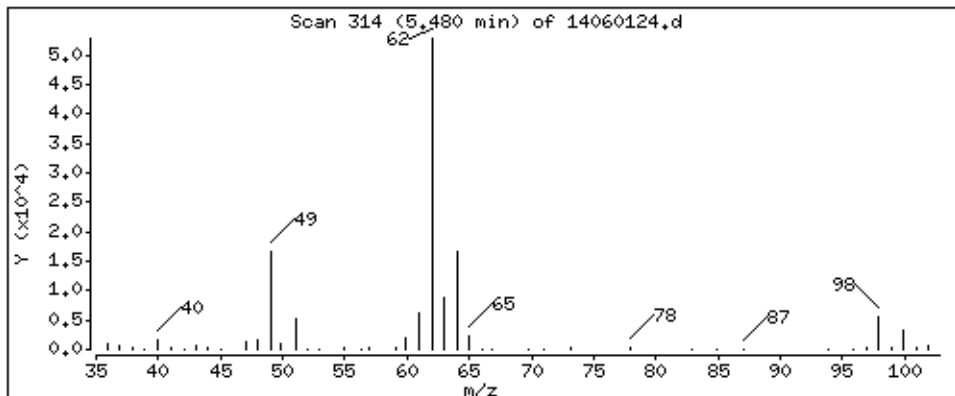
Operator: md

Column phase: RTX-624

Column diameter: 0.18

120 1,2-Dichloroethane

Concentration: 198.22 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

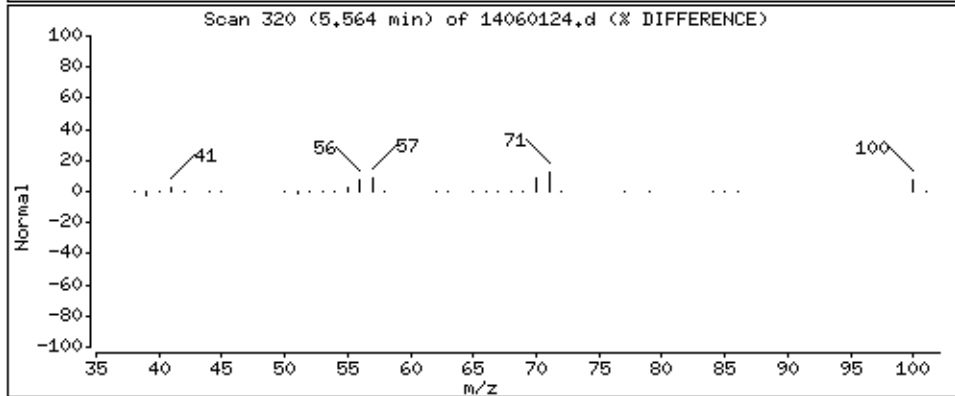
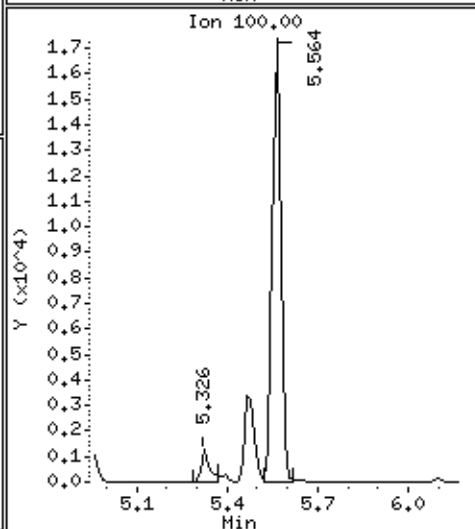
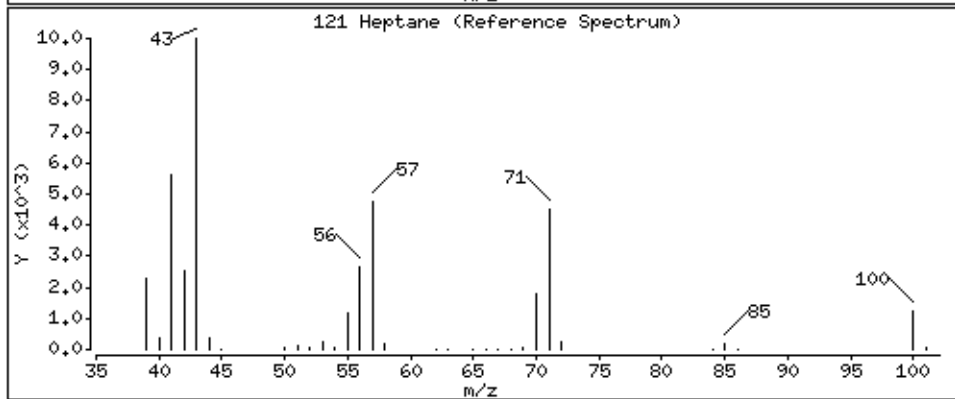
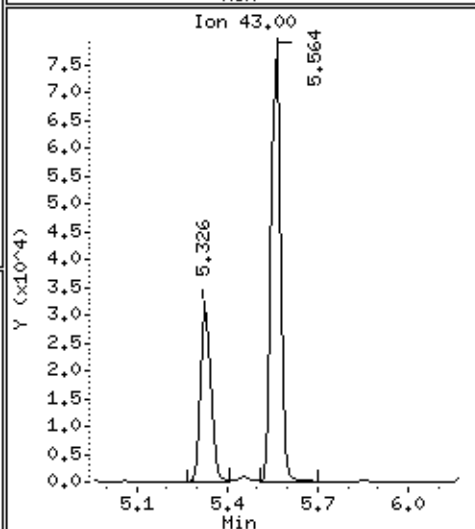
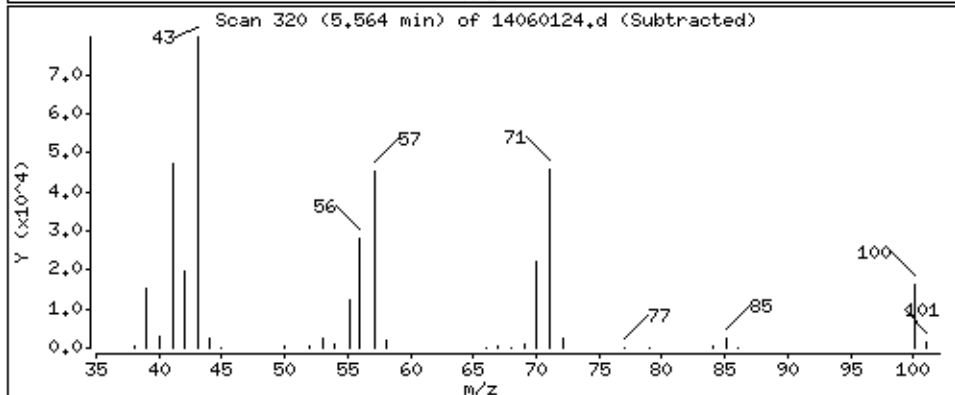
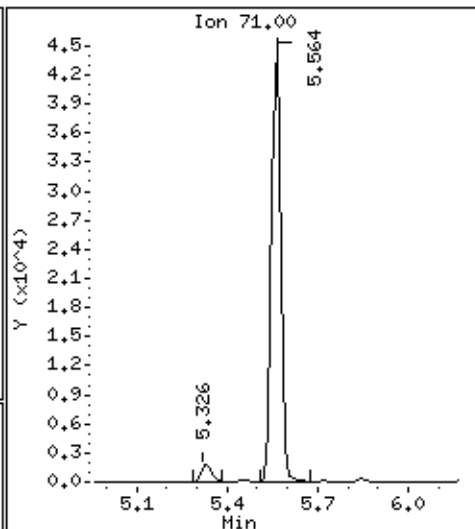
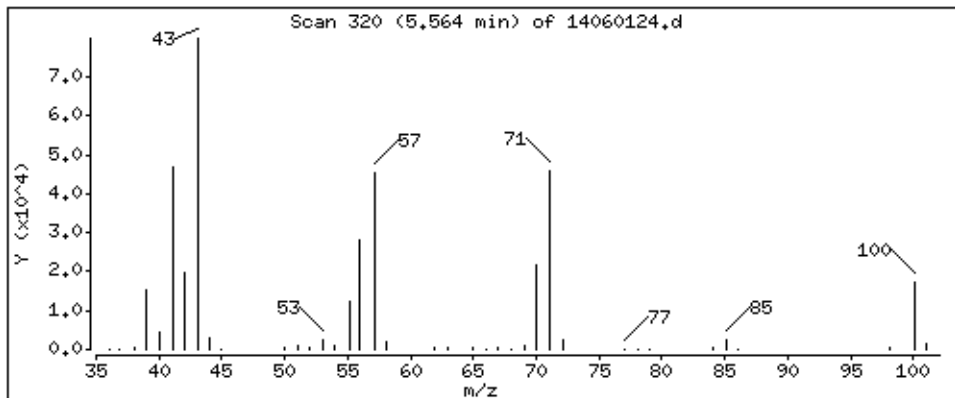
Operator: md

Column phase: RTX-624

Column diameter: 0.18

121 Heptane

Concentration: 199.23 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

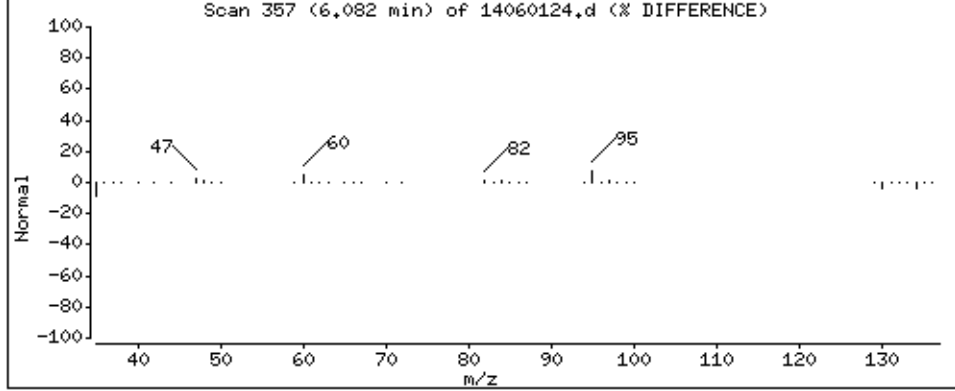
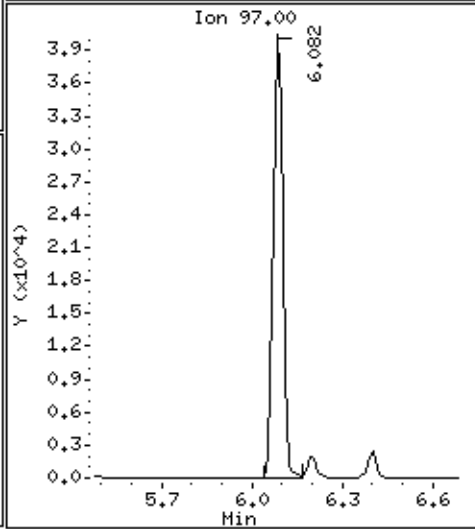
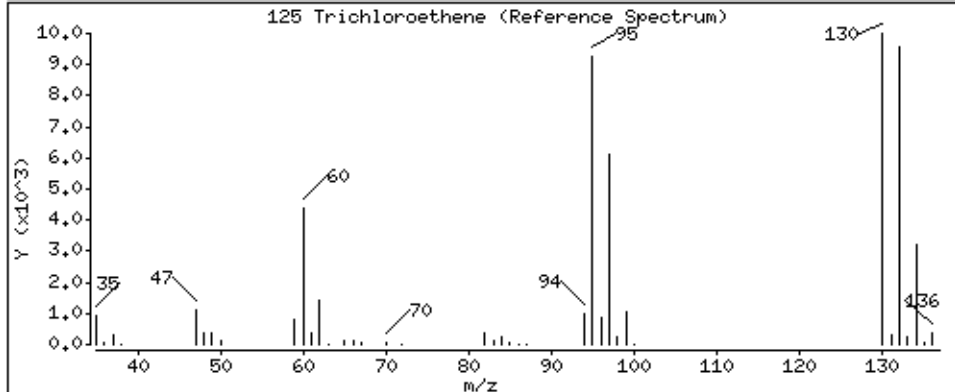
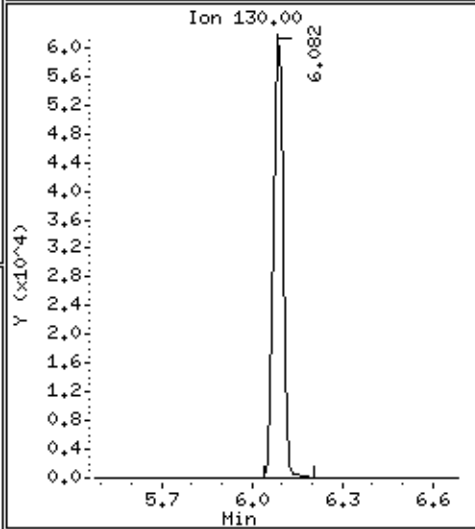
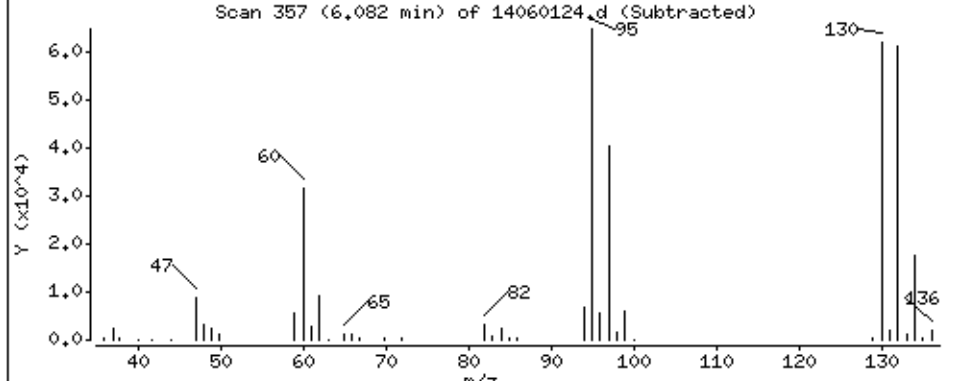
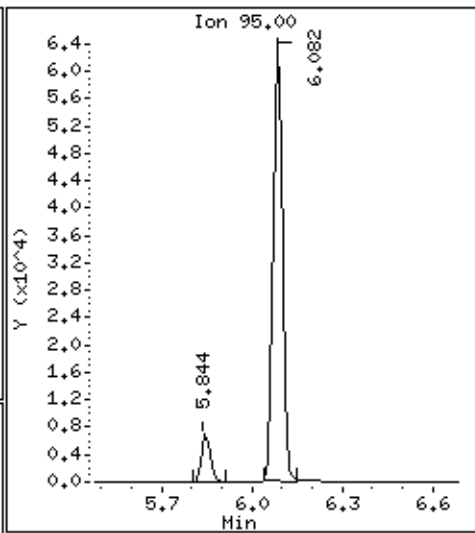
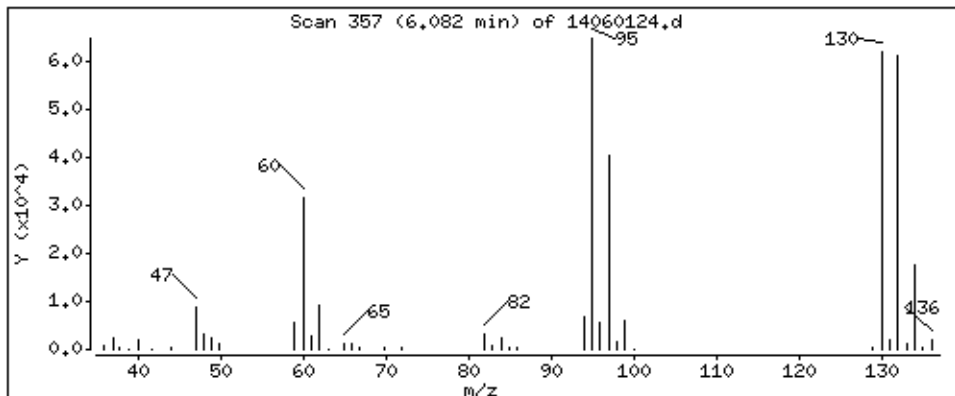
Operator: md

Column phase: RTX-624

Column diameter: 0.18

125 Trichloroethene

Concentration: 207.08 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

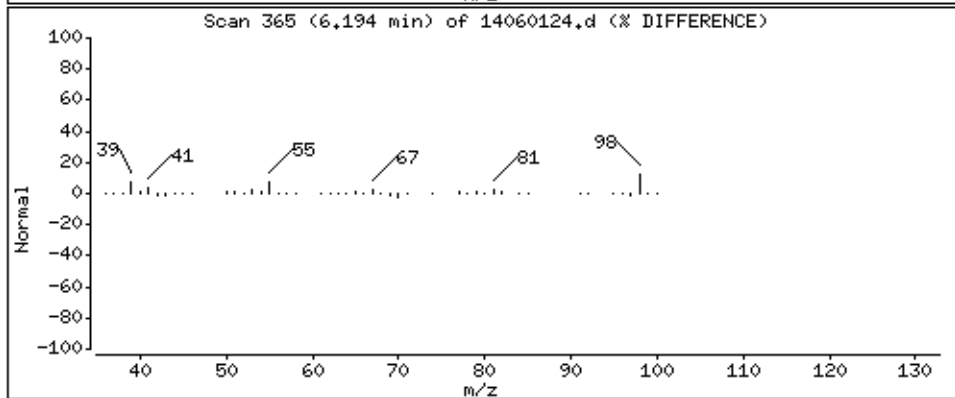
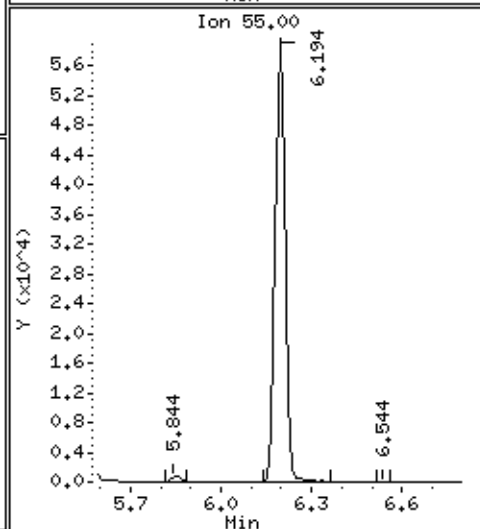
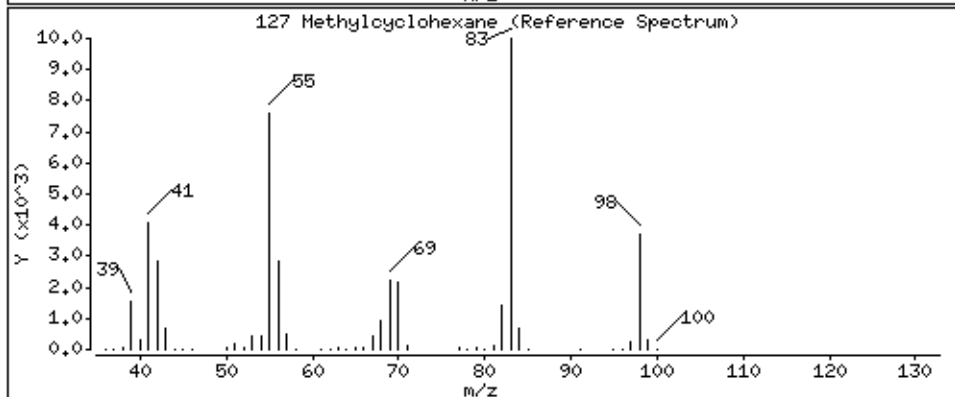
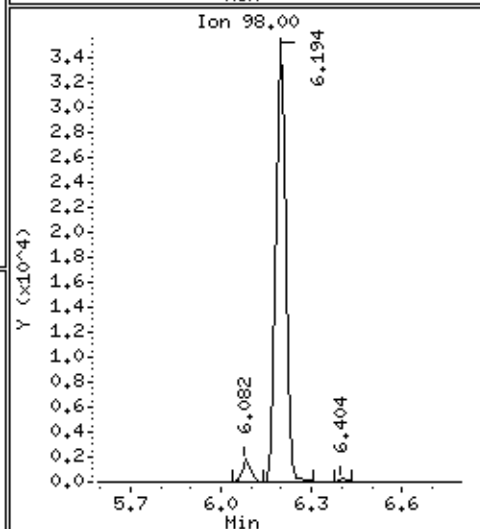
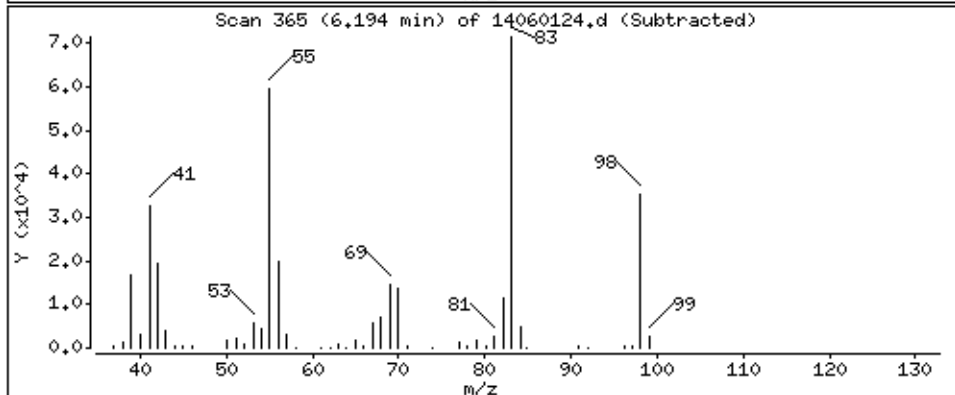
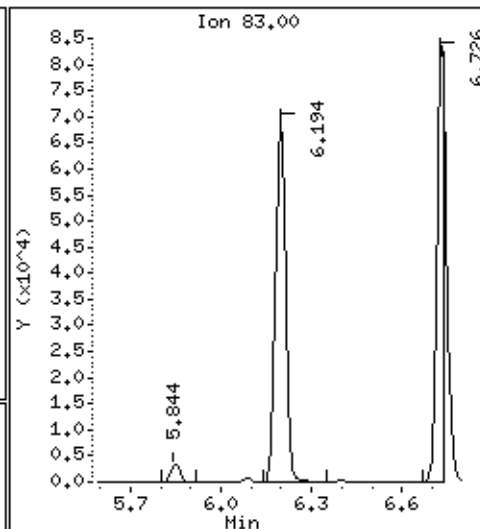
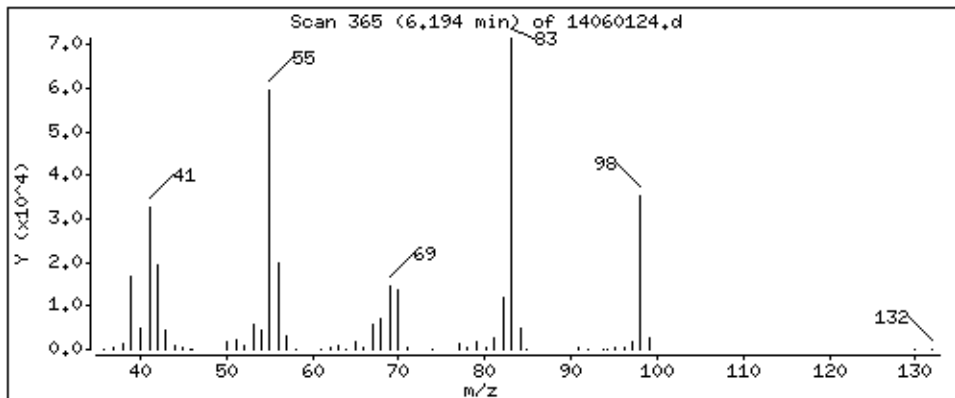
Operator: md

Column phase: RTX-624

Column diameter: 0.18

127 Methylcyclohexane

Concentration: 195.61 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

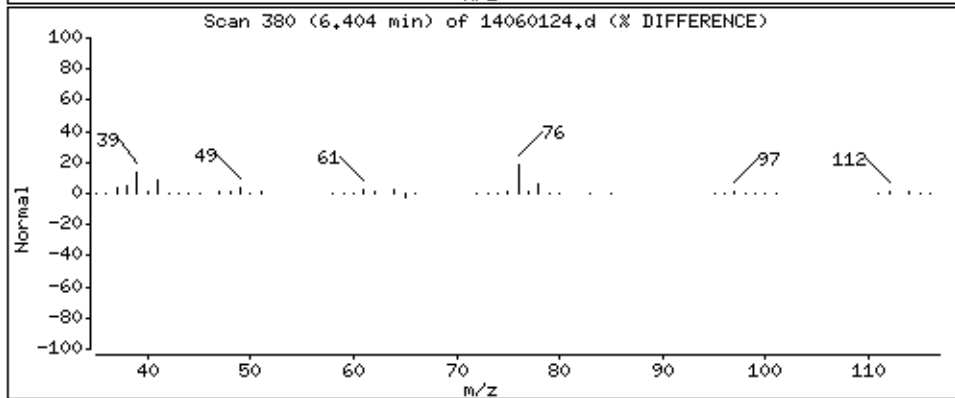
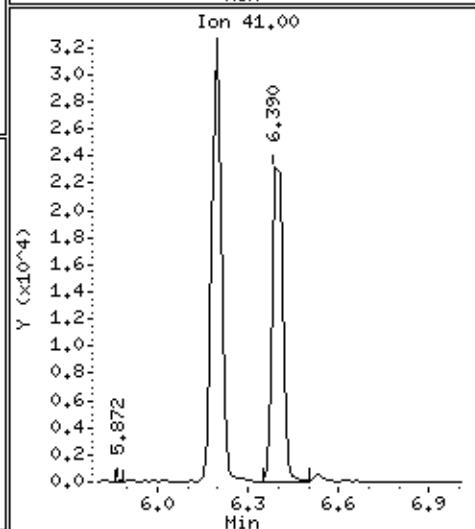
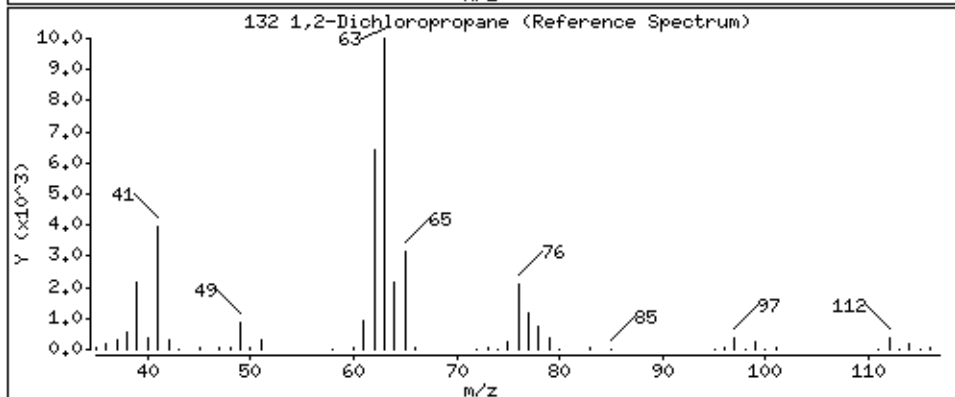
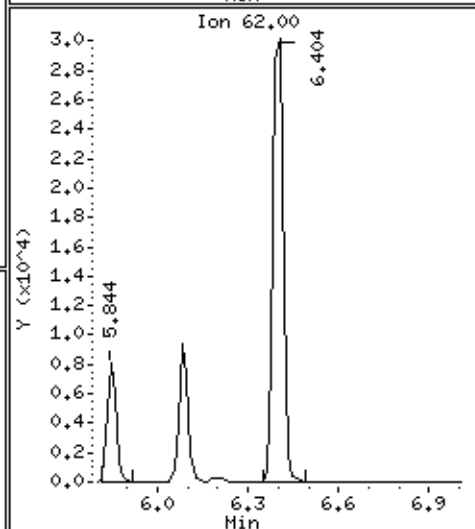
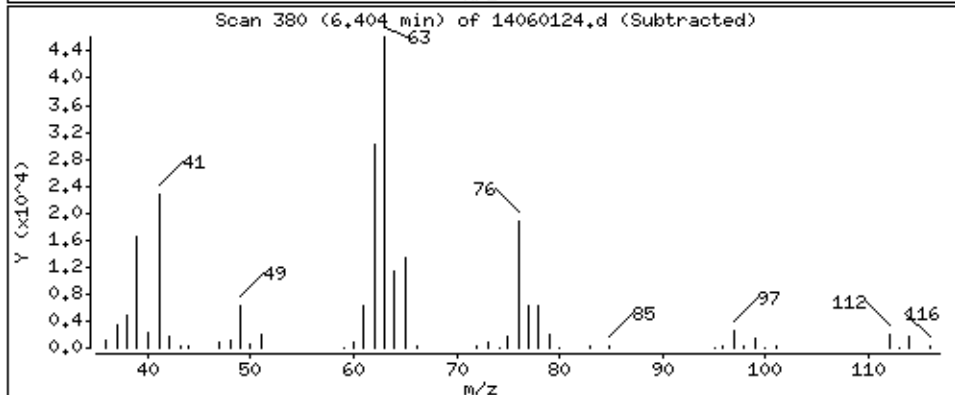
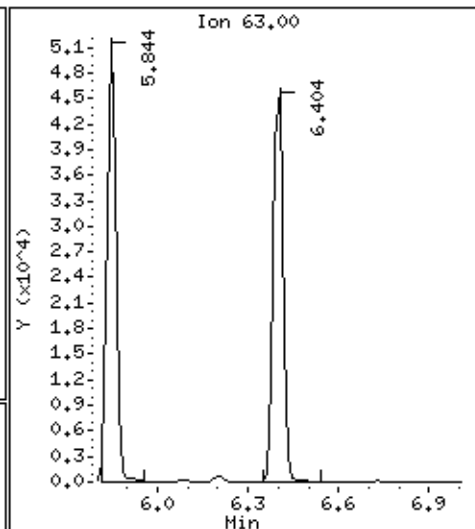
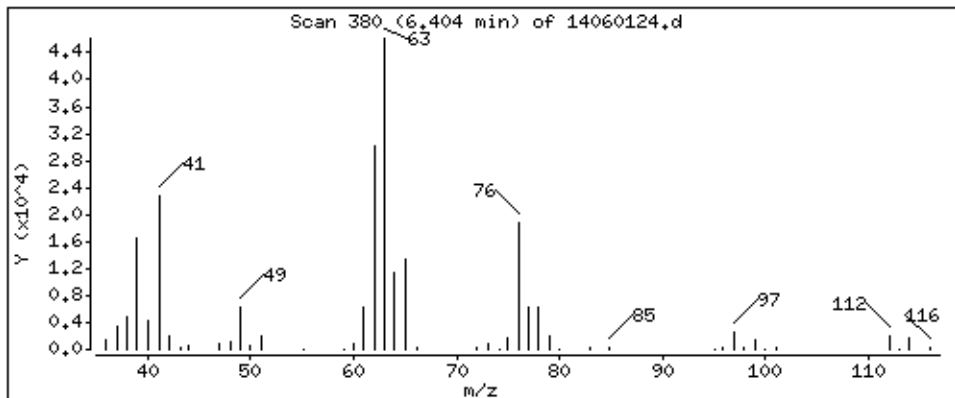
Operator: md

Column phase: RTX-624

Column diameter: 0.18

132 1,2-Dichloropropane

Concentration: 201.34 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

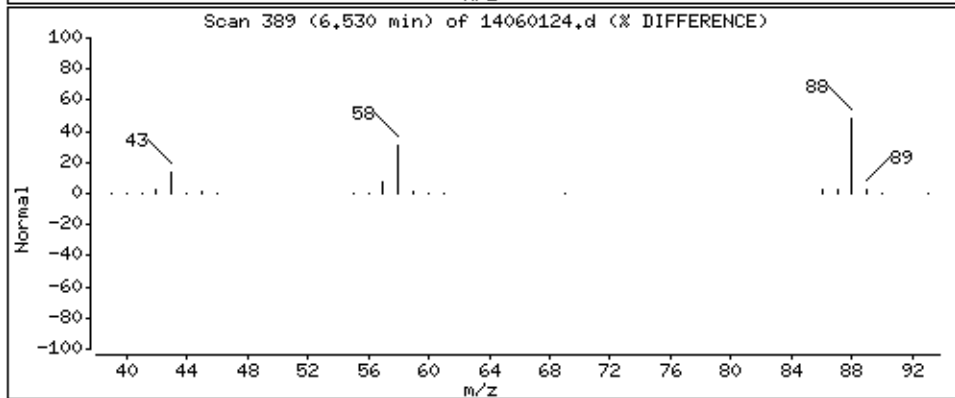
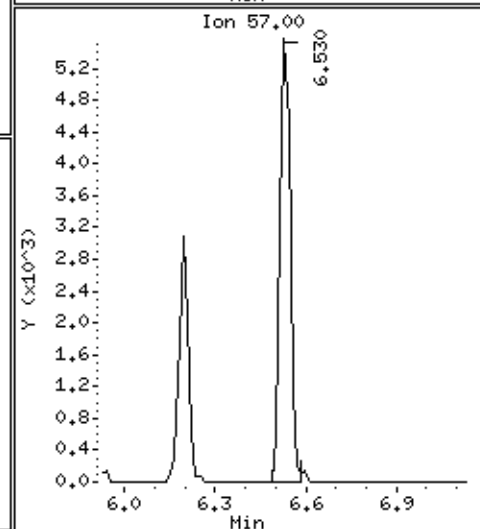
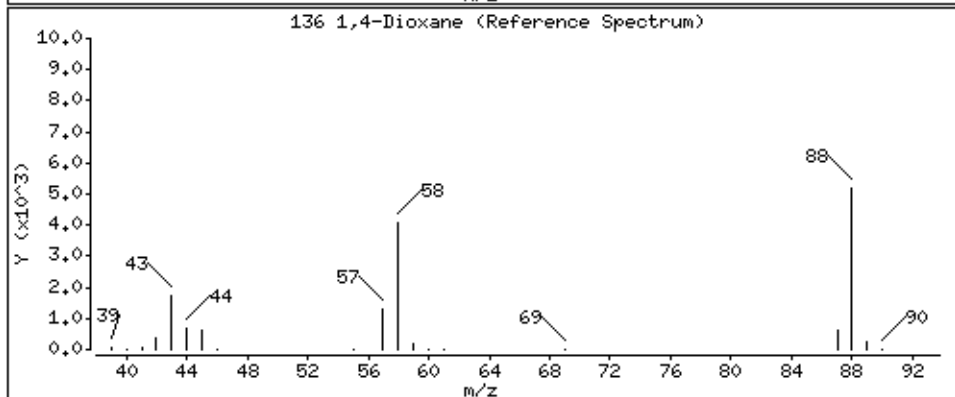
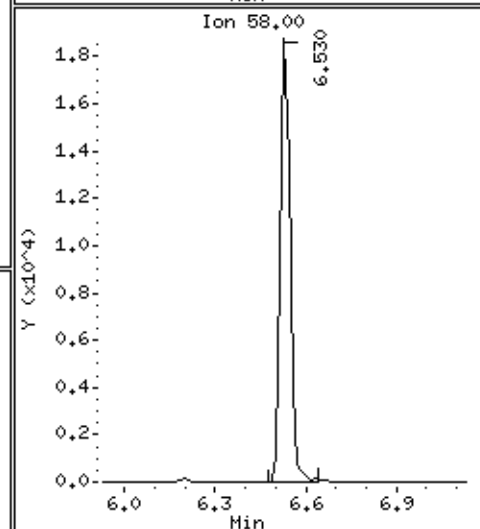
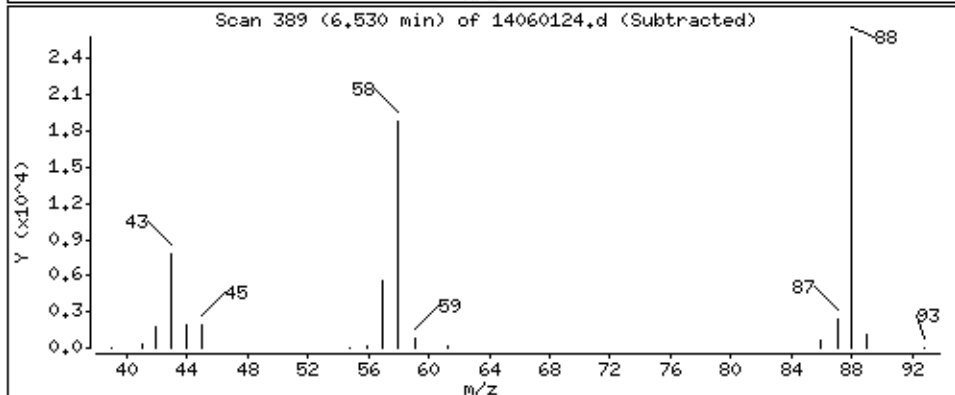
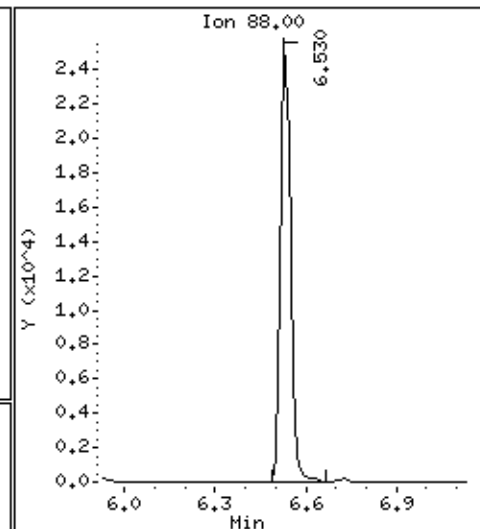
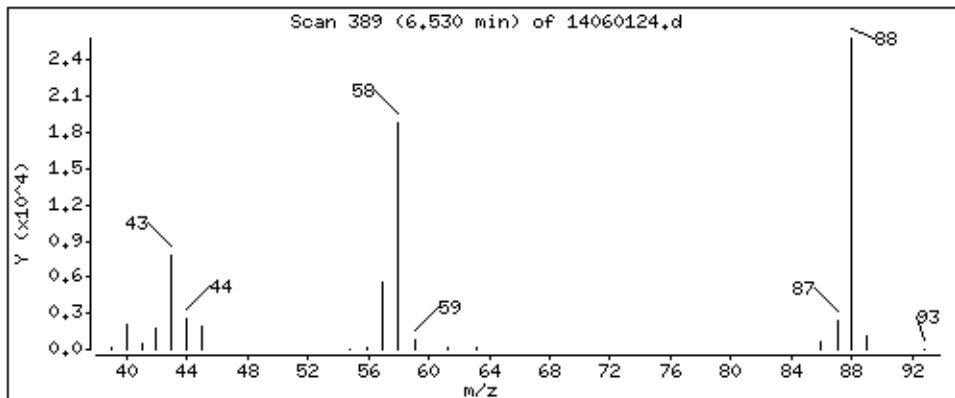
Operator: md

Column phase: RTX-624

Column diameter: 0.18

136 1,4-Dioxane

Concentration: 195.18 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

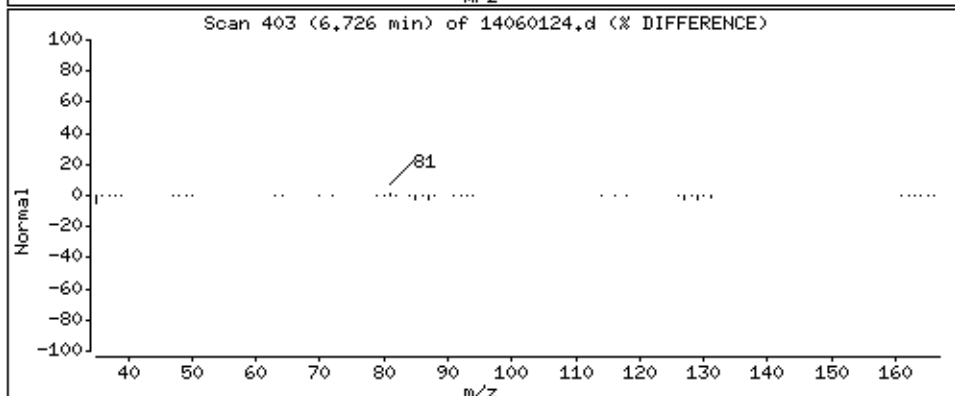
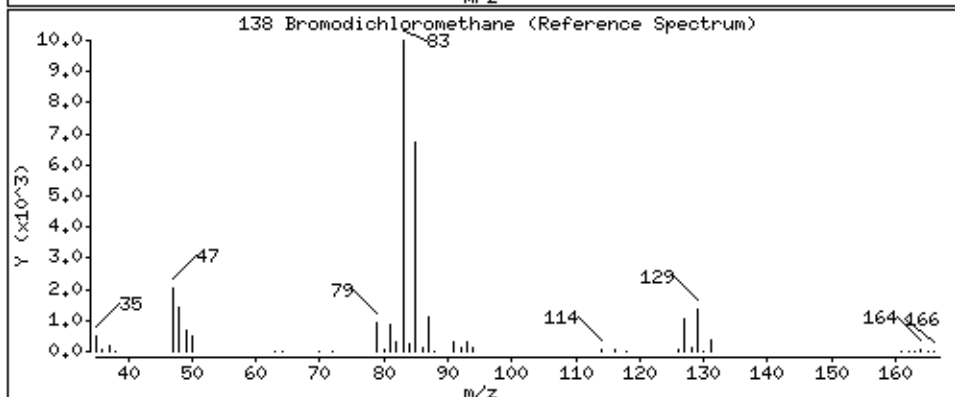
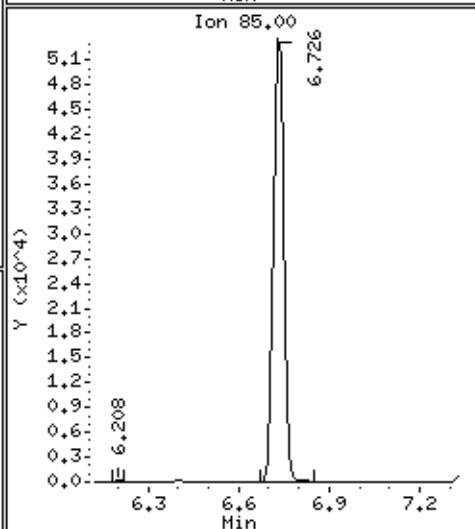
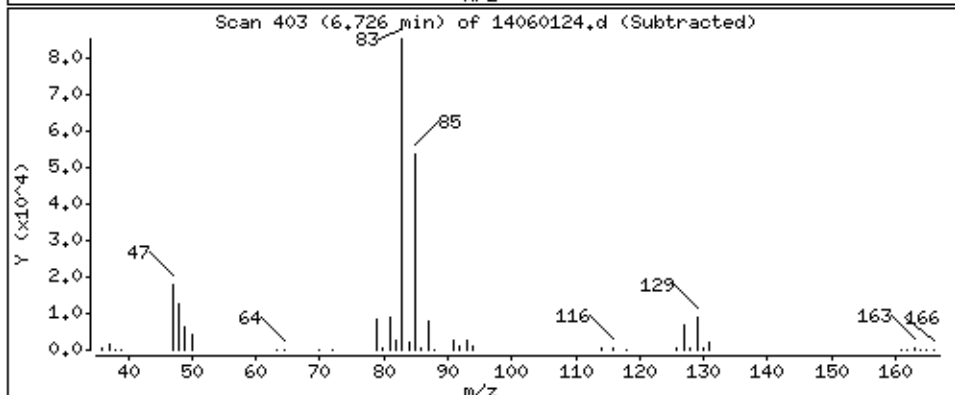
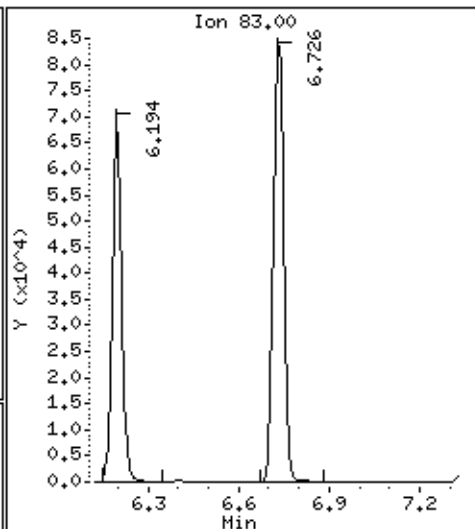
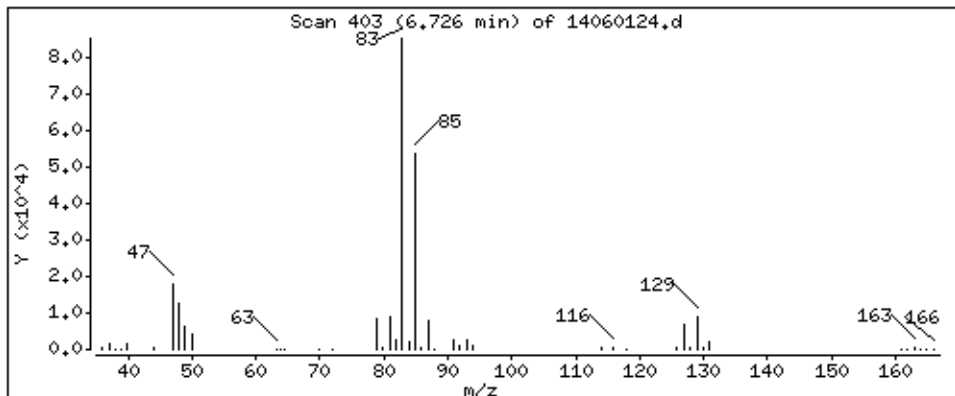
Operator: md

Column phase: RTX-624

Column diameter: 0.18

138 Bromodichloromethane

Concentration: 201.27 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

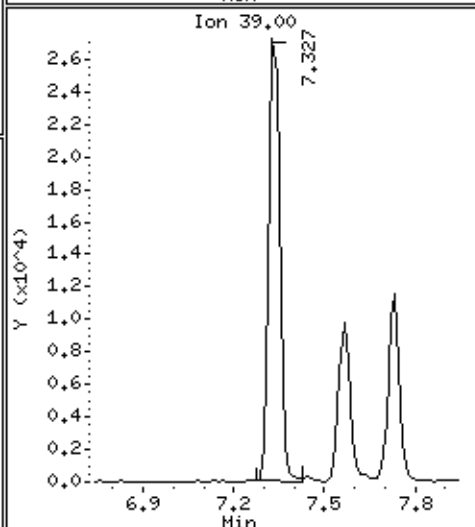
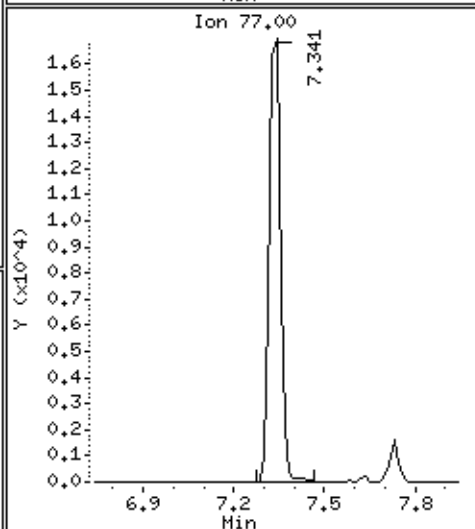
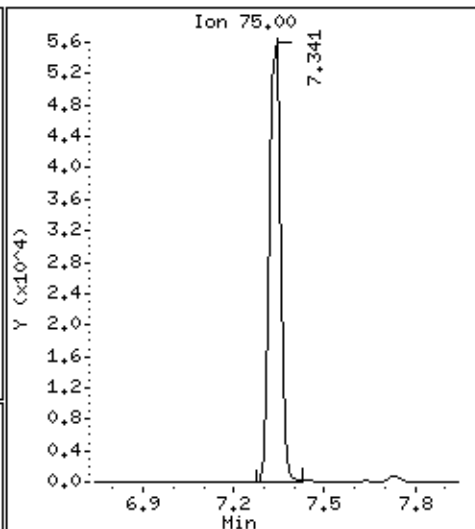
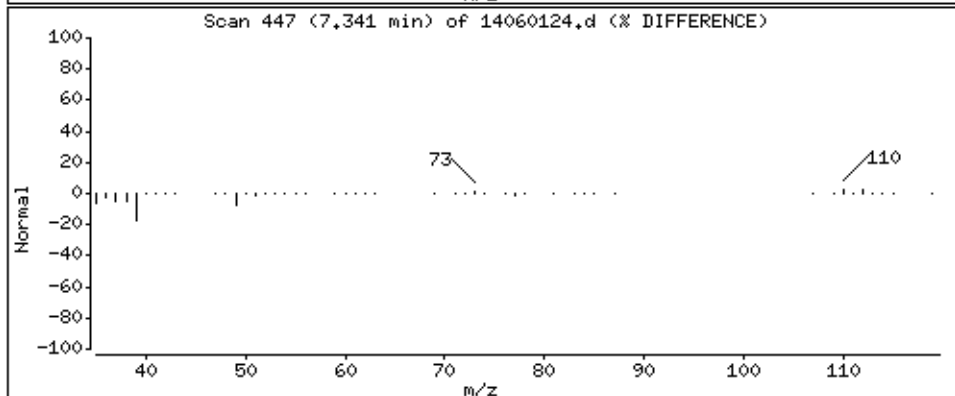
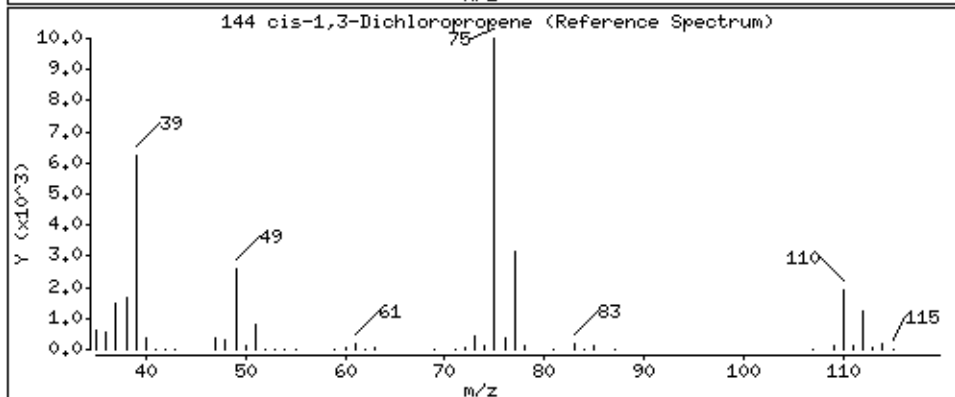
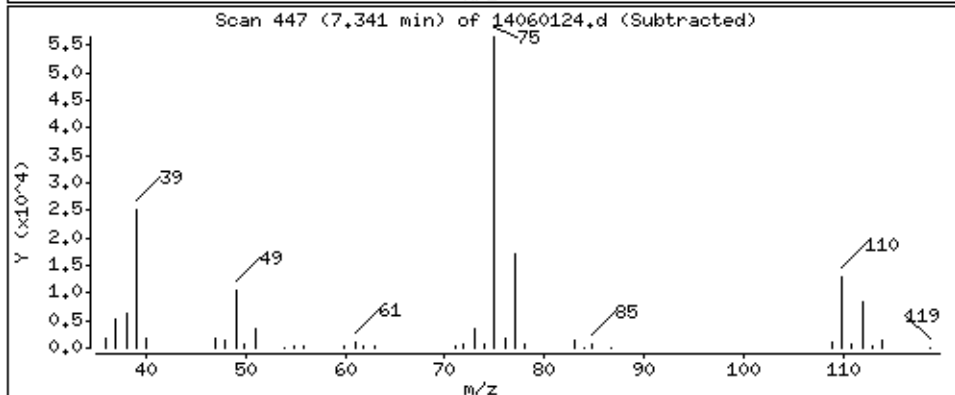
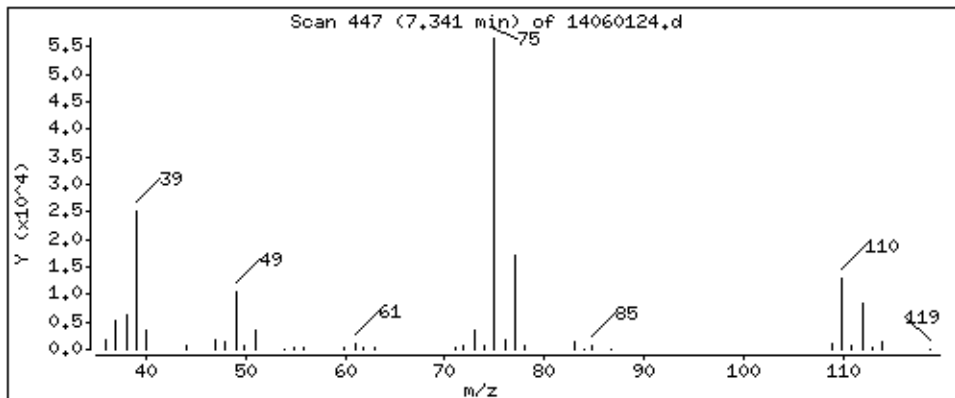
Operator: md

Column phase: RTX-624

Column diameter: 0.18

144 cis-1,3-Dichloropropene

Concentration: 197.43 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

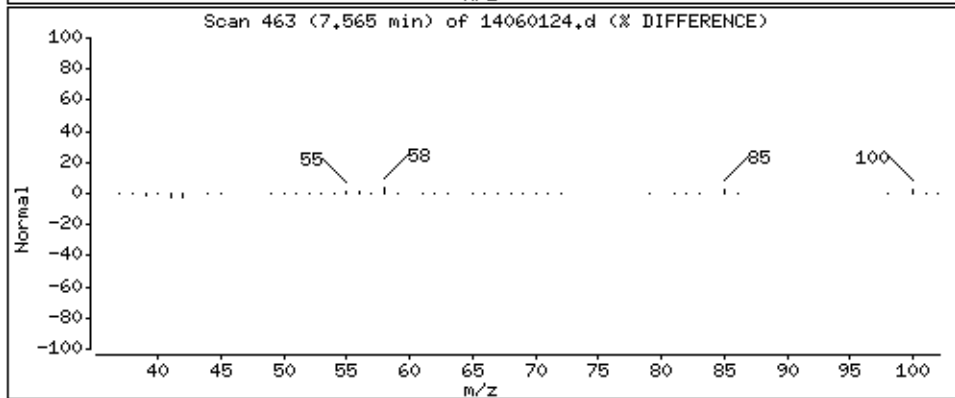
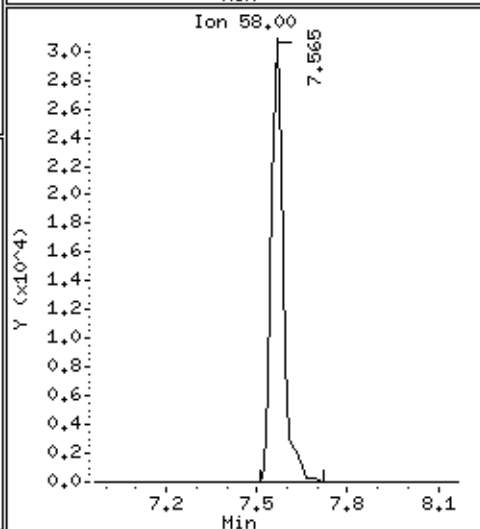
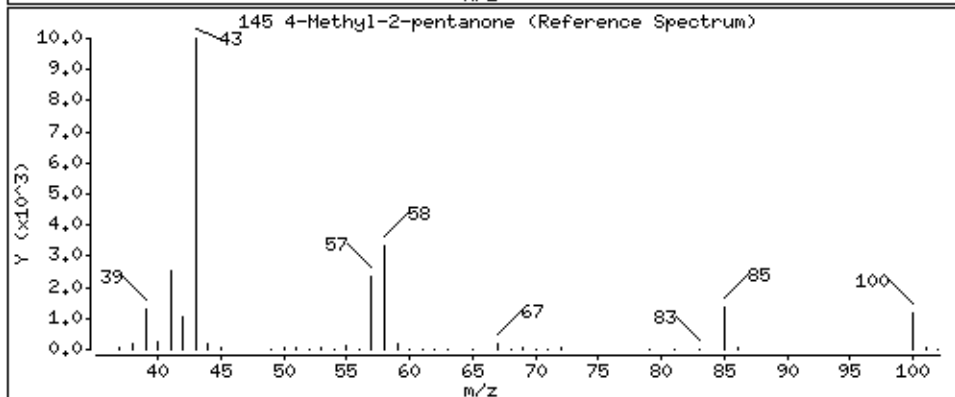
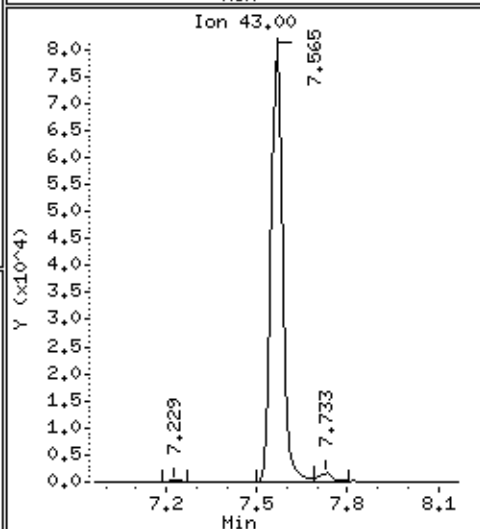
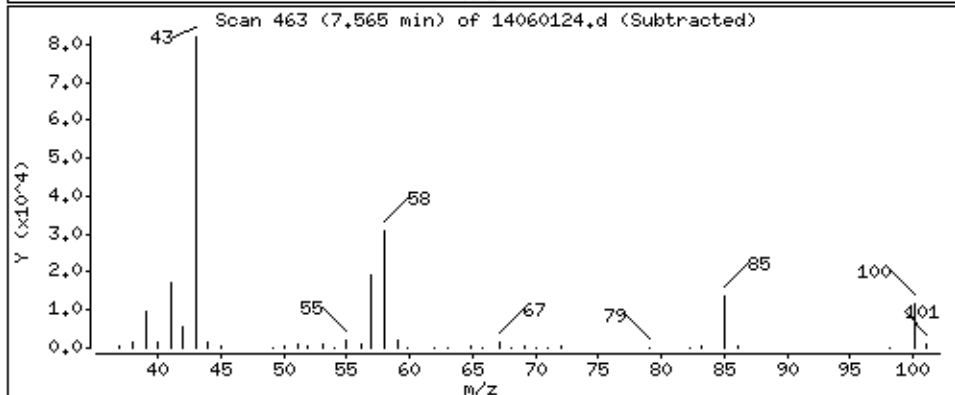
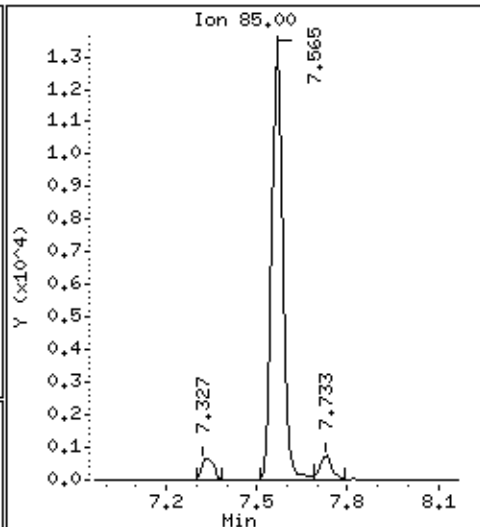
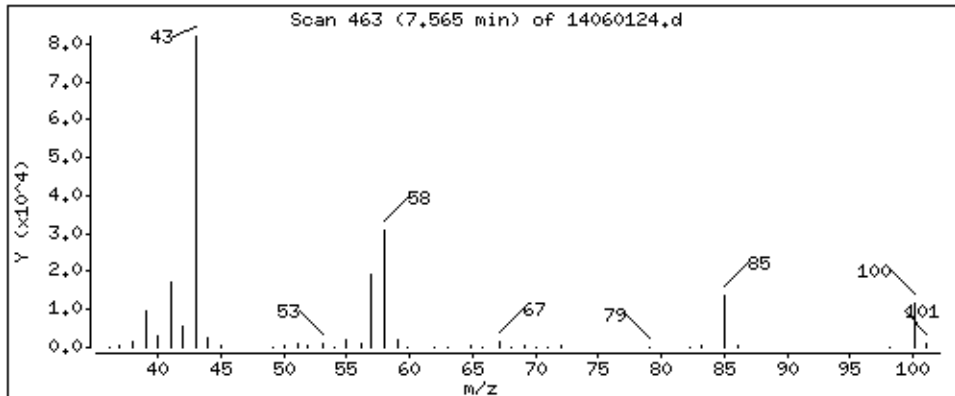
Operator: md

Column phase: RTX-624

Column diameter: 0.18

145 4-Methyl-2-pentanone

Concentration: 211.10 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

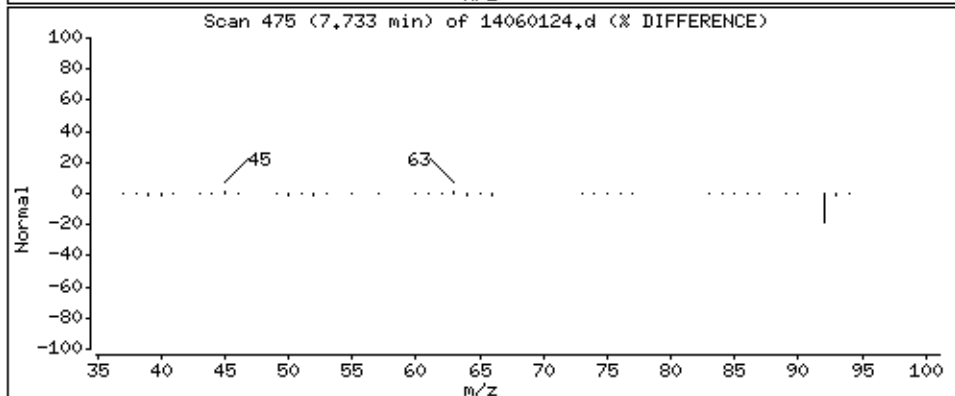
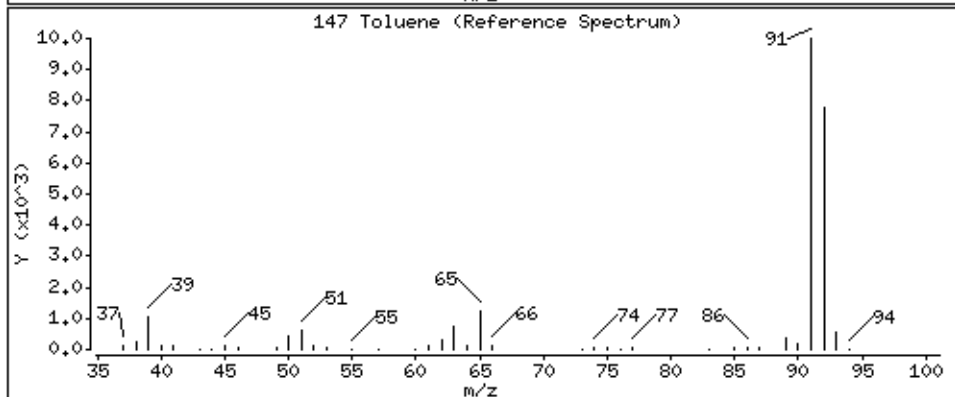
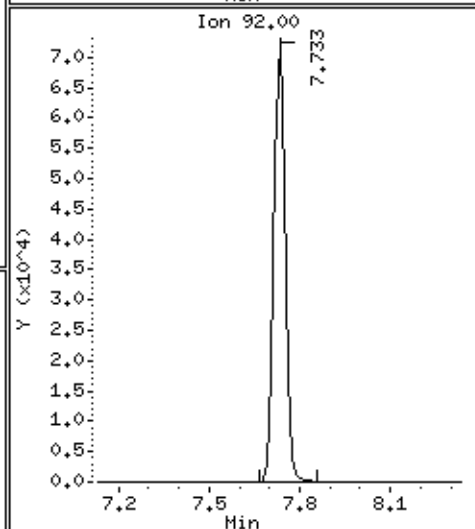
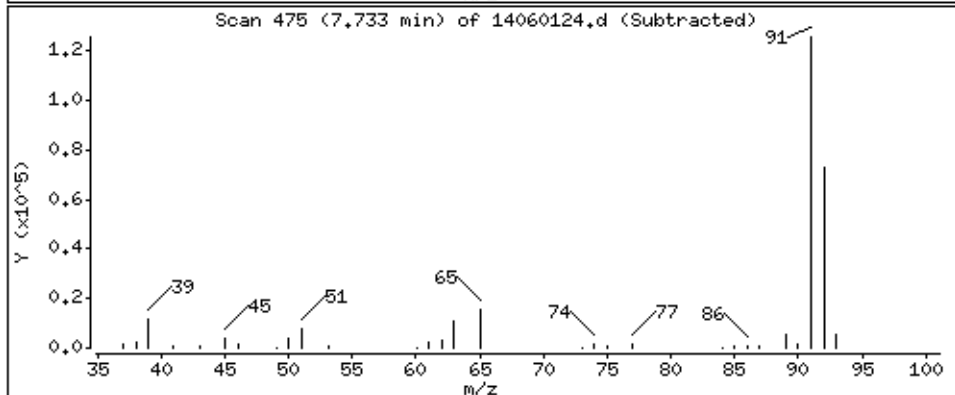
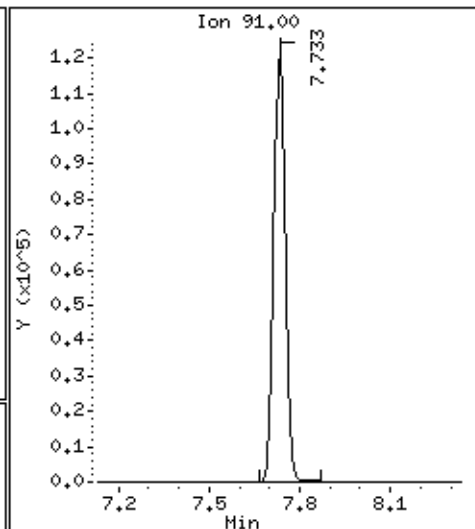
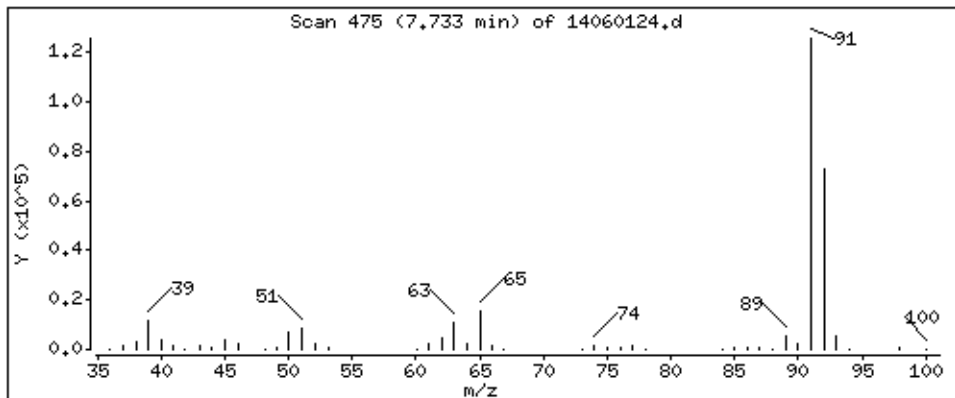
Operator: md

Column phase: RTX-624

Column diameter: 0.18

147 Toluene

Concentration: 195.14 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

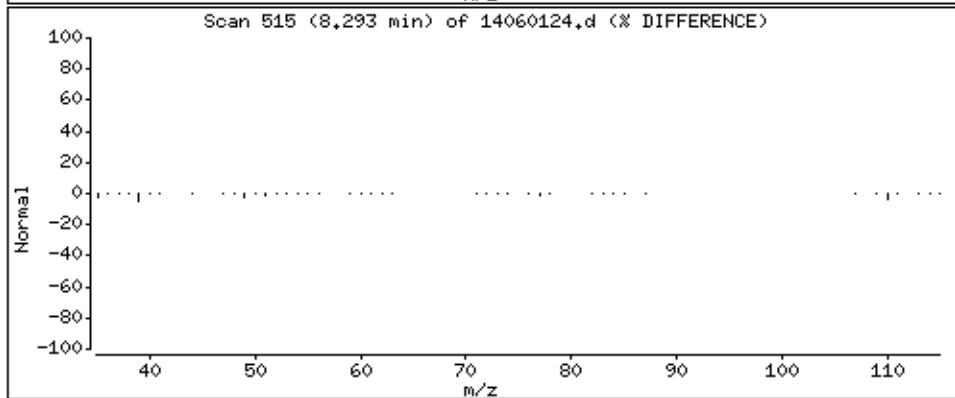
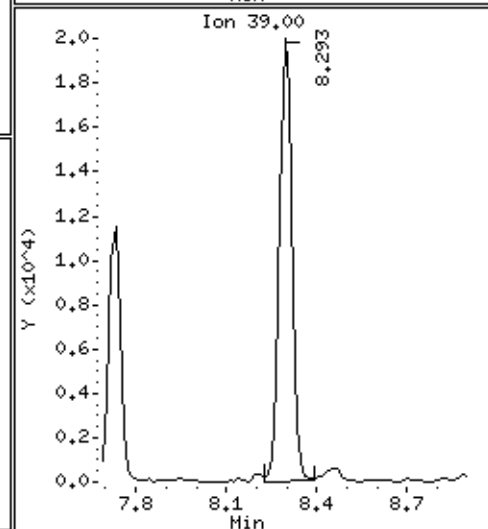
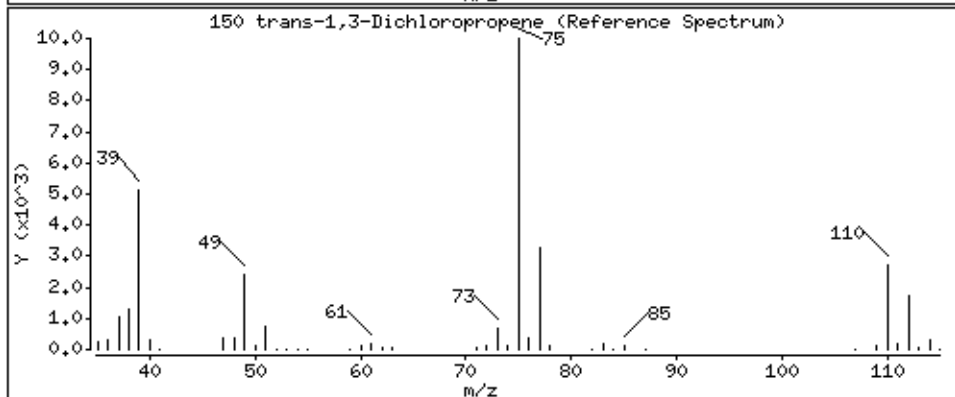
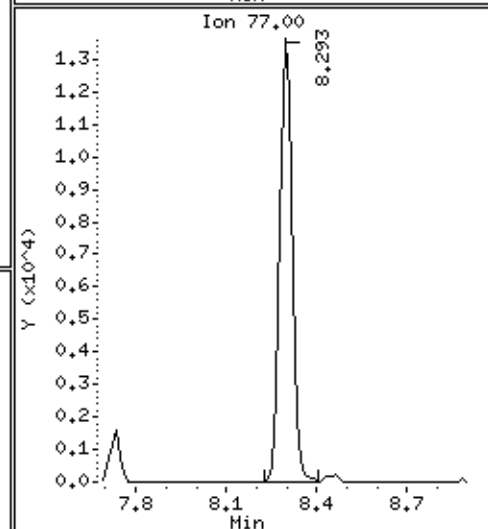
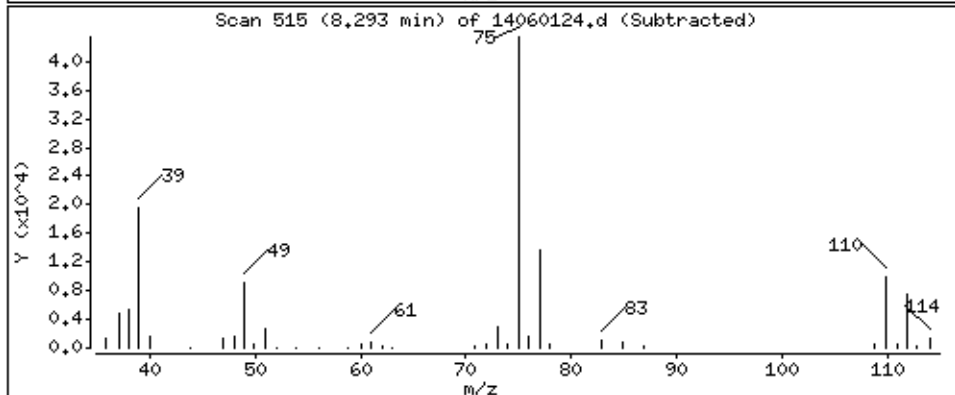
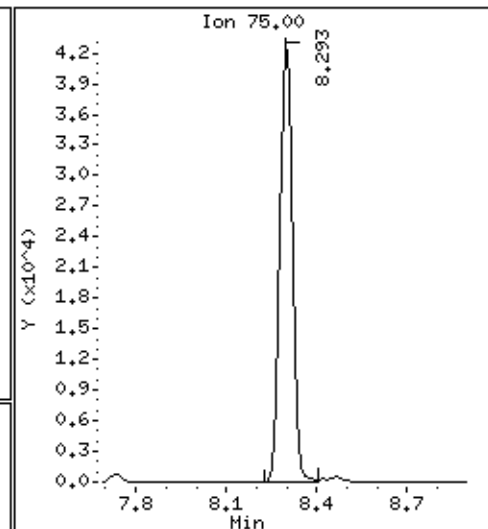
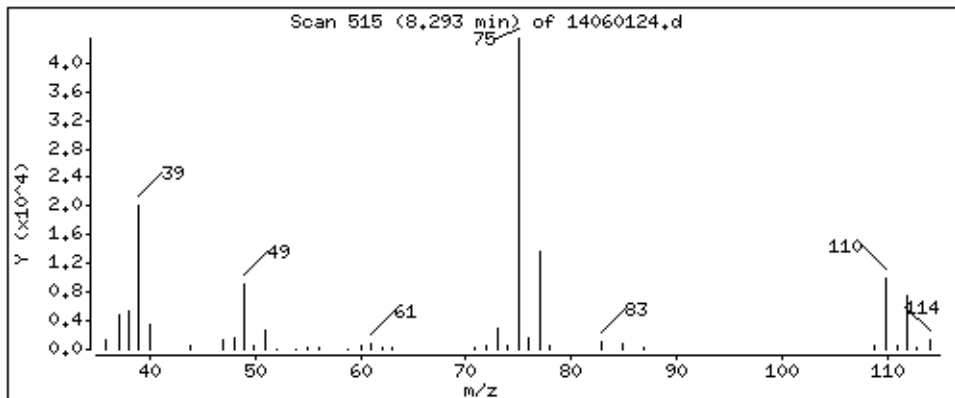
Operator: md

Column phase: RTX-624

Column diameter: 0.18

150 trans-1,3-Dichloropropene

Concentration: 198.30 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

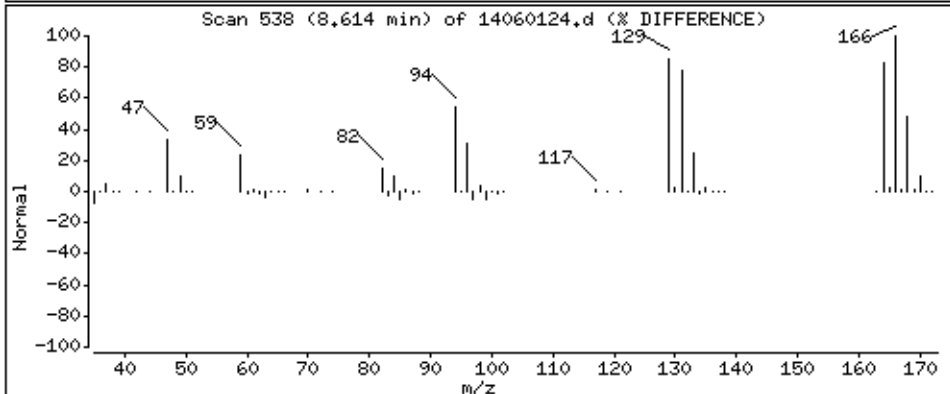
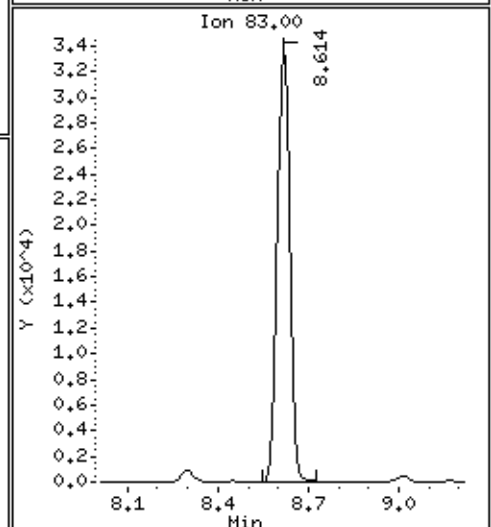
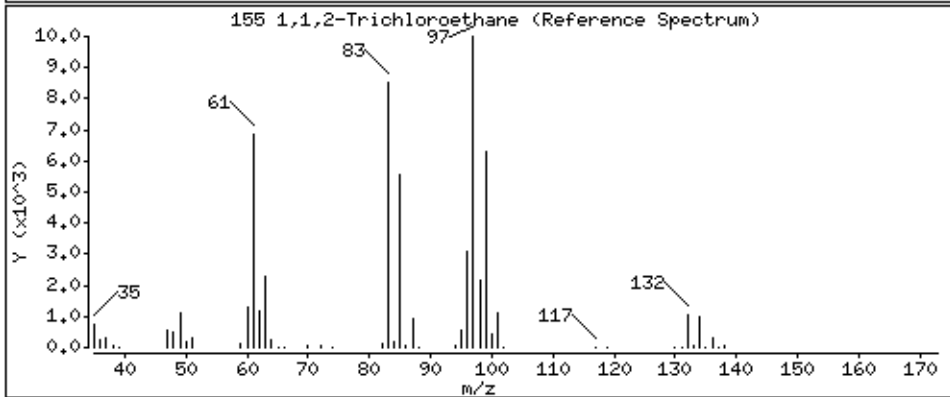
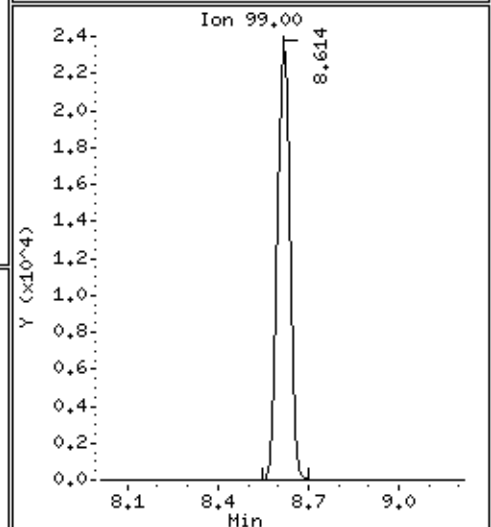
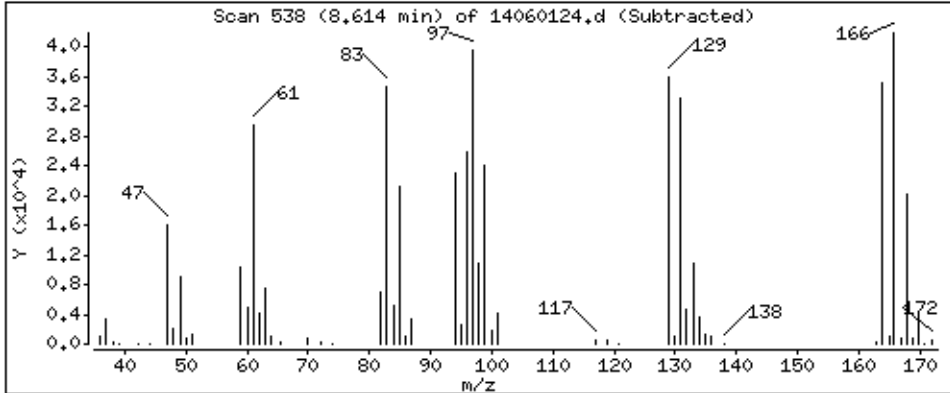
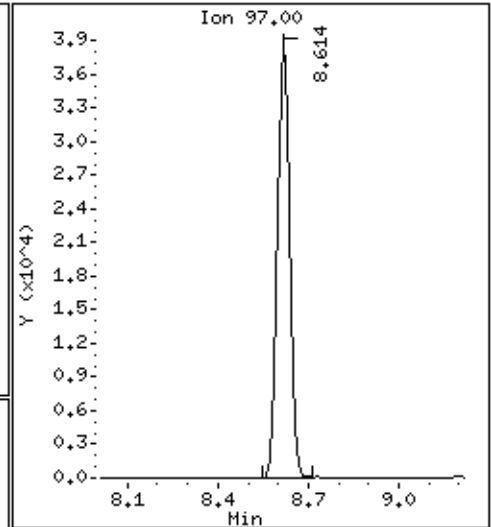
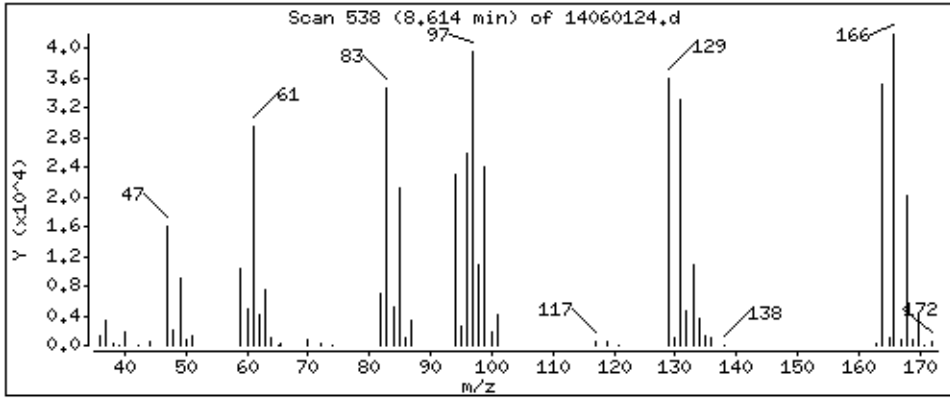
Operator: md

Column phase: RTX-624

Column diameter: 0.18

155 1,1,2-Trichloroethane

Concentration: 191.95 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

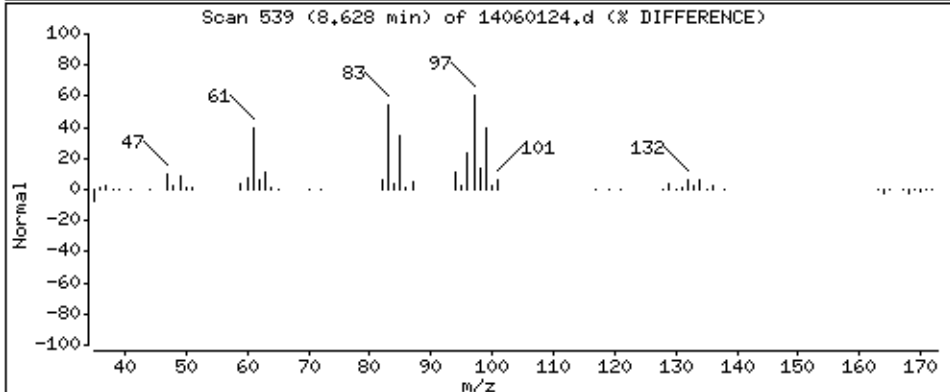
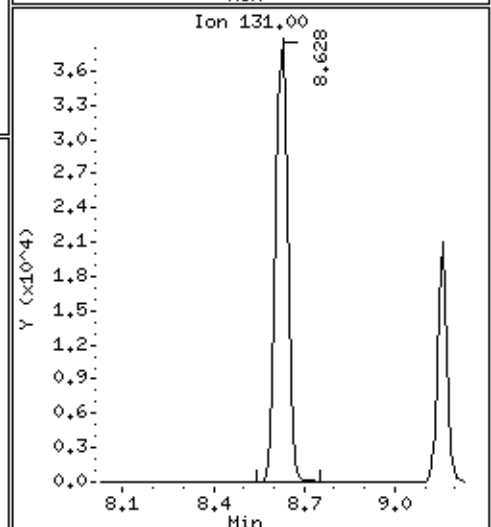
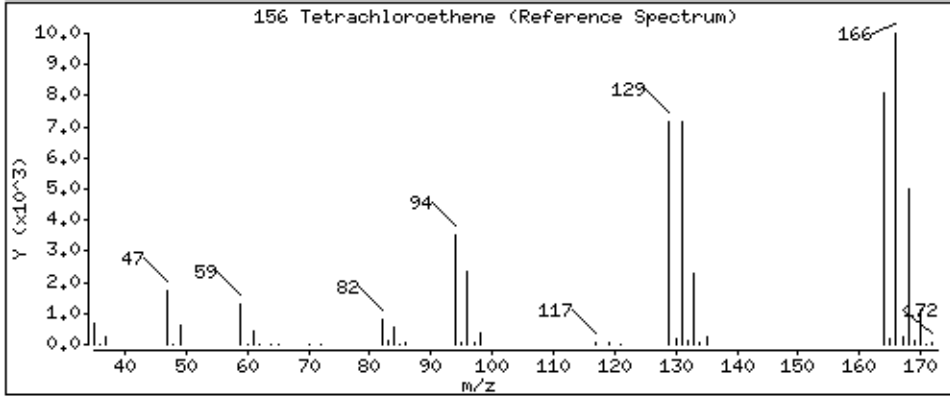
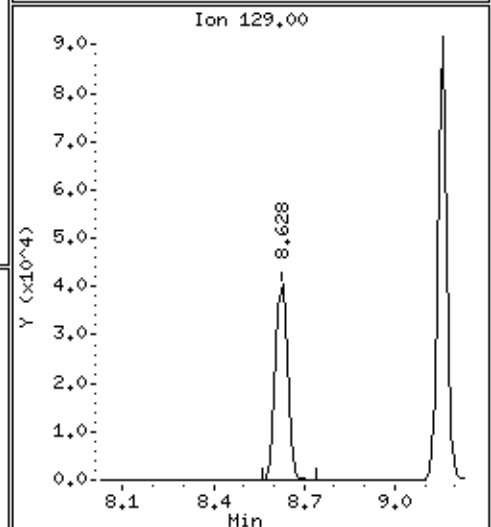
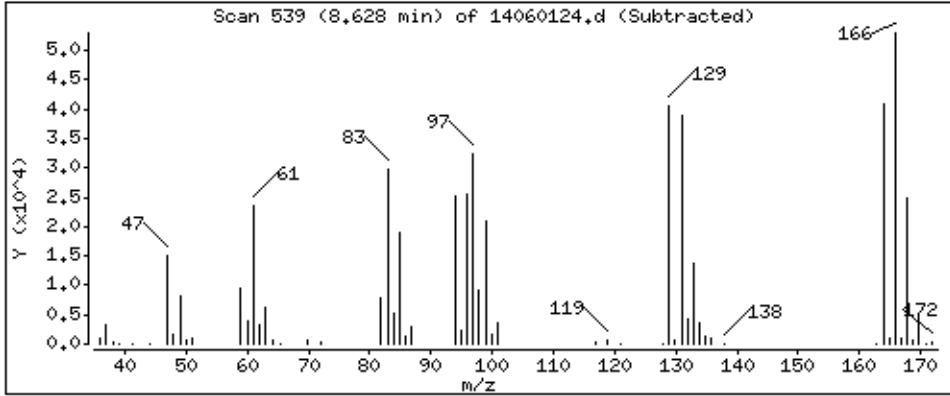
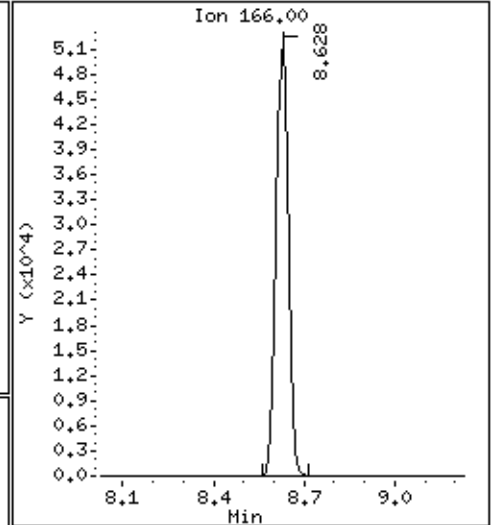
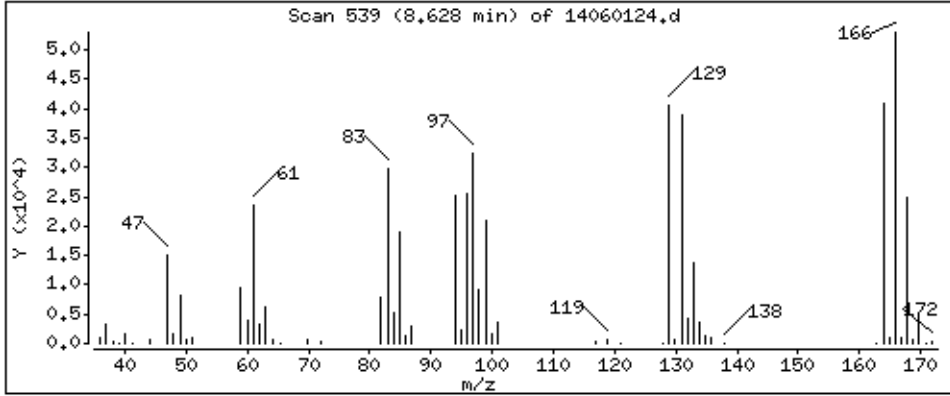
Operator: md

Column phase: RTX-624

Column diameter: 0.18

156 Tetrachloroethene

Concentration: 192.93 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

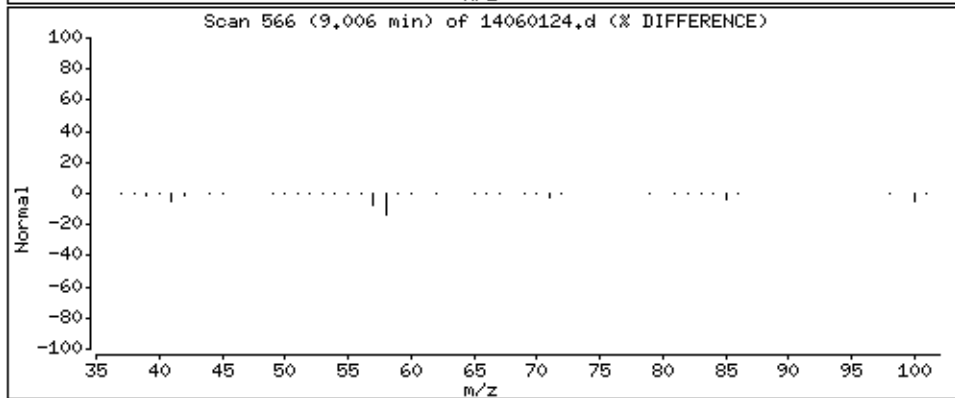
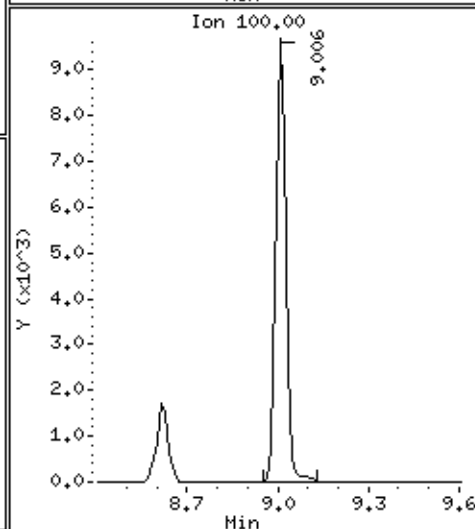
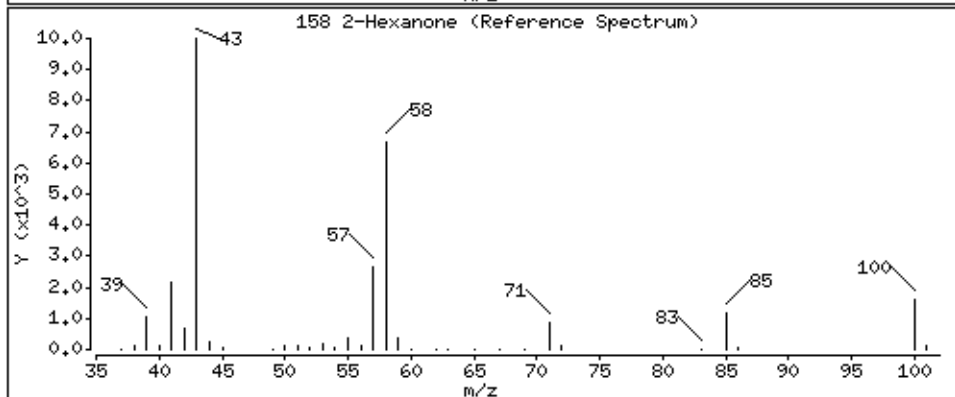
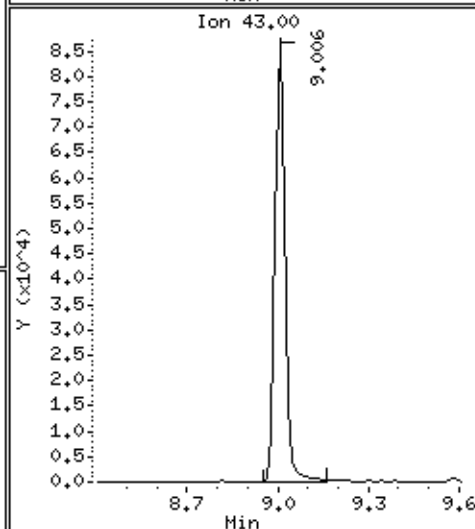
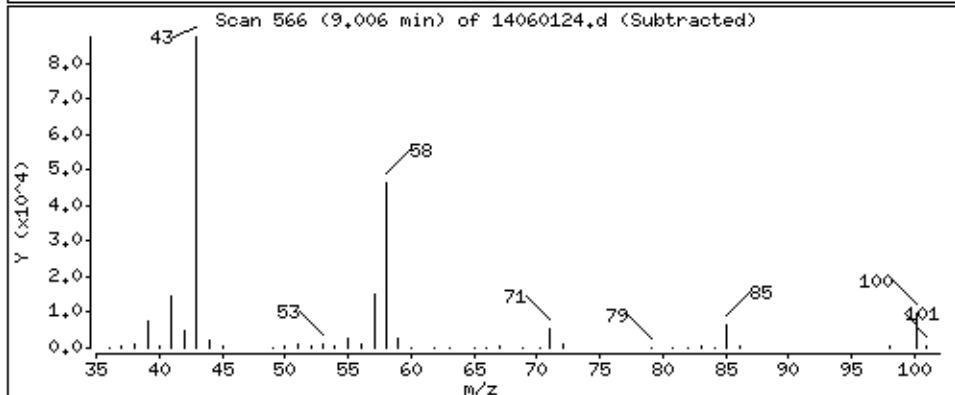
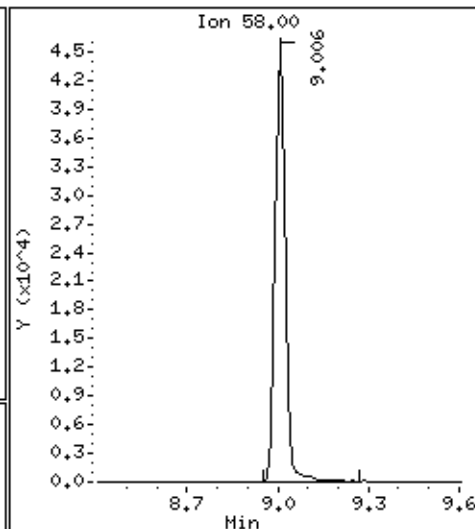
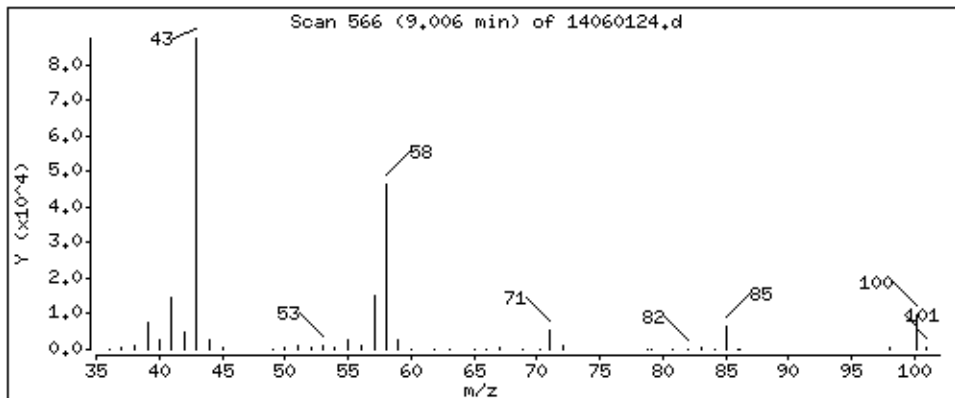
Operator: md

Column phase: RTX-624

Column diameter: 0.18

158 2-Hexanone

Concentration: 208.60 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

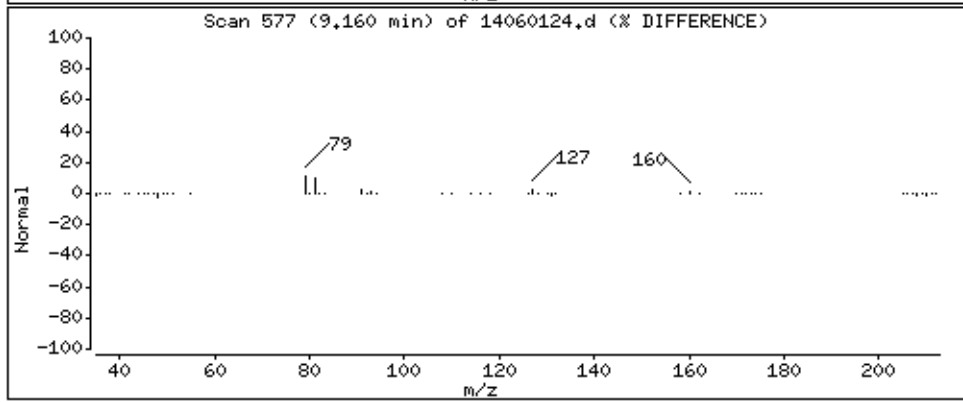
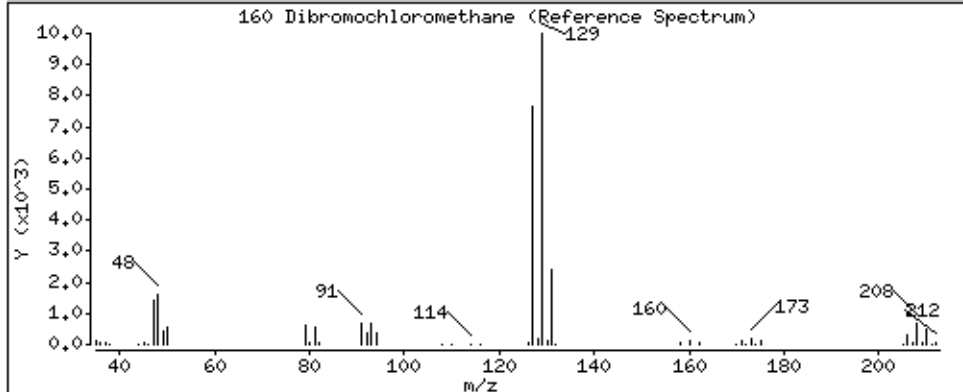
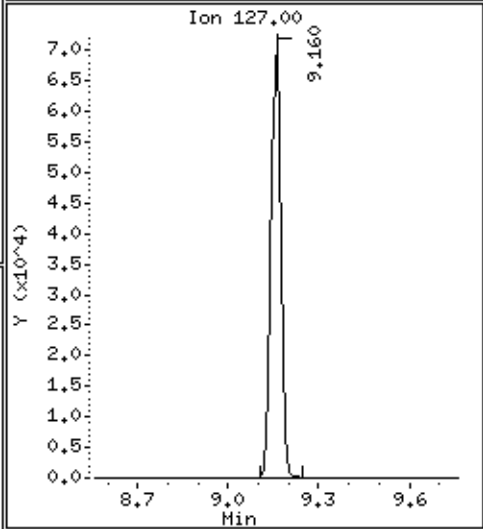
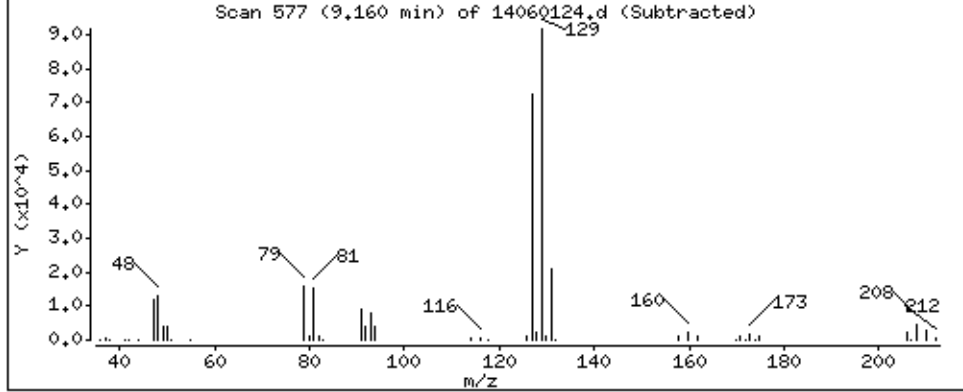
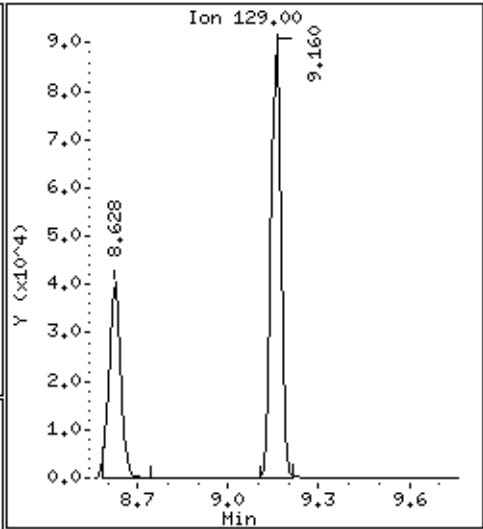
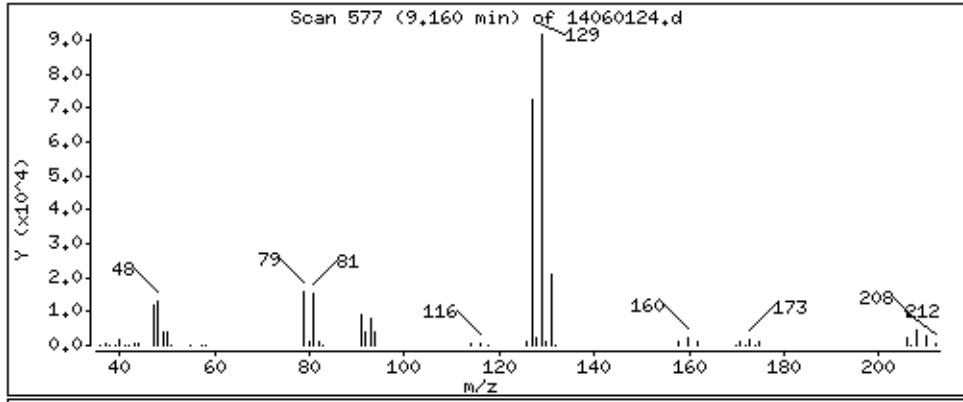
Operator: md

Column phase: RTX-624

Column diameter: 0.18

160 Dibromochloromethane

Concentration: 200.48 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

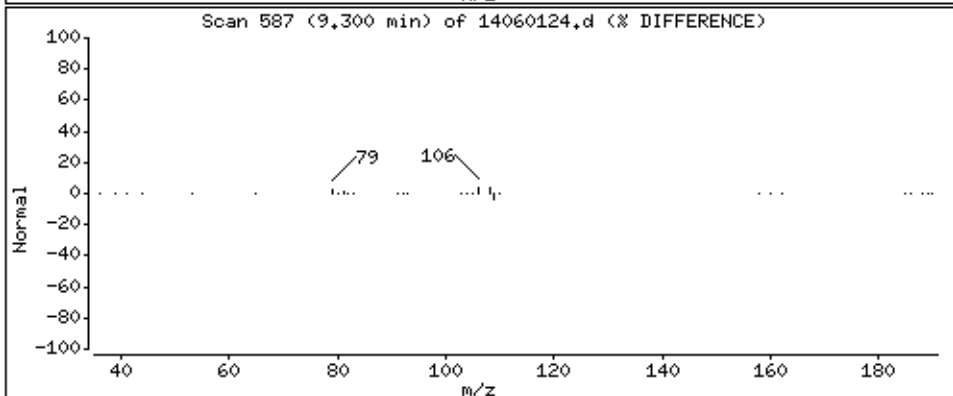
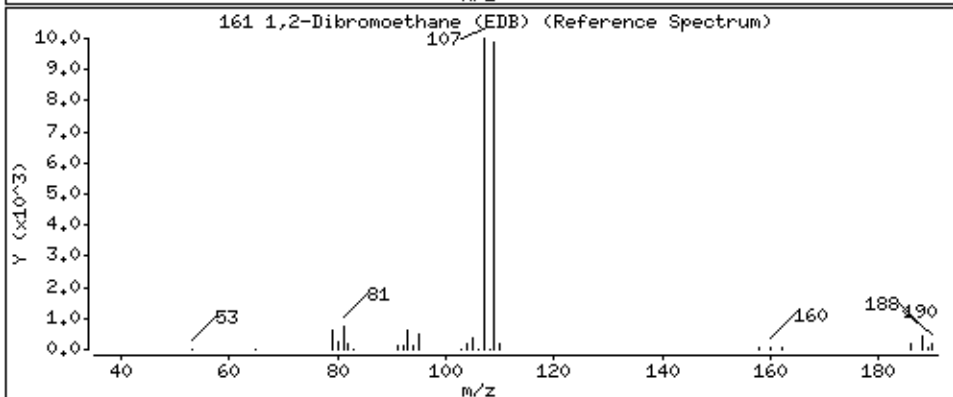
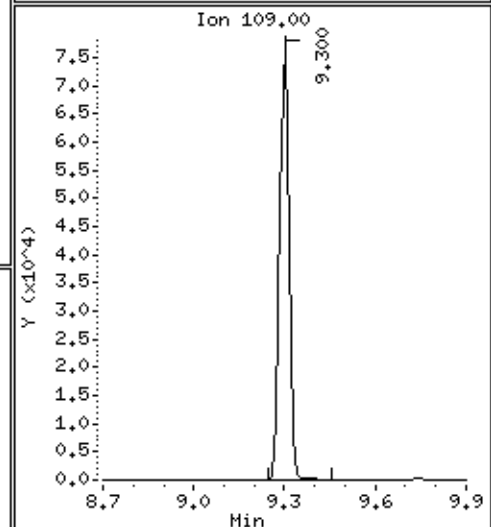
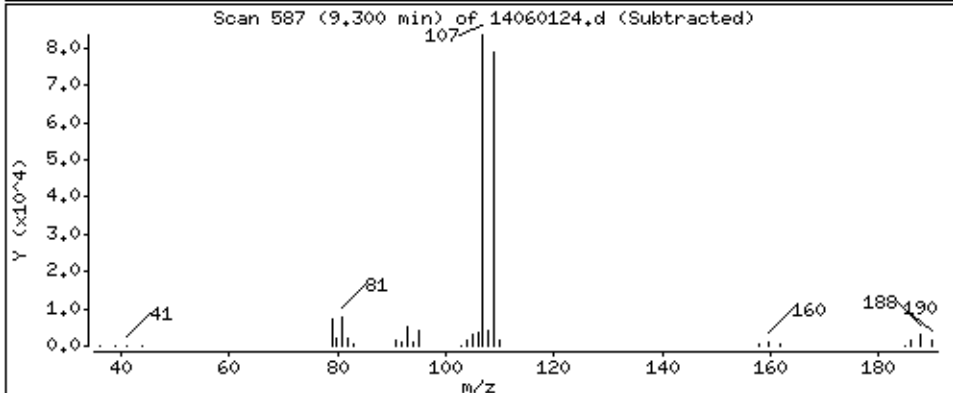
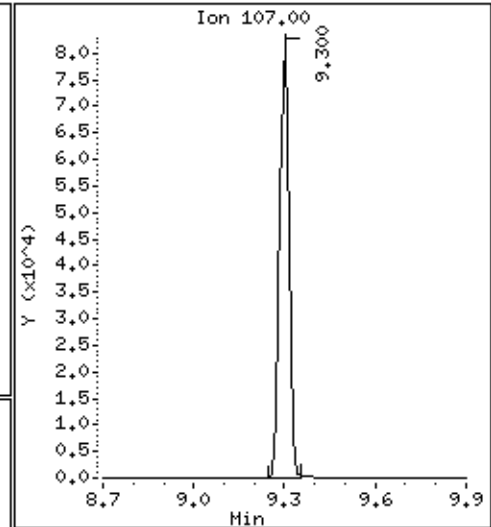
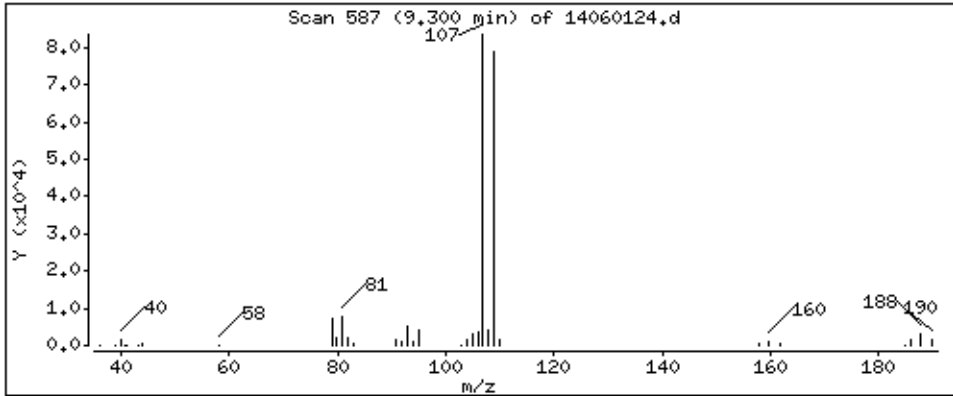
Operator: md

Column phase: RTX-624

Column diameter: 0.18

161 1,2-Dibromoethane (EDB)

Concentration: 198.50 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

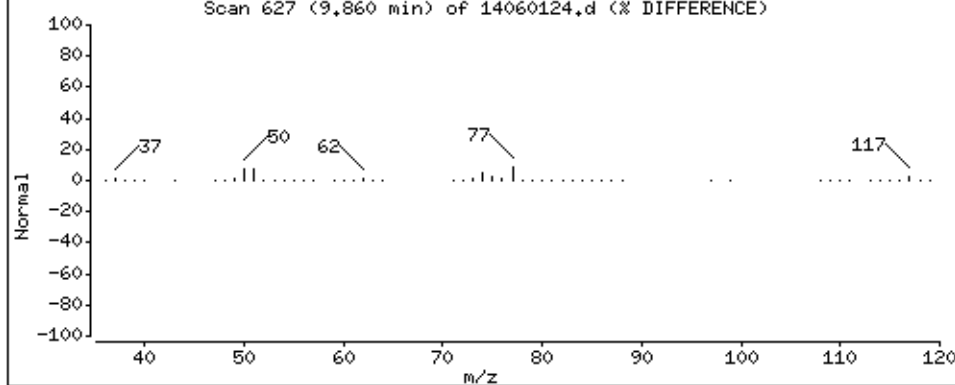
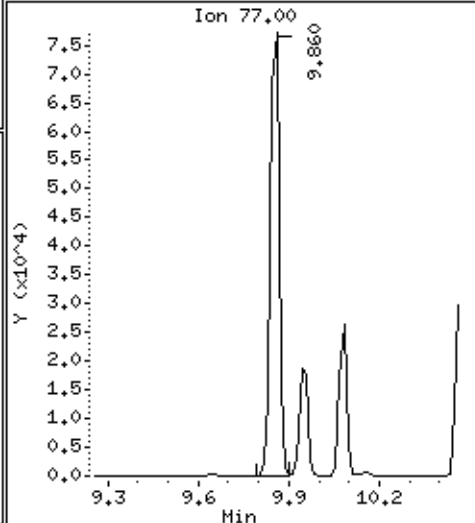
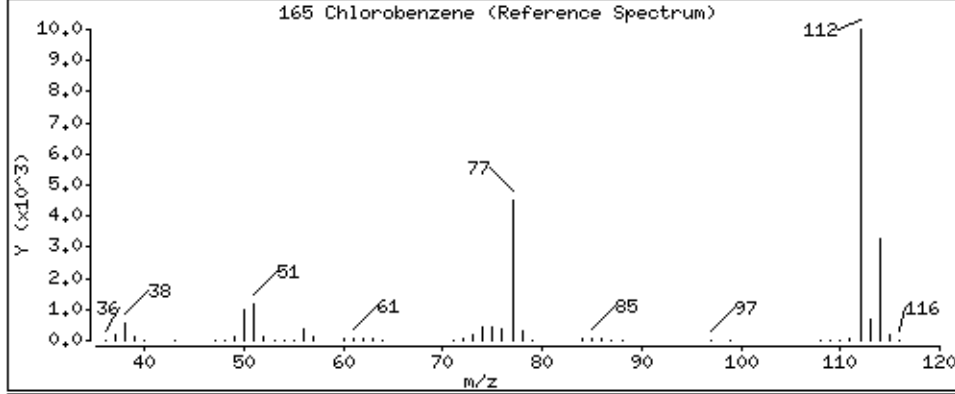
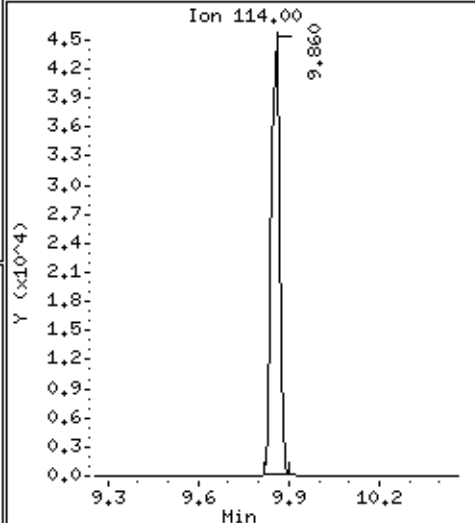
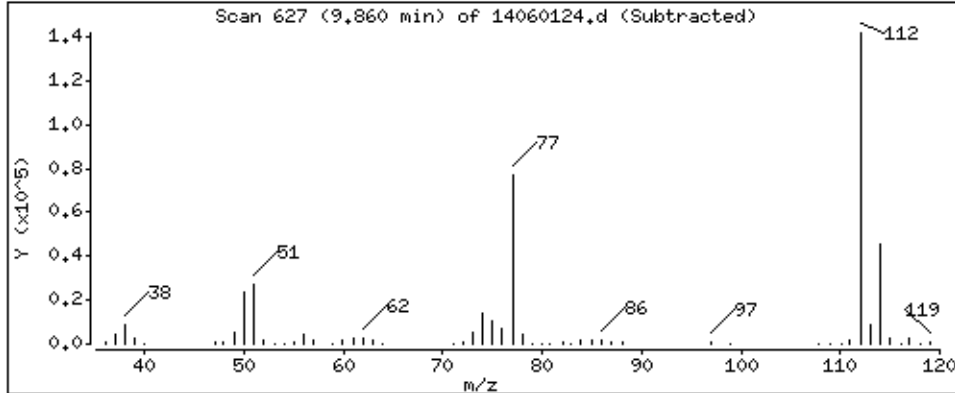
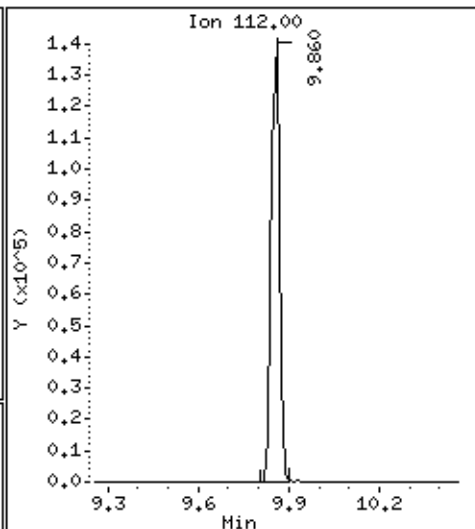
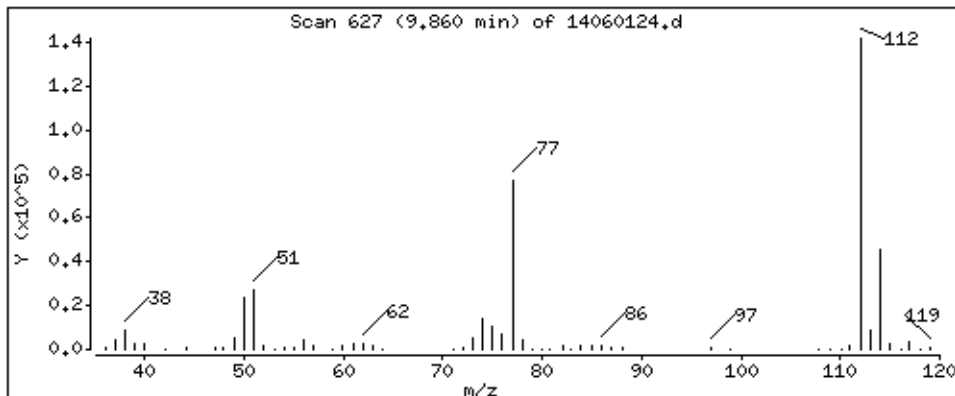
Operator: md

Column phase: RTX-624

Column diameter: 0.18

165 Chlorobenzene

Concentration: 192.44 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

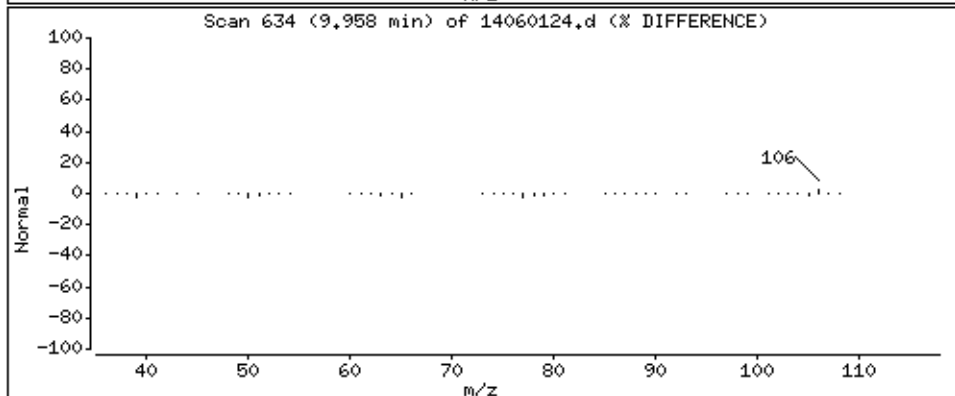
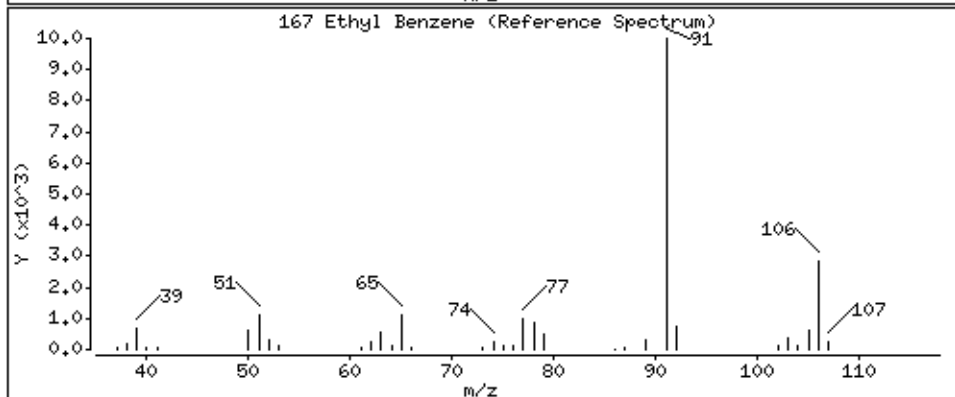
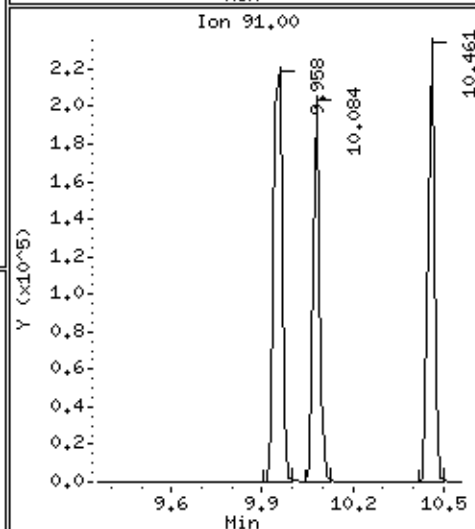
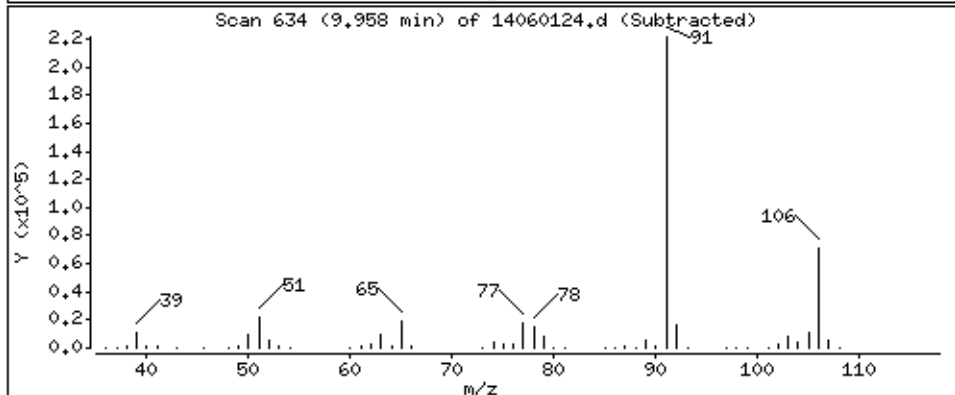
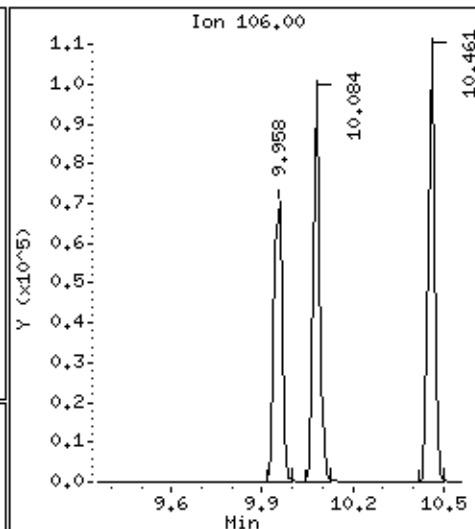
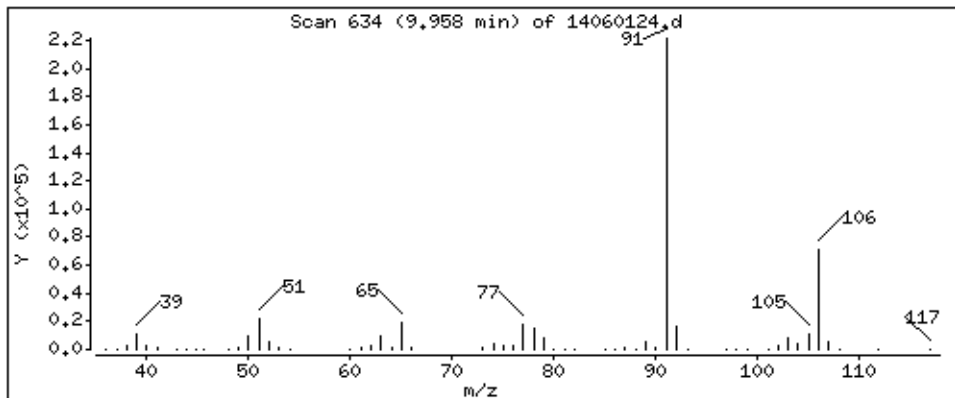
Operator: md

Column phase: RTX-624

Column diameter: 0.18

167 Ethyl Benzene

Concentration: 200.62 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

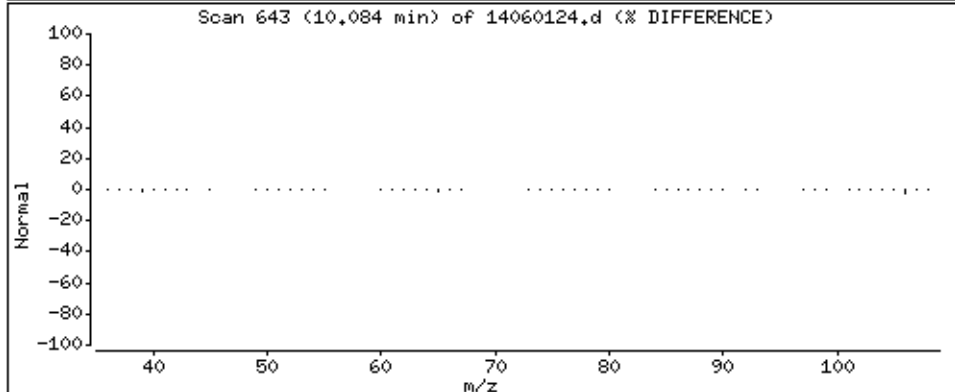
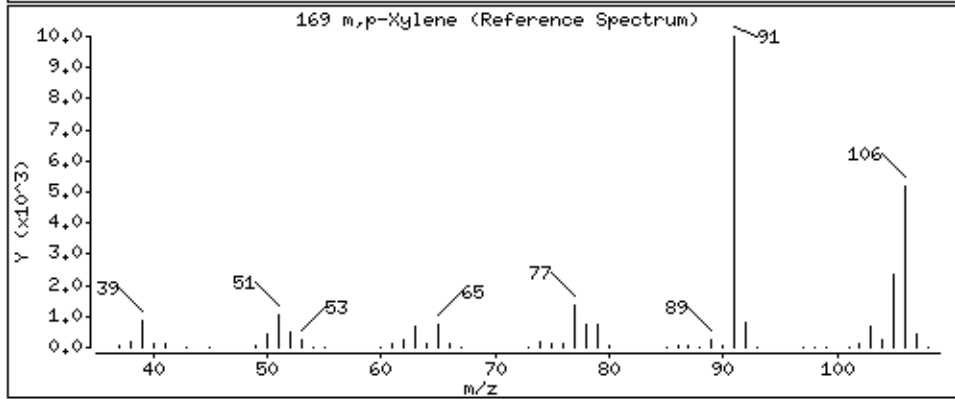
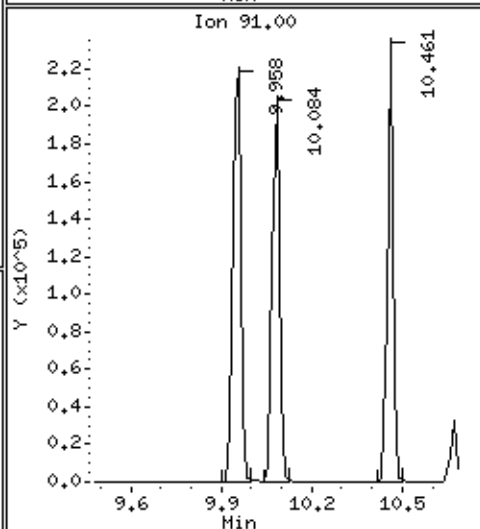
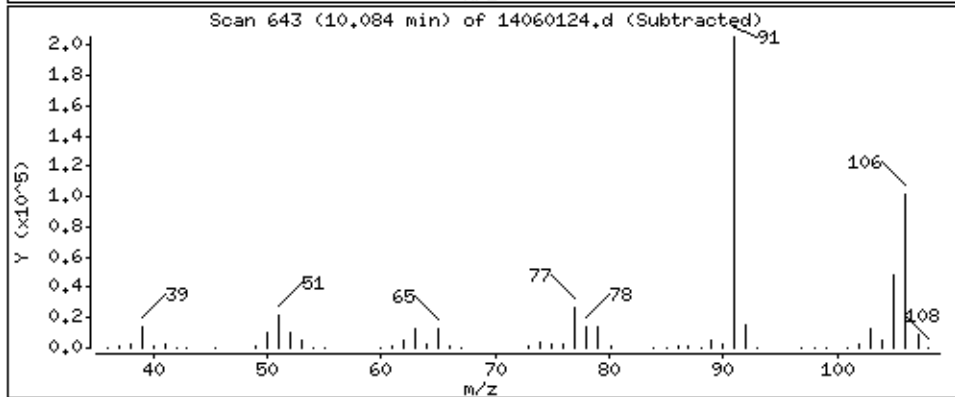
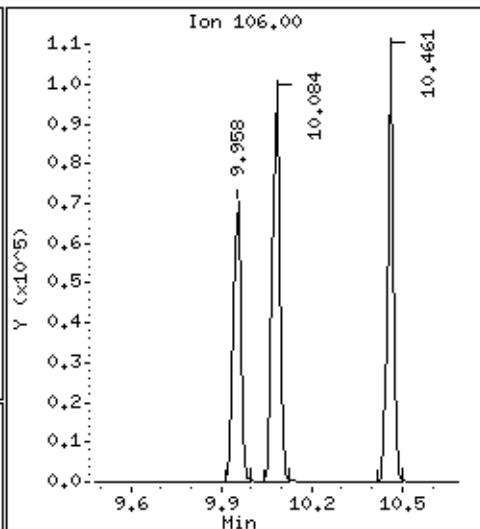
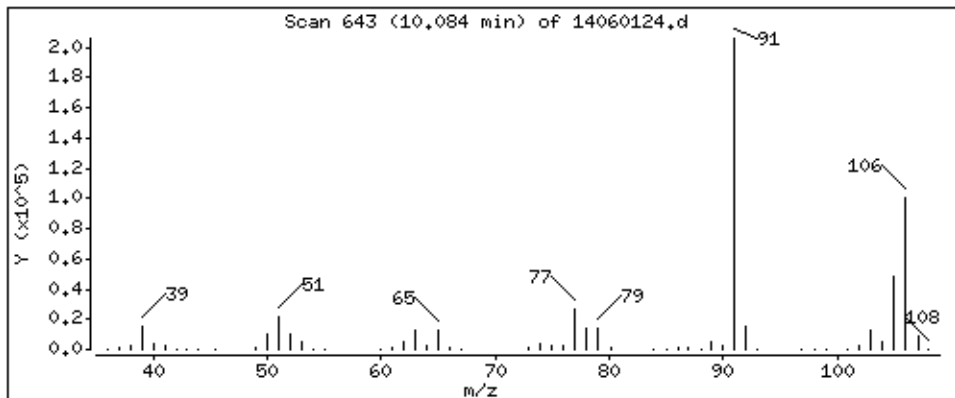
Operator: md

Column phase: RTX-624

Column diameter: 0.18

169 m,p-Xylene

Concentration: 200.10 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

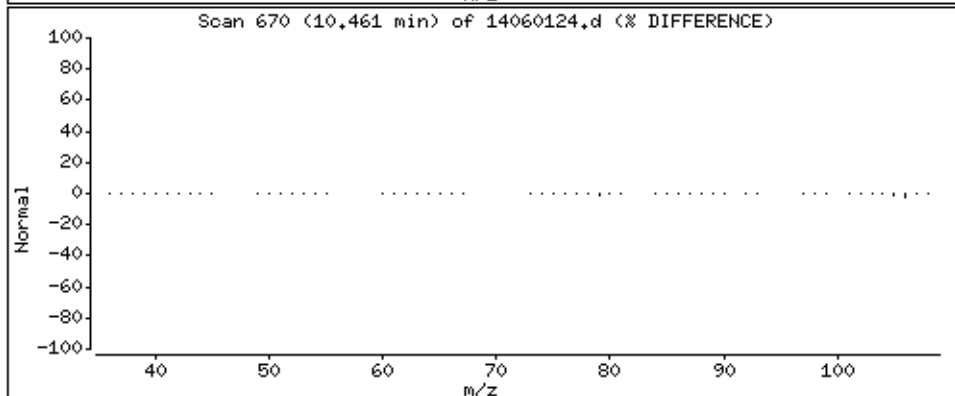
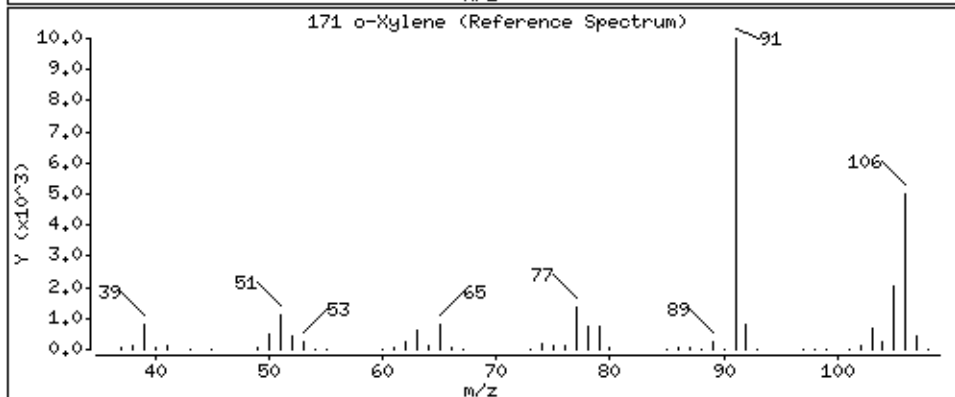
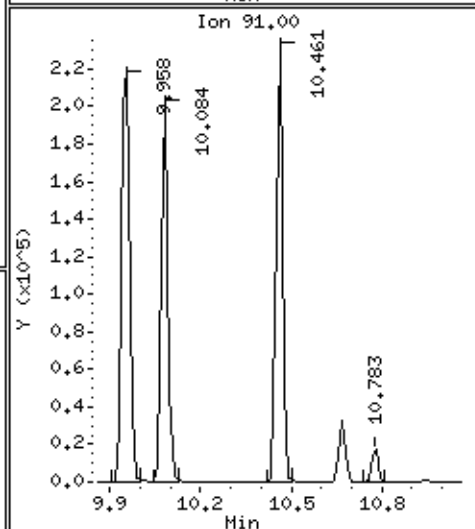
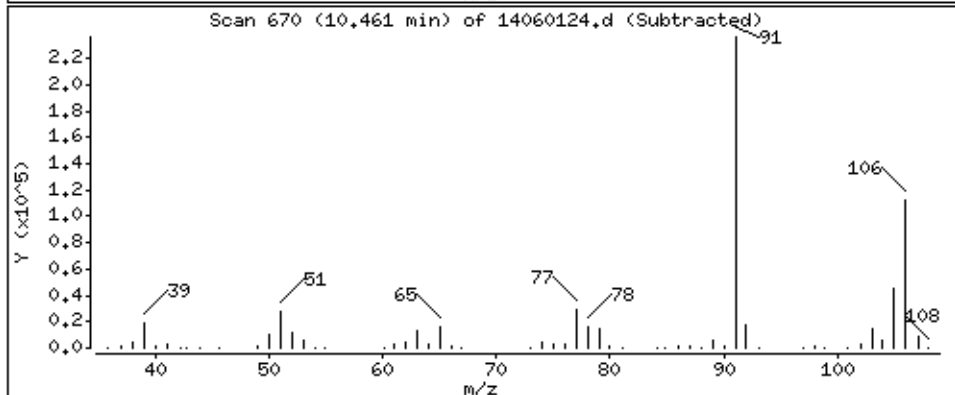
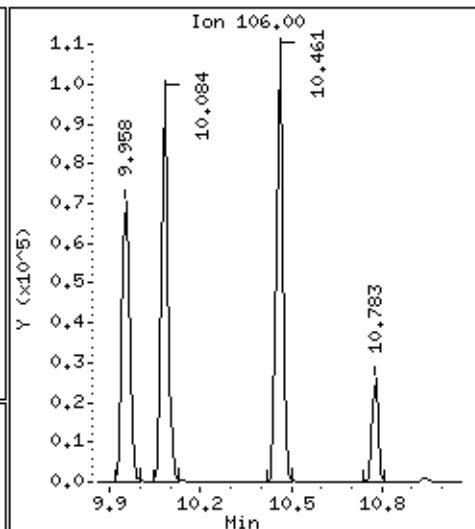
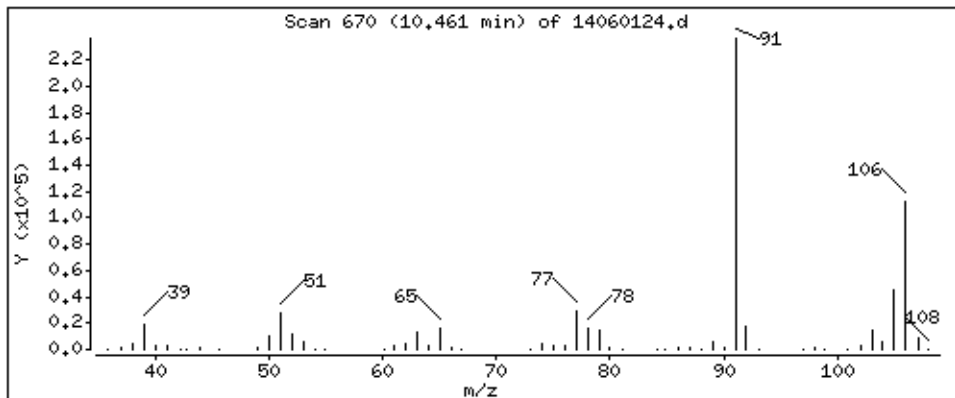
Operator: md

Column phase: RTX-624

Column diameter: 0.18

171 o-Xylene

Concentration: 207.58 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

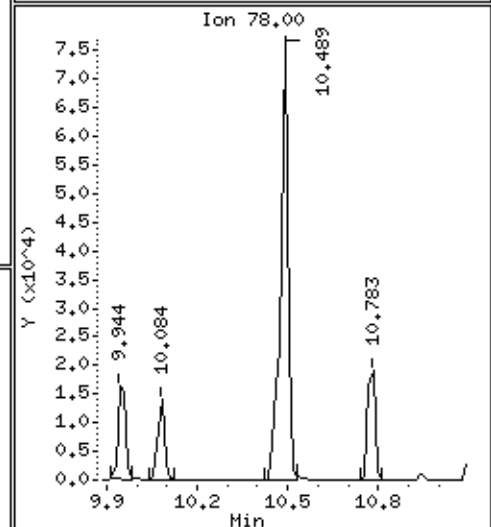
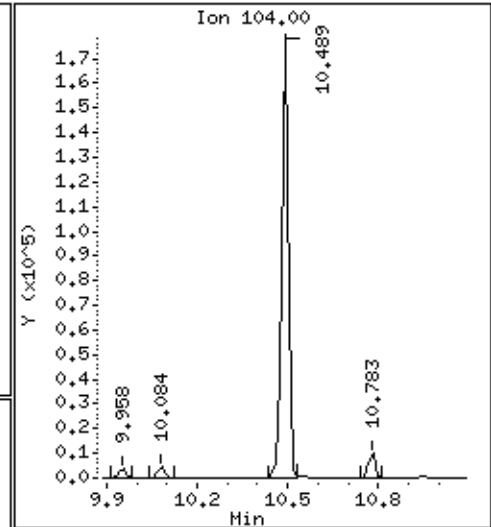
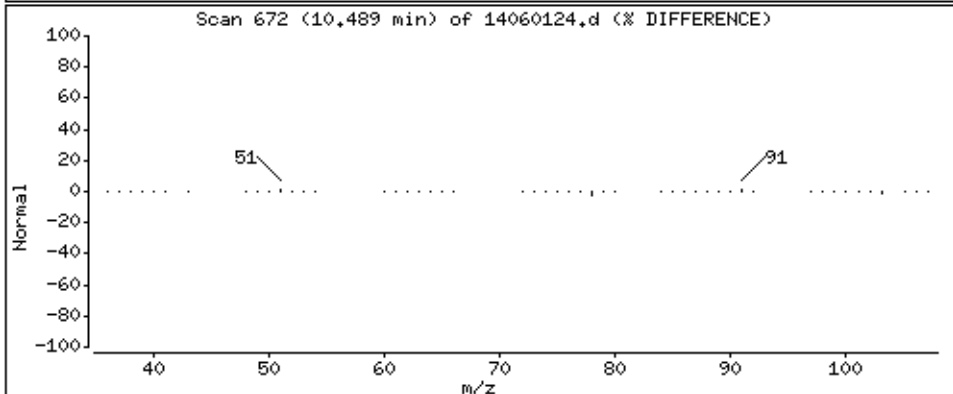
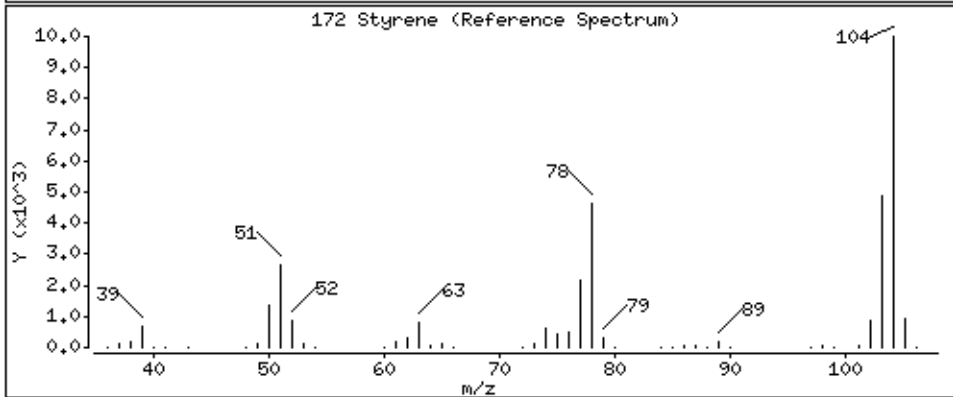
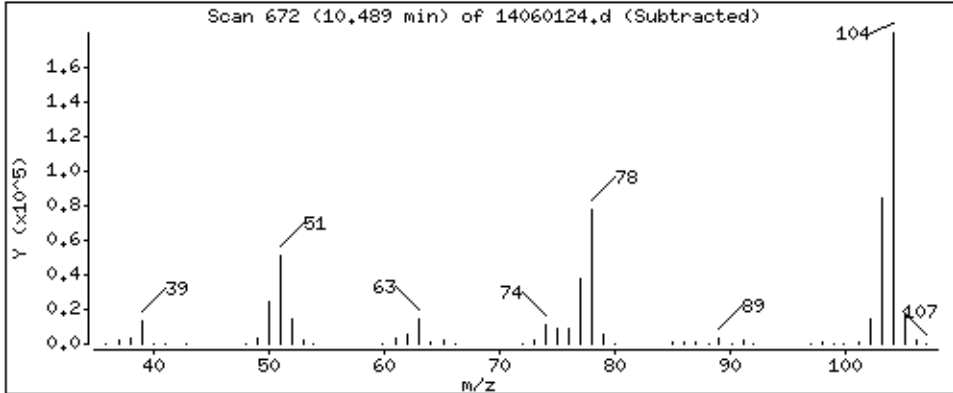
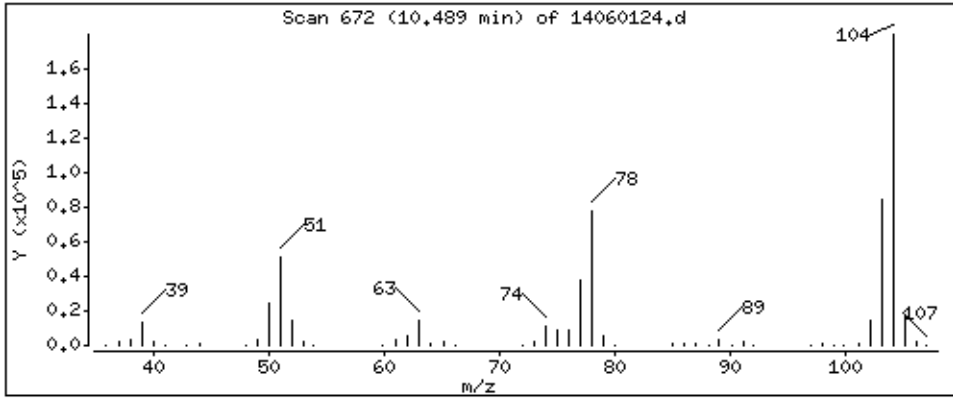
Operator: md

Column phase: RTX-624

Column diameter: 0.18

172 Styrene

Concentration: 212.86 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

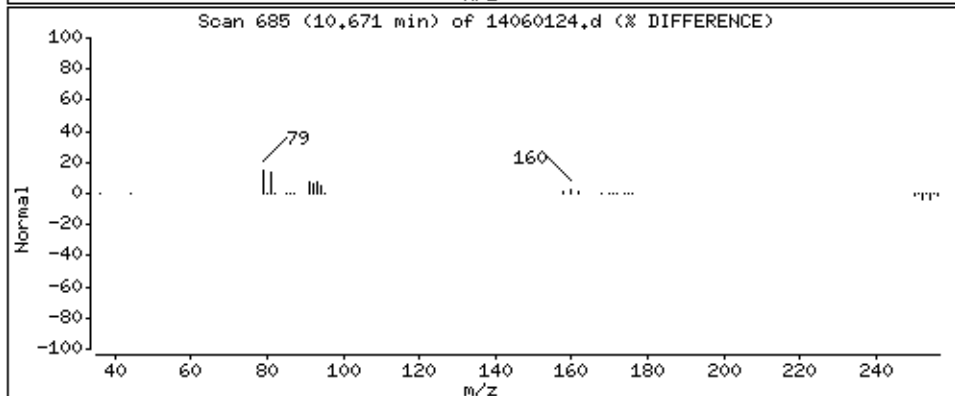
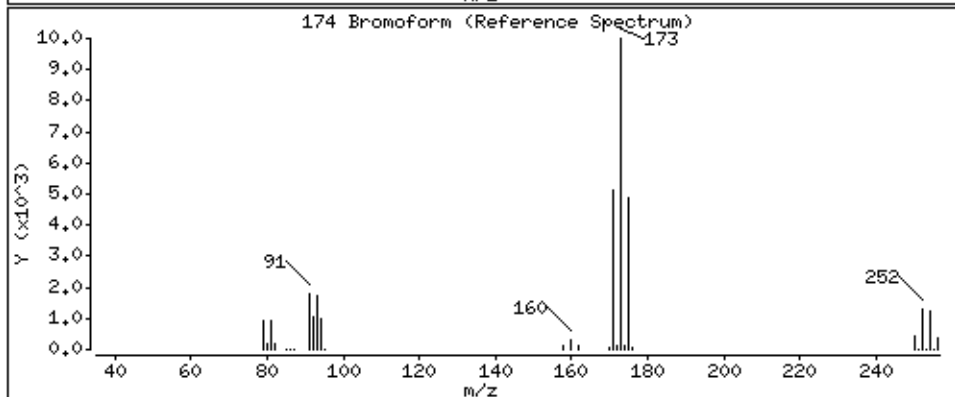
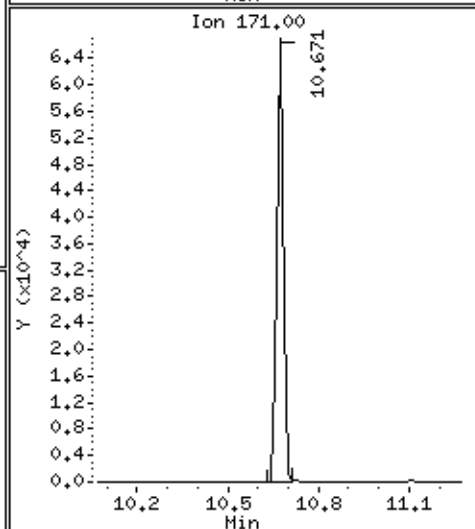
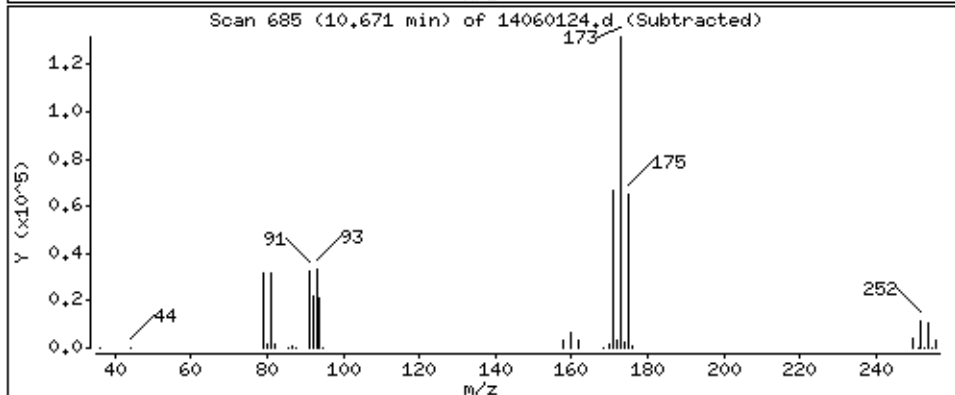
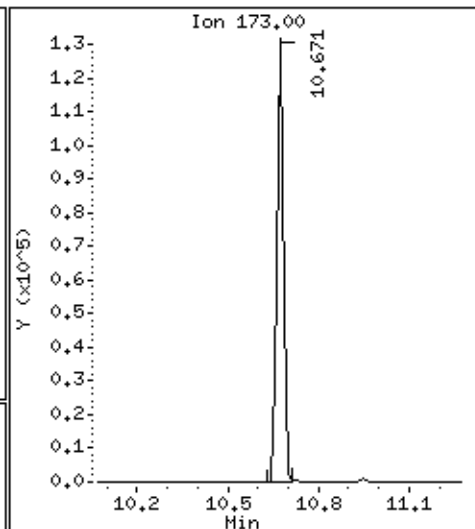
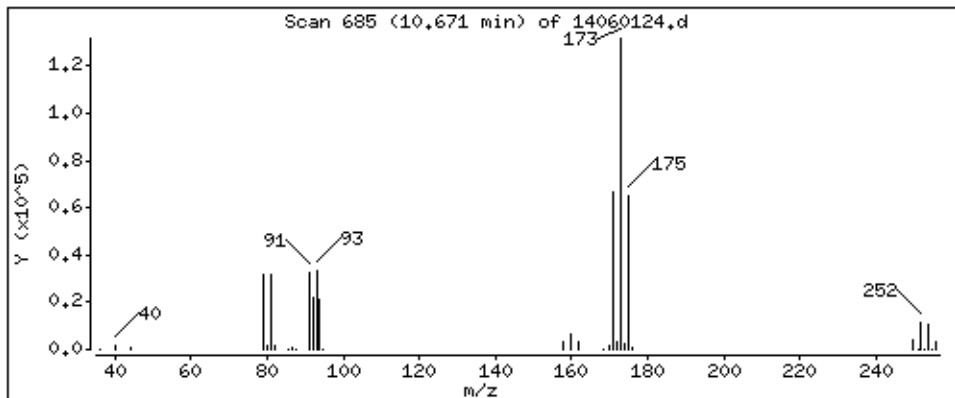
Operator: md

Column phase: RTX-624

Column diameter: 0.18

174 Bromoform

Concentration: 202.30 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

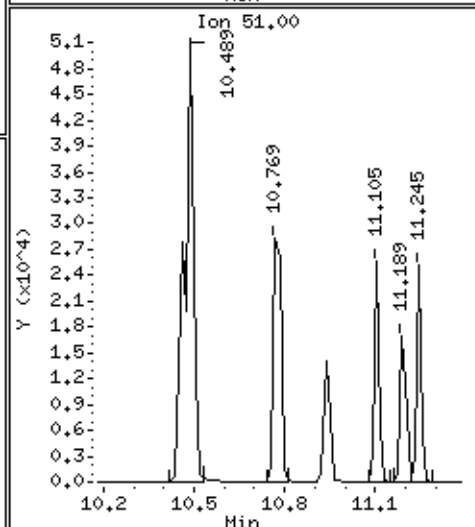
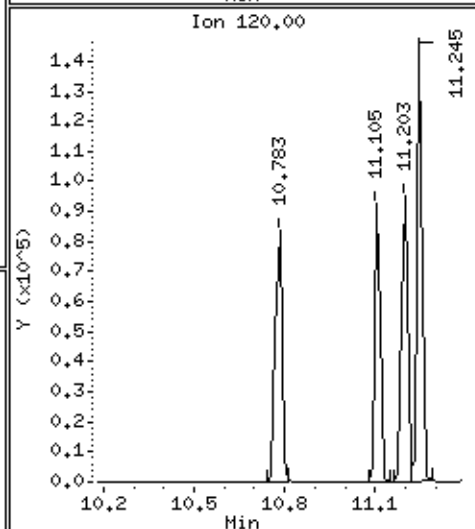
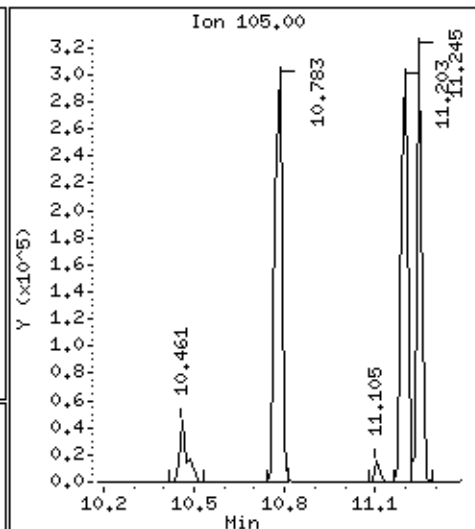
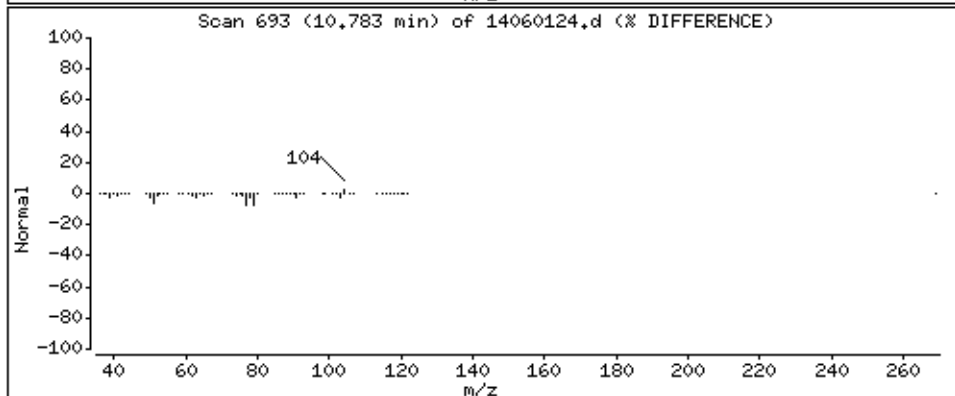
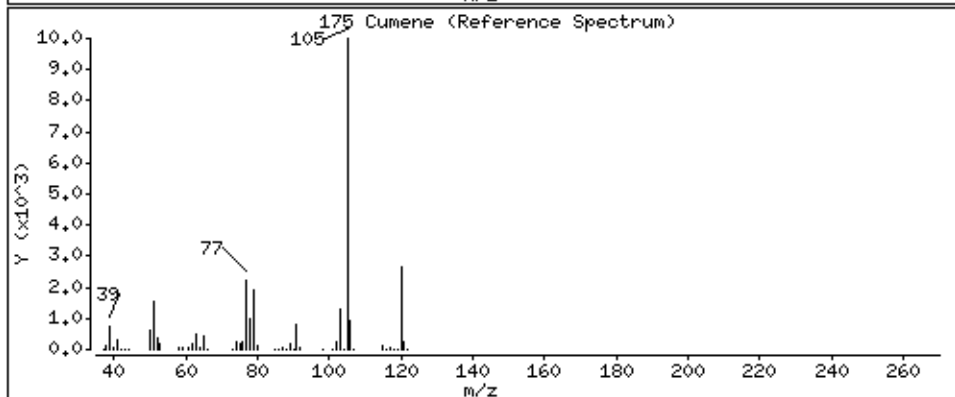
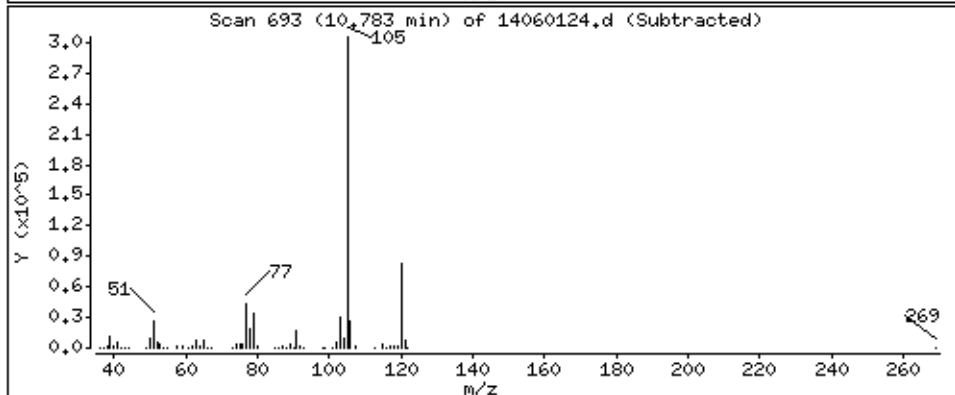
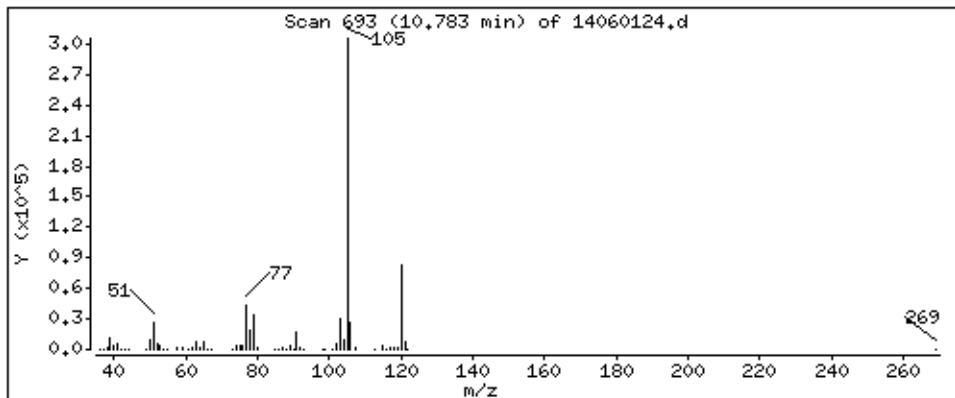
Operator: md

Column phase: RTX-624

Column diameter: 0.18

175 Cumene

Concentration: 204.04 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

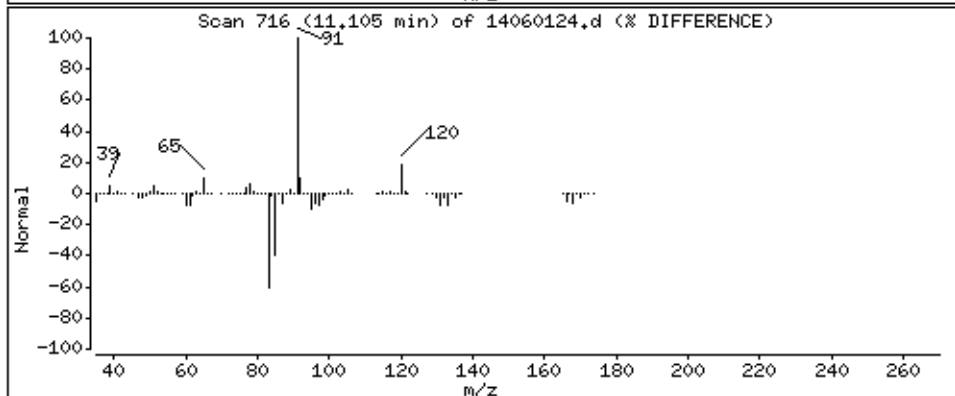
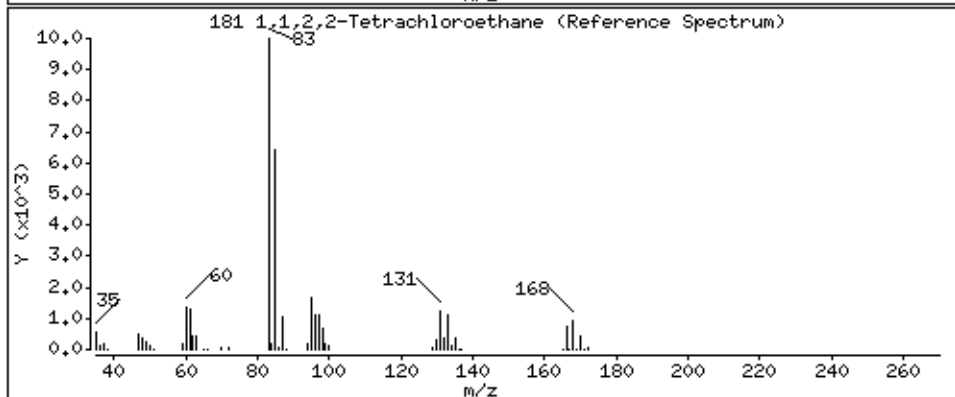
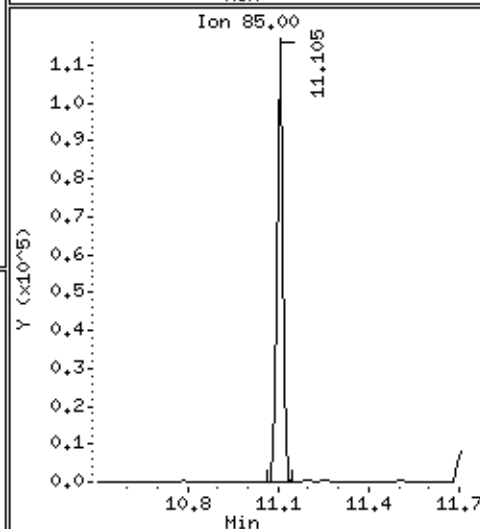
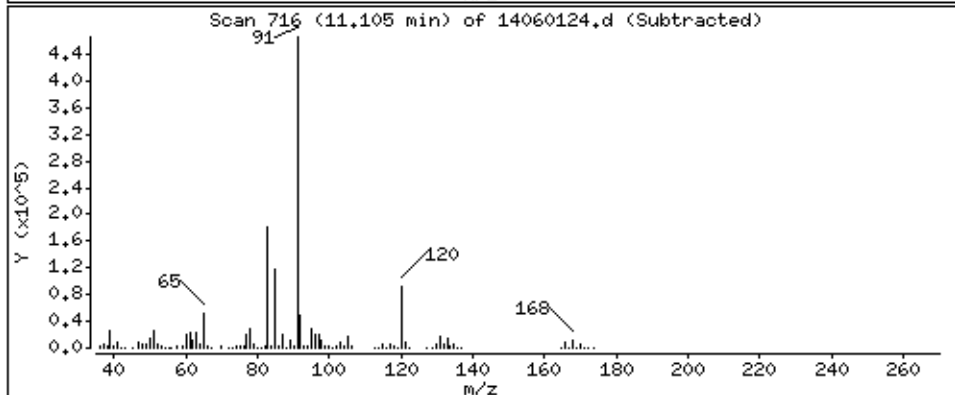
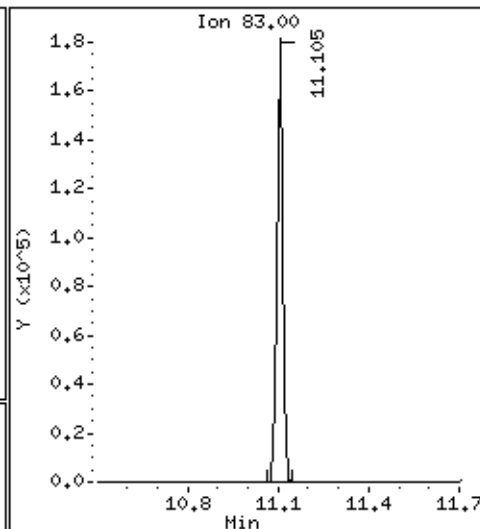
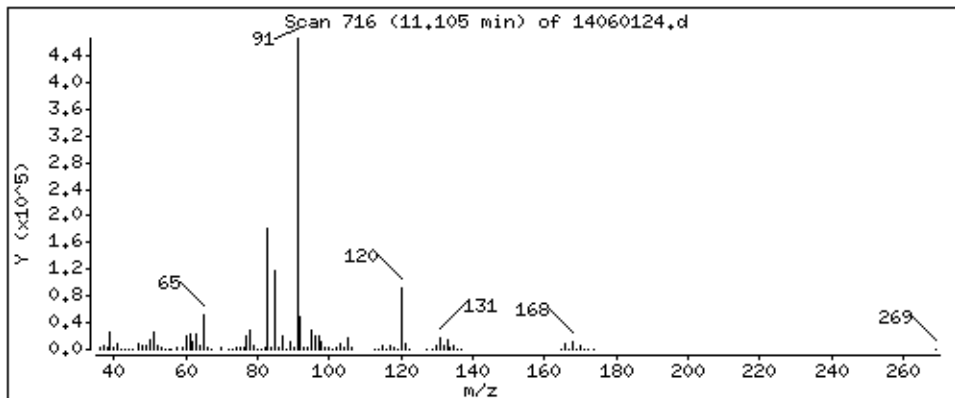
Operator: md

Column phase: RTX-624

Column diameter: 0.18

181 1,1,2,2-Tetrachloroethane

Concentration: 182.76 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

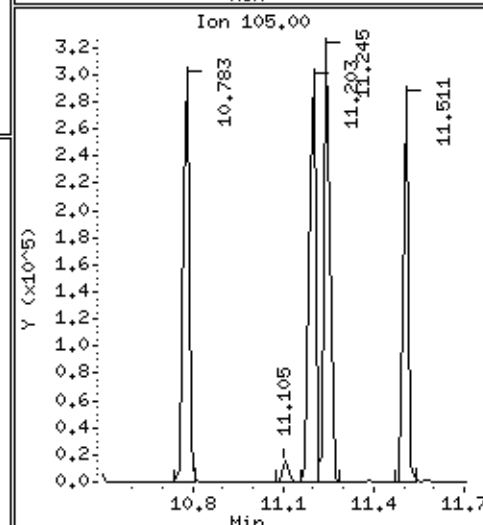
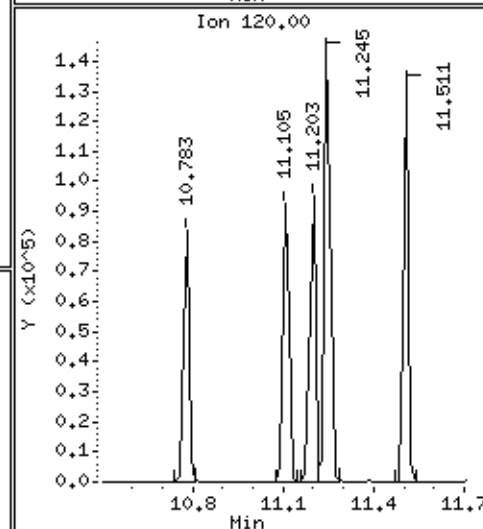
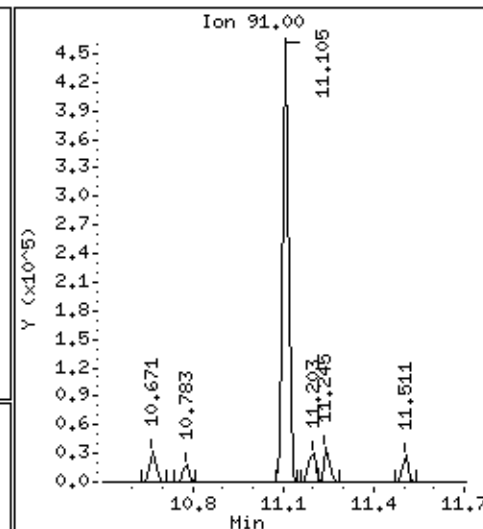
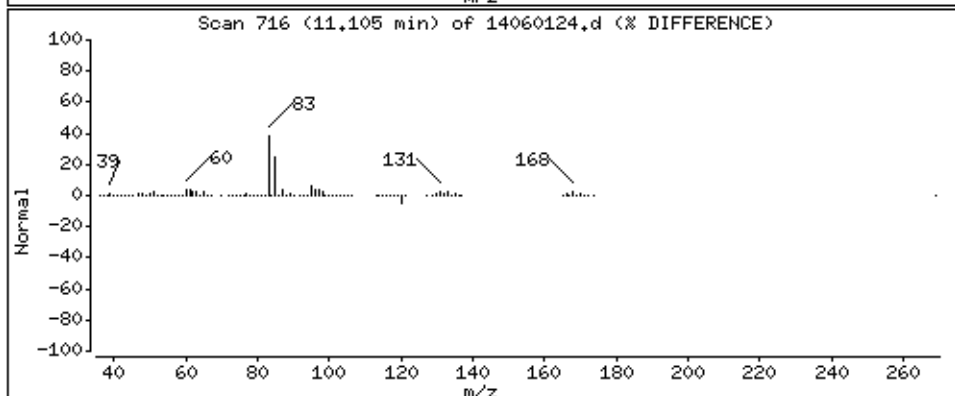
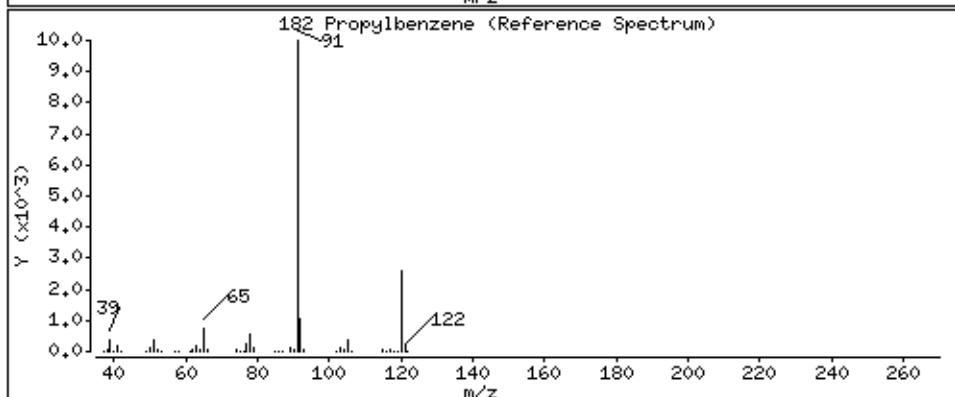
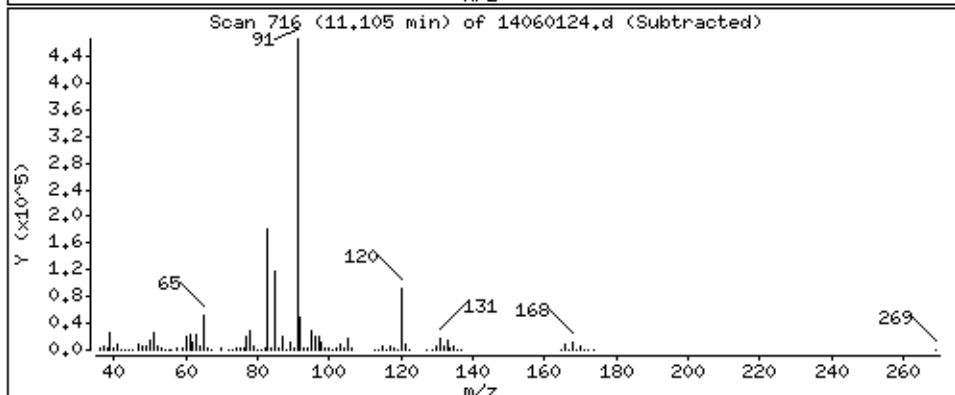
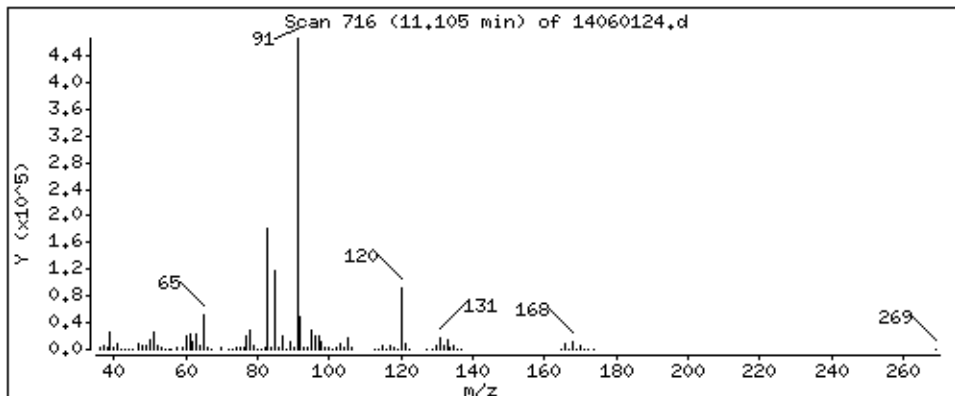
Operator: md

Column phase: RTX-624

Column diameter: 0.18

182 Propylbenzene

Concentration: 207.09 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

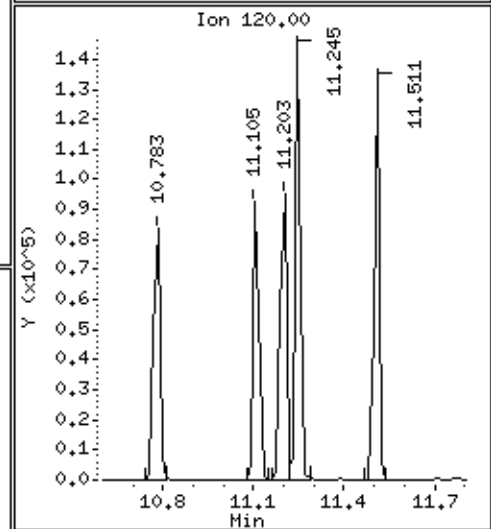
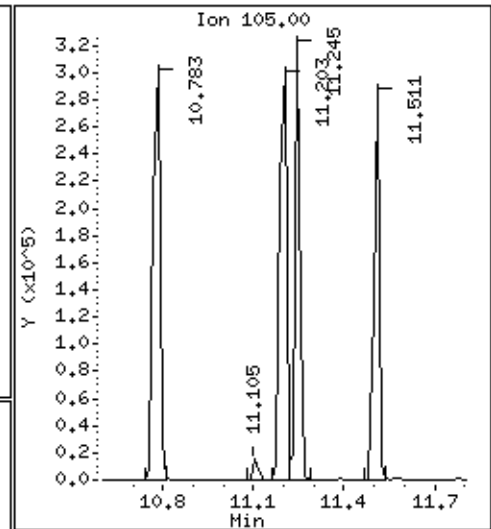
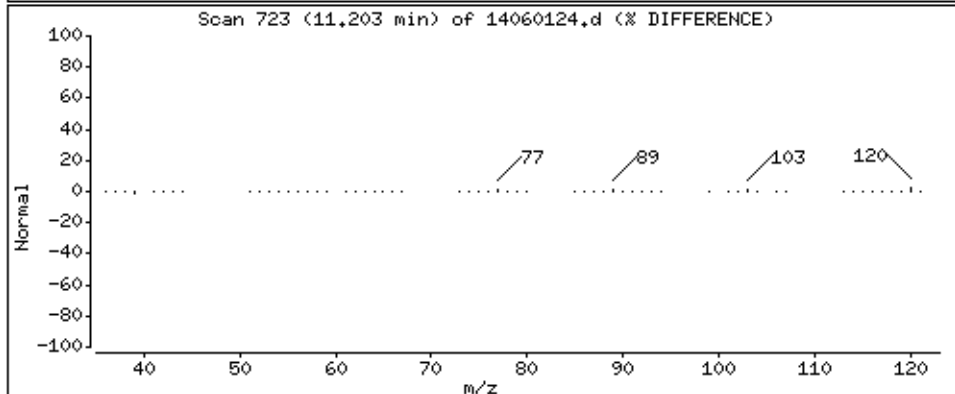
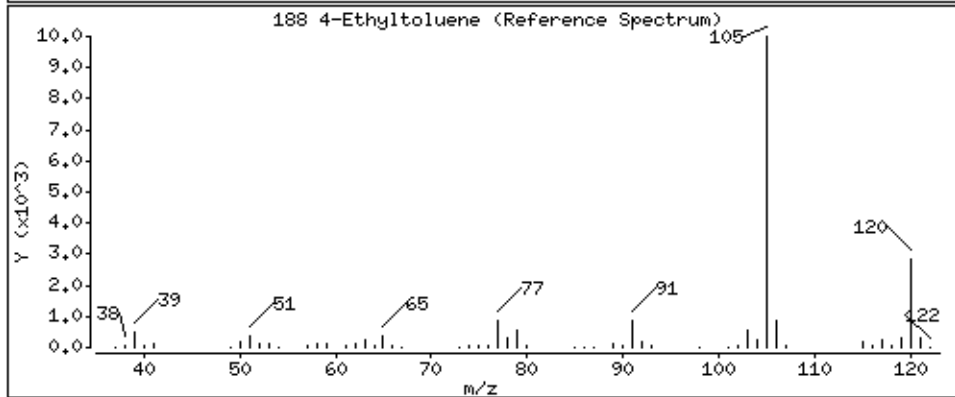
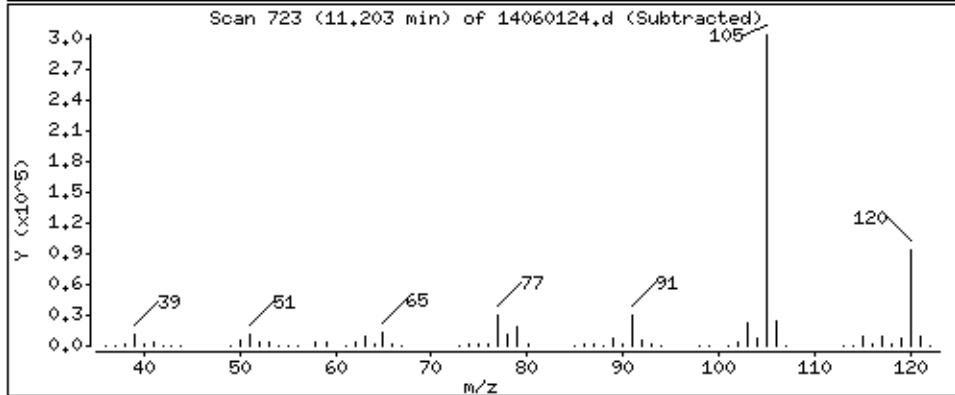
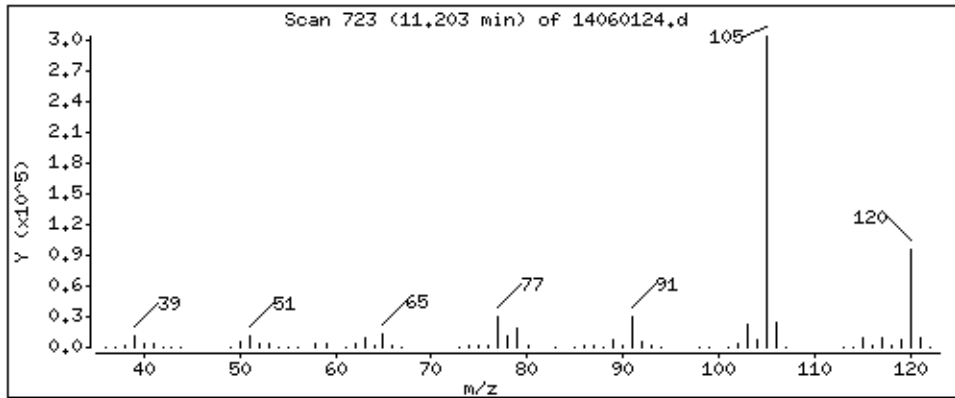
Operator: md

Column phase: RTX-624

Column diameter: 0.18

188 4-Ethyltoluene

Concentration: 208.64 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

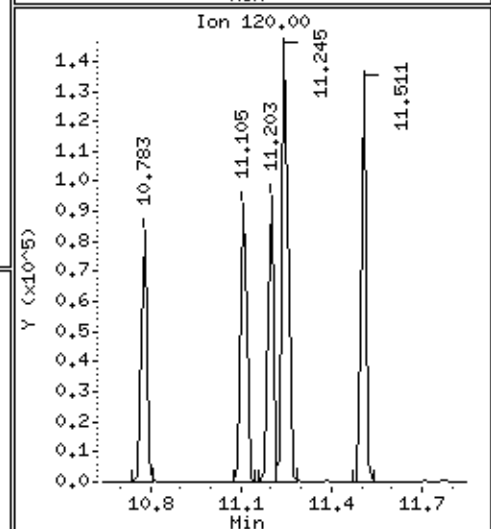
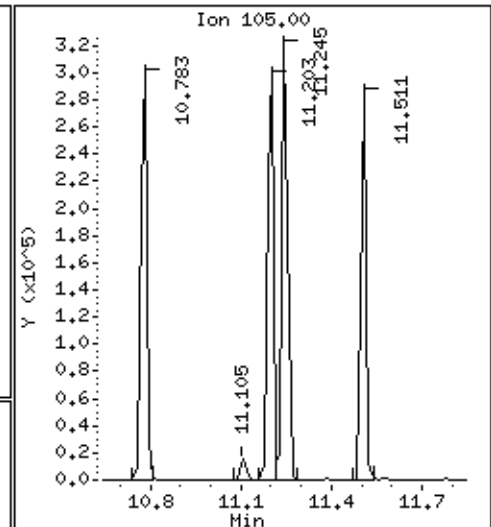
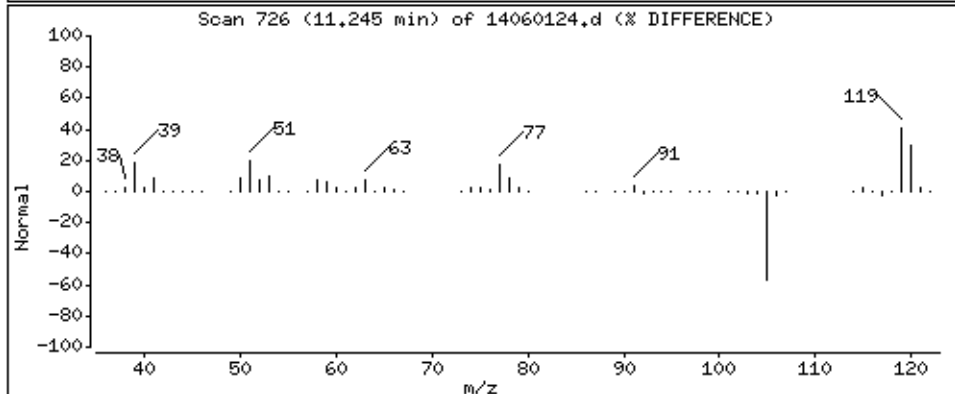
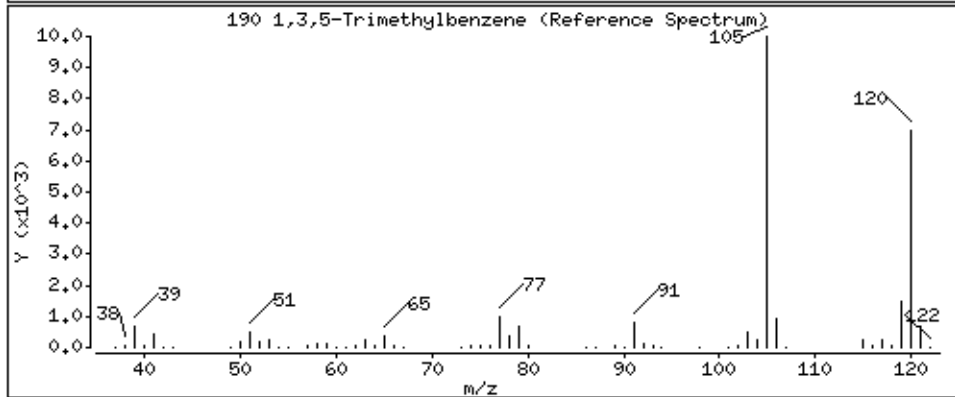
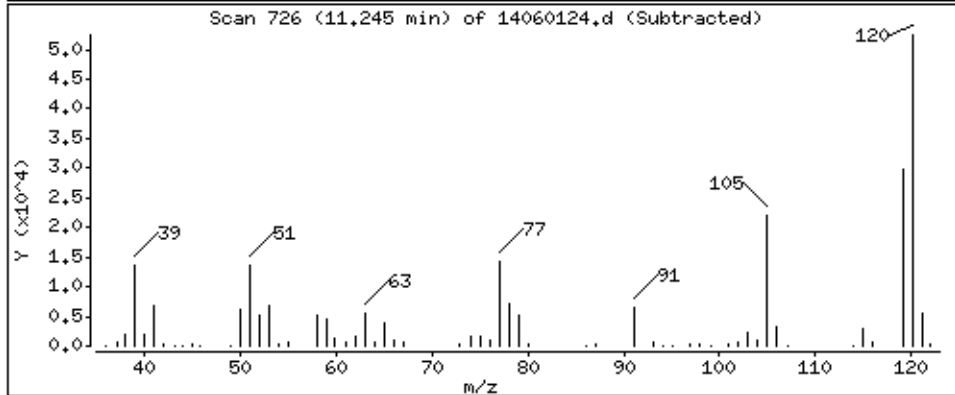
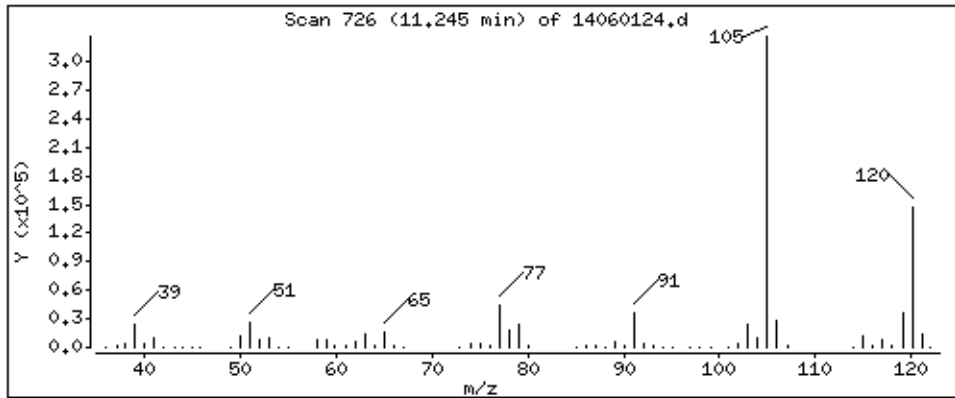
Operator: md

Column phase: RTX-624

Column diameter: 0.18

190 1,3,5-Trimethylbenzene

Concentration: 213.93 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

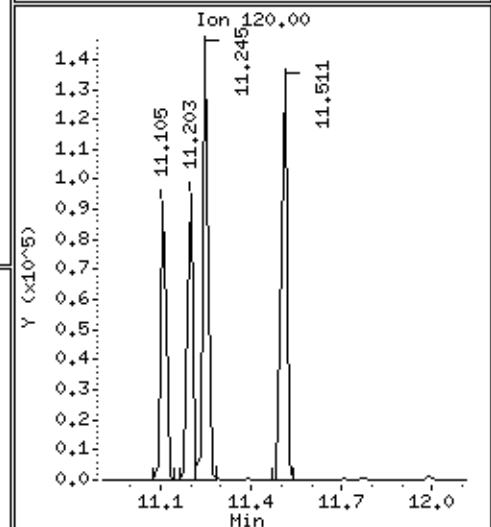
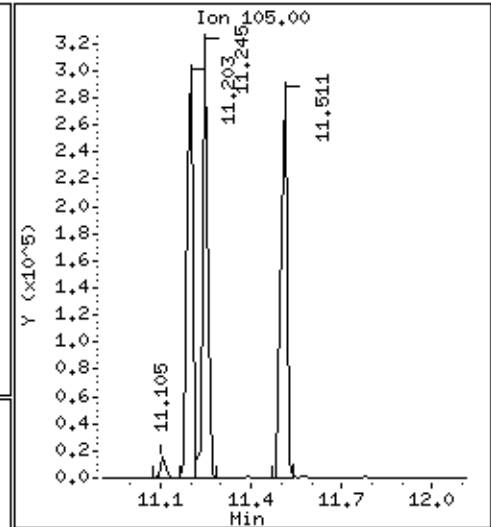
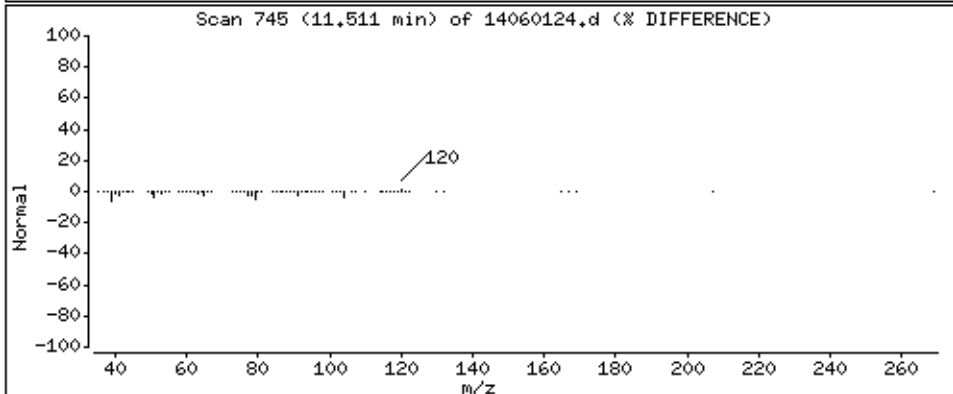
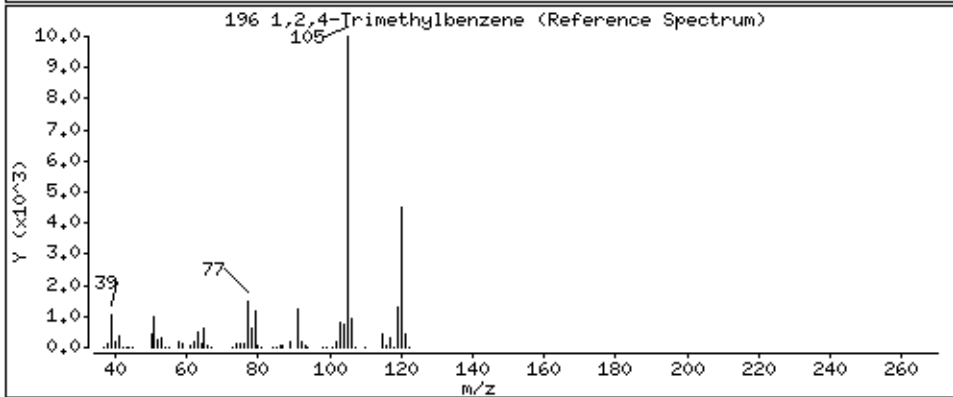
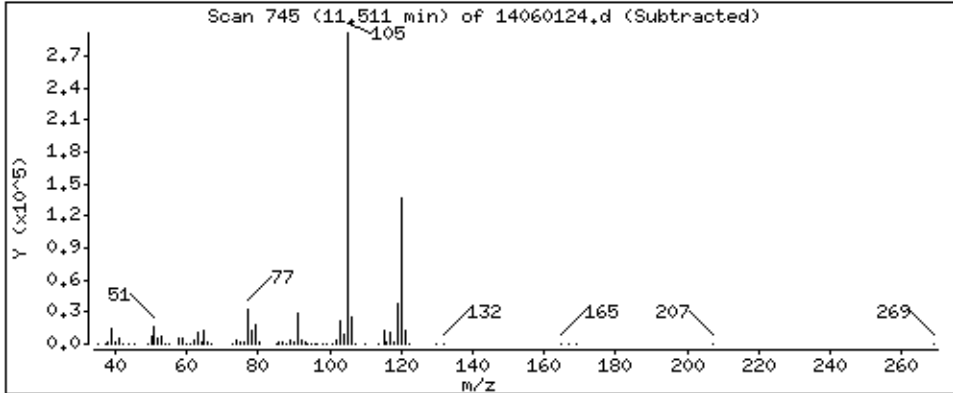
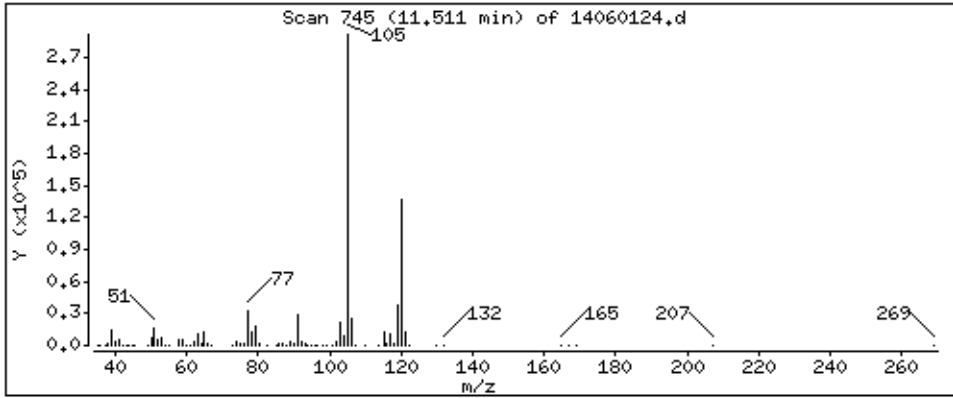
Operator: md

Column phase: RTX-624

Column diameter: 0.18

196 1,2,4-Trimethylbenzene

Concentration: 211.41 PPBW



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

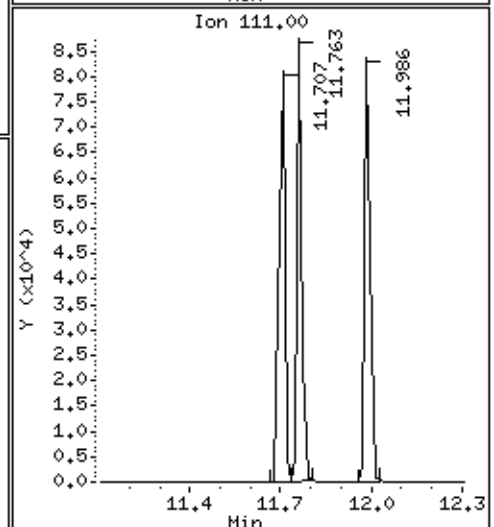
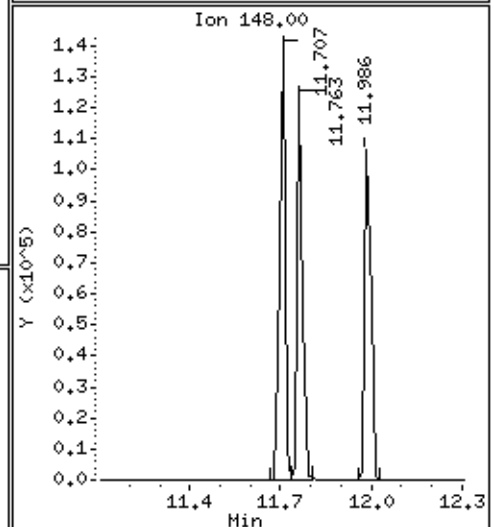
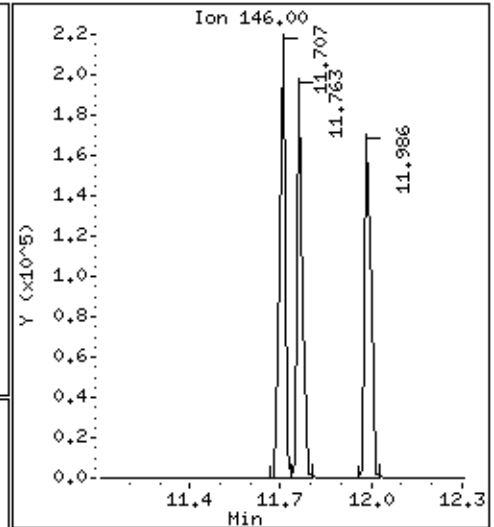
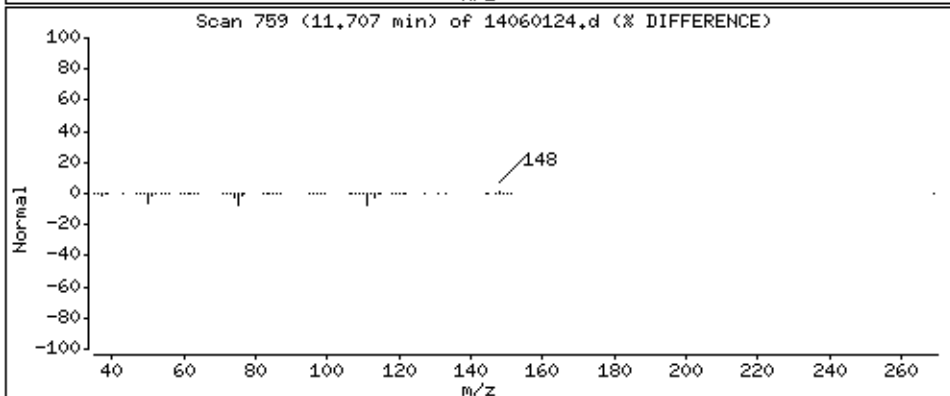
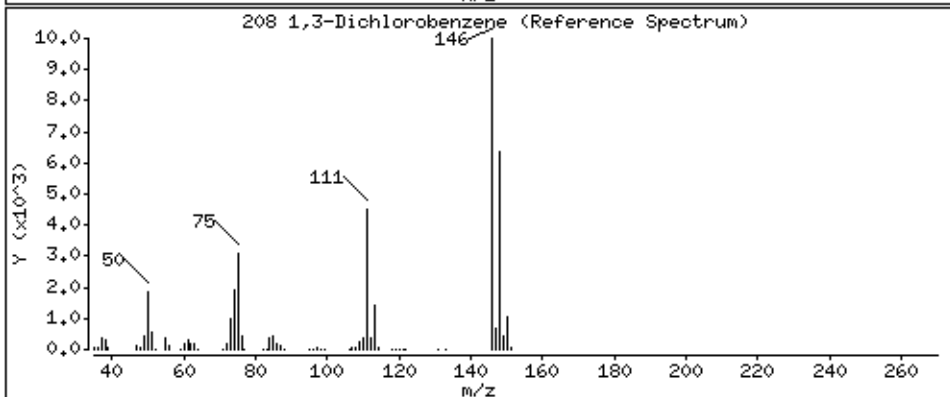
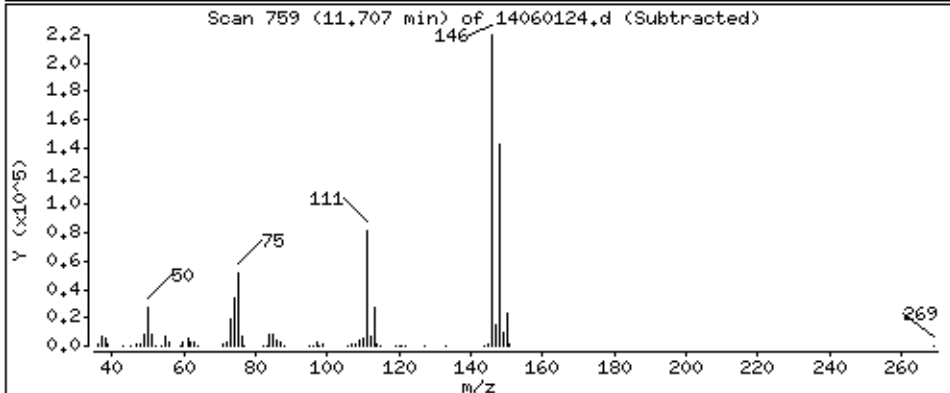
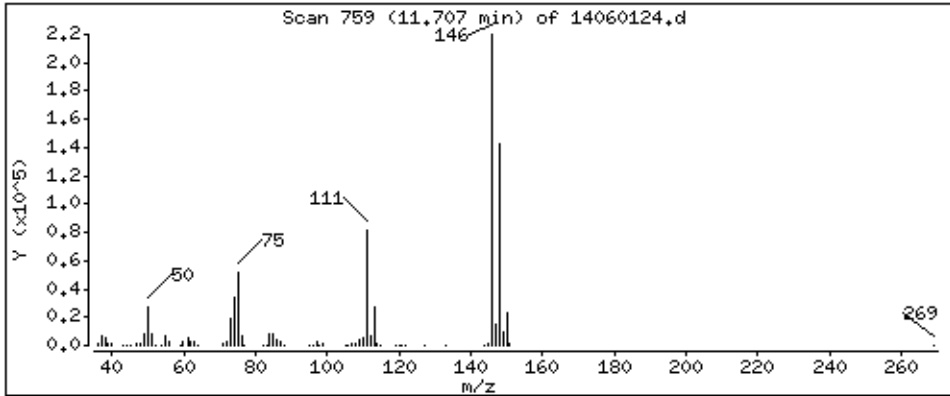
Operator: md

Column phase: RTX-624

Column diameter: 0.18

208 1,3-Dichlorobenzene

Concentration: 199.18 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

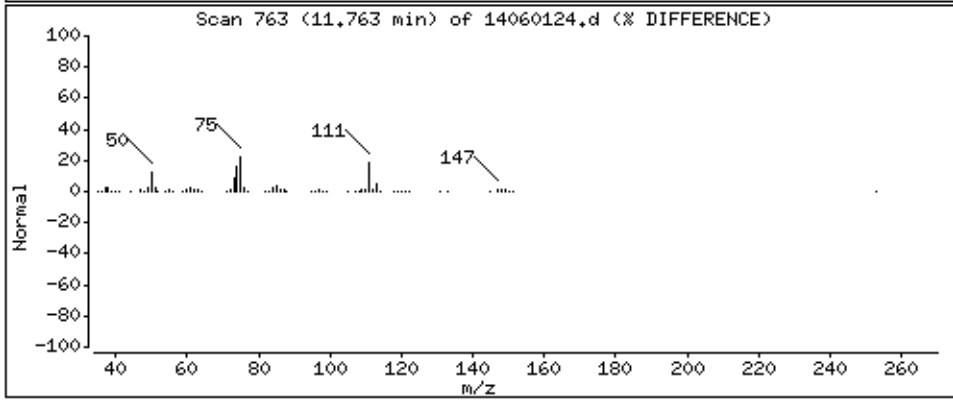
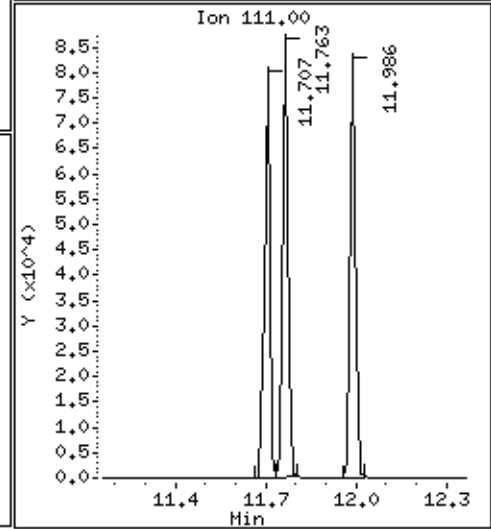
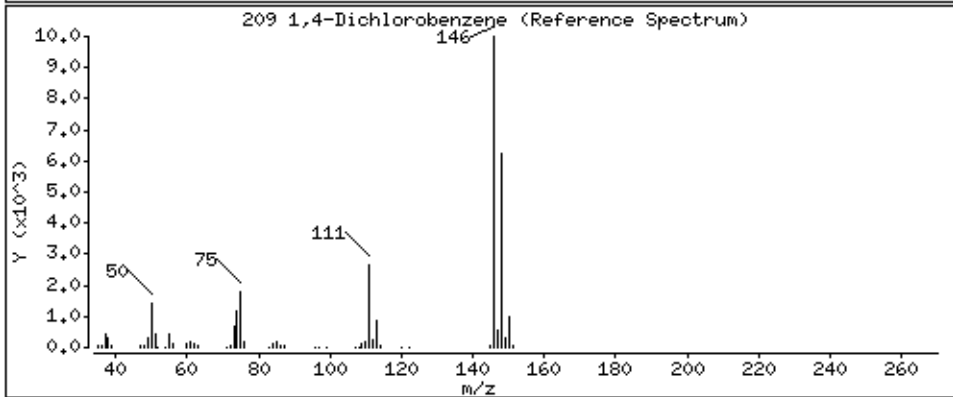
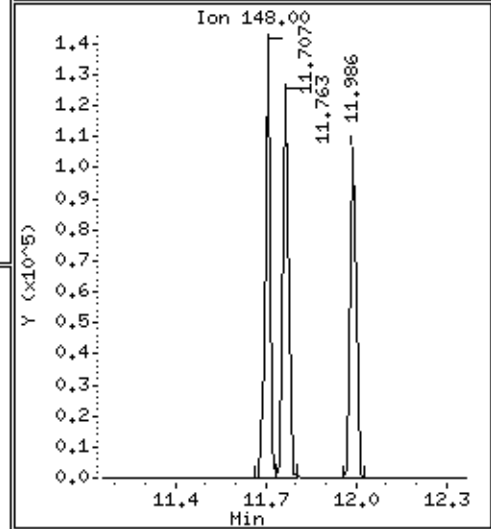
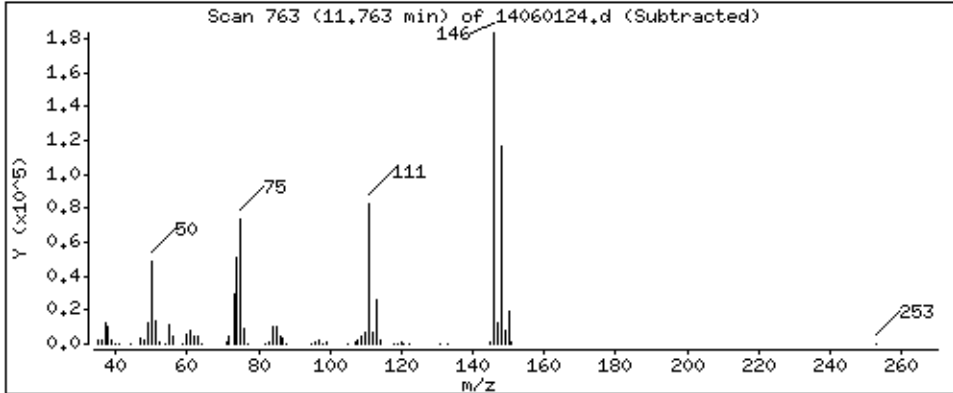
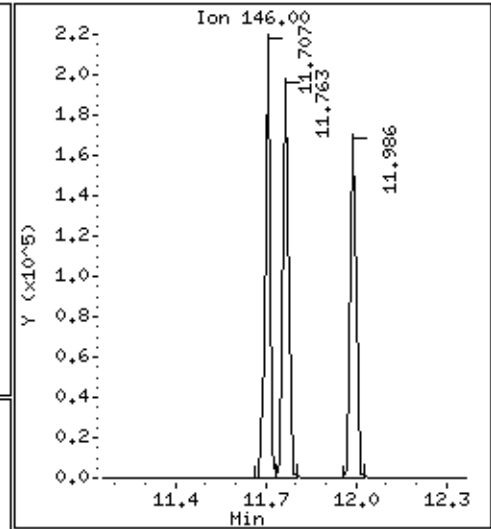
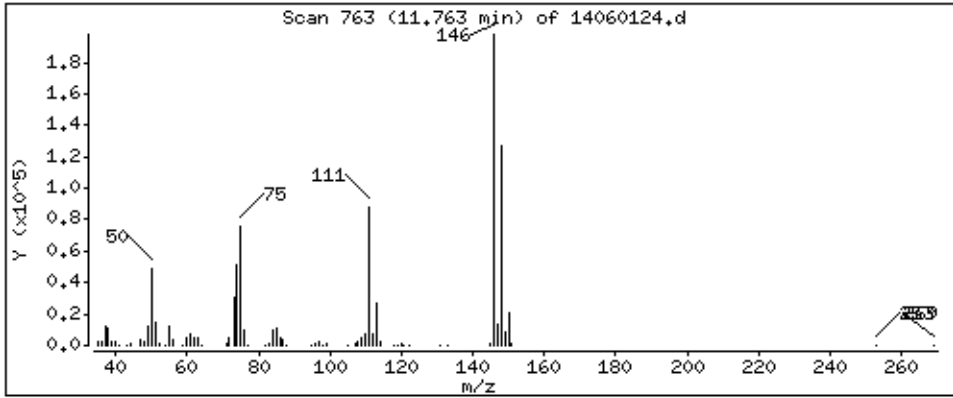
Operator: md

Column phase: RTX-624

Column diameter: 0.18

209 1,4-Dichlorobenzene

Concentration: 196.15 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

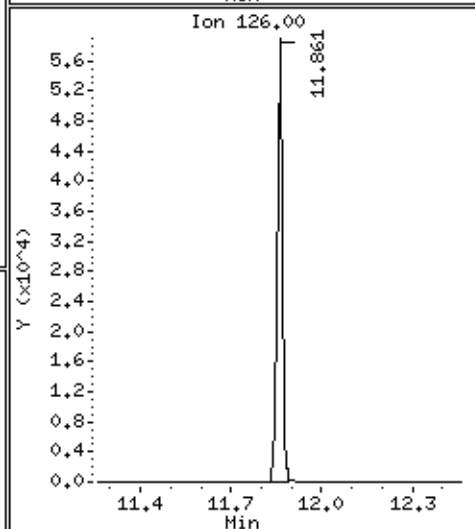
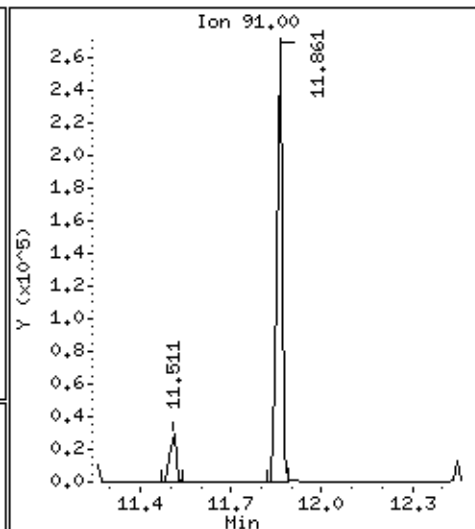
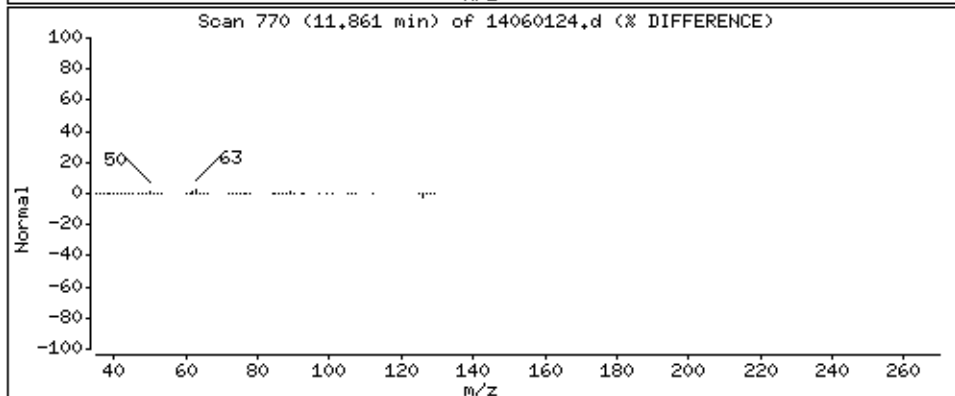
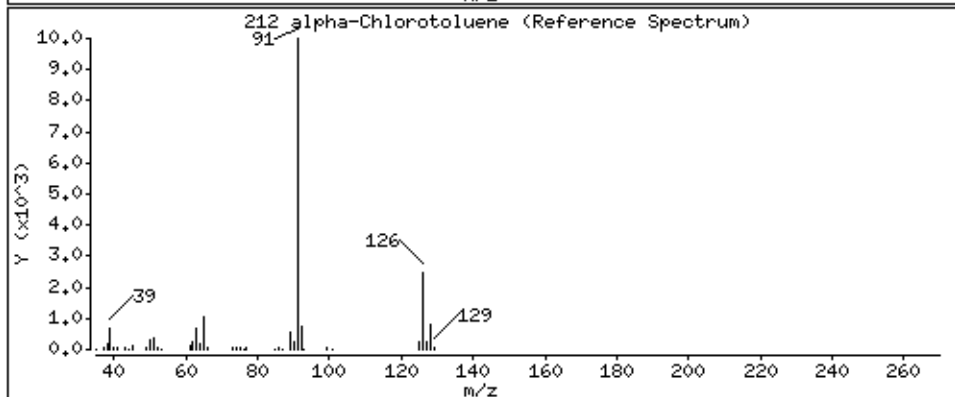
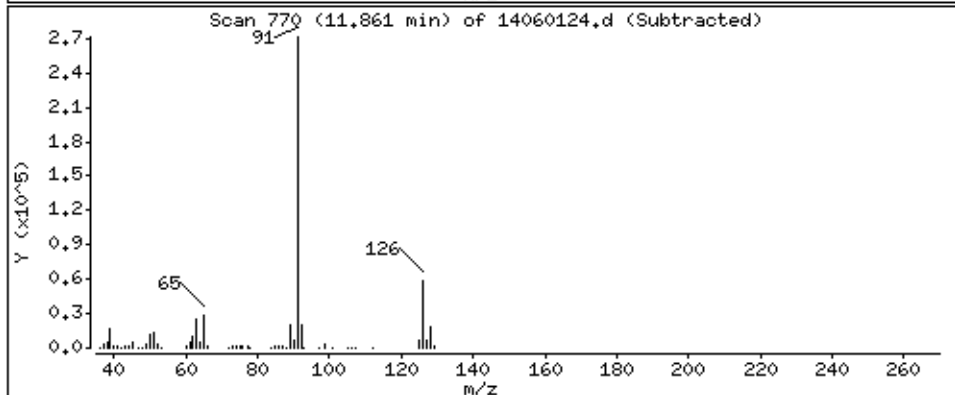
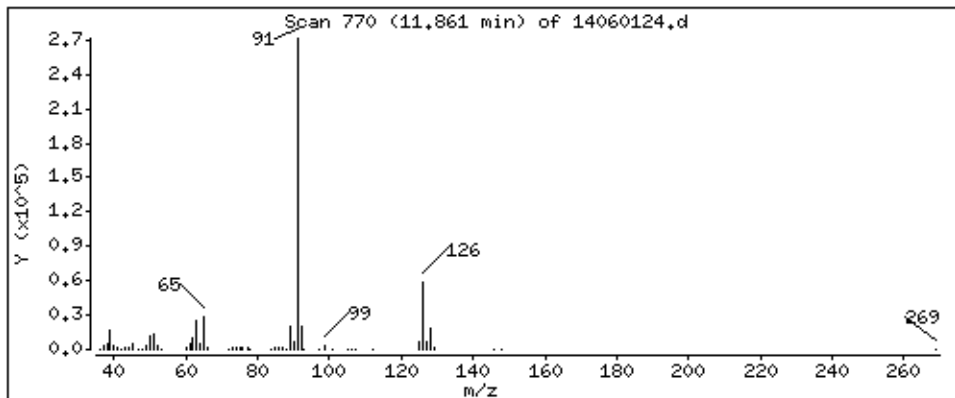
Operator: md

Column phase: RTX-624

Column diameter: 0.18

212 alpha-Chlorotoluene

Concentration: 238.42 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

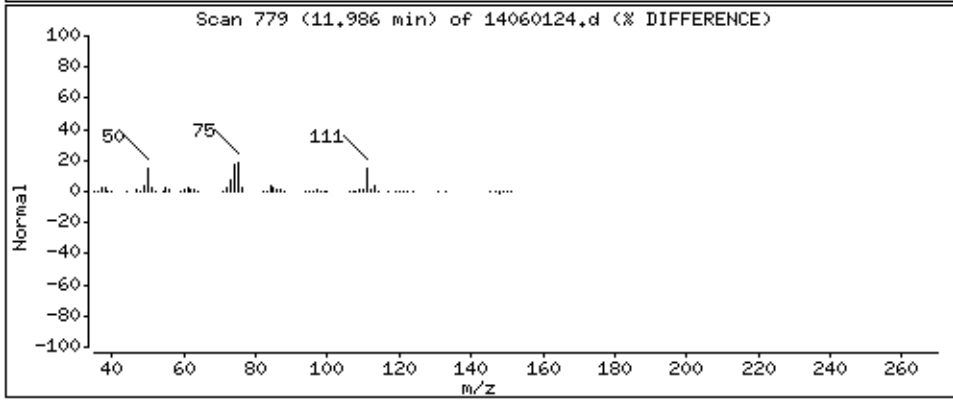
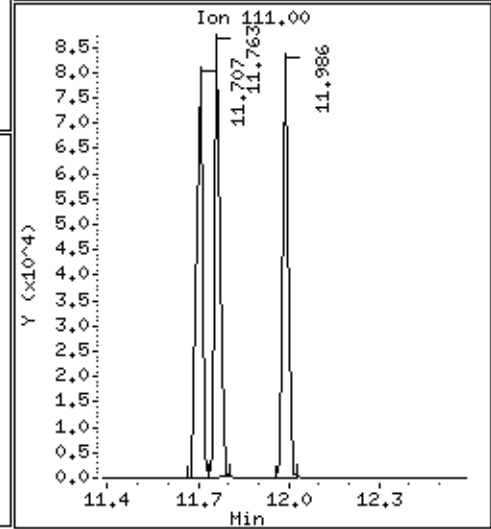
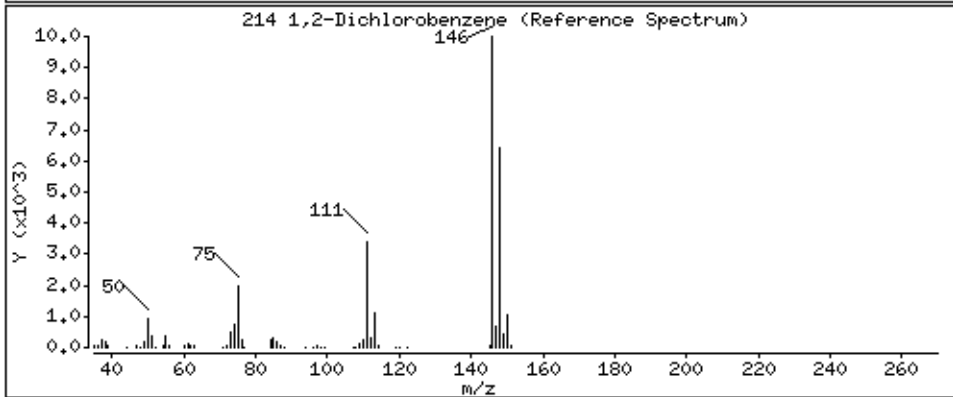
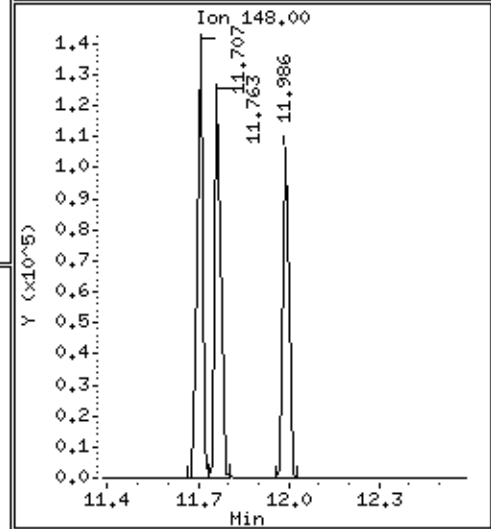
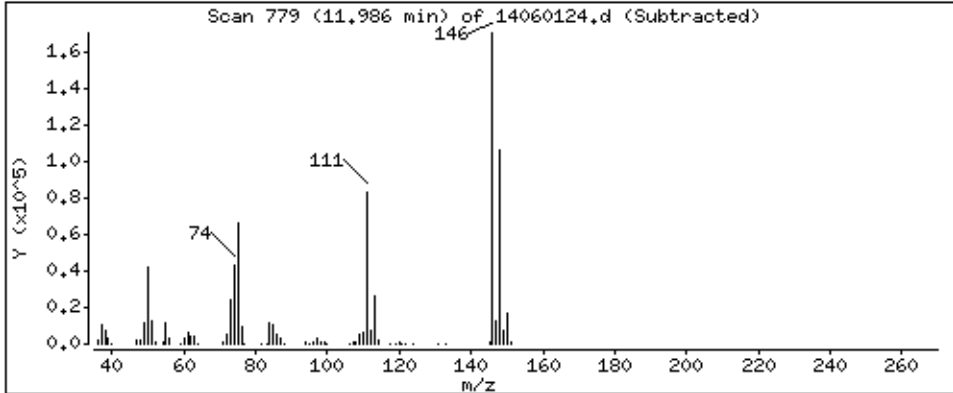
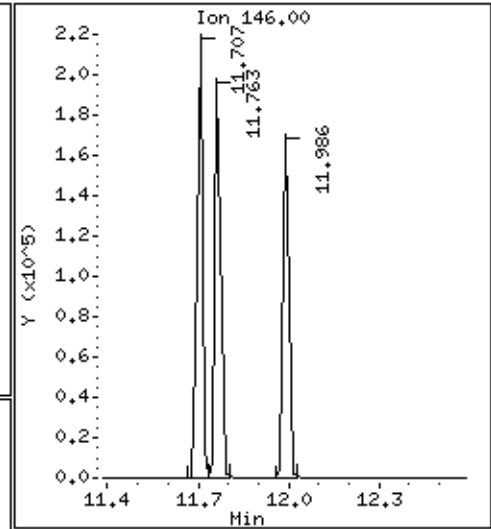
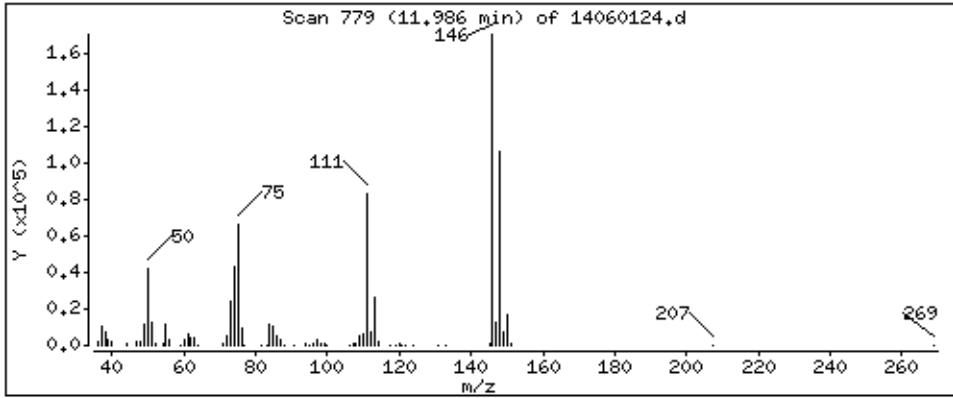
Operator: md

Column phase: RTX-624

Column diameter: 0.18

214 1,2-Dichlorobenzene

Concentration: 197.28 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

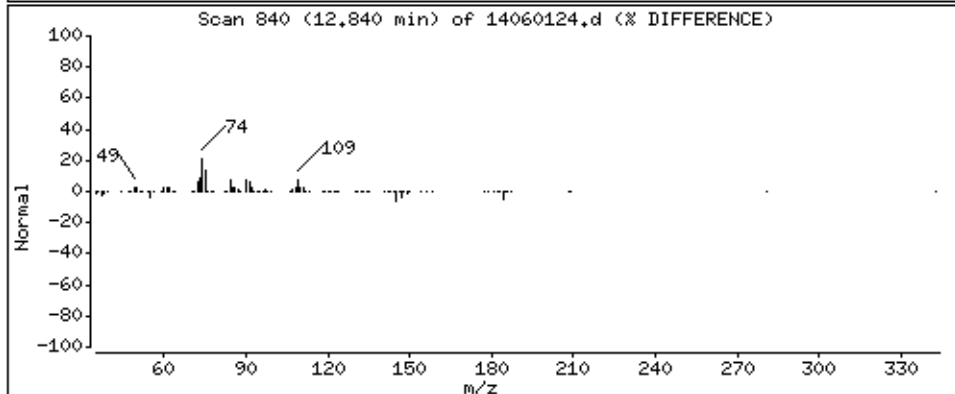
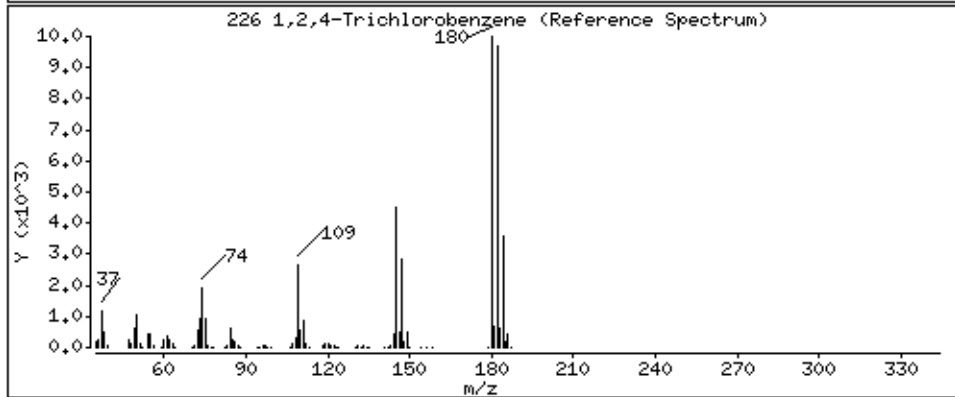
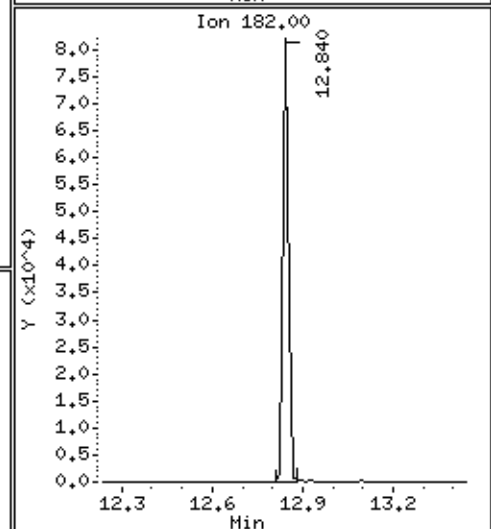
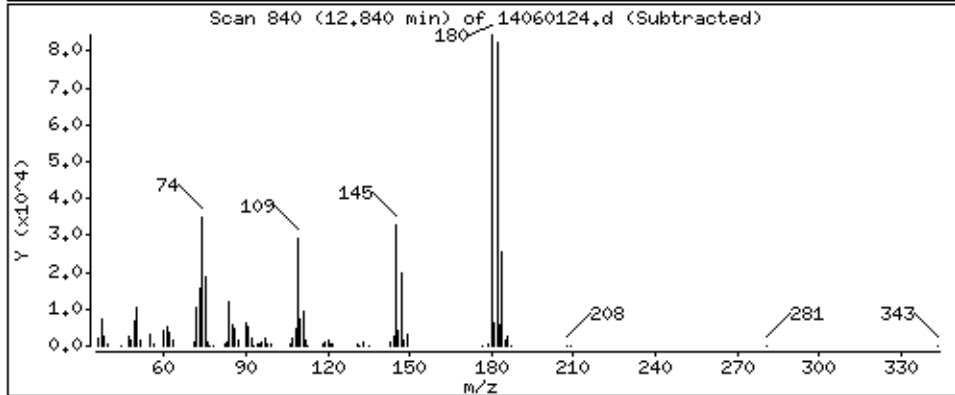
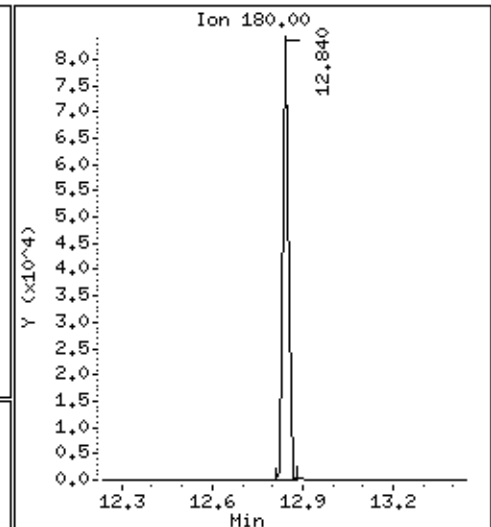
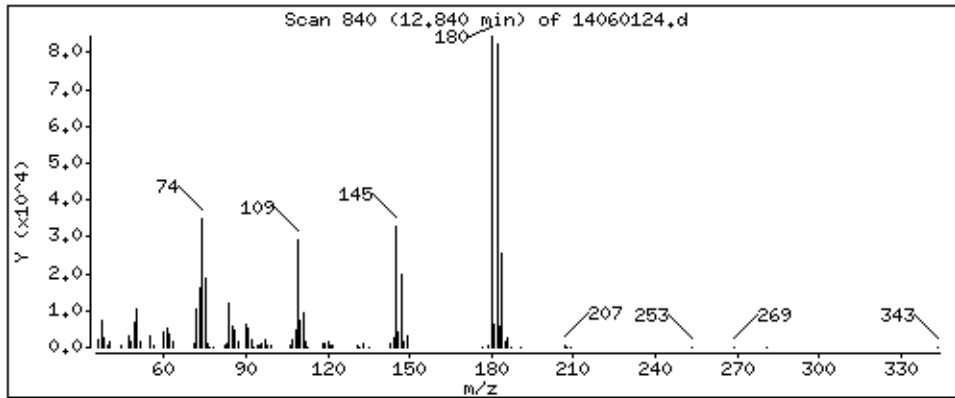
Operator: md

Column phase: RTX-624

Column diameter: 0.18

226 1,2,4-Trichlorobenzene

Concentration: 199.53 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

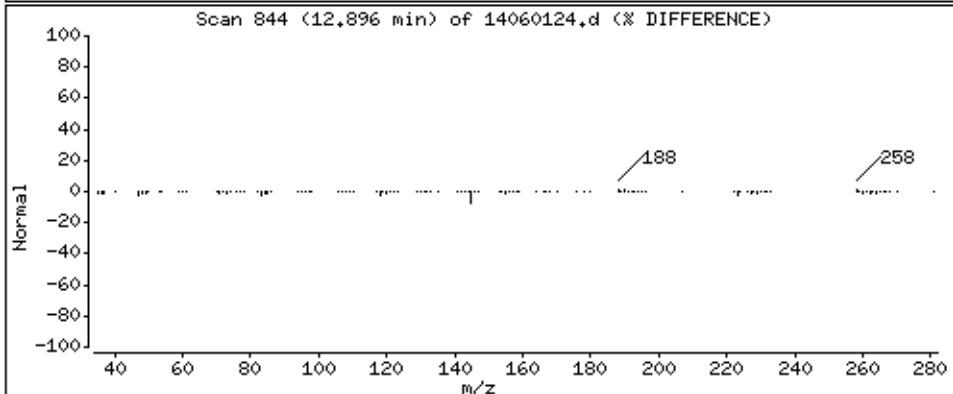
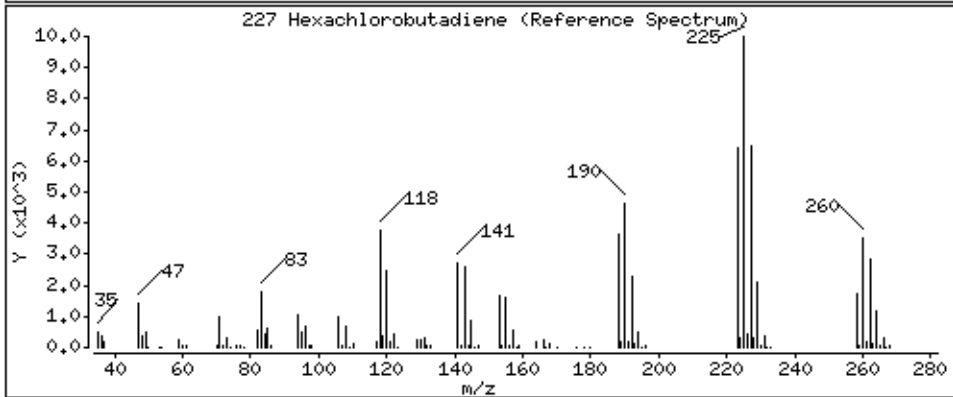
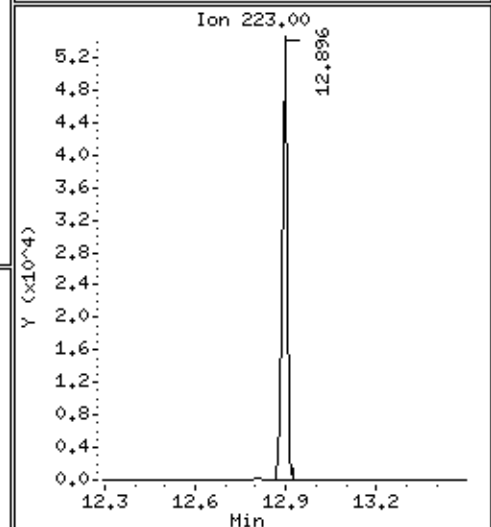
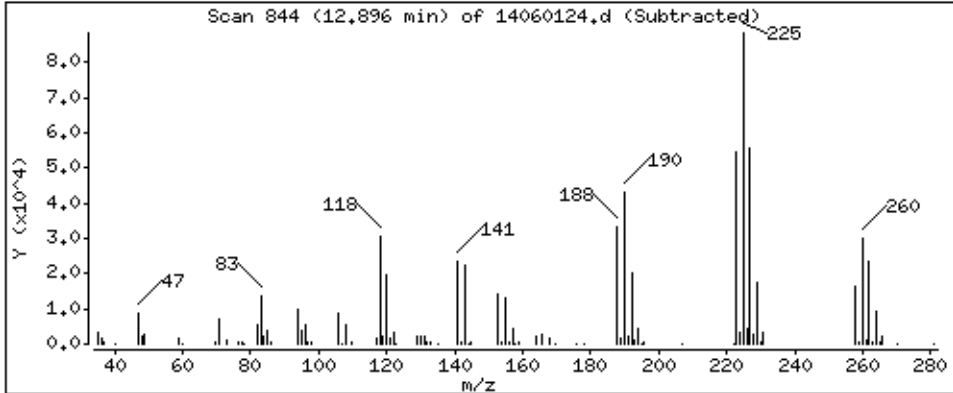
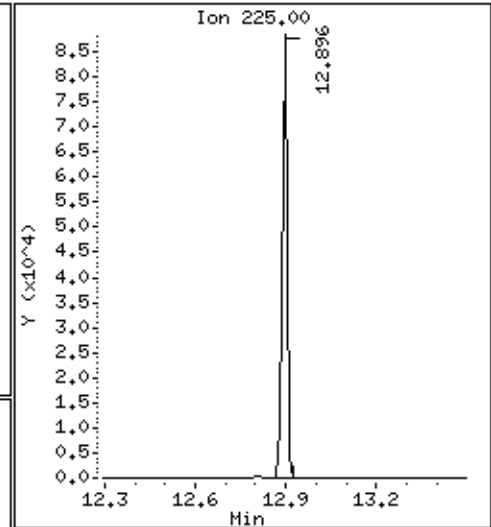
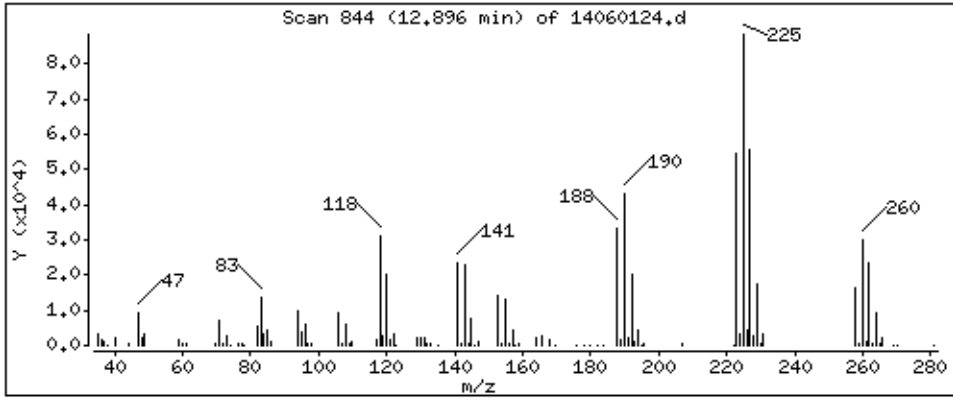
Operator: md

Column phase: RTX-624

Column diameter: 0.18

227 Hexachlorobutadiene

Concentration: 204.32 PPBV



Date : 01-JUN-2015 22:06

Client ID: ICV

Instrument: msd14.i

Sample Info: 50mL #2716-297

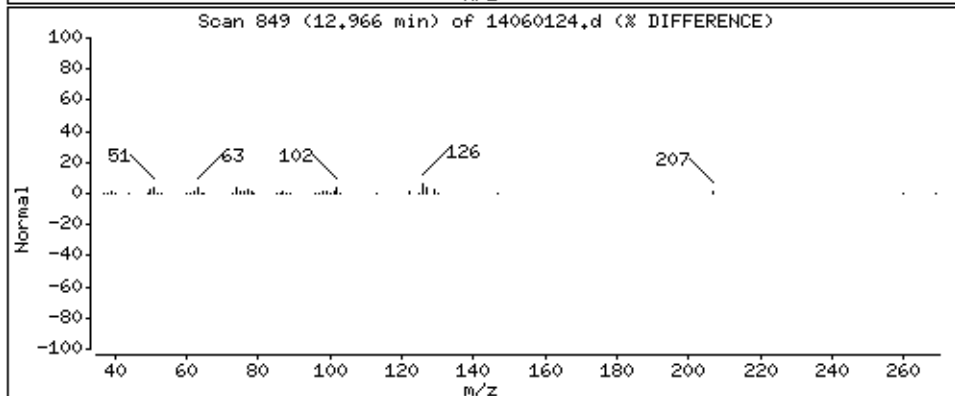
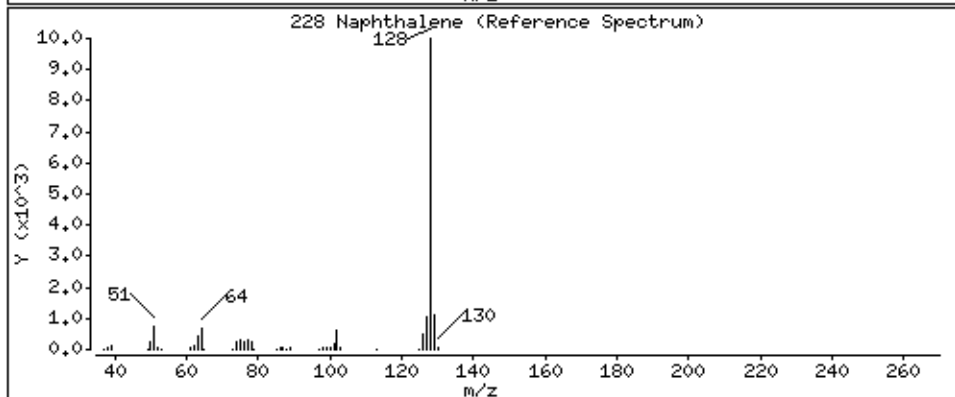
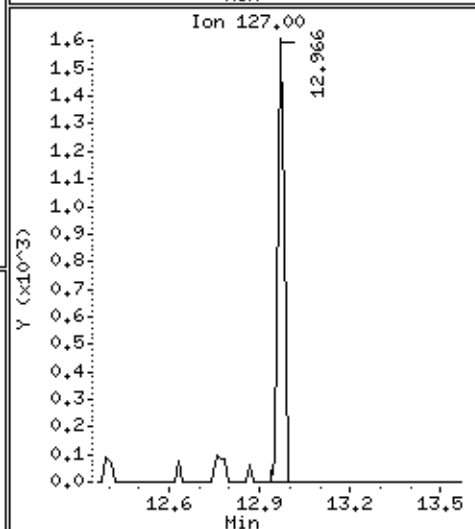
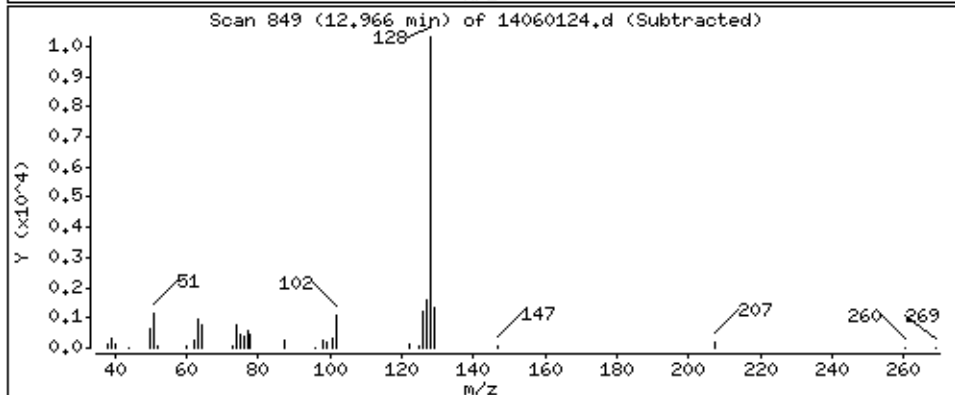
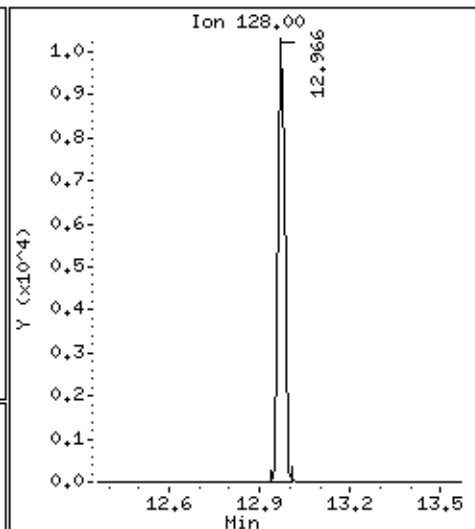
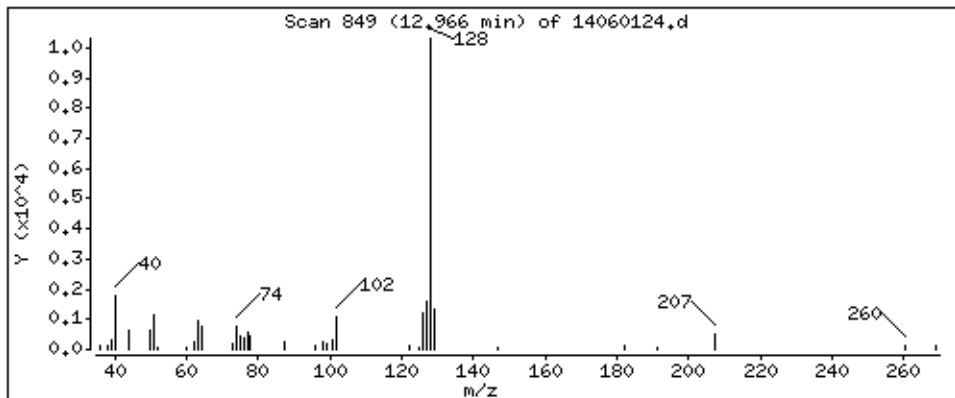
Operator: md

Column phase: RTX-624

Column diameter: 0.18

228 Naphthalene

Concentration: 18,803 PPBV



Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060107.d
 Lab Smp Id: ICAL Level 1 Client Smp ID: ICAL Level 1
 Inj Date : 01-JUN-2015 15:03
 Operator : md Inst ID: msd14.i
 Smp Info : 30ml #2736-26
 Misc Info : 3.0ppbv(5.0ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 21:30 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 15:03 Cal File: 14060107.d
 Als bottle: 1 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Benzene.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.739	4.739	(1.000)	130	99141	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	80001			48.08- 108.08	80.69
4.739	4.739	(1.000)	49	151047			116.54- 176.54	152.36
§ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.136)	65	154076	400.000	410.76	70.00- 130.00	100.00
5.382	5.382	(1.136)	67	77728			23.57- 83.57	50.45
* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	429658	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	68942			0.00- 45.72	16.05
§ 146 Toluene-d8						CAS #: 2037-26-5		
7.635	7.635	(1.306)	98	429424	400.000	400.44	70.00- 130.00	100.00
7.635	7.635	(1.306)	70	48072			0.00- 41.05	11.19
7.635	7.635	(1.306)	100	281888			38.18- 98.18	65.64

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
* 163 Chlorobenzene-d5									
						CAS #: 3114-55-4			
9.832	9.832	(1.000)	117	388755	400.000		70.00- 130.00	100.00	
9.818	9.818	(1.000)	82	213764			25.58- 85.58	54.99	

\$ 177 4-Bromofluorobenzene									
						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	223790	400.000	402.85	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	294058			102.26- 162.26	131.40	
10.951	10.951	(1.114)	176	214284			66.15- 126.15	95.75	

116 Benzene									
						CAS #: 71-43-2			
5.340	5.340	(0.914)	78	4205	3.00000	3.369	70.00- 130.00	100.00(a)	
5.354	5.354	(0.916)	77	863			0.00- 53.58	20.52	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060107.d
 Lab Smp Id: ICAL Level 1
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 1
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 3.0ppbv(5.0ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	99141	-10.57
123 1,4-Difluorobenze	489861	293917	685805	429658	-12.29
163 Chlorobenzene-d5	420158	252095	588221	388755	-7.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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/msd14.1/01jun15.b/14060107.d

Date : 01-JUN-2015 15:03

Client ID: ICAL Level 1

Sample Info: 30ml #2736-26

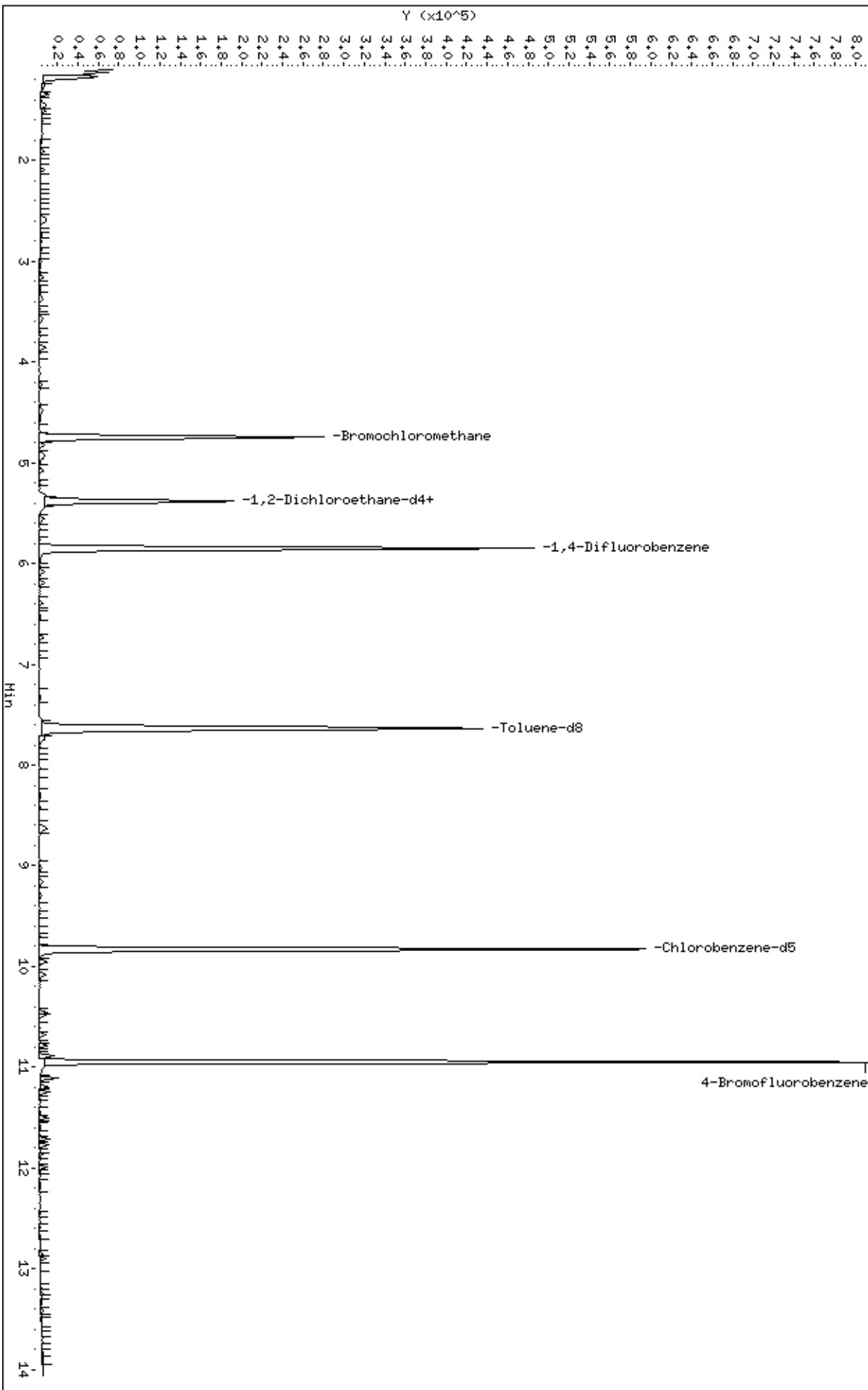
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.1/01jun15.b/14060107.d



Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060108.d
 Lab Smp Id: ICAL Level 2 Client Smp ID: ICAL Level 2
 Inj Date : 01-JUN-2015 15:28
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #2736-26
 Misc Info : 5.0ppbv(5.0ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 21:30 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 15:28 Cal File: 14060108.d
 Als bottle: 1 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Level2.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.739	4.739	(1.000)	130	106128	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	80526			48.08- 108.08	75.88
4.739	4.739	(1.000)	49	155003			116.54- 176.54	146.05

* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	454456	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	72772			0.00- 45.72	16.01

* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
9.832	9.832	(1.000)	117	402048	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	216463			25.58- 85.58	53.84

\$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.136)	65	159472	400.000	398.10	70.00- 130.00	100.00
5.396	5.396	(1.139)	67	79129			23.57- 83.57	49.62

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	445517	400.000	395.16	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	49149			0.00- 41.05	11.03	
7.635	7.635	(1.306)	100	294623			38.18- 98.18	66.13	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	220247	400.000	388.75	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	295414			102.26- 162.26	134.13	
10.951	10.951	(1.114)	176	214196			66.15- 126.15	97.25	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.268)	85	5725	5.00000	5.458	70.00- 130.00	100.00	
1.269	1.269	(0.268)	87	1715			3.05- 63.05	29.96	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	3815	5.00000	5.351	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	1416			1.48- 61.48	37.12	

25 Vinyl Chloride						CAS #: 75-01-4			
1.507	1.507	(0.318)	62	2188	5.00000	5.558	70.00- 130.00	100.00	
1.521	1.521	(0.321)	64	559			0.94- 60.94	25.55	

26 1,3-Butadiene						CAS #: 106-99-0			
1.521	1.521	(0.321)	54	1472	5.00000	5.213	70.00- 130.00	100.00	
1.521	1.521	(0.321)	39	2389			66.21- 126.21	162.30	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.383)	94	1319	5.00000	5.210	70.00- 130.00	100.00	
1.814	1.814	(0.383)	96	1202			64.87- 124.87	91.13	
1.814	1.814	(0.383)	79	473			0.00- 46.18	35.86	

35 Freon 11						CAS #: 75-69-4			
2.094	2.094	(0.442)	101	6030	5.00000	5.524	70.00- 130.00	100.00	
2.094	2.094	(0.442)	103	3300			34.32- 94.32	54.73	

49 Freon 113						CAS #: 76-13-1			
2.584	2.584	(0.545)	151	3502	5.00000	5.285	70.00- 130.00	100.00	
2.584	2.584	(0.545)	153	2237			34.22- 94.22	63.88	
2.584	2.584	(0.545)	101	5158			102.57- 162.57	147.29	

50 1,1-Dichloroethene						CAS #: 75-35-4			
2.612	2.612	(0.551)	61	3823	5.00000	5.474	70.00- 130.00	100.00	
2.612	2.612	(0.551)	96	2145			27.93- 87.93	56.11	
2.612	2.612	(0.551)	98	1747			6.48- 66.48	45.70	

56 Carbon Disulfide						CAS #: 75-15-0			
2.794	2.794	(0.590)	76	5669	5.00000	5.137	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride									
						CAS #:	75-09-2		
3.158	3.158	(0.666)	49	2977	5.00000	5.603	70.00- 130.00	100.00	
3.158	3.158	(0.666)	84	2065			43.35- 103.35	69.37	
3.158	3.158	(0.666)	51	814			0.70- 60.70	27.34	

72 Methyl tert-butyl ether									
						CAS #:	1634-04-4		
3.354	3.354	(0.708)	73	3441	5.00000	4.503	70.00- 130.00	100.00(a)	
3.368	3.368	(0.711)	57	980			0.00- 54.09	28.48	
3.354	3.354	(0.708)	41	1151			0.00- 55.75	33.45	

73 trans-1,2-Dichloroethene									
						CAS #:	156-60-5		
3.382	3.382	(0.714)	96	1903	5.00000	4.938	70.00- 130.00	100.00(a)	
3.382	3.382	(0.714)	61	3474			117.22- 177.22	182.55	
3.396	3.396	(0.717)	98	1660			31.31- 91.31	87.23	

78 Hexane									
						CAS #:	110-54-3		
3.577	3.577	(0.755)	57	2708	5.00000	4.673	70.00- 130.00	100.00(a)	
3.577	3.577	(0.755)	43	2536			33.82- 93.82	93.65	
3.577	3.577	(0.755)	86	495			0.00- 47.96	18.28	

82 1,1-Dichloroethane									
						CAS #:	75-34-3		
3.871	3.871	(0.817)	63	3889	5.00000	5.276	70.00- 130.00	100.00	
3.857	3.857	(0.814)	65	1443			0.83- 60.83	37.10	

91 cis-1,2-Dichloroethene									
						CAS #:	156-59-2		
4.487	4.487	(0.947)	61	3106	5.00000	5.284	70.00- 130.00	100.00	
4.487	4.487	(0.947)	96	2232			44.12- 104.12	71.86	
4.487	4.487	(0.947)	98	1411			18.04- 78.04	45.43	

99 Tetrahydrofuran									
						CAS #:	109-99-9		
4.739	4.739	(1.000)	42	2227	5.00000	5.017	70.00- 130.00	100.00	
4.739	4.739	(1.000)	71	763			6.63- 66.63	34.26	
4.739	4.739	(1.000)	72	829			9.95- 69.95	37.22	

100 Chloroform									
						CAS #:	67-66-3		
4.837	4.837	(1.021)	83	4661	5.00000	5.398	70.00- 130.00	100.00	
4.823	4.823	(1.018)	85	2744			36.11- 96.11	58.87	

102 Cyclohexane									
						CAS #:	110-82-7		
4.921	4.921	(1.038)	84	3007	5.00000	5.354	70.00- 130.00	100.00	
4.921	4.921	(1.038)	56	3278			92.51- 152.51	109.01	
4.921	4.921	(1.038)	41	1860			36.86- 96.86	61.86	

103 1,1,1-Trichloroethane									
						CAS #:	71-55-6		
4.949	4.949	(1.044)	97	4341	5.00000	5.164	70.00- 130.00	100.00	
4.949	4.949	(1.044)	99	2742			34.93- 94.93	63.17	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

106 Carbon Tetrachloride						CAS #: 56-23-5			
5.089	5.089	(1.074)	119	3517	5.00000	4.749	70.00- 130.00	100.00(a)	
5.089	5.089	(1.074)	117	3914			76.39- 136.39	111.29	

113 2,2,4-Trimethylpentane						CAS #: 540-84-1			
5.326	5.326	(1.124)	57	10878	5.00000	5.254	70.00- 130.00	100.00	
5.326	5.326	(1.124)	56	3835			3.74- 63.74	35.25	
5.326	5.326	(1.124)	41	2762			0.00- 55.31	25.39	

116 Benzene						CAS #: 71-43-2			
5.354	5.354	(0.916)	78	6223	5.00000	4.806	70.00- 130.00	100.00(a)	
5.354	5.354	(0.916)	77	1543			0.00- 53.58	24.80	

120 1,2-Dichloroethane						CAS #: 107-06-2			
5.466	5.466	(0.935)	62	2973	5.00000	5.416	70.00- 130.00	100.00	
5.466	5.466	(0.935)	64	1035			2.61- 62.61	34.81	

121 Heptane						CAS #: 142-82-5			
5.564	5.564	(0.952)	71	2017	5.00000	4.985	70.00- 130.00	100.00(a)	
5.564	5.564	(0.952)	43	3714			146.34- 206.34	184.13	
5.564	5.564	(0.952)	100	581			3.46- 63.46	28.81	

125 Trichloroethene						CAS #: 79-01-6			
6.082	6.082	(1.041)	95	3589	5.00000	5.812	70.00- 130.00	100.00	
6.082	6.082	(1.041)	130	3488			73.37- 133.37	97.19	
6.096	6.096	(1.043)	97	2051			35.35- 95.35	57.15	

127 Methylcyclohexane						CAS #: 108-87-2			
6.194	6.194	(1.060)	83	3987	5.00000	5.390	70.00- 130.00	100.00(a)	
6.194	6.194	(1.060)	98	1705			19.87- 79.87	42.76	
6.194	6.194	(1.060)	55	3094			54.72- 114.72	77.60	

132 1,2-Dichloropropane						CAS #: 78-87-5			
6.404	6.404	(1.096)	63	2441	5.00000	5.333	70.00- 130.00	100.00	
6.404	6.404	(1.096)	62	1999			40.76- 100.76	81.89	
6.390	6.390	(1.093)	41	1431			26.03- 86.03	58.62	

138 Bromodichloromethane						CAS #: 75-27-4			
6.740	6.740	(1.153)	83	4690	5.00000	5.233	70.00- 130.00	100.00	
6.726	6.726	(1.151)	85	3012			32.51- 92.51	64.22	

144 cis-1,3-Dichloropropene						CAS #: 10061-01-5			
7.341	7.341	(1.256)	75	2528	5.00000	4.372	70.00- 130.00	100.00(a)	
7.341	7.341	(1.256)	77	1173			0.58- 60.58	46.40	
7.341	7.341	(1.256)	39	1730			18.98- 78.98	68.43	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	====	=====	=====	=====	=====	=====		

145	4-Methyl-2-pentanone					CAS #:	108-10-1			
7.579	7.579	(1.297)	85	663	5.00000	4.996	70.00-	130.00	100.00(a)	
7.565	7.565	(1.294)	43	4679			626.54-	686.54	705.73	
7.551	7.551	(1.292)	58	1614			227.69-	287.69	243.44	

147	Toluene					CAS #:	108-88-3			
7.733	7.733	(1.323)	91	7698	5.00000	5.207	70.00-	130.00	100.00	
7.733	7.733	(1.323)	92	4480			28.44-	88.44	58.20	

150	trans-1,3-Dichloropropene					CAS #:	10061-02-6			
8.307	8.307	(0.845)	75	2299	5.00000	4.547	70.00-	130.00	100.00(a)	
8.293	8.293	(0.843)	77	741			1.11-	61.11	32.23	
8.293	8.293	(0.843)	39	1226			14.88-	74.88	53.33	

155	1,1,2-Trichloroethane					CAS #:	79-00-5			
8.628	8.628	(0.878)	97	2435	5.00000	4.960	70.00-	130.00	100.00(a)	
8.614	8.614	(0.876)	99	1742			32.09-	92.09	71.54	
8.614	8.614	(0.876)	83	2704			58.01-	118.01	111.05	

156	Tetrachloroethene					CAS #:	127-18-4			
8.628	8.628	(0.878)	166	3752	5.00000	5.337	70.00-	130.00	100.00	
8.628	8.628	(0.878)	129	2760			46.67-	106.67	73.56	
8.628	8.628	(0.878)	131	2633			42.30-	102.30	70.18	

160	Dibromochloromethane					CAS #:	124-48-1			
9.160	9.160	(0.932)	129	4262	5.00000	4.900	70.00-	130.00	100.00(a)	
9.160	9.160	(0.932)	127	3728			47.21-	107.21	87.47	

161	1,2-Dibromoethane (EDB)					CAS #:	106-93-4			
9.300	9.300	(0.946)	107	3945	5.00000	5.065	70.00-	130.00	100.00	
9.300	9.300	(0.946)	109	3567			63.74-	123.74	90.42	

165	Chlorobenzene					CAS #:	108-90-7			
9.860	9.860	(1.003)	112	6406	5.00000	5.243	70.00-	130.00	100.00	
9.860	9.860	(1.003)	114	2388			2.02-	62.02	37.28	
9.846	9.846	(1.001)	77	7823			30.14-	90.14	122.12	

167	Ethyl Benzene					CAS #:	100-41-4			
9.958	9.958	(1.013)	106	3116	5.00000	5.282	70.00-	130.00	100.00	
9.958	9.958	(1.013)	91	9651			306.11-	366.11	309.72	

169	m,p-Xylene					CAS #:	108-38-3			
10.084	10.084	(1.026)	106	3626	5.00000	5.082	70.00-	130.00	100.00	
10.084	10.084	(1.026)	91	6909			174.24-	234.24	190.54	

171	o-Xylene					CAS #:	95-47-6			
10.461	10.461	(1.064)	106	2800	5.00000	4.650	70.00-	130.00	100.00(a)	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
171 o-Xylene (continued)									
10.461	10.461	(1.064)	91	6752			191.30- 251.30	241.14	

172 Styrene									
10.489	10.489	(1.067)	104	5080	5.00000	4.814	70.00- 130.00	100.00(a)	
10.489	10.489	(1.067)	78	2139			19.95- 79.95	42.11	

174 Bromoform									
10.671	10.671	(1.085)	173	4098	5.00000	5.011	70.00- 130.00	100.00(a)	
10.671	10.671	(1.085)	171	2313			23.00- 83.00	56.44	

175 Cumene									
10.783	10.783	(1.097)	105	10285	5.00000	4.935	70.00- 130.00	100.00(a)	
10.783	10.783	(1.097)	120	2704			0.00- 56.04	26.29	
10.769	10.769	(1.095)	51	962			0.00- 40.17	9.35	

181 1,1,2,2-Tetrachloroethane									
11.105	11.105	(1.129)	83	4831	5.00000	4.726	70.00- 130.00	100.00(a)	
11.105	11.105	(1.129)	85	3629			35.69- 95.69	75.12	

182 Propylbenzene									
11.105	11.105	(1.129)	91	13753	5.00000	5.181	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	2779			0.00- 51.76	20.21	
11.105	11.105	(1.129)	105	516			0.00- 33.53	3.75	

188 4-Ethyltoluene									
11.203	11.203	(1.139)	105	9542	5.00000	4.814	70.00- 130.00	100.00(a)	
11.203	11.203	(1.139)	120	2516			0.00- 59.33	26.37	

190 1,3,5-Trimethylbenzene									
11.245	11.245	(1.144)	105	7835	5.00000	4.622	70.00- 130.00	100.00(a)	
11.245	11.245	(1.144)	120	3785			16.85- 76.85	48.31	

196 1,2,4-Trimethylbenzene									
11.511	11.511	(1.171)	105	7077	5.00000	4.660	70.00- 130.00	100.00(a)	
11.511	11.511	(1.171)	120	3532			15.19- 75.19	49.91	

208 1,3-Dichlorobenzene									
11.707	11.707	(1.191)	146	5680	5.00000	4.969	70.00- 130.00	100.00(a)	
11.707	11.707	(1.191)	148	3400			33.74- 93.74	59.86	
11.707	11.707	(1.191)	111	2211			10.77- 70.77	38.93	

209 1,4-Dichlorobenzene									
11.763	11.763	(1.196)	146	5368	5.00000	4.835	70.00- 130.00	100.00(a)	
11.763	11.763	(1.196)	148	3539			33.86- 93.86	65.93	
11.763	11.763	(1.196)	111	2066			10.30- 70.30	38.49	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
212 alpha-Chlorotoluene									
CAS #: 100-44-7									
11.861	11.861	(1.206)	91	4374	5.00000	4.004	70.00- 130.00	100.00(a)	
11.861	11.861	(1.206)	126	860			0.00- 50.90	19.66	

214 1,2-Dichlorobenzene									
CAS #: 95-50-1									
11.987	11.987	(1.219)	146	5223	5.00000	4.979	70.00- 130.00	100.00(a)	
11.987	11.987	(1.219)	148	3287			33.29- 93.29	62.93	
11.987	11.987	(1.219)	111	2407			12.93- 72.93	46.08	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060108.d
 Lab Smp Id: ICAL Level 2
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 2
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 5.0ppbv(5.0ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	106128	-4.26
123 1,4-Difluorobenze	489861	293917	685805	454456	-7.23
163 Chlorobenzene-d5	420158	252095	588221	402048	-4.31

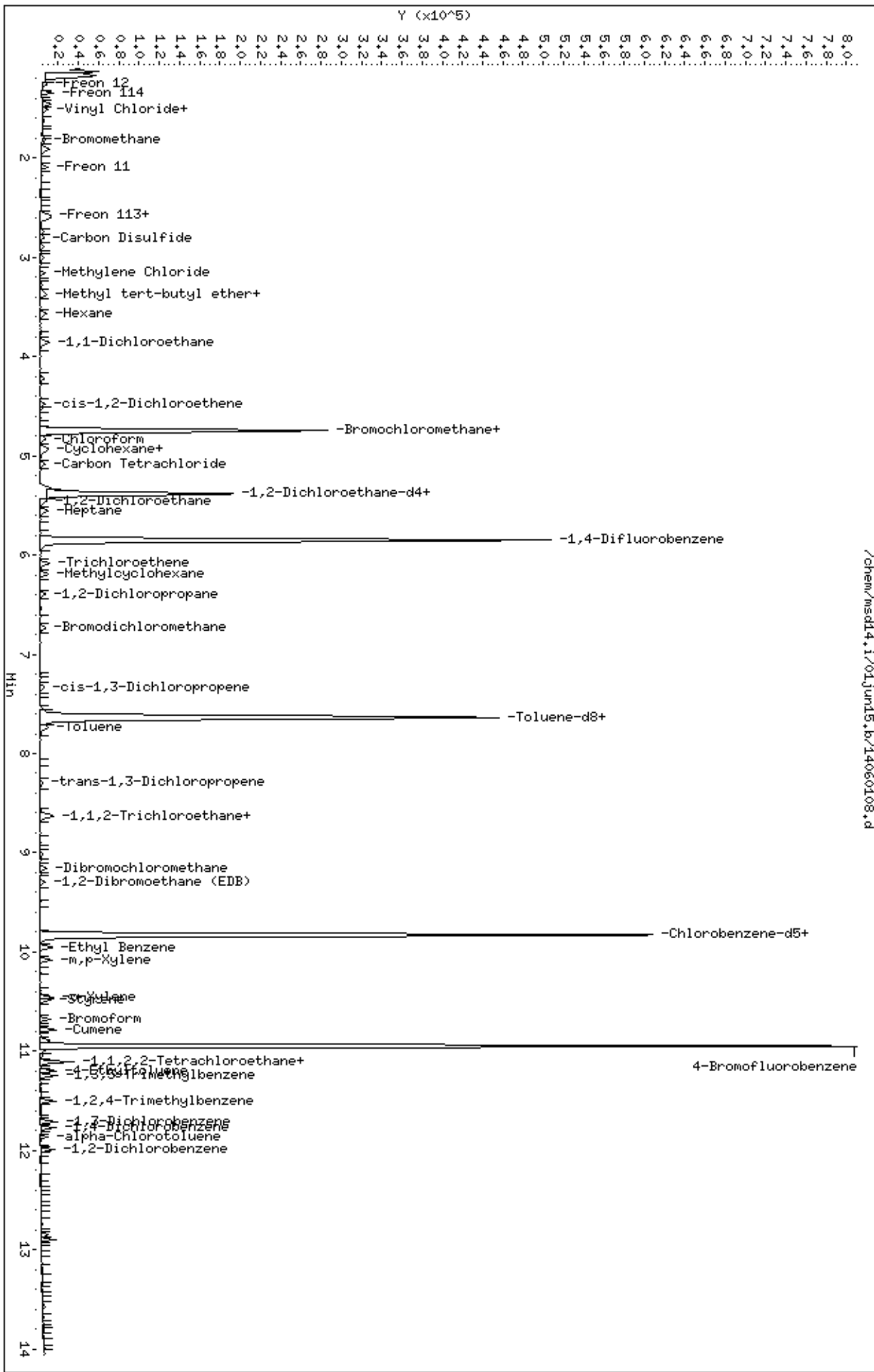
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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: 04-Jun-2015 17:46

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/04jun15.b/14060405.d
 Lab Smp Id: ICAL Level 3 Client Smp ID: ICAL Level 3
 Inj Date : 04-JUN-2015 13:22
 Operator : mjs Inst ID: msd14.i
 Smp Info : 5.0ml #2736-10
 Misc Info : 20ppbv(200ppbv) AT-1
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/04jun15.b/14550601b.m
 Meth Date : 04-Jun-2015 17:46 HR8M Quant Type: ISTD
 Cal Date : 04-JUN-2015 13:22 Cal File: 14060405.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT1curve.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #:	74-97-5	
4.739	4.739	(1.000)	130	114162	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	86308			48.08- 108.08	75.60
4.739	4.739	(1.000)	49	158978			116.54- 176.54	139.26

* 123 1,4-Difluorobenzene						CAS #:	540-36-3	
5.844	5.844	(1.000)	114	482767	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	76429			0.00- 45.72	15.83

* 163 Chlorobenzene-d5						CAS #:	3114-55-4	
9.832	9.832	(1.000)	117	422062	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	230291			25.58- 85.58	54.56

6 Freon 143a						CAS #:	420-46-2	
1.157	1.157	(0.244)	69	7972	20.0000	18.892	80.00- 120.00	100.00(a)
1.157	1.157	(0.244)	65	2609			0.00- 30.00	32.73

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
7 Freon 134a									
						CAS #:	811-97-2		
1.199	1.199	(0.253)	83	5725	20.0000	18.940	80.00-	120.00	100.00(a)
1.199	1.199	(0.253)	69	6117			0.00-	30.00	106.85

10 1,1-Difluoroethane									
						CAS #:	75-37-6		
1.241	1.241	(0.262)	65	3129	20.0000	18.813	80.00-	120.00	100.00(a)
1.241	1.241	(0.262)	51	5252			0.00-	30.00	167.85

13 Chlorodifluoromethane									
						CAS #:	75-45-6		
1.283	1.283	(0.271)	67	1346	20.0000	18.501	80.00-	120.00	100.00(a)
1.269	1.269	(0.268)	51	10881			0.00-	30.00	808.40

16 Freon 142b									
						CAS #:	75-68-3		
1.395	1.395	(0.294)	65	11090	20.0000	17.790	80.00-	120.00	100.00(a)
1.395	1.395	(0.294)	45	3302			0.00-	30.00	29.77

37 Dichlorofluoromethane									
						CAS #:	75-43-4		
2.108	2.108	(0.445)	67	12362	20.0000	19.040	80.00-	120.00	100.00(Ta)
2.108	2.108	(0.445)	69	4043			0.00-	30.00	32.71
0.000	1.000	(0.000)	35	0			0.00-	30.00	0.00

48 Freon 123									
						CAS #:	306-83-2		
2.542	2.542	(0.536)	83	12904	20.0000	17.969	80.00-	120.00	100.00(a)
2.542	2.542	(0.536)	133	3185			0.00-	30.00	24.68
2.542	2.542	(0.536)	85	9212			0.00-	30.00	71.39

59 Cyclopentene									
						CAS #:	142-29-0		
3.018	3.018	(0.637)	67	11937	20.0000	18.922	80.00-	120.00	100.00(a)
3.018	3.018	(0.637)	68	4159			0.00-	30.00	34.84
3.018	3.018	(0.637)	53	2399			0.00-	30.00	20.10

84 1-Propanol									
						CAS #:	71-23-8		
4.025	4.025	(0.849)	42	789	20.0000	16.064	80.00-	120.00	100.00(a)
4.025	4.025	(0.849)	59	863			0.00-	30.00	109.38
4.025	4.025	(0.849)	41	789			0.00-	30.00	100.00

90 2,2-Dichloropropane									
						CAS #:	594-20-7		
4.445	4.445	(0.938)	77	3903	20.0000	12.186	80.00-	120.00	100.00(a)
4.431	4.431	(0.935)	79	1217			0.00-	30.00	31.18
4.431	4.431	(0.935)	97	839			0.00-	30.00	21.50

107 1,1-Dichloropropene									
						CAS #:	563-58-6		
5.144	5.144	(1.086)	110	3295	20.0000	17.975	80.00-	120.00	100.00(a)
5.130	5.130	(1.083)	75	8920			0.00-	30.00	270.71

115 Isobutanol									
						CAS #:	78-83-1		
5.368	5.368	(0.919)	43	4409	20.0000	16.939	80.00-	120.00	100.00(a)

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
115 Isobutanol (continued)									
5.368	5.368	(0.919)	41	3333			0.00- 30.00	75.60	

124 n-Butanol CAS #: 71-36-3									
6.124	6.124	(1.048)	56	5542	20.0000	15.083	80.00- 120.00	100.00(a)	
6.124	6.124	(1.048)	41	4123			0.00- 30.00	74.40	
6.124	6.124	(1.048)	43	3690			0.00- 30.00	66.58	

157 1,3-Dichloropropane CAS #: 142-28-9									
8.894	8.894	(1.877)	76	9997	20.0000	17.894	80.00- 120.00	100.00(a)	
8.894	8.894	(1.877)	41	6305			0.00- 30.00	63.07	
8.894	8.894	(1.877)	78	3266			0.00- 30.00	32.67	

159 Butyl Acetate CAS #: 123-86-4									
9.174	9.174	(1.570)	56	1673	20.0000	16.114	80.00- 120.00	100.00(a)	
9.174	9.174	(1.570)	73	447			0.00- 30.00	26.72	
9.174	9.174	(1.570)	43	4015			0.00- 30.00	239.99	

168 1,1,1,2-Tetrachloroethane CAS #: 630-20-6									
9.972	9.972	(1.014)	131	9094	20.0000	19.380	80.00- 120.00	100.00(a)	
9.972	9.972	(1.014)	117	7818			0.00- 30.00	85.97	
9.972	9.972	(1.014)	95	3554			0.00- 30.00	39.08	

173 2-Heptanone CAS #: 110-43-0									
10.643	10.643	(1.083)	58	7113	20.0000	15.945	80.00- 120.00	100.00(a)	
10.629	10.629	(1.081)	43	11412			0.00- 30.00	160.44	

176 Cyclohexanone CAS #: 108-94-1									
10.909	10.909	(1.110)	55	7359	20.0000	19.142	80.00- 120.00	100.00(a)	
10.909	10.909	(1.110)	98	2158			0.00- 30.00	29.32	
10.909	10.909	(1.110)	42	4084			0.00- 30.00	55.50	

180 Bromobenzene CAS #: 108-86-1									
11.049	11.049	(1.124)	156	8779	20.0000	18.489	80.00- 120.00	100.00(a)	
11.049	11.049	(1.124)	77	15798			0.00- 30.00	179.95	
11.049	11.049	(1.124)	158	9360			0.00- 30.00	106.62	

185 1,2,3-Trichloropropane CAS #: 96-18-4									
11.133	11.133	(1.132)	110	4989	20.0000	18.910	80.00- 120.00	100.00(a)	
11.133	11.133	(1.132)	61	3352			0.00- 30.00	67.19	
11.133	11.133	(1.132)	112	3214			0.00- 30.00	64.42	

189 2-Chlorotoluene CAS #: 95-49-8									
11.189	11.189	(1.138)	126	7171	20.0000	18.562	80.00- 120.00	100.00(a)	
11.189	11.189	(1.138)	91	21542			0.00- 30.00	300.40	
11.189	11.189	(1.138)	65	2267			0.00- 30.00	31.61	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

191	4-Chlorotoluene				CAS #: 106-43-4				
11.273	11.273	(1.147)	126	7135	20.0000	18.804	80.00-	120.00	100.00(a)
11.273	11.273	(1.147)	91	20942			0.00-	30.00	293.51
11.273	11.273	(1.147)	63	2990			0.00-	30.00	41.91

195	tert-Butylbenzene				CAS #: 98-06-6				
11.469	11.469	(1.167)	119	21290	20.0000	17.384	80.00-	120.00	100.00(a)
11.469	11.469	(1.167)	134	5710			0.00-	30.00	26.82
11.469	11.469	(1.167)	91	14571			0.00-	30.00	68.44

197	Pentachloroethane				CAS #: 76-01-7				
11.511	11.511	(1.171)	167	5483	20.0000	16.513	80.00-	120.00	100.00(a)
11.511	11.511	(1.171)	117	6314			0.00-	30.00	115.16

203	sec-Butylbenzene				CAS #: 135-98-8				
11.609	11.609	(1.181)	105	31726	20.0000	16.995	80.00-	120.00	100.00(a)
11.609	11.609	(1.181)	134	6072			0.00-	30.00	19.14
11.609	11.609	(1.181)	91	5262			0.00-	30.00	16.59

207	p-Cymene				CAS #: 99-87-6				
11.707	11.707	(1.191)	119	23552	20.0000	16.185	80.00-	120.00	100.00(a)
11.707	11.707	(1.191)	134	6548			0.00-	30.00	27.80
11.707	11.707	(1.191)	91	5830			0.00-	30.00	24.75

210	1,2,3-Trimethylbenzene				CAS #: 526-73-8				
11.776	11.776	(1.198)	120	9603	20.0000	16.663	80.00-	120.00	100.00(a)
11.776	11.776	(1.198)	105	22789			0.00-	30.00	237.31
11.776	11.776	(1.198)	77	2814			0.00-	30.00	29.30

213	Butylbenzene				CAS #: 104-51-8				
11.944	11.944	(1.215)	134	5243	20.0000	15.552	80.00-	120.00	100.00(a)
11.944	11.944	(1.215)	91	21755			0.00-	30.00	414.93
11.944	11.944	(1.215)	92	12742			0.00-	30.00	243.03

221	1,2-Dibromo-3-chloropropane				CAS #: 96-12-8				
12.448	12.448	(1.266)	157	4469	20.0000	15.020	80.00-	120.00	100.00(a)
12.448	12.448	(1.266)	75	4555			0.00-	30.00	101.92
12.448	12.448	(1.266)	155	3630			0.00-	30.00	81.23

QC Flag Legend

T - Target compound detected outside RT window.
 a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

Report Date: 04-Jun-2015 17:46

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060405.d
 Lab Smp Id: ICAL Level 3
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: mjs
 Method File: /chem/msd14.i/04jun15.b/14550601b.m
 Misc Info: 20ppbv(200ppbv) AT-1

Calibration Date: 04-JUN-2015
 Calibration Time: 13:42
 Client Smp ID: ICAL Level 3
 Level: LOW
 Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	113467	68080	158854	114162	0.61
123 1,4-Difluorobenze	491560	294936	688184	482767	-1.79
163 Chlorobenzene-d5	437963	262778	613148	422062	-3.63

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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/msd14.1/04jun15.b/14060405.d

Date: 04-JUN-2015 13:22

Client ID: ICAL Level 3

Sample Info: 5.0ml #2736-10

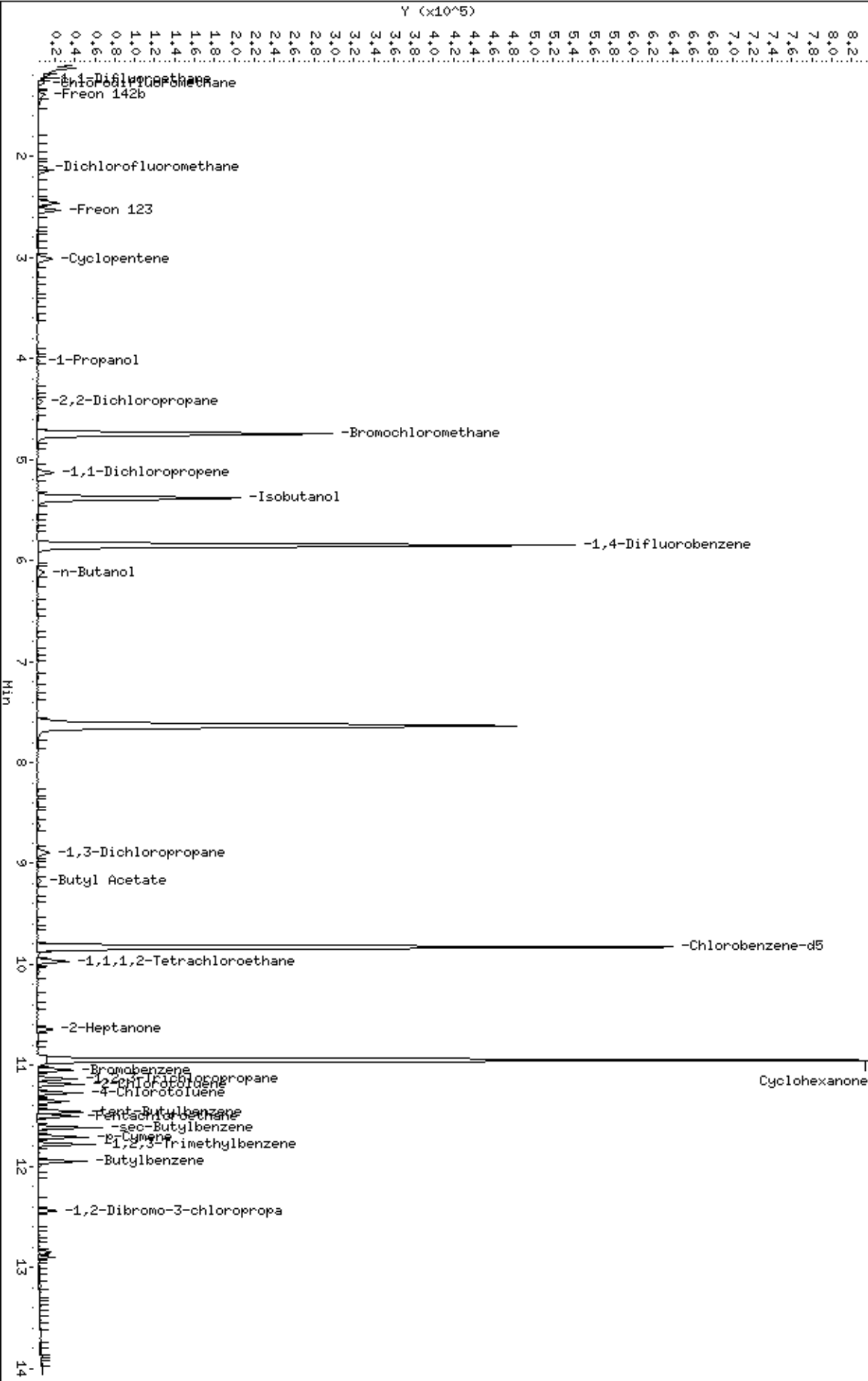
Column phase: RTX-624

Instrument: msd14.1

Operator: m.js

Column diameter: 0.18

/chem/msd14.1/04jun15.b/14060405.d



Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060109.d
 Lab Smp Id: ICAL Level 3 Client Smp ID: ICAL Level 3
 Inj Date : 01-JUN-2015 15:50
 Operator : md Inst ID: msd14.i
 Smp Info : 5.0ml #2716-281
 Misc Info : 20ppbv(200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 21:30 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 15:50 Cal File: 14060109.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12mdl.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.739	4.739	(1.000)	130	106965	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	81611			48.08- 108.08	76.30
4.739	4.739	(1.000)	49	154634			116.54- 176.54	144.57

* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	452574	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	72624			0.00- 45.72	16.05

* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
9.832	9.832	(1.000)	117	395646	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	216915			25.58- 85.58	54.83

\$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.136)	65	158450	400.000	394.31	70.00- 130.00	100.00
5.382	5.382	(1.136)	67	79819			23.57- 83.57	50.37

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	440737	400.000	394.38	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	50036			0.00- 41.05	11.35	
7.635	7.635	(1.306)	100	297742			38.18- 98.18	67.56	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	215910	400.000	390.37	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	289632			102.26- 162.26	134.14	
10.951	10.951	(1.114)	176	208929			66.15- 126.15	96.77	

9 Propylene						CAS #: 115-07-1			
1.241	1.241	(0.262)	41	5554	20.0000	19.472	70.00- 130.00	100.00(a)	
1.241	1.241	(0.262)	42	4231			34.95- 94.95	76.18	
1.227	1.227	(0.259)	39	4780			42.16- 102.16	86.06	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.268)	85	18286	20.0000	18.112	70.00- 130.00	100.00	
1.269	1.269	(0.268)	87	6259			3.05- 63.05	34.23	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	12634	20.0000	18.321	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	4083			1.48- 61.48	32.32	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.300)	50	7521	20.0000	20.703	70.00- 130.00	100.00	
1.409	1.409	(0.297)	52	2412			1.15- 61.15	32.07	

23 Butane						CAS #: 106-97-8			
1.479	1.479	(0.312)	58	1878	20.0000	21.920	70.00- 130.00	100.00	
1.479	1.479	(0.312)	43	11336			680.52- 740.52	603.62	

25 Vinyl Chloride						CAS #: 75-01-4			
1.521	1.521	(0.321)	62	7537	20.0000	19.319	70.00- 130.00	100.00	
1.507	1.507	(0.318)	64	2568			0.94- 60.94	34.07	

26 1,3-Butadiene						CAS #: 106-99-0			
1.521	1.521	(0.321)	54	5091	20.0000	18.541	70.00- 130.00	100.00	
1.521	1.521	(0.321)	39	5185			66.21- 126.21	101.85	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.383)	94	3413	20.0000	15.037	70.00- 130.00	100.00	
1.814	1.814	(0.383)	96	4327			64.87- 124.87	126.78	
1.814	1.814	(0.383)	79	539			0.00- 46.18	15.79	

30 Chloroethane						CAS #: 75-00-3			
1.912	1.912	(0.404)	64	4091	20.0000	20.897	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.898	1.898	(0.401)	66	1036			0.00- 59.89	25.32	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.404)	43	8091	20.0000	19.131	70.00- 130.00	100.00(a)	
1.912	1.912	(0.404)	57	5751			39.30- 99.30	71.08	
1.912	1.912	(0.404)	72	903			0.00- 38.88	11.16	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.442)	101	19641	20.0000	18.514	70.00- 130.00	100.00	
2.094	2.094	(0.442)	103	12598			34.32- 94.32	64.14	

42 Ethanol CAS #: 64-17-5									
2.346	2.346	(0.495)	45	3291	20.0000	19.810	70.00- 130.00	100.00(a)	
2.346	2.346	(0.495)	43	874			0.00- 50.94	26.56	
2.360	2.360	(0.498)	46	1323			13.63- 73.63	40.20	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.545)	151	11516	20.0000	18.074	70.00- 130.00	100.00	
2.584	2.584	(0.545)	153	8397			34.22- 94.22	72.92	
2.584	2.584	(0.545)	101	16730			102.57- 162.57	145.28	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.551)	61	11598	20.0000	17.504	70.00- 130.00	100.00	
2.612	2.612	(0.551)	96	7363			27.93- 87.93	63.49	
2.612	2.612	(0.551)	98	4348			6.48- 66.48	37.49	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.578)	58	3747	20.0000	19.783	70.00- 130.00	100.00(a)	
2.738	2.738	(0.578)	43	12109			289.79- 349.79	323.17	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.593)	76	20431	20.0000	18.883	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.607)	45	9729	20.0000	17.937	70.00- 130.00	100.00(a)	
2.878	2.878	(0.607)	43	2757			0.00- 50.97	28.34	
2.878	2.878	(0.607)	59	428			0.00- 33.89	4.40	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.634)	76	2442	20.0000	17.143	70.00- 130.00	100.00(a)	
3.004	3.004	(0.634)	41	6936			247.13- 307.13	284.03	

66 Methylene Chloride CAS #: 75-09-2									
3.172	3.172	(0.669)	49	9870	20.0000	18.926	70.00- 130.00	100.00	
3.172	3.172	(0.669)	84	6354			43.35- 103.35	64.38	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.158	3.158	(0.666)	51	2829			0.70- 60.70	28.66	

71 tert-Butyl alcohol CAS #: 75-65-0									
3.270	3.270	(0.690)	59	6712	20.0000	17.135	70.00- 130.00	100.00(a)	
3.270	3.270	(0.690)	41	2134			0.00- 55.72	31.79	
3.270	3.270	(0.690)	57	887			0.00- 41.28	13.22	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.354	3.354	(0.708)	73	12455	20.0000	17.274	70.00- 130.00	100.00	
3.354	3.354	(0.708)	57	3324			0.00- 54.09	26.69	
3.354	3.354	(0.708)	41	3501			0.00- 55.75	28.11	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.382	3.382	(0.714)	96	7962	20.0000	20.330	70.00- 130.00	100.00	
3.382	3.382	(0.714)	61	10802			117.22- 177.22	135.67	
3.382	3.382	(0.714)	98	4581			31.31- 91.31	57.54	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.755)	57	11695	20.0000	20.015	70.00- 130.00	100.00	
3.577	3.577	(0.755)	43	7250			33.82- 93.82	61.99	
3.577	3.577	(0.755)	86	1938			0.00- 47.96	16.57	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.857	3.857	(0.814)	63	13214	20.0000	18.468	70.00- 130.00	100.00	
3.857	3.857	(0.814)	65	4025			0.83- 60.83	30.46	

83 Isopropyl ether CAS #: 108-20-3									
3.843	3.843	(0.811)	45	22565	20.0000	18.478	70.00- 130.00	100.00(a)	
3.857	3.857	(0.814)	87	5827			0.00- 54.15	25.82	
3.843	3.843	(0.811)	59	2509			0.00- 41.46	11.12	

86 Vinyl Acetate CAS #: 108-05-4									
3.577	3.577	(0.755)	86	1938	20.0000	28.334	70.00- 130.00	100.00	
3.577	3.577	(0.755)	43	7250			1031.22-1091.22	374.10	
3.577	3.577	(0.755)	42	4179			62.99- 122.99	215.63	

88 Ethyl-tert-butyl ether CAS #: 637-92-3									
4.221	4.221	(0.891)	59	14553	20.0000	16.807	70.00- 130.00	100.00(a)	
4.221	4.221	(0.891)	87	5525			9.73- 69.73	37.96	
4.221	4.221	(0.891)	41	3443			0.00- 49.83	23.66	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.947)	61	9511	20.0000	17.183	70.00- 130.00	100.00	
4.487	4.487	(0.947)	96	7315			44.12- 104.12	76.91	
4.487	4.487	(0.947)	98	4695			18.04- 78.04	49.36	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
92 2-Butanone						CAS #: 78-93-3			
4.515	4.515	(0.953)	72	2772	20.0000	16.768	70.00- 130.00	100.00(a)	
4.515	4.515	(0.953)	43	12051			384.18- 444.18	434.74	
4.515	4.515	(0.953)	57	994			3.18- 63.18	35.86	

99 Tetrahydrofuran						CAS #: 109-99-9			
4.739	4.739	(1.000)	42	6787	20.0000	16.497	70.00- 130.00	100.00	
4.739	4.739	(1.000)	71	2621			6.63- 66.63	38.62	
4.725	4.725	(0.997)	72	3035			9.95- 69.95	44.72	

100 Chloroform						CAS #: 67-66-3			
4.823	4.823	(1.018)	83	15232	20.0000	18.263	70.00- 130.00	100.00	
4.823	4.823	(1.018)	85	9994			36.11- 96.11	65.61	

102 Cyclohexane						CAS #: 110-82-7			
4.921	4.921	(1.038)	84	9695	20.0000	17.988	70.00- 130.00	100.00	
4.921	4.921	(1.038)	56	11268			92.51- 152.51	116.22	
4.921	4.921	(1.038)	41	6322			36.86- 96.86	65.21	

103 1,1,1-Trichloroethane						CAS #: 71-55-6			
4.949	4.949	(1.044)	97	14208	20.0000	17.723	70.00- 130.00	100.00	
4.949	4.949	(1.044)	99	9749			34.93- 94.93	68.62	

106 Carbon Tetrachloride						CAS #: 56-23-5			
5.089	5.089	(1.074)	119	12914	20.0000	18.116	70.00- 130.00	100.00	
5.089	5.089	(1.074)	117	13965			76.39- 136.39	108.14	

113 2,2,4-Trimethylpentane						CAS #: 540-84-1			
5.326	5.326	(1.124)	57	36051	20.0000	18.098	70.00- 130.00	100.00	
5.326	5.326	(1.124)	56	12614			3.74- 63.74	34.99	
5.326	5.326	(1.124)	41	9797			0.00- 55.31	27.18	

116 Benzene						CAS #: 71-43-2			
5.354	5.354	(0.916)	78	20924	20.0000	17.029	70.00- 130.00	100.00	
5.354	5.354	(0.916)	77	5017			0.00- 53.58	23.98	

119 tert-Amyl methyl ether						CAS #: 994-05-8			
5.452	5.452	(1.151)	73	14051	20.0000	17.624	70.00- 130.00	100.00(a)	
5.452	5.452	(1.151)	87	2788			0.00- 53.81	19.84	
5.452	5.452	(1.151)	55	4590			1.86- 61.86	32.67	

120 1,2-Dichloroethane						CAS #: 107-06-2			
5.480	5.480	(0.938)	62	10247	20.0000	19.145	70.00- 130.00	100.00	
5.466	5.466	(0.935)	64	3149			2.61- 62.61	30.73	

121 Heptane						CAS #: 142-82-5			
5.564	5.564	(0.952)	71	7354	20.0000	18.798	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
121 Heptane (continued)									
5.564	5.564	(0.952)	43	13109			146.34- 206.34	178.26	
5.564	5.564	(0.952)	100	2447			3.46- 63.46	33.27	

125 Trichloroethene CAS #: 79-01-6									
6.082	6.082	(1.041)	95	10888	20.0000	18.409	70.00- 130.00	100.00	
6.082	6.082	(1.041)	130	11323			73.37- 133.37	104.00	
6.082	6.082	(1.041)	97	6761			35.35- 95.35	62.10	

127 Methylcyclohexane CAS #: 108-87-2									
6.194	6.194	(1.060)	83	13547	20.0000	18.896	70.00- 130.00	100.00(a)	
6.194	6.194	(1.060)	98	6365			19.87- 79.87	46.98	
6.194	6.194	(1.060)	55	11040			54.72- 114.72	81.49	

132 1,2-Dichloropropane CAS #: 78-87-5									
6.404	6.404	(1.096)	63	8630	20.0000	19.276	70.00- 130.00	100.00	
6.404	6.404	(1.096)	62	5516			40.76- 100.76	63.92	
6.390	6.390	(1.093)	41	5185			26.03- 86.03	60.08	

136 1,4-Dioxane CAS #: 123-91-1									
6.530	6.530	(1.117)	88	4368	20.0000	18.486	70.00- 130.00	100.00(a)	
6.530	6.530	(1.117)	58	3130			42.35- 102.35	71.66	
6.530	6.530	(1.117)	57	1055			0.00- 53.99	24.15	

138 Bromodichloromethane CAS #: 75-27-4									
6.726	6.726	(1.151)	83	15296	20.0000	17.997	70.00- 130.00	100.00	
6.726	6.726	(1.151)	85	10262			32.51- 92.51	67.09	

144 cis-1,3-Dichloropropene CAS #: 10061-01-5									
7.341	7.341	(1.256)	75	10639	20.0000	18.957	70.00- 130.00	100.00	
7.341	7.341	(1.256)	77	3500			0.58- 60.58	32.90	
7.327	7.327	(1.254)	39	5209			18.98- 78.98	48.96	

145 4-Methyl-2-pentanone CAS #: 108-10-1									
7.565	7.565	(1.294)	85	2151	20.0000	17.354	70.00- 130.00	100.00	
7.565	7.565	(1.294)	43	16272			626.54- 686.54	756.49	
7.565	7.565	(1.294)	58	5338			227.69- 287.69	248.16	

147 Toluene CAS #: 108-88-3									
7.733	7.733	(1.323)	91	26964	20.0000	18.844	70.00- 130.00	100.00	
7.733	7.733	(1.323)	92	15962			28.44- 88.44	59.20	

150 trans-1,3-Dichloropropene CAS #: 10061-02-6									
8.307	8.307	(0.845)	75	7932	20.0000	17.099	70.00- 130.00	100.00	
8.293	8.293	(0.843)	77	2625			1.11- 61.11	33.09	
8.307	8.307	(0.845)	39	4068			14.88- 74.88	51.29	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		

155	1,1,2-Trichloroethane					CAS #: 79-00-5				
8.614	8.614	(0.876)	97	9276	20.0000	19.460	70.00- 130.00	100.00		
8.614	8.614	(0.876)	99	5328			32.09- 92.09	57.44		
8.628	8.628	(0.878)	83	8176			58.01- 118.01	88.14		

156	Tetrachloroethene					CAS #: 127-18-4				
8.628	8.628	(0.878)	166	12733	20.0000	18.908	70.00- 130.00	100.00		
8.628	8.628	(0.878)	129	9765			46.67- 106.67	76.69		
8.628	8.628	(0.878)	131	8772			42.30- 102.30	68.89		

158	2-Hexanone					CAS #: 591-78-6				
9.006	9.006	(0.916)	58	5593	20.0000	16.467	70.00- 130.00	100.00(a)		
9.006	9.006	(0.916)	43	10945			165.25- 225.25	195.69		
9.006	9.006	(0.916)	100	1062			0.00- 52.77	18.99		

160	Dibromochloromethane					CAS #: 124-48-1				
9.160	9.160	(0.932)	129	15400	20.0000	18.614	70.00- 130.00	100.00		
9.160	9.160	(0.932)	127	12759			47.21- 107.21	82.85		

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4				
9.300	9.300	(0.946)	107	13589	20.0000	18.427	70.00- 130.00	100.00		
9.300	9.300	(0.946)	109	13062			63.74- 123.74	96.12		

165	Chlorobenzene					CAS #: 108-90-7				
9.860	9.860	(1.003)	112	22330	20.0000	19.024	70.00- 130.00	100.00		
9.860	9.860	(1.003)	114	7264			2.02- 62.02	32.53		
9.860	9.860	(1.003)	77	17389			30.14- 90.14	77.87		

167	Ethyl Benzene					CAS #: 100-41-4				
9.958	9.958	(1.013)	106	9498	20.0000	17.417	70.00- 130.00	100.00		
9.958	9.958	(1.013)	91	32175			306.11- 366.11	338.76		

169	m,p-Xylene					CAS #: 108-38-3				
10.084	10.084	(1.026)	106	12137	20.0000	18.104	70.00- 130.00	100.00		
10.084	10.084	(1.026)	91	25190			174.24- 234.24	207.55		

171	o-Xylene					CAS #: 95-47-6				
10.461	10.461	(1.064)	106	11222	20.0000	19.280	70.00- 130.00	100.00		
10.461	10.461	(1.064)	91	24519			191.30- 251.30	218.49		

172	Styrene					CAS #: 100-42-5				
10.489	10.489	(1.067)	104	17945	20.0000	18.102	70.00- 130.00	100.00		
10.489	10.489	(1.067)	78	9013			19.95- 79.95	50.23		

174	Bromoform					CAS #: 75-25-2				
10.671	10.671	(1.085)	173	14354	20.0000	18.503	70.00- 130.00	100.00(a)		

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
174 Bromoform (continued)									
10.671	10.671	(1.085)	171	7503			23.00- 83.00	52.27	

175 Cumene CAS #: 98-82-8									
10.783	10.783	(1.097)	105	35834	20.0000	18.242	70.00- 130.00	100.00(a)	
10.783	10.783	(1.097)	120	8811			0.00- 56.04	24.59	
10.783	10.783	(1.097)	51	4140			0.00- 40.17	11.55	

181 1,1,2,2-Tetrachloroethane CAS #: 79-34-5									
11.105	11.105	(1.129)	83	18995	20.0000	19.242	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	13021			35.69- 95.69	68.55	

182 Propylbenzene CAS #: 103-65-1									
11.105	11.105	(1.129)	91	46636	20.0000	18.517	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	10258			0.00- 51.76	22.00	
11.105	11.105	(1.129)	105	1553			0.00- 33.53	3.33	

188 4-Ethyltoluene CAS #: 622-96-8									
11.203	11.203	(1.139)	105	36043	20.0000	18.958	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	10872			0.00- 59.33	30.16	

190 1,3,5-Trimethylbenzene CAS #: 108-67-8									
11.245	11.245	(1.144)	105	32409	20.0000	19.616	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	14583			16.85- 76.85	45.00	

196 1,2,4-Trimethylbenzene CAS #: 95-63-6									
11.511	11.511	(1.171)	105	29305	20.0000	19.737	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	12732			15.19- 75.19	43.45	

208 1,3-Dichlorobenzene CAS #: 541-73-1									
11.707	11.707	(1.191)	146	21837	20.0000	19.605	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	14522			33.74- 93.74	66.50	
11.707	11.707	(1.191)	111	8733			10.77- 70.77	39.99	

209 1,4-Dichlorobenzene CAS #: 106-46-7									
11.763	11.763	(1.196)	146	22110	20.0000	20.158	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	13557			33.86- 93.86	61.32	
11.763	11.763	(1.196)	111	9214			10.30- 70.30	41.67	

212 alpha-Chlorotoluene CAS #: 100-44-7									
11.861	11.861	(1.206)	91	17223	20.0000	17.158	70.00- 130.00	100.00	
11.861	11.861	(1.206)	126	3823			0.00- 50.90	22.20	

214 1,2-Dichlorobenzene CAS #: 95-50-1									
11.986	11.986	(1.219)	146	20146	20.0000	19.674	70.00- 130.00	100.00	
11.986	11.986	(1.219)	148	12743			33.29- 93.29	63.25	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
214 1,2-Dichlorobenzene (continued)									
11.986	11.986	(1.219)	111	9066			12.93- 72.93	45.00	

226 1,2,4-Trichlorobenzene CAS #: 120-82-1									
12.854	12.854	(1.307)	180	7037	20.0000	15.536	70.00- 130.00	100.00(a)	
12.854	12.854	(1.307)	182	7448			66.09- 126.09	105.84	

227 Hexachlorobutadiene CAS #: 87-68-3									
12.896	12.896	(1.312)	225	6289	20.0000	16.167	70.00- 130.00	100.00(a)	
12.896	12.896	(1.312)	223	3417			33.17- 93.17	54.33	

228 Naphthalene CAS #: 91-20-3									
12.980	12.980	(1.320)	128	1165	2.00000	1.450	70.00- 130.00	100.00(Ta)	
0.000	1.000	(0.000)	127	0			0.00- 41.17	0.00	

QC Flag Legend

- T - Target compound detected outside RT window.
- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060109.d
 Lab Smp Id: ICAL Level 3
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 3
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 20ppbv(200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	106965	-3.51
123 1,4-Difluorobenze	489861	293917	685805	452574	-7.61
163 Chlorobenzene-d5	420158	252095	588221	395646	-5.83

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

AREA UPPER LIMIT = + 40% of internal standard area.

AREA LOWER LIMIT = - 40% of internal standard area.

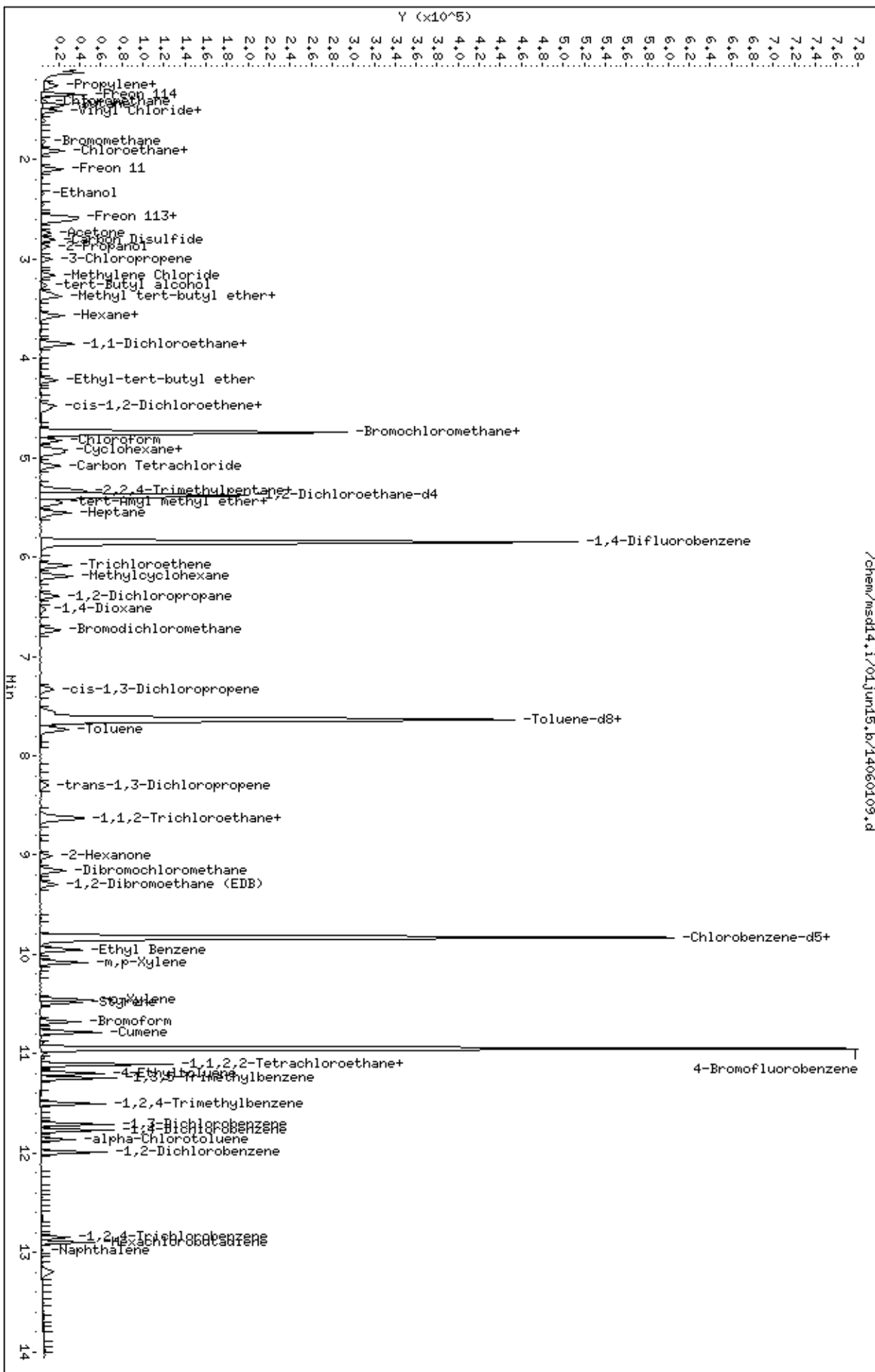
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.

RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msdd4.1/01jun15.b/14060109.d
 Date: 01-JUN-2015 15:50
 Client ID: ICAL Level 3
 Sample Info: 5.0ml #2716-281

Column phase: RTX-624

Instrument: msdd4.1
 Operator: md
 Column diameter: 0.18



Report Date: 01-Jun-2015 21:31

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060110.d
 Lab Smp Id: ICAL Level 4 Client Smp ID: ICAL Level 4
 Inj Date : 01-JUN-2015 16:17
 Operator : md Inst ID: msd14.i
 Smp Info : 12.5ml #2716-281
 Misc Info : 50ppbv(200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 21:31 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 16:17 Cal File: 14060110.d
 Als bottle: 1 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12mdl.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #:	74-97-5	
4.739	4.739	(1.000)	130	105745	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	82283			48.08- 108.08	77.81
4.739	4.739	(1.000)	49	153014			116.54- 176.54	144.70

* 123 1,4-Difluorobenzene						CAS #:	540-36-3	
5.844	5.844	(1.000)	114	460543	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	73919			0.00- 45.72	16.05

* 163 Chlorobenzene-d5						CAS #:	3114-55-4	
9.832	9.832	(1.000)	117	391077	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	215390			25.58- 85.58	55.08

§ 117 1,2-Dichloroethane-d4						CAS #:	17060-07-0	
5.382	5.382	(1.136)	65	152686	400.000	387.38	70.00- 130.00	100.00
5.382	5.382	(1.136)	67	80649			23.57- 83.57	52.82

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	447225	400.000	394.59	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	49898			0.00- 41.05	11.16	
7.635	7.635	(1.306)	100	296448			38.18- 98.18	66.29	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	219512	400.000	401.22	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	293298			102.26- 162.26	133.61	
10.951	10.951	(1.114)	176	214610			66.15- 126.15	97.77	

9 Propylene						CAS #: 115-07-1			
1.241	1.241	(0.262)	41	14591	50.0000	51.150	70.00- 130.00	100.00	
1.227	1.227	(0.259)	42	9603			34.95- 94.95	65.81	
1.227	1.227	(0.259)	39	9809			42.16- 102.16	67.23	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.268)	85	46179	50.0000	47.147	70.00- 130.00	100.00	
1.269	1.269	(0.268)	87	15176			3.05- 63.05	32.86	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	32913	50.0000	48.698	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	10823			1.48- 61.48	32.88	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.300)	50	19215	50.0000	52.283	70.00- 130.00	100.00	
1.423	1.423	(0.300)	52	5625			1.15- 61.15	29.27	

23 Butane						CAS #: 106-97-8			
1.479	1.479	(0.312)	58	4140	50.0000	49.248	70.00- 130.00	100.00	
1.479	1.479	(0.312)	43	26958			680.52- 740.52	651.16	

25 Vinyl Chloride						CAS #: 75-01-4			
1.507	1.507	(0.318)	62	17026	50.0000	45.476	70.00- 130.00	100.00	
1.507	1.507	(0.318)	64	5761			0.94- 60.94	33.84	

26 1,3-Butadiene						CAS #: 106-99-0			
1.521	1.521	(0.321)	54	13180	50.0000	48.908	70.00- 130.00	100.00	
1.521	1.521	(0.321)	39	11984			66.21- 126.21	90.93	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.383)	94	10097	50.0000	46.152	70.00- 130.00	100.00	
1.828	1.828	(0.386)	96	9423			64.87- 124.87	93.32	
1.814	1.814	(0.383)	79	1392			0.00- 46.18	13.79	

30 Chloroethane						CAS #: 75-00-3			
1.912	1.912	(0.404)	64	8842	50.0000	47.039	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.912	1.912	(0.404)	66	2466			0.00- 59.89	27.89	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.404)	43	22308	50.0000	52.189	70.00- 130.00	100.00	
1.912	1.912	(0.404)	57	14670			39.30- 99.30	65.76	
1.912	1.912	(0.404)	72	2045			0.00- 38.88	9.17	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.442)	101	47310	50.0000	46.241	70.00- 130.00	100.00	
2.094	2.094	(0.442)	103	31678			34.32- 94.32	66.96	

42 Ethanol CAS #: 64-17-5									
2.360	2.360	(0.498)	45	7557	50.0000	47.270	70.00- 130.00	100.00	
2.360	2.360	(0.498)	43	1752			0.00- 50.94	23.18	
2.360	2.360	(0.498)	46	3300			13.63- 73.63	43.67	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.545)	151	30959	50.0000	49.360	70.00- 130.00	100.00	
2.584	2.584	(0.545)	153	18332			34.22- 94.22	59.21	
2.584	2.584	(0.545)	101	40939			102.57- 162.57	132.24	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.551)	61	30815	50.0000	47.749	70.00- 130.00	100.00	
2.612	2.612	(0.551)	96	18536			27.93- 87.93	60.15	
2.612	2.612	(0.551)	98	11163			6.48- 66.48	36.23	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.578)	58	8423	50.0000	46.540	70.00- 130.00	100.00	
2.738	2.738	(0.578)	43	29753			289.79- 349.79	353.24	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.593)	76	49973	50.0000	47.499	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.607)	45	27347	50.0000	50.663	70.00- 130.00	100.00	
2.878	2.878	(0.607)	43	6436			0.00- 50.97	23.53	
2.864	2.864	(0.604)	59	1001			0.00- 33.89	3.66	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.634)	76	6879	50.0000	49.226	70.00- 130.00	100.00	
3.004	3.004	(0.634)	41	19389			247.13- 307.13	281.86	

66 Methylene Chloride CAS #: 75-09-2									
3.172	3.172	(0.669)	49	22809	50.0000	45.554	70.00- 130.00	100.00	
3.172	3.172	(0.669)	84	17166			43.35- 103.35	75.26	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.172	3.172	(0.669)	51	6936			0.70- 60.70	30.41	

71 tert-Butyl alcohol CAS #: 75-65-0									
3.270	3.270	(0.690)	59	18669	50.0000	48.792	70.00- 130.00	100.00	
3.270	3.270	(0.690)	41	5378			0.00- 55.72	28.81	
3.270	3.270	(0.690)	57	2361			0.00- 41.28	12.65	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.353	3.353	(0.708)	73	33855	50.0000	48.099	70.00- 130.00	100.00	
3.353	3.353	(0.708)	57	9015			0.00- 54.09	26.63	
3.353	3.353	(0.708)	41	10003			0.00- 55.75	29.55	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.381	3.381	(0.714)	96	18009	50.0000	47.340	70.00- 130.00	100.00	
3.381	3.381	(0.714)	61	27201			117.22- 177.22	151.04	
3.381	3.381	(0.714)	98	11215			31.31- 91.31	62.27	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.755)	57	27545	50.0000	48.244	70.00- 130.00	100.00	
3.577	3.577	(0.755)	43	18320			33.82- 93.82	66.51	
3.577	3.577	(0.755)	86	5142			0.00- 47.96	18.67	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.857	3.857	(0.814)	63	33374	50.0000	47.856	70.00- 130.00	100.00	
3.871	3.871	(0.817)	65	10275			0.83- 60.83	30.79	

83 Isopropyl ether CAS #: 108-20-3									
3.843	3.843	(0.811)	45	59721	50.0000	49.644	70.00- 130.00	100.00	
3.857	3.857	(0.814)	87	14957			0.00- 54.15	25.04	
3.843	3.843	(0.811)	59	6643			0.00- 41.46	11.12	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.826)	86	224	50.0000	4.810	70.00- 130.00	100.00(a)	
3.913	3.913	(0.826)	43	5302			1031.22-1091.22	2366.96	
3.913	3.913	(0.826)	42	587			62.99- 122.99	262.05	

88 Ethyl-tert-butyl ether CAS #: 637-92-3									
4.221	4.221	(0.891)	59	40675	50.0000	48.317	70.00- 130.00	100.00	
4.221	4.221	(0.891)	87	16791			9.73- 69.73	41.28	
4.221	4.221	(0.891)	41	9163			0.00- 49.83	22.53	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.947)	61	26161	50.0000	48.338	70.00- 130.00	100.00	
4.487	4.487	(0.947)	96	18918			44.12- 104.12	72.31	
4.487	4.487	(0.947)	98	11890			18.04- 78.04	45.45	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
92 2-Butanone						CAS #: 78-93-3			
4.515	4.515	(0.953)	72	8068	50.0000	49.576	70.00- 130.00	100.00	
4.515	4.515	(0.953)	43	34322			384.18- 444.18	425.41	
4.515	4.515	(0.953)	57	2580			3.18- 63.18	31.98	

99 Tetrahydrofuran						CAS #: 109-99-9			
4.725	4.725	(0.997)	42	18932	50.0000	47.367	70.00- 130.00	100.00	
4.739	4.739	(1.000)	71	7951			6.63- 66.63	42.00	
4.725	4.725	(0.997)	72	8382			9.95- 69.95	44.27	

100 Chloroform						CAS #: 67-66-3			
4.823	4.823	(1.018)	83	40365	50.0000	49.213	70.00- 130.00	100.00	
4.823	4.823	(1.018)	85	25842			36.11- 96.11	64.02	

102 Cyclohexane						CAS #: 110-82-7			
4.921	4.921	(1.038)	84	22525	50.0000	43.974	70.00- 130.00	100.00	
4.921	4.921	(1.038)	56	29820			92.51- 152.51	132.39	
4.921	4.921	(1.038)	41	15699			36.86- 96.86	69.70	

103 1,1,1-Trichloroethane						CAS #: 71-55-6			
4.949	4.949	(1.044)	97	37656	50.0000	48.112	70.00- 130.00	100.00	
4.949	4.949	(1.044)	99	23995			34.93- 94.93	63.72	

106 Carbon Tetrachloride						CAS #: 56-23-5			
5.088	5.088	(1.074)	119	35350	50.0000	50.122	70.00- 130.00	100.00	
5.088	5.088	(1.074)	117	36903			76.39- 136.39	104.39	

113 2,2,4-Trimethylpentane						CAS #: 540-84-1			
5.326	5.326	(1.124)	57	88849	50.0000	46.246	70.00- 130.00	100.00	
5.326	5.326	(1.124)	56	31601			3.74- 63.74	35.57	
5.326	5.326	(1.124)	41	22765			0.00- 55.31	25.62	

116 Benzene						CAS #: 71-43-2			
5.354	5.354	(0.916)	78	55162	50.0000	45.181	70.00- 130.00	100.00	
5.354	5.354	(0.916)	77	12425			0.00- 53.58	22.52	

119 tert-Amyl methyl ether						CAS #: 994-05-8			
5.452	5.452	(1.151)	73	35611	50.0000	46.681	70.00- 130.00	100.00	
5.452	5.452	(1.151)	87	9162			0.00- 53.81	25.73	
5.452	5.452	(1.151)	55	11905			1.86- 61.86	33.43	

120 1,2-Dichloroethane						CAS #: 107-06-2			
5.480	5.480	(0.938)	62	24962	50.0000	46.807	70.00- 130.00	100.00	
5.466	5.466	(0.935)	64	8335			2.61- 62.61	33.39	

121 Heptane						CAS #: 142-82-5			
5.564	5.564	(0.952)	71	17781	50.0000	45.890	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	CAL-AMT		ON-COL	TARGET RANGE	RATIO	
				RESPONSE	(PPEV)	(PPBV)			
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
121 Heptane (continued)									
5.564	5.564	(0.952)	43	33064			146.34- 206.34	185.95	
5.564	5.564	(0.952)	100	6043			3.46- 63.46	33.99	

125 Trichloroethene CAS #: 79-01-6									
6.082	6.082	(1.041)	95	27014	50.0000	46.061	70.00- 130.00	100.00	
6.082	6.082	(1.041)	130	28196			73.37- 133.37	104.38	
6.082	6.082	(1.041)	97	17461			35.35- 95.35	64.64	

127 Methylcyclohexane CAS #: 108-87-2									
6.194	6.194	(1.060)	83	32020	50.0000	45.274	70.00- 130.00	100.00	
6.194	6.194	(1.060)	98	15904			19.87- 79.87	49.67	
6.194	6.194	(1.060)	55	28701			54.72- 114.72	89.63	

132 1,2-Dichloropropane CAS #: 78-87-5									
6.404	6.404	(1.096)	63	20669	50.0000	46.444	70.00- 130.00	100.00	
6.404	6.404	(1.096)	62	14494			40.76- 100.76	70.12	
6.404	6.404	(1.096)	41	12422			26.03- 86.03	60.10	

136 1,4-Dioxane CAS #: 123-91-1									
6.530	6.530	(1.117)	88	11965	50.0000	49.841	70.00- 130.00	100.00	
6.530	6.530	(1.117)	58	8721			42.35- 102.35	72.89	
6.530	6.530	(1.117)	57	3365			0.00- 53.99	28.12	

138 Bromodichloromethane CAS #: 75-27-4									
6.739	6.739	(1.153)	83	41710	50.0000	48.657	70.00- 130.00	100.00	
6.739	6.739	(1.153)	85	25995			32.51- 92.51	62.32	

144 cis-1,3-Dichloropropene CAS #: 10061-01-5									
7.341	7.341	(1.256)	75	28670	50.0000	50.150	70.00- 130.00	100.00	
7.341	7.341	(1.256)	77	8862			0.58- 60.58	30.91	
7.327	7.327	(1.254)	39	14803			18.98- 78.98	51.63	

145 4-Methyl-2-pentanone CAS #: 108-10-1									
7.565	7.565	(1.294)	85	5562	50.0000	45.437	70.00- 130.00	100.00	
7.565	7.565	(1.294)	43	38835			626.54- 686.54	698.22	
7.565	7.565	(1.294)	58	14688			227.69- 287.69	264.08	

147 Toluene CAS #: 108-88-3									
7.733	7.733	(1.323)	91	68326	50.0000	47.658	70.00- 130.00	100.00	
7.733	7.733	(1.323)	92	39340			28.44- 88.44	57.58	

150 trans-1,3-Dichloropropene CAS #: 10061-02-6									
8.293	8.293	(0.843)	75	21110	50.0000	46.970	70.00- 130.00	100.00	
8.307	8.307	(0.845)	77	7059			1.11- 61.11	33.44	
8.307	8.307	(0.845)	39	11014			14.88- 74.88	52.17	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		

155	1,1,2-Trichloroethane					CAS #: 79-00-5				
8.614	8.614	(0.876)	97	22314	50.0000	47.993	70.00-	130.00	100.00	
8.614	8.614	(0.876)	99	14305			32.09-	92.09	64.11	
8.614	8.614	(0.876)	83	19743			58.01-	118.01	88.48	

156	Tetrachloroethene					CAS #: 127-18-4				
8.628	8.628	(0.878)	166	31344	50.0000	47.785	70.00-	130.00	100.00	
8.628	8.628	(0.878)	129	24181			46.67-	106.67	77.15	
8.628	8.628	(0.878)	131	24422			42.30-	102.30	77.92	

158	2-Hexanone					CAS #: 591-78-6				
9.006	9.006	(0.916)	58	16920	50.0000	50.266	70.00-	130.00	100.00	
9.006	9.006	(0.916)	43	31324			165.25-	225.25	185.13	
9.006	9.006	(0.916)	100	3613			0.00-	52.77	21.35	

160	Dibromochloromethane					CAS #: 124-48-1				
9.160	9.160	(0.932)	129	40468	50.0000	49.613	70.00-	130.00	100.00	
9.160	9.160	(0.932)	127	31158			47.21-	107.21	76.99	

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4				
9.300	9.300	(0.946)	107	33566	50.0000	46.976	70.00-	130.00	100.00	
9.300	9.300	(0.946)	109	32336			63.74-	123.74	96.34	

165	Chlorobenzene					CAS #: 108-90-7				
9.860	9.860	(1.003)	112	53807	50.0000	47.233	70.00-	130.00	100.00	
9.860	9.860	(1.003)	114	16975			2.02-	62.02	31.55	
9.860	9.860	(1.003)	77	35326			30.14-	90.14	65.65	

167	Ethyl Benzene					CAS #: 100-41-4				
9.958	9.958	(1.013)	106	24291	50.0000	46.205	70.00-	130.00	100.00	
9.958	9.958	(1.013)	91	83420			306.11-	366.11	343.42	

169	m,p-Xylene					CAS #: 108-38-3				
10.084	10.084	(1.026)	106	31649	50.0000	48.302	70.00-	130.00	100.00	
10.084	10.084	(1.026)	91	64999			174.24-	234.24	205.37	

171	o-Xylene					CAS #: 95-47-6				
10.461	10.461	(1.064)	106	29604	50.0000	51.084	70.00-	130.00	100.00	
10.461	10.461	(1.064)	91	61730			191.30-	251.30	208.52	

172	Styrene					CAS #: 100-42-5				
10.489	10.489	(1.067)	104	46383	50.0000	47.974	70.00-	130.00	100.00	
10.489	10.489	(1.067)	78	22675			19.95-	79.95	48.89	

174	Bromoform					CAS #: 75-25-2				
10.671	10.671	(1.085)	173	37425	50.0000	49.100	70.00-	130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
174 Bromoform (continued)									
10.671	10.671	(1.085)	171	19052			23.00- 83.00	50.91	

175 Cumene									
						CAS #: 98-82-8			
10.783	10.783	(1.097)	105	89380	50.0000	46.963	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	24423			0.00- 56.04	27.32	
10.769	10.769	(1.095)	51	9488			0.00- 40.17	10.62	

181 1,1,2,2-Tetrachloroethane									
						CAS #: 79-34-5			
11.105	11.105	(1.129)	83	48681	50.0000	49.917	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	32279			35.69- 95.69	66.31	

182 Propylbenzene									
						CAS #: 103-65-1			
11.105	11.105	(1.129)	91	115143	50.0000	47.135	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	25224			0.00- 51.76	21.91	
11.105	11.105	(1.129)	105	4461			0.00- 33.53	3.87	

188 4-Ethyltoluene									
						CAS #: 622-96-8			
11.203	11.203	(1.139)	105	90838	50.0000	48.742	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	25238			0.00- 59.33	27.78	

190 1,3,5-Trimethylbenzene									
						CAS #: 108-67-8			
11.245	11.245	(1.144)	105	81116	50.0000	49.752	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	37943			16.85- 76.85	46.78	

196 1,2,4-Trimethylbenzene									
						CAS #: 95-63-6			
11.511	11.511	(1.171)	105	70991	50.0000	48.769	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	32203			15.19- 75.19	45.36	

208 1,3-Dichlorobenzene									
						CAS #: 541-73-1			
11.707	11.707	(1.191)	146	53726	50.0000	49.092	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	33727			33.74- 93.74	62.78	
11.707	11.707	(1.191)	111	22391			10.77- 70.77	41.68	

209 1,4-Dichlorobenzene									
						CAS #: 106-46-7			
11.763	11.763	(1.196)	146	54435	50.0000	50.157	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	34530			33.86- 93.86	63.43	
11.763	11.763	(1.196)	111	20321			10.30- 70.30	37.33	

212 alpha-Chlorotoluene									
						CAS #: 100-44-7			
11.860	11.860	(1.206)	91	50562	50.0000	50.717	70.00- 130.00	100.00	
11.860	11.860	(1.206)	126	9862			0.00- 50.90	19.50	

214 1,2-Dichlorobenzene									
						CAS #: 95-50-1			
11.986	11.986	(1.219)	146	49080	50.0000	48.858	70.00- 130.00	100.00	
11.986	11.986	(1.219)	148	31537			33.29- 93.29	64.26	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
214 1,2-Dichlorobenzene (continued)									
11.986	11.986	(1.219)	111	21419			12.93- 72.93	43.64	

226 1,2,4-Trichlorobenzene CAS #: 120-82-1									
12.854	12.854	(1.307)	180	29003	50.0000	58.970	70.00- 130.00	100.00	
12.854	12.854	(1.307)	182	28561			66.09- 126.09	98.48	

227 Hexachlorobutadiene CAS #: 87-68-3									
12.896	12.896	(1.312)	225	24199	50.0000	57.938	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	14474			33.17- 93.17	59.81	

228 Naphthalene CAS #: 91-20-3									
12.980	12.980	(1.320)	128	5167	5.00000	5.913	70.00- 130.00	100.00(a)	
12.980	12.980	(1.320)	127	472			0.00- 41.17	9.13	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 01-Jun-2015 21:31

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060110.d
 Lab Smp Id: ICAL Level 4
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 4
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 50ppbv(200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	105745	-4.61
123 1,4-Difluorobenze	489861	293917	685805	460543	-5.98
163 Chlorobenzene-d5	420158	252095	588221	391077	-6.92

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

AREA UPPER LIMIT = + 40% of internal standard area.

AREA LOWER LIMIT = - 40% of internal standard area.

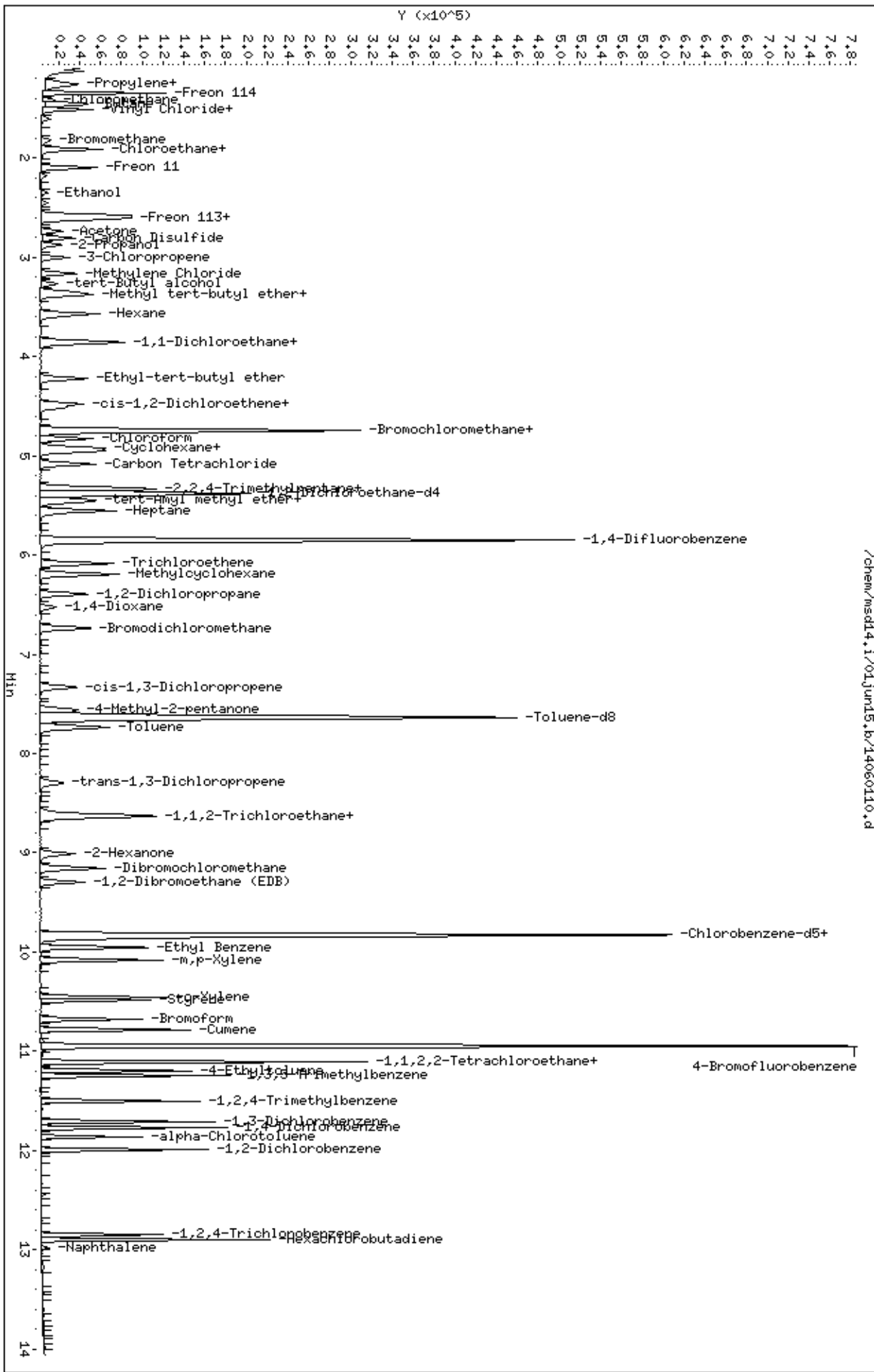
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.

RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msdd4.1/01jun15.b/14060110.d
 Date: 01-JUN-2015 16:17
 Client ID: ICAL Level 4
 Sample Info: 12.5ml #2716-281

Column phase: RTX-624

Instrument: msdd4.1
 Operator: md
 Column diameter: 0.18



/chem/msdd4.1/01jun15.b/14060110.d

Report Date: 04-Jun-2015 16:49

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/04jun15.b/14060406.d
 Lab Smp Id: ICAL Level 5 Client Smp ID: ICAL Level 5
 Inj Date : 04-JUN-2015 13:42
 Operator : mjs Inst ID: msd14.i
 Smp Info : 25ml #2736-10
 Misc Info : 100ppbv(200ppbv) AT-1
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/04jun15.b/14550601b.m
 Meth Date : 04-Jun-2015 16:49 HR8M Quant Type: ISTD
 Cal Date : 04-JUN-2015 13:42 Cal File: 14060406.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT1curve.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #:	74-97-5	
4.739	4.739	(1.000)	130	113467	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	87878			48.08- 108.08	77.45
4.739	4.739	(1.000)	49	159811			116.54- 176.54	140.84

* 123 1,4-Difluorobenzene						CAS #:	540-36-3	
5.844	5.844	(1.000)	114	491560	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	80637			0.00- 45.72	16.40

* 163 Chlorobenzene-d5						CAS #:	3114-55-4	
9.832	9.832	(1.000)	117	437963	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	243270			25.58- 85.58	55.55

6 Freon 143a						CAS #:	420-46-2	
1.157	1.157	(0.244)	69	44051	100.000	100.00	80.00- 120.00	100.00
1.157	1.157	(0.244)	65	14010			0.00- 30.00	31.80

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
7 Freon 134a									
						CAS #: 811-97-2			
1.199	1.199	(0.253)	83	31853	100.000	100.00	80.00- 120.00	100.00	
1.199	1.199	(0.253)	69	29676			0.00- 30.00	93.17	

10 1,1-Difluoroethane									
						CAS #: 75-37-6			
1.241	1.241	(0.262)	65	16804	100.000	100.00	80.00- 120.00	100.00	
1.241	1.241	(0.262)	51	32098			0.00- 30.00	191.01	

13 Chlorodifluoromethane									
						CAS #: 75-45-6			
1.283	1.283	(0.271)	67	7567	100.000	100.00	80.00- 120.00	100.00	
1.283	1.283	(0.271)	51	57088			0.00- 30.00	754.43	

16 Freon 142b									
						CAS #: 75-68-3			
1.395	1.395	(0.294)	65	67269	100.000	100.00	80.00- 120.00	100.00	
1.395	1.395	(0.294)	45	15972			0.00- 30.00	23.74	

37 Dichlorofluoromethane									
						CAS #: 75-43-4			
2.108	2.108	(0.445)	67	68143	100.000	100.00	80.00- 120.00	100.00(T)	
2.108	2.108	(0.445)	69	21822			0.00- 30.00	32.02	
0.000	1.000	(0.000)	35	0			0.00- 30.00	0.00	

48 Freon 123									
						CAS #: 306-83-2			
2.542	2.542	(0.536)	83	77092	100.000	100.00	80.00- 120.00	100.00	
2.542	2.542	(0.536)	133	15374			0.00- 30.00	19.94	
2.542	2.542	(0.536)	85	52369			0.00- 30.00	67.93	

59 Cyclopentene									
						CAS #: 142-29-0			
3.018	3.018	(0.637)	67	65249	100.000	100.00	80.00- 120.00	100.00	
3.018	3.018	(0.637)	68	24675			0.00- 30.00	37.82	
3.018	3.018	(0.637)	53	13283			0.00- 30.00	20.36	

84 1-Propanol									
						CAS #: 71-23-8			
4.011	4.011	(0.846)	42	5306	100.000	100.00	80.00- 120.00	100.00	
4.011	4.011	(0.846)	59	6663			0.00- 30.00	125.57	
4.025	4.025	(0.849)	41	3914			0.00- 30.00	73.77	

90 2,2-Dichloropropane									
						CAS #: 594-20-7			
4.431	4.431	(0.935)	77	36523	100.000	100.00	80.00- 120.00	100.00	
4.431	4.431	(0.935)	79	11513			0.00- 30.00	31.52	
4.431	4.431	(0.935)	97	7135			0.00- 30.00	19.54	

107 1,1-Dichloropropene									
						CAS #: 563-58-6			
5.131	5.131	(1.083)	110	19497	100.000	100.00	80.00- 120.00	100.00	
5.131	5.131	(1.083)	75	53748			0.00- 30.00	275.67	

115 Isobutanol									
						CAS #: 78-83-1			
5.368	5.368	(0.919)	43	28514	100.000	100.00	80.00- 120.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
115 Isobutanol (continued)									
5.368	5.368	(0.919)	41	21172			0.00- 30.00	74.25	

124 n-Butanol CAS #: 71-36-3									
6.110	6.110	(1.045)	56	40846	100.000	100.00	80.00- 120.00	100.00	
6.110	6.110	(1.045)	41	27818			0.00- 30.00	68.10	
6.110	6.110	(1.045)	43	23135			0.00- 30.00	56.64	

157 1,3-Dichloropropane CAS #: 142-28-9									
8.894	8.894	(1.877)	76	59041	100.000	100.00	80.00- 120.00	100.00	
8.894	8.894	(1.877)	41	33948			0.00- 30.00	57.50	
8.894	8.894	(1.877)	78	18348			0.00- 30.00	31.08	

159 Butyl Acetate CAS #: 123-86-4									
9.174	9.174	(1.570)	56	11650	100.000	100.00	80.00- 120.00	100.00	
9.174	9.174	(1.570)	73	4428			0.00- 30.00	38.01	
9.174	9.174	(1.570)	43	25639			0.00- 30.00	220.08	

168 1,1,1,2-Tetrachloroethane CAS #: 630-20-6									
9.972	9.972	(1.014)	131	50510	100.000	100.00	80.00- 120.00	100.00	
9.972	9.972	(1.014)	117	33914			0.00- 30.00	67.14	
9.972	9.972	(1.014)	95	20517			0.00- 30.00	40.62	

173 2-Heptanone CAS #: 110-43-0									
10.629	10.629	(1.081)	58	48643	100.000	100.00	80.00- 120.00	100.00	
10.629	10.629	(1.081)	43	80513			0.00- 30.00	165.52	

176 Cyclohexanone CAS #: 108-94-1									
10.909	10.909	(1.110)	55	39701	100.000	100.00	80.00- 120.00	100.00	
10.909	10.909	(1.110)	98	15461			0.00- 30.00	38.94	
10.909	10.909	(1.110)	42	24761			0.00- 30.00	62.37	

180 Bromobenzene CAS #: 108-86-1									
11.049	11.049	(1.124)	156	51903	100.000	100.00	80.00- 120.00	100.00	
11.049	11.049	(1.124)	77	87081			0.00- 30.00	167.78	
11.049	11.049	(1.124)	158	51139			0.00- 30.00	98.53	

185 1,2,3-Trichloropropane CAS #: 96-18-4									
11.133	11.133	(1.132)	110	28290	100.000	100.00	80.00- 120.00	100.00	
11.133	11.133	(1.132)	61	18444			0.00- 30.00	65.20	
11.133	11.133	(1.132)	112	17914			0.00- 30.00	63.32	

189 2-Chlorotoluene CAS #: 95-49-8									
11.189	11.189	(1.138)	126	41810	100.000	100.00	80.00- 120.00	100.00	
11.189	11.189	(1.138)	91	126434			0.00- 30.00	302.40	
11.189	11.189	(1.138)	65	12082			0.00- 30.00	28.90	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

191	4-Chlorotoluene				CAS #: 106-43-4				
11.273	11.273	(1.147)	126	40825	100.000	100.00	80.00- 120.00	100.00	
11.273	11.273	(1.147)	91	126852			0.00- 30.00	310.72	
11.273	11.273	(1.147)	63	16755			0.00- 30.00	41.04	

195	tert-Butylbenzene				CAS #: 98-06-6				
11.469	11.469	(1.167)	119	135625	100.000	100.00	80.00- 120.00	100.00	
11.469	11.469	(1.167)	134	35246			0.00- 30.00	25.99	
11.455	11.455	(1.165)	91	90716			0.00- 30.00	66.89	

197	Pentachloroethane				CAS #: 76-01-7				
11.511	11.511	(1.171)	167	36828	100.000	100.00	80.00- 120.00	100.00	
11.511	11.511	(1.171)	117	39023			0.00- 30.00	105.96	

203	sec-Butylbenzene				CAS #: 135-98-8				
11.609	11.609	(1.181)	105	206557	100.000	100.00	80.00- 120.00	100.00	
11.609	11.609	(1.181)	134	41361			0.00- 30.00	20.02	
11.609	11.609	(1.181)	91	32411			0.00- 30.00	15.69	

207	p-Cymene				CAS #: 99-87-6				
11.707	11.707	(1.191)	119	163069	100.000	100.00	80.00- 120.00	100.00	
11.707	11.707	(1.191)	134	43371			0.00- 30.00	26.60	
11.707	11.707	(1.191)	91	37814			0.00- 30.00	23.19	

210	1,2,3-Trimethylbenzene				CAS #: 526-73-8				
11.777	11.777	(1.198)	120	62966	100.000	100.00	80.00- 120.00	100.00	
11.777	11.777	(1.198)	105	153364			0.00- 30.00	243.57	
11.777	11.777	(1.198)	77	18725			0.00- 30.00	29.74	

213	Butylbenzene				CAS #: 104-51-8				
11.945	11.945	(1.215)	134	38060	100.000	100.00	80.00- 120.00	100.00	
11.945	11.945	(1.215)	91	152384			0.00- 30.00	400.38	
11.945	11.945	(1.215)	92	80214			0.00- 30.00	210.76	

221	1,2-Dibromo-3-chloropropane				CAS #: 96-12-8				
12.448	12.448	(1.266)	157	31043	100.000	100.00	80.00- 120.00	100.00	
12.434	12.434	(1.265)	75	28524			0.00- 30.00	91.89	
12.448	12.448	(1.266)	155	24404			0.00- 30.00	78.61	

QC Flag Legend

T - Target compound detected outside RT window.

Report Date: 04-Jun-2015 16:49

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060406.d
 Lab Smp Id: ICAL Level 5
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: mjs

Calibration Date: 04-JUN-2015
 Calibration Time: 13:42
 Client Smp ID: ICAL Level 5
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/04jun15.b/14550601b.m

Misc Info: 100ppbv(200ppbv) AT-1

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	113467	68080	158854	113467	0.00
123 1,4-Difluorobenze	491560	294936	688184	491560	0.00
163 Chlorobenzene-d5	437963	262778	613148	437963	0.00

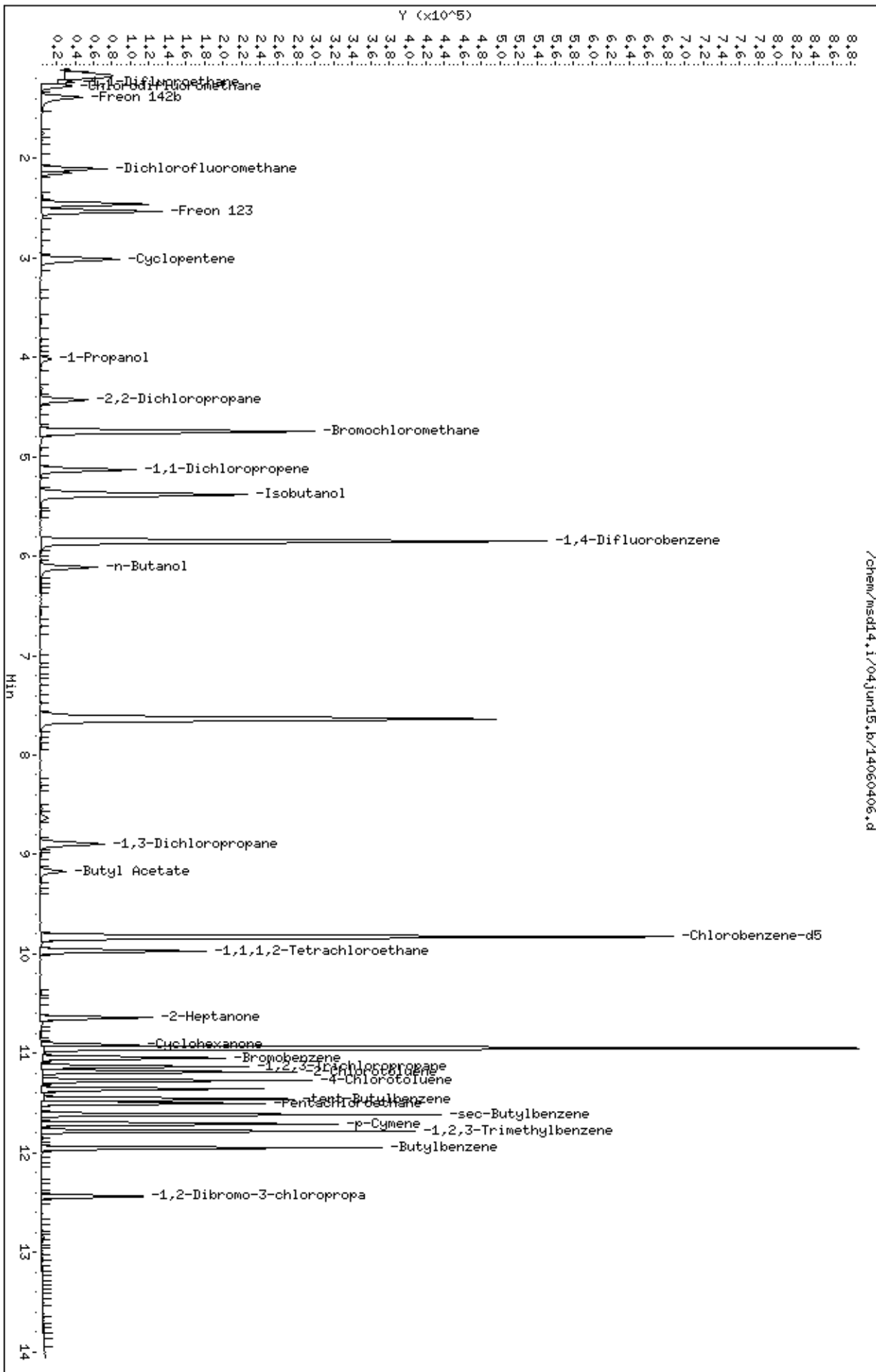
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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: 01-Jun-2015 22:06

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060111.d
 Lab Smp Id: ICAL Level 5 Client Smp ID: ICAL Level 5
 Inj Date : 01-JUN-2015 16:35
 Operator : md Inst ID: msd14.i
 Smp Info : 25ml #2716-281
 Misc Info : 100ppbv(200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:06 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 16:35 Cal File: 14060111.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.739	4.739	(1.000)	130	107718	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	82553			48.08- 108.08	76.64
4.739	4.739	(1.000)	49	158656			116.54- 176.54	147.29

* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	473591	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	75823			0.00- 45.72	16.01

* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
9.832	9.832	(1.000)	117	415995	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	230688			25.58- 85.58	55.45

\$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.136)	65	157852	400.000	391.58	70.00- 130.00	100.00
5.382	5.382	(1.136)	67	80740			23.57- 83.57	51.15

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	473224	400.000	402.54	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	52201			0.00- 41.05	11.03	
7.635	7.635	(1.306)	100	328600			38.18- 98.18	69.44	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	236098	400.000	408.74	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	313813			102.26- 162.26	132.92	
10.951	10.951	(1.114)	176	226335			66.15- 126.15	95.86	

9 Propylene						CAS #: 115-07-1			
1.227	1.227	(0.259)	41	32879	100.000	104.04	70.00- 130.00	100.00	
1.227	1.227	(0.259)	42	21161			34.95- 94.95	64.36	
1.227	1.227	(0.259)	39	22736			42.16- 102.16	69.15	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.268)	85	107918	100.000	102.53	70.00- 130.00	100.00	
1.269	1.269	(0.268)	87	32962			3.05- 63.05	30.54	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	71803	100.000	98.236	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	22389			1.48- 61.48	31.18	

17 Chloromethane						CAS #: 74-87-3			
1.409	1.409	(0.297)	50	36796	100.000	97.017	70.00- 130.00	100.00	
1.409	1.409	(0.297)	52	12265			1.15- 61.15	33.33	

23 Butane						CAS #: 106-97-8			
1.479	1.479	(0.312)	58	8063	100.000	90.714	70.00- 130.00	100.00	
1.465	1.465	(0.309)	43	58693			680.52- 740.52	727.93	

25 Vinyl Chloride						CAS #: 75-01-4			
1.507	1.507	(0.318)	62	37725	100.000	97.143	70.00- 130.00	100.00	
1.507	1.507	(0.318)	64	12311			0.94- 60.94	32.63	

26 1,3-Butadiene						CAS #: 106-99-0			
1.521	1.521	(0.321)	54	29358	100.000	98.555	70.00- 130.00	100.00	
1.521	1.521	(0.321)	39	29180			66.21- 126.21	99.39	

29 Bromomethane						CAS #: 74-83-9			
1.815	1.815	(0.383)	94	26196	100.000	104.48	70.00- 130.00	100.00	
1.815	1.815	(0.383)	96	23265			64.87- 124.87	88.81	
1.815	1.815	(0.383)	79	4154			0.00- 46.18	15.86	

30 Chloroethane						CAS #: 75-00-3			
1.898	1.898	(0.401)	64	20310	100.000	101.27	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.898	1.898	(0.401)	66	5708			0.00- 59.89	28.10	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.404)	43	47455	100.000	102.01	70.00- 130.00	100.00	
1.912	1.912	(0.404)	57	32848			39.30- 99.30	69.22	
1.912	1.912	(0.404)	72	4124			0.00- 38.88	8.69	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.442)	101	103493	100.000	95.868	70.00- 130.00	100.00	
2.094	2.094	(0.442)	103	67813			34.32- 94.32	65.52	

42 Ethanol CAS #: 64-17-5									
2.346	2.346	(0.495)	45	17192	100.000	104.61	70.00- 130.00	100.00	
2.346	2.346	(0.495)	43	4004			0.00- 50.94	23.29	
2.346	2.346	(0.495)	46	6609			13.63- 73.63	38.44	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.545)	151	65214	100.000	97.945	70.00- 130.00	100.00	
2.584	2.584	(0.545)	153	41843			34.22- 94.22	64.16	
2.584	2.584	(0.545)	101	89908			102.57- 162.57	137.87	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.551)	61	66793	100.000	96.939	70.00- 130.00	100.00	
2.612	2.612	(0.551)	96	39649			27.93- 87.93	59.36	
2.612	2.612	(0.551)	98	24041			6.48- 66.48	35.99	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.578)	58	20213	100.000	99.532	70.00- 130.00	100.00	
2.738	2.738	(0.578)	43	63059			289.79- 349.79	311.97	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.593)	76	113556	100.000	98.949	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.607)	45	59497	100.000	90.828	70.00- 130.00	100.00	
2.878	2.878	(0.607)	43	14321			0.00- 50.97	24.07	
2.878	2.878	(0.607)	59	2372			0.00- 33.89	3.99	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.634)	76	16843	100.000	97.741	70.00- 130.00	100.00	
3.004	3.004	(0.634)	41	46815			247.13- 307.13	277.95	

66 Methylene Chloride CAS #: 75-09-2									
3.158	3.158	(0.666)	49	50264	100.000	96.015	70.00- 130.00	100.00	
3.158	3.158	(0.666)	84	35598			43.35- 103.35	70.82	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.158	3.158	(0.666)	51	15311			0.70- 60.70	30.46	

71 tert-Butyl alcohol CAS #: 75-65-0									
3.270	3.270	(0.690)	59	46546	100.000	113.89	70.00- 130.00	100.00	
3.270	3.270	(0.690)	41	13042			0.00- 55.72	28.02	
3.284	3.284	(0.693)	57	5802			0.00- 41.28	12.47	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.354	3.354	(0.708)	73	86748	100.000	96.855	70.00- 130.00	100.00	
3.354	3.354	(0.708)	57	21216			0.00- 54.09	24.46	
3.354	3.354	(0.708)	41	23745			0.00- 55.75	27.37	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.382	3.382	(0.714)	96	40871	100.000	99.921	70.00- 130.00	100.00	
3.382	3.382	(0.714)	61	58710			117.22- 177.22	143.65	
3.382	3.382	(0.714)	98	25643			31.31- 91.31	62.74	

78 Hexane CAS #: 110-54-3									
3.578	3.578	(0.755)	57	64905	100.000	97.609	70.00- 130.00	100.00	
3.578	3.578	(0.755)	43	43789			33.82- 93.82	67.47	
3.578	3.578	(0.755)	86	11608			0.00- 47.96	17.88	

83 Isopropyl ether CAS #: 108-20-3									
3.843	3.843	(0.811)	45	138300	100.000	109.34	70.00- 130.00	100.00	
3.857	3.857	(0.814)	87	33206			0.00- 54.15	24.01	
3.857	3.857	(0.814)	59	15299			0.00- 41.46	11.06	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.857	3.857	(0.814)	63	74773	100.000	98.321	70.00- 130.00	100.00	
3.871	3.871	(0.817)	65	23636			0.83- 60.83	31.61	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.826)	86	2238	100.000	33.396	70.00- 130.00	100.00	
3.913	3.913	(0.826)	43	27066			1031.22-1091.22	1209.38	
3.913	3.913	(0.826)	42	2519			62.99- 122.99	112.56	

88 Ethyl-tert-butyl ether CAS #: 637-92-3									
4.221	4.221	(0.891)	59	100745	100.000	112.56	70.00- 130.00	100.00	
4.221	4.221	(0.891)	87	40301			9.73- 69.73	40.00	
4.221	4.221	(0.891)	41	22285			0.00- 49.83	22.12	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.947)	61	58215	100.000	95.450	70.00- 130.00	100.00	
4.487	4.487	(0.947)	96	43679			44.12- 104.12	75.03	
4.487	4.487	(0.947)	98	27253			18.04- 78.04	46.81	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
92 2-Butanone						CAS #: 78-93-3			
4.515	4.515	(0.953)	72	18288	100.000	93.033	70.00- 130.00	100.00	
4.515	4.515	(0.953)	43	81229			384.18- 444.18	444.17	
4.515	4.515	(0.953)	57	6100			3.18- 63.18	33.36	

99 Tetrahydrofuran						CAS #: 109-99-9			
4.725	4.725	(0.997)	42	45927	100.000	99.059	70.00- 130.00	100.00	
4.725	4.725	(0.997)	71	16446			6.63- 66.63	35.81	
4.725	4.725	(0.997)	72	17643			9.95- 69.95	38.42	

100 Chloroform						CAS #: 67-66-3			
4.823	4.823	(1.018)	83	86928	100.000	97.935	70.00- 130.00	100.00	
4.823	4.823	(1.018)	85	56858			36.11- 96.11	65.41	

102 Cyclohexane						CAS #: 110-82-7			
4.921	4.921	(1.038)	84	54964	100.000	95.823	70.00- 130.00	100.00	
4.921	4.921	(1.038)	56	68623			92.51- 152.51	124.85	
4.921	4.921	(1.038)	41	36321			36.86- 96.86	66.08	

103 1,1,1-Trichloroethane						CAS #: 71-55-6			
4.949	4.949	(1.044)	97	86683	100.000	98.954	70.00- 130.00	100.00	
4.949	4.949	(1.044)	99	55294			34.93- 94.93	63.79	

106 Carbon Tetrachloride						CAS #: 56-23-5			
5.089	5.089	(1.074)	119	84112	100.000	100.36	70.00- 130.00	100.00	
5.089	5.089	(1.074)	117	85153			76.39- 136.39	101.24	

113 2,2,4-Trimethylpentane						CAS #: 540-84-1			
5.326	5.326	(1.124)	57	209074	100.000	96.168	70.00- 130.00	100.00	
5.326	5.326	(1.124)	56	70516			3.74- 63.74	33.73	
5.326	5.326	(1.124)	41	54170			0.00- 55.31	25.91	

116 Benzene						CAS #: 71-43-2			
5.354	5.354	(0.916)	78	126588	100.000	96.517	70.00- 130.00	100.00	
5.354	5.354	(0.916)	77	29307			0.00- 53.58	23.15	

119 tert-Amyl methyl ether						CAS #: 994-05-8			
5.452	5.452	(1.151)	73	91221	100.000	112.50	70.00- 130.00	100.00	
5.452	5.452	(1.151)	87	22399			0.00- 53.81	24.55	
5.452	5.452	(1.151)	55	30268			1.86- 61.86	33.18	

120 1,2-Dichloroethane						CAS #: 107-06-2			
5.466	5.466	(0.935)	62	56105	100.000	97.260	70.00- 130.00	100.00	
5.466	5.466	(0.935)	64	17747			2.61- 62.61	31.63	

121 Heptane						CAS #: 142-82-5			
5.564	5.564	(0.952)	71	43585	100.000	97.389	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	CAL-AMT		ON-COL	TARGET RANGE		RATIO
				RESPONSE	(PPEV)	(PPBV)			
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
121 Heptane (continued)									
5.564	5.564	(0.952)	43	78797			146.34-	206.34	180.79
5.564	5.564	(0.952)	100	14653			3.46-	63.46	33.62

125 Trichloroethene									
						CAS #:	79-01-6		
6.082	6.082	(1.041)	95	59995	100.000	96.601	70.00-	130.00	100.00
6.082	6.082	(1.041)	130	60811			73.37-	133.37	101.36
6.082	6.082	(1.041)	97	37396			35.35-	95.35	62.33

127 Methylcyclohexane									
						CAS #:	108-87-2		
6.194	6.194	(1.060)	83	73959	100.000	94.916	70.00-	130.00	100.00
6.194	6.194	(1.060)	98	36672			19.87-	79.87	49.58
6.194	6.194	(1.060)	55	64012			54.72-	114.72	86.55

132 1,2-Dichloropropane									
						CAS #:	78-87-5		
6.404	6.404	(1.096)	63	45573	100.000	93.462	70.00-	130.00	100.00
6.404	6.404	(1.096)	62	33831			40.76-	100.76	74.23
6.404	6.404	(1.096)	41	26917			26.03-	86.03	59.06

136 1,4-Dioxane									
						CAS #:	123-91-1		
6.530	6.530	(1.117)	88	27139	100.000	96.110	70.00-	130.00	100.00
6.530	6.530	(1.117)	58	19473			42.35-	102.35	71.75
6.530	6.530	(1.117)	57	6612			0.00-	53.99	24.36

138 Bromodichloromethane									
						CAS #:	75-27-4		
6.726	6.726	(1.151)	83	93000	100.000	96.603	70.00-	130.00	100.00
6.726	6.726	(1.151)	85	58185			32.51-	92.51	62.56

144 cis-1,3-Dichloropropene									
						CAS #:	10061-01-5		
7.341	7.341	(1.256)	75	67362	100.000	98.474	70.00-	130.00	100.00
7.327	7.327	(1.254)	77	22023			0.58-	60.58	32.69
7.327	7.327	(1.254)	39	33226			18.98-	78.98	49.32

145 4-Methyl-2-pentanone									
						CAS #:	108-10-1		
7.565	7.565	(1.294)	85	14151	100.000	92.317	70.00-	130.00	100.00
7.565	7.565	(1.294)	43	92677			626.54-	686.54	654.91
7.565	7.565	(1.294)	58	37845			227.69-	287.69	267.44

147 Toluene									
						CAS #:	108-88-3		
7.733	7.733	(1.323)	91	153652	100.000	97.549	70.00-	130.00	100.00
7.733	7.733	(1.323)	92	89470			28.44-	88.44	58.23

150 trans-1,3-Dichloropropene									
						CAS #:	10061-02-6		
8.293	8.293	(0.843)	75	55164	100.000	91.686	70.00-	130.00	100.00
8.293	8.293	(0.843)	77	16435			1.11-	61.11	29.79
8.293	8.293	(0.843)	39	25760			14.88-	74.88	46.70

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		

155	1,1,2-Trichloroethane					CAS #: 79-00-5				
8.615	8.615	(0.876)	97	52842	100.000	97.949	70.00-	130.00	100.00	
8.615	8.615	(0.876)	99	31946			32.09-	92.09	60.46	
8.615	8.615	(0.876)	83	45723			58.01-	118.01	86.53	

156	Tetrachloroethene					CAS #: 127-18-4				
8.629	8.629	(0.878)	166	69868	100.000	96.741	70.00-	130.00	100.00	
8.629	8.629	(0.878)	129	54378			46.67-	106.67	77.83	
8.629	8.629	(0.878)	131	49585			42.30-	102.30	70.97	

158	2-Hexanone					CAS #: 591-78-6				
9.006	9.006	(0.916)	58	40384	100.000	83.832	70.00-	130.00	100.00	
9.006	9.006	(0.916)	43	74484			165.25-	225.25	184.44	
9.006	9.006	(0.916)	100	8642			0.00-	52.77	21.40	

160	Dibromochloromethane					CAS #: 124-48-1				
9.160	9.160	(0.932)	129	92594	100.000	97.255	70.00-	130.00	100.00	
9.160	9.160	(0.932)	127	71109			47.21-	107.21	76.80	

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4				
9.300	9.300	(0.946)	107	80873	100.000	97.840	70.00-	130.00	100.00	
9.300	9.300	(0.946)	109	73925			63.74-	123.74	91.41	

165	Chlorobenzene					CAS #: 108-90-7				
9.860	9.860	(1.003)	112	124021	100.000	98.095	70.00-	130.00	100.00	
9.860	9.860	(1.003)	114	38612			2.02-	62.02	31.13	
9.860	9.860	(1.003)	77	74002			30.14-	90.14	59.67	

167	Ethyl Benzene					CAS #: 100-41-4				
9.958	9.958	(1.013)	106	58740	100.000	96.805	70.00-	130.00	100.00	
9.958	9.958	(1.013)	91	193975			306.11-	366.11	330.23	

169	m,p-Xylene					CAS #: 108-38-3				
10.084	10.084	(1.026)	106	71859	100.000	95.812	70.00-	130.00	100.00	
10.084	10.084	(1.026)	91	147750			174.24-	234.24	205.61	

171	o-Xylene					CAS #: 95-47-6				
10.461	10.461	(1.064)	106	66779	100.000	97.030	70.00-	130.00	100.00	
10.461	10.461	(1.064)	91	146151			191.30-	251.30	218.86	

172	Styrene					CAS #: 100-42-5				
10.489	10.489	(1.067)	104	110021	100.000	96.431	70.00-	130.00	100.00	
10.489	10.489	(1.067)	78	55495			19.95-	79.95	50.44	

174	Bromoform					CAS #: 75-25-2				
10.671	10.671	(1.085)	173	85203	100.000	98.110	70.00-	130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
174 Bromoform (continued)									
10.671	10.671	(1.085)	171	44130			23.00- 83.00	51.79	

175 Cumene									
						CAS #: 98-82-8			
10.783	10.783	(1.097)	105	214447	100.000	98.058	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	56035			0.00- 56.04	26.13	
10.769	10.769	(1.095)	51	22476			0.00- 40.17	10.48	

181 1,1,2,2-Tetrachloroethane									
						CAS #: 79-34-5			
11.105	11.105	(1.129)	83	108735	100.000	97.872	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	71255			35.69- 95.69	65.53	

182 Propylbenzene									
						CAS #: 103-65-1			
11.105	11.105	(1.129)	91	264275	100.000	97.559	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	57252			0.00- 51.76	21.66	
11.105	11.105	(1.129)	105	10143			0.00- 33.53	3.84	

188 4-Ethyltoluene									
						CAS #: 622-96-8			
11.203	11.203	(1.139)	105	210058	100.000	99.020	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	61363			0.00- 59.33	29.21	

190 1,3,5-Trimethylbenzene									
						CAS #: 108-67-8			
11.245	11.245	(1.144)	105	183259	100.000	101.55	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	88617			16.85- 76.85	48.36	

196 1,2,4-Trimethylbenzene									
						CAS #: 95-63-6			
11.511	11.511	(1.171)	105	159998	100.000	96.795	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	72322			15.19- 75.19	45.20	

208 1,3-Dichlorobenzene									
						CAS #: 541-73-1			
11.707	11.707	(1.191)	146	114272	100.000	95.193	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	72327			33.74- 93.74	63.29	
11.707	11.707	(1.191)	111	47817			10.77- 70.77	41.84	

209 1,4-Dichlorobenzene									
						CAS #: 106-46-7			
11.763	11.763	(1.196)	146	112008	100.000	94.150	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	72077			33.86- 93.86	64.35	
11.763	11.763	(1.196)	111	45094			10.30- 70.30	40.26	

212 alpha-Chlorotoluene									
						CAS #: 100-44-7			
11.861	11.861	(1.206)	91	113301	100.000	95.212	70.00- 130.00	100.00	
11.861	11.861	(1.206)	126	24133			0.00- 50.90	21.30	

214 1,2-Dichlorobenzene									
						CAS #: 95-50-1			
11.987	11.987	(1.219)	146	102588	100.000	93.914	70.00- 130.00	100.00	
11.987	11.987	(1.219)	148	64330			33.29- 93.29	62.71	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
214 1,2-Dichlorobenzene (continued)									
11.987	11.987	(1.219)	111	43542			12.93- 72.93	42.44	

226 1,2,4-Trichlorobenzene CAS #: 120-82-1									
12.840	12.840	(1.306)	180	32795	100.000	67.746	70.00- 130.00	100.00	
12.840	12.840	(1.306)	182	30312			66.09- 126.09	92.43	

227 Hexachlorobutadiene CAS #: 87-68-3									
12.896	12.896	(1.312)	225	30282	100.000	74.205	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	19358			33.17- 93.17	63.93	

228 Naphthalene CAS #: 91-20-3									
12.966	12.966	(1.319)	128	5029	10.0000	6.331	70.00- 130.00	100.00(a)	
12.966	12.966	(1.319)	127	746			0.00- 41.17	14.83	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 01-Jun-2015 22:06

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060111.d
 Lab Smp Id: ICAL Level 5
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:35
 Client Smp ID: ICAL Level 5
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 100ppbv(200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	107718	64631	150805	107718	0.00
123 1,4-Difluorobenze	473591	284155	663027	473591	0.00
163 Chlorobenzene-d5	415995	249597	582393	415995	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

AREA UPPER LIMIT = + 40% of internal standard area.

AREA LOWER LIMIT = - 40% of internal standard area.

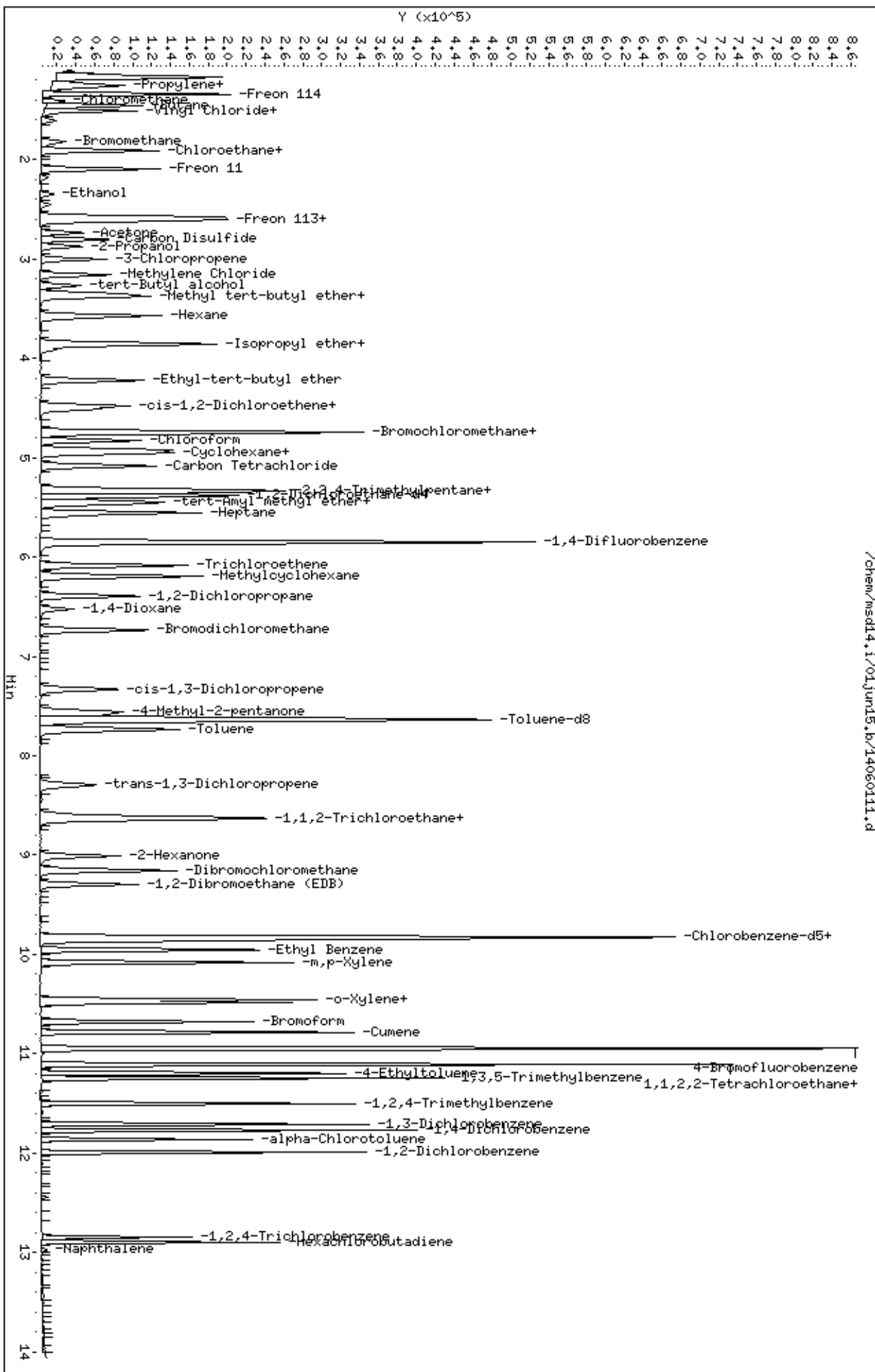
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.

RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msdd4.1/01jun15.b/14060111.d
 Date: 01-JUN-2015 16:35
 Client ID: ICAL Level 5
 Sample Info: 25ml #2716-281

Column phase: RTX-624

Instrument: msdd4.1
 Operator: md
 Column diameter: 0.18



Report Date: 04-Jun-2015 16:50

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/04jun15.b/14060407.d
 Lab Smp Id: ICAL Level 6 Client Smp ID: ICAL Level 6
 Inj Date : 04-JUN-2015 14:00
 Operator : mjs Inst ID: msd14.i
 Smp Info : 50ml #2736-10
 Misc Info : 200ppbv(200ppbv) AT-1
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/04jun15.b/14550601b.m
 Meth Date : 04-Jun-2015 16:50 HR8M Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:00 Cal File: 14060407.d
 Als bottle: 2 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT1curve.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane CAS #: 74-97-5

4.739	4.739 (1.000)	130	112562	400.000	70.00- 130.00	100.00
4.753	4.753 (1.000)	128	87511		48.08- 108.08	77.74
4.739	4.739 (1.000)	49	160151		116.54- 176.54	142.28

* 123 1,4-Difluorobenzene CAS #: 540-36-3

5.844	5.844 (1.000)	114	493160	400.000	70.00- 130.00	100.00
5.844	5.844 (1.000)	88	80802		0.00- 45.72	16.38

* 163 Chlorobenzene-d5 CAS #: 3114-55-4

9.832	9.832 (1.000)	117	444827	400.000	70.00- 130.00	100.00
9.818	9.818 (1.000)	82	246509		25.58- 85.58	55.42

6 Freon 143a CAS #: 420-46-2

1.157	1.157 (0.244)	69	83634	200.000	201.01 80.00- 120.00	100.00
1.157	1.157 (0.244)	65	27478		0.00- 30.00	32.86

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
7 Freon 134a						CAS #: 811-97-2			
1.199	1.199	(0.253)	83	59175	200.000	198.55	80.00- 120.00	100.00	
1.199	1.199	(0.253)	69	54496			0.00- 30.00	92.09	

10 1,1-Difluoroethane						CAS #: 75-37-6			
1.241	1.241	(0.262)	65	32119	200.000	200.10	80.00- 120.00	100.00	
1.241	1.241	(0.262)	51	59676			0.00- 30.00	185.80	

13 Chlorodifluoromethane						CAS #: 75-45-6			
1.283	1.283	(0.271)	67	14755	200.000	205.69	80.00- 120.00	100.00	
1.283	1.283	(0.271)	51	109302			0.00- 30.00	740.78	

16 Freon 142b						CAS #: 75-68-3			
1.395	1.395	(0.294)	65	125966	200.000	204.95	80.00- 120.00	100.00	
1.395	1.395	(0.294)	45	30418			0.00- 30.00	24.15	

37 Dichlorofluoromethane						CAS #: 75-43-4			
2.108	2.108	(0.445)	67	127008	200.000	198.40	80.00- 120.00	100.00	
2.108	2.108	(0.445)	69	41964			0.00- 30.00	33.04	
2.150	2.150	(0.454)	35	658			0.00- 30.00	0.52	

48 Freon 123						CAS #: 306-83-2			
2.542	2.542	(0.536)	83	144641	200.000	204.28	80.00- 120.00	100.00	
2.542	2.542	(0.536)	133	30605			0.00- 30.00	21.16	
2.542	2.542	(0.536)	85	97160			0.00- 30.00	67.17	

59 Cyclopentene						CAS #: 142-29-0			
3.018	3.018	(0.637)	67	126056	200.000	202.66	80.00- 120.00	100.00	
3.018	3.018	(0.637)	68	47550			0.00- 30.00	37.72	
3.018	3.018	(0.637)	53	25685			0.00- 30.00	20.38	

84 1-Propanol						CAS #: 71-23-8			
4.011	4.011	(0.846)	42	10749	200.000	221.97	80.00- 120.00	100.00	
4.025	4.025	(0.849)	59	13460			0.00- 30.00	125.22	
4.011	4.011	(0.846)	41	7941			0.00- 30.00	73.88	

90 2,2-Dichloropropane						CAS #: 594-20-7			
4.431	4.431	(0.935)	77	78539	200.000	248.69	80.00- 120.00	100.00	
4.431	4.431	(0.935)	79	25560			0.00- 30.00	32.54	
4.431	4.431	(0.935)	97	14820			0.00- 30.00	18.87	

107 1,1-Dichloropropene						CAS #: 563-58-6			
5.131	5.131	(1.083)	110	37272	200.000	206.22	80.00- 120.00	100.00	
5.131	5.131	(1.083)	75	105405			0.00- 30.00	282.80	

115 Isobutanol						CAS #: 78-83-1			
5.368	5.368	(0.919)	43	57284	200.000	215.44	80.00- 120.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
115 Isobutanol (continued)									
5.368	5.368	(0.919)	41	41599			0.00- 30.00	72.62	

124 n-Butanol									
						CAS #: 71-36-3			
6.110	6.110	(1.045)	56	86632	200.000	230.81	80.00- 120.00	100.00	
6.110	6.110	(1.045)	41	60894			0.00- 30.00	70.29	
6.110	6.110	(1.045)	43	46789			0.00- 30.00	54.01	

157 1,3-Dichloropropane									
						CAS #: 142-28-9			
8.894	8.894	(1.877)	76	114808	200.000	208.42	80.00- 120.00	100.00	
8.894	8.894	(1.877)	41	68211			0.00- 30.00	59.41	
8.894	8.894	(1.877)	78	37062			0.00- 30.00	32.28	

159 Butyl Acetate									
						CAS #: 123-86-4			
9.174	9.174	(1.570)	56	23169	200.000	218.46	80.00- 120.00	100.00	
9.174	9.174	(1.570)	73	9591			0.00- 30.00	41.40	
9.174	9.174	(1.570)	43	57290			0.00- 30.00	247.27	

168 1,1,1,2-Tetrachloroethane									
						CAS #: 630-20-6			
9.972	9.972	(1.014)	131	98281	200.000	198.73	80.00- 120.00	100.00	
9.972	9.972	(1.014)	117	69131			0.00- 30.00	70.34	
9.972	9.972	(1.014)	95	40434			0.00- 30.00	41.14	

173 2-Heptanone									
						CAS #: 110-43-0			
10.629	10.629	(1.081)	58	108317	200.000	209.18	80.00- 120.00	100.00	
10.629	10.629	(1.081)	43	168703			0.00- 30.00	155.75	

176 Cyclohexanone									
						CAS #: 108-94-1			
10.909	10.909	(1.110)	55	84899	200.000	209.54	80.00- 120.00	100.00	
10.909	10.909	(1.110)	98	33527			0.00- 30.00	39.49	
10.909	10.909	(1.110)	42	53761			0.00- 30.00	63.32	

180 Bromobenzene									
						CAS #: 108-86-1			
11.049	11.049	(1.124)	156	102298	200.000	204.42	80.00- 120.00	100.00	
11.049	11.049	(1.124)	77	174311			0.00- 30.00	170.40	
11.049	11.049	(1.124)	158	101478			0.00- 30.00	99.20	

185 1,2,3-Trichloropropane									
						CAS #: 96-18-4			
11.133	11.133	(1.132)	110	56783	200.000	204.22	80.00- 120.00	100.00	
11.133	11.133	(1.132)	61	38184			0.00- 30.00	67.25	
11.133	11.133	(1.132)	112	36267			0.00- 30.00	63.87	

189 2-Chlorotoluene									
						CAS #: 95-49-8			
11.189	11.189	(1.138)	126	83785	200.000	205.78	80.00- 120.00	100.00	
11.189	11.189	(1.138)	91	251910			0.00- 30.00	300.66	
11.189	11.189	(1.138)	65	22899			0.00- 30.00	27.33	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

191	4-Chlorotoluene				CAS #: 106-43-4				
11.273	11.273	(1.147)	126	81810	200.000	204.58	80.00- 120.00	100.00	
11.273	11.273	(1.147)	91	256000			0.00- 30.00	312.92	
11.273	11.273	(1.147)	63	35140			0.00- 30.00	42.95	

195	tert-Butylbenzene				CAS #: 98-06-6				
11.469	11.469	(1.167)	119	274583	200.000	212.73	80.00- 120.00	100.00	
11.469	11.469	(1.167)	134	69387			0.00- 30.00	25.27	
11.455	11.455	(1.165)	91	188101			0.00- 30.00	68.50	

197	Pentachloroethane				CAS #: 76-01-7				
11.511	11.511	(1.171)	167	77375	200.000	221.10	80.00- 120.00	100.00	
11.511	11.511	(1.171)	117	82105			0.00- 30.00	106.11	

203	sec-Butylbenzene				CAS #: 135-98-8				
11.609	11.609	(1.181)	105	426494	200.000	216.78	80.00- 120.00	100.00	
11.609	11.609	(1.181)	134	83782			0.00- 30.00	19.64	
11.609	11.609	(1.181)	91	67731			0.00- 30.00	15.88	

207	p-Cymene				CAS #: 99-87-6				
11.707	11.707	(1.191)	119	340734	200.000	222.17	80.00- 120.00	100.00	
11.707	11.707	(1.191)	134	88372			0.00- 30.00	25.94	
11.707	11.707	(1.191)	91	79785			0.00- 30.00	23.42	

210	1,2,3-Trimethylbenzene				CAS #: 526-73-8				
11.777	11.777	(1.198)	120	135315	200.000	222.78	80.00- 120.00	100.00	
11.777	11.777	(1.198)	105	325672			0.00- 30.00	240.68	
11.777	11.777	(1.198)	77	40218			0.00- 30.00	29.72	

213	Butylbenzene				CAS #: 104-51-8				
11.945	11.945	(1.215)	134	80612	200.000	226.88	80.00- 120.00	100.00	
11.945	11.945	(1.215)	91	339232			0.00- 30.00	420.82	
11.945	11.945	(1.215)	92	178770			0.00- 30.00	221.77	

221	1,2-Dibromo-3-chloropropane				CAS #: 96-12-8				
12.448	12.448	(1.266)	157	77984	200.000	248.70	80.00- 120.00	100.00	
12.434	12.434	(1.265)	75	70823			0.00- 30.00	90.82	
12.448	12.448	(1.266)	155	61161			0.00- 30.00	78.43	

Report Date: 04-Jun-2015 16:50

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060407.d
 Lab Smp Id: ICAL Level 6
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: mjs

Calibration Date: 04-JUN-2015
 Calibration Time: 13:42
 Client Smp ID: ICAL Level 6
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/04jun15.b/14550601b.m

Misc Info: 200ppbv(200ppbv) AT-1

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	113467	68080	158854	112562	-0.80
123 1,4-Difluorobenze	491560	294936	688184	493160	0.33
163 Chlorobenzene-d5	437963	262778	613148	444827	1.57

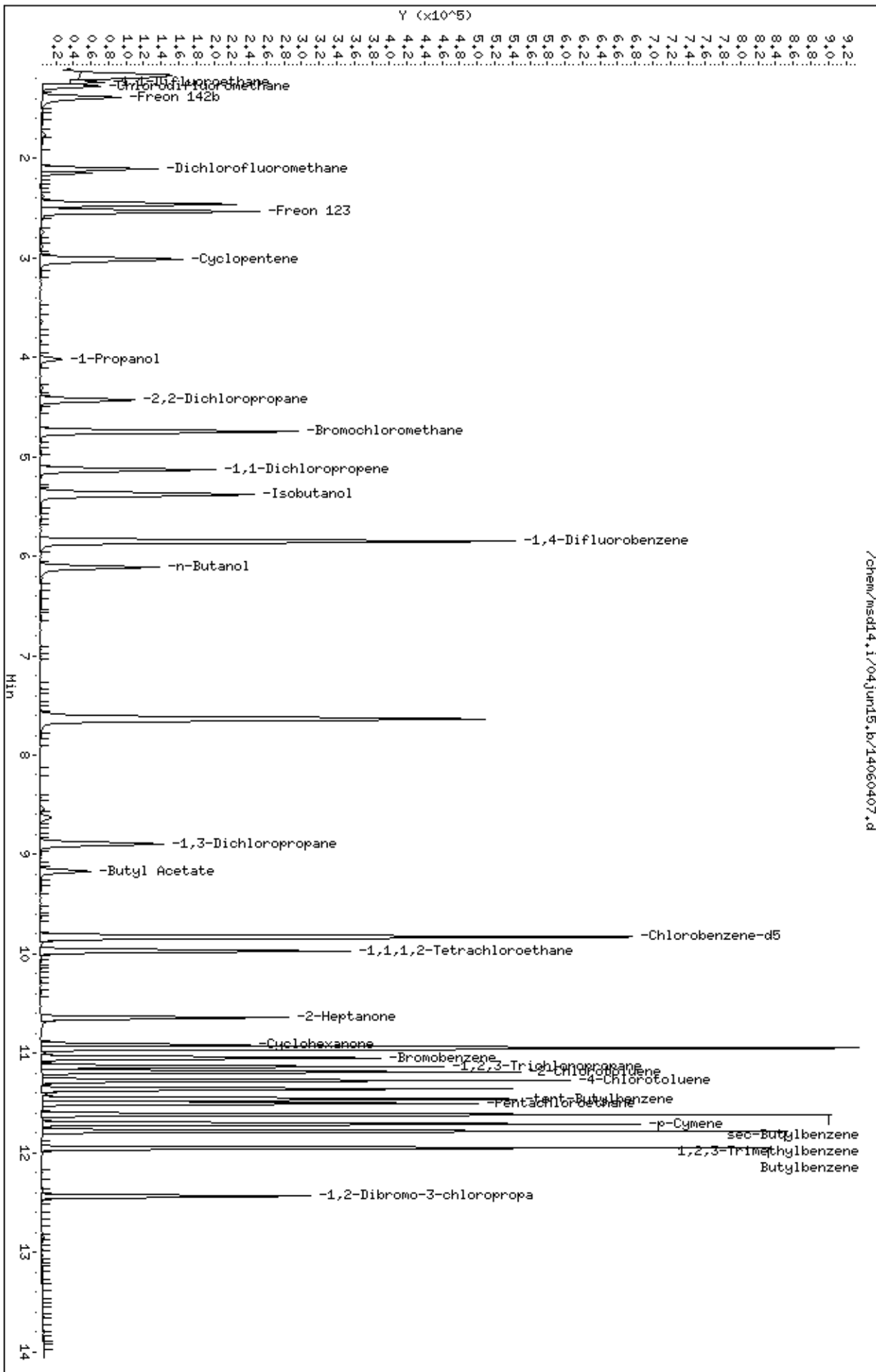
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060112.d
 Lab Smp Id: ICAL Level 6 Client Smp ID: ICAL Level 6
 Inj Date : 01-JUN-2015 16:54
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #2716-281
 Misc Info : 200ppbv(200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 21:30 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 16:54 Cal File: 14060112.d
 Als bottle: 1 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.753	4.753	(1.000)	130	110855	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	86558			48.08- 108.08	78.08
4.739	4.739	(1.000)	49	162452			116.54- 176.54	146.54

* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	489861	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	77006			0.00- 45.72	15.72

* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
9.832	9.832	(1.000)	117	420158	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	233530			25.58- 85.58	55.58

§ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.132)	65	163257	400.000	400.00	70.00- 130.00	100.00
5.382	5.382	(1.132)	67	87455			23.57- 83.57	53.57

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	488519	400.000	400.00	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	53960			0.00- 41.05	11.05	
7.635	7.635	(1.306)	100	333054			38.18- 98.18	68.18	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	238447	400.000	400.00	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	315362			102.26- 162.26	132.26	
10.951	10.951	(1.114)	176	229274			66.15- 126.15	96.15	

9 Propylene						CAS #: 115-07-1			
1.227	1.227	(0.258)	41	60683	200.000	200.00	70.00- 130.00	100.00	
1.227	1.227	(0.258)	42	39412			34.95- 94.95	64.95	
1.241	1.241	(0.261)	39	43786			42.16- 102.16	72.16	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.267)	85	199091	200.000	200.00	70.00- 130.00	100.00	
1.269	1.269	(0.267)	87	65793			3.05- 63.05	33.05	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	138473	200.000	200.00	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	43585			1.48- 61.48	31.48	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.299)	50	72649	200.000	200.00	70.00- 130.00	100.00	
1.423	1.423	(0.299)	52	22627			1.15- 61.15	31.15	

23 Butane						CAS #: 106-97-8			
1.478	1.478	(0.311)	58	16053	200.000	200.00	70.00- 130.00	100.00	
1.464	1.464	(0.308)	43	114060			680.52- 740.52	710.52	

25 Vinyl Chloride						CAS #: 75-01-4			
1.506	1.506	(0.317)	62	73067	200.000	200.00	70.00- 130.00	100.00	
1.506	1.506	(0.317)	64	22607			0.94- 60.94	30.94	

26 1,3-Butadiene						CAS #: 106-99-0			
1.520	1.520	(0.320)	54	56474	200.000	200.00	70.00- 130.00	100.00	
1.520	1.520	(0.320)	39	54334			66.21- 126.21	96.21	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.382)	94	50657	200.000	200.00	70.00- 130.00	100.00	
1.814	1.814	(0.382)	96	48060			64.87- 124.87	94.87	
1.814	1.814	(0.382)	79	8194			0.00- 46.18	16.18	

30 Chloroethane						CAS #: 75-00-3			
1.898	1.898	(0.399)	64	38758	200.000	200.00	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.898	1.898	(0.399)	66	11583			0.00- 59.89	29.89	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.402)	43	91466	200.000	200.00	70.00- 130.00	100.00	
1.912	1.912	(0.402)	57	63390			39.30- 99.30	69.30	
1.912	1.912	(0.402)	72	8125			0.00- 38.88	8.88	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.441)	101	204161	200.000	200.00	70.00- 130.00	100.00	
2.094	2.094	(0.441)	103	131322			34.32- 94.32	64.32	

42 Ethanol CAS #: 64-17-5									
2.360	2.360	(0.497)	45	34760	200.000	200.00	70.00- 130.00	100.00	
2.360	2.360	(0.497)	43	7279			0.00- 50.94	20.94	
2.360	2.360	(0.497)	46	15167			13.63- 73.63	43.63	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.544)	151	130522	200.000	200.00	70.00- 130.00	100.00	
2.584	2.584	(0.544)	153	83819			34.22- 94.22	64.22	
2.584	2.584	(0.544)	101	173031			102.57- 162.57	132.57	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.550)	61	132081	200.000	200.00	70.00- 130.00	100.00	
2.612	2.612	(0.550)	96	76512			27.93- 87.93	57.93	
2.612	2.612	(0.550)	98	48188			6.48- 66.48	36.48	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.576)	58	39686	200.000	200.00	70.00- 130.00	100.00	
2.738	2.738	(0.576)	43	126910			289.79- 349.79	319.79	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.591)	76	224187	200.000	200.00	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.605)	45	124019	200.000	200.00	70.00- 130.00	100.00	
2.878	2.878	(0.605)	43	26012			0.00- 50.97	20.97	
2.878	2.878	(0.605)	59	4823			0.00- 33.89	3.89	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.632)	76	33744	200.000	200.00	70.00- 130.00	100.00	
3.004	3.004	(0.632)	41	93516			247.13- 307.13	277.13	

66 Methylene Chloride CAS #: 75-09-2									
3.157	3.157	(0.664)	49	97603	200.000	200.00	70.00- 130.00	100.00	
3.171	3.171	(0.667)	84	71589			43.35- 103.35	73.35	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.157	3.157	(0.664)	51	29965			0.70- 60.70	30.70	

71 tert-Butyl alcohol CAS #: 75-65-0									
3.269	3.269	(0.688)	59	92824	200.000	200.00	70.00- 130.00	100.00	
3.269	3.269	(0.688)	41	23878			0.00- 55.72	25.72	
3.269	3.269	(0.688)	57	10470			0.00- 41.28	11.28	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.353	3.353	(0.706)	73	175486	200.000	200.00	70.00- 130.00	100.00	
3.353	3.353	(0.706)	57	42280			0.00- 54.09	24.09	
3.353	3.353	(0.706)	41	45194			0.00- 55.75	25.75	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.381	3.381	(0.711)	96	81500	200.000	200.00	70.00- 130.00	100.00	
3.381	3.381	(0.711)	61	119986			117.22- 177.22	147.22	
3.381	3.381	(0.711)	98	49970			31.31- 91.31	61.31	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.753)	57	128986	200.000	200.00	70.00- 130.00	100.00	
3.577	3.577	(0.753)	43	82319			33.82- 93.82	63.82	
3.577	3.577	(0.753)	86	23160			0.00- 47.96	17.96	

83 Isopropyl ether CAS #: 108-20-3									
3.843	3.843	(0.809)	45	272392	200.000	200.00	70.00- 130.00	100.00	
3.857	3.857	(0.812)	87	65782			0.00- 54.15	24.15	
3.857	3.857	(0.812)	59	31226			0.00- 41.46	11.46	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.871	3.871	(0.815)	63	145492	200.000	200.00	70.00- 130.00	100.00	
3.871	3.871	(0.815)	65	44851			0.83- 60.83	30.83	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.823)	86	8269	200.000	200.00	70.00- 130.00	100.00	
3.913	3.913	(0.823)	43	87752			1031.22-1091.22	1061.22	
3.913	3.913	(0.823)	42	7689			62.99- 122.99	92.99	

88 Ethyl-tert-butyl ether CAS #: 637-92-3									
4.221	4.221	(0.888)	59	208127	200.000	200.00	70.00- 130.00	100.00	
4.235	4.235	(0.891)	87	82690			9.73- 69.73	39.73	
4.221	4.221	(0.888)	41	41269			0.00- 49.83	19.83	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.944)	61	115843	200.000	200.00	70.00- 130.00	100.00	
4.487	4.487	(0.944)	96	85862			44.12- 104.12	74.12	
4.487	4.487	(0.944)	98	55656			18.04- 78.04	48.04	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
92 2-Butanone						CAS #: 78-93-3			
4.515	4.515	(0.950)	72	39803	200.000	200.00	70.00- 130.00	100.00	
4.515	4.515	(0.950)	43	164855			384.18- 444.18	414.18	
4.515	4.515	(0.950)	57	13205			3.18- 63.18	33.18	

99 Tetrahydrofuran						CAS #: 109-99-9			
4.725	4.725	(0.994)	42	92430	200.000	200.00	70.00- 130.00	100.00	
4.725	4.725	(0.994)	71	33854			6.63- 66.63	36.63	
4.725	4.725	(0.994)	72	36929			9.95- 69.95	39.95	

100 Chloroform						CAS #: 67-66-3			
4.823	4.823	(1.015)	83	166015	200.000	200.00	70.00- 130.00	100.00	
4.823	4.823	(1.015)	85	109752			36.11- 96.11	66.11	

102 Cyclohexane						CAS #: 110-82-7			
4.920	4.920	(1.035)	84	109025	200.000	200.00	70.00- 130.00	100.00	
4.920	4.920	(1.035)	56	133566			92.51- 152.51	122.51	
4.920	4.920	(1.035)	41	72891			36.86- 96.86	66.86	

103 1,1,1-Trichloroethane						CAS #: 71-55-6			
4.948	4.948	(1.041)	97	169877	200.000	200.00	70.00- 130.00	100.00	
4.948	4.948	(1.041)	99	110305			34.93- 94.93	64.93	

106 Carbon Tetrachloride						CAS #: 56-23-5			
5.088	5.088	(1.071)	119	162468	200.000	200.00	70.00- 130.00	100.00	
5.088	5.088	(1.071)	117	172848			76.39- 136.39	106.39	

113 2,2,4-Trimethylpentane						CAS #: 540-84-1			
5.326	5.326	(1.121)	57	410552	200.000	200.00	70.00- 130.00	100.00	
5.326	5.326	(1.121)	56	138530			3.74- 63.74	33.74	
5.326	5.326	(1.121)	41	103907			0.00- 55.31	25.31	

116 Benzene						CAS #: 71-43-2			
5.354	5.354	(0.916)	78	249535	200.000	200.00	70.00- 130.00	100.00	
5.354	5.354	(0.916)	77	58845			0.00- 53.58	23.58	

119 tert-Amyl methyl ether						CAS #: 994-05-8			
5.452	5.452	(1.147)	73	184890	200.000	200.00	70.00- 130.00	100.00	
5.452	5.452	(1.147)	87	44025			0.00- 53.81	23.81	
5.452	5.452	(1.147)	55	58909			1.86- 61.86	31.86	

120 1,2-Dichloroethane						CAS #: 107-06-2			
5.480	5.480	(0.938)	62	108491	200.000	200.00	70.00- 130.00	100.00	
5.480	5.480	(0.938)	64	35376			2.61- 62.61	32.61	

121 Heptane						CAS #: 142-82-5			
5.564	5.564	(0.952)	71	87496	200.000	200.00	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
121 Heptane (continued)									
5.564	5.564	(0.952)	43	154289			146.34- 206.34	176.34	
5.564	5.564	(0.952)	100	29275			3.46- 63.46	33.46	

125 Trichloroethene CAS #: 79-01-6									
6.082	6.082	(1.041)	95	111520	200.000	200.00	70.00- 130.00	100.00	
6.082	6.082	(1.041)	130	115280			73.37- 133.37	103.37	
6.082	6.082	(1.041)	97	72878			35.35- 95.35	65.35	

127 Methylcyclohexane CAS #: 108-87-2									
6.194	6.194	(1.060)	83	147054	200.000	200.00	70.00- 130.00	100.00	
6.194	6.194	(1.060)	98	73341			19.87- 79.87	49.87	
6.194	6.194	(1.060)	55	124581			54.72- 114.72	84.72	

132 1,2-Dichloropropane CAS #: 78-87-5									
6.404	6.404	(1.096)	63	92091	200.000	200.00	70.00- 130.00	100.00	
6.404	6.404	(1.096)	62	65166			40.76- 100.76	70.76	
6.404	6.404	(1.096)	41	51596			26.03- 86.03	56.03	

136 1,4-Dioxane CAS #: 123-91-1									
6.530	6.530	(1.117)	88	55023	200.000	200.00	70.00- 130.00	100.00	
6.530	6.530	(1.117)	58	39807			42.35- 102.35	72.35	
6.530	6.530	(1.117)	57	13199			0.00- 53.99	23.99	

138 Bromodichloromethane CAS #: 75-27-4									
6.725	6.725	(1.151)	83	184193	200.000	200.00	70.00- 130.00	100.00	
6.725	6.725	(1.151)	85	115131			32.51- 92.51	62.51	

144 cis-1,3-Dichloropropene CAS #: 10061-01-5									
7.341	7.341	(1.256)	75	140324	200.000	200.00	70.00- 130.00	100.00	
7.341	7.341	(1.256)	77	42907			0.58- 60.58	30.58	
7.327	7.327	(1.254)	39	68728			18.98- 78.98	48.98	

145 4-Methyl-2-pentanone CAS #: 108-10-1									
7.565	7.565	(1.294)	85	28630	200.000	200.00	70.00- 130.00	100.00	
7.565	7.565	(1.294)	43	187966			626.54- 686.54	656.54	
7.565	7.565	(1.294)	58	73777			227.69- 287.69	257.69	

147 Toluene CAS #: 108-88-3									
7.733	7.733	(1.323)	91	305489	200.000	200.00	70.00- 130.00	100.00	
7.733	7.733	(1.323)	92	178530			28.44- 88.44	58.44	

150 trans-1,3-Dichloropropene CAS #: 10061-02-6									
8.293	8.293	(0.843)	75	115233	200.000	200.00	70.00- 130.00	100.00	
8.293	8.293	(0.843)	77	35848			1.11- 61.11	31.11	
8.293	8.293	(0.843)	39	51721			14.88- 74.88	44.88	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		

155	1,1,2-Trichloroethane					CAS #: 79-00-5				
8.614	8.614	(0.876)	97	103422	200.000	200.00	70.00- 130.00	100.00		
8.614	8.614	(0.876)	99	64212			32.09- 92.09	62.09		
8.614	8.614	(0.876)	83	91022			58.01- 118.01	88.01		

156	Tetrachloroethene					CAS #: 127-18-4				
8.628	8.628	(0.878)	166	137015	200.000	200.00	70.00- 130.00	100.00		
8.628	8.628	(0.878)	129	105051			46.67- 106.67	76.67		
8.628	8.628	(0.878)	131	99065			42.30- 102.30	72.30		

158	2-Hexanone					CAS #: 591-78-6				
9.006	9.006	(0.916)	58	84878	200.000	200.00	70.00- 130.00	100.00		
9.006	9.006	(0.916)	43	165724			165.25- 225.25	195.25		
9.006	9.006	(0.916)	100	19328			0.00- 52.77	22.77		

160	Dibromochloromethane					CAS #: 124-48-1				
9.160	9.160	(0.932)	129	185453	200.000	200.00	70.00- 130.00	100.00		
9.160	9.160	(0.932)	127	143179			47.21- 107.21	77.21		

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4				
9.300	9.300	(0.946)	107	160670	200.000	200.00	70.00- 130.00	100.00		
9.300	9.300	(0.946)	109	150613			63.74- 123.74	93.74		

165	Chlorobenzene					CAS #: 108-90-7				
9.860	9.860	(1.003)	112	242971	200.000	200.00	70.00- 130.00	100.00		
9.860	9.860	(1.003)	114	77808			2.02- 62.02	32.02		
9.860	9.860	(1.003)	77	146113			30.14- 90.14	60.14		

167	Ethyl Benzene					CAS #: 100-41-4				
9.958	9.958	(1.013)	106	116341	200.000	200.00	70.00- 130.00	100.00		
9.958	9.958	(1.013)	91	391039			306.11- 366.11	336.11		

169	m,p-Xylene					CAS #: 108-38-3				
10.083	10.083	(1.026)	106	146690	200.000	200.00	70.00- 130.00	100.00		
10.083	10.083	(1.026)	91	299594			174.24- 234.24	204.24		

171	o-Xylene					CAS #: 95-47-6				
10.461	10.461	(1.064)	106	134653	200.000	200.00	70.00- 130.00	100.00		
10.461	10.461	(1.064)	91	297992			191.30- 251.30	221.30		

172	Styrene					CAS #: 100-42-5				
10.489	10.489	(1.067)	104	228742	200.000	200.00	70.00- 130.00	100.00		
10.489	10.489	(1.067)	78	114255			19.95- 79.95	49.95		

174	Bromoform					CAS #: 75-25-2				
10.671	10.671	(1.085)	173	170548	200.000	200.00	70.00- 130.00	100.00		

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
174 Bromoform (continued)									
10.671	10.671	(1.085)	171	90385			23.00- 83.00	53.00	

175 Cumene									
						CAS #: 98-82-8			
10.783	10.783	(1.097)	105	441185	200.000	200.00	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	114874			0.00- 56.04	26.04	
10.783	10.783	(1.097)	51	44875			0.00- 40.17	10.17	

181 1,1,2,2-Tetrachloroethane									
						CAS #: 79-34-5			
11.105	11.105	(1.129)	83	225338	200.000	200.00	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	148015			35.69- 95.69	65.69	

182 Propylbenzene									
						CAS #: 103-65-1			
11.105	11.105	(1.129)	91	534630	200.000	200.00	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	116323			0.00- 51.76	21.76	
11.105	11.105	(1.129)	105	18861			0.00- 33.53	3.53	

188 4-Ethyltoluene									
						CAS #: 622-96-8			
11.203	11.203	(1.139)	105	429772	200.000	200.00	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	126052			0.00- 59.33	29.33	

190 1,3,5-Trimethylbenzene									
						CAS #: 108-67-8			
11.245	11.245	(1.144)	105	381053	200.000	200.00	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	178541			16.85- 76.85	46.85	

196 1,2,4-Trimethylbenzene									
						CAS #: 95-63-6			
11.511	11.511	(1.171)	105	339012	200.000	200.00	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	153209			15.19- 75.19	45.19	

208 1,3-Dichlorobenzene									
						CAS #: 541-73-1			
11.707	11.707	(1.191)	146	240392	200.000	200.00	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	153227			33.74- 93.74	63.74	
11.707	11.707	(1.191)	111	98000			10.77- 70.77	40.77	

209 1,4-Dichlorobenzene									
						CAS #: 106-46-7			
11.762	11.762	(1.196)	146	239666	200.000	200.00	70.00- 130.00	100.00	
11.762	11.762	(1.196)	148	153042			33.86- 93.86	63.86	
11.762	11.762	(1.196)	111	96595			10.30- 70.30	40.30	

212 alpha-Chlorotoluene									
						CAS #: 100-44-7			
11.860	11.860	(1.206)	91	273837	200.000	200.00	70.00- 130.00	100.00	
11.860	11.860	(1.206)	126	57229			0.00- 50.90	20.90	

214 1,2-Dichlorobenzene									
						CAS #: 95-50-1			
11.986	11.986	(1.219)	146	220195	200.000	200.00	70.00- 130.00	100.00	
11.986	11.986	(1.219)	148	139360			33.29- 93.29	63.29	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
214 1,2-Dichlorobenzene (continued)									
11.986	11.986	(1.219)	111	94523			12.93- 72.93	42.93	

226 1,2,4-Trichlorobenzene CAS #: 120-82-1									
12.840	12.840	(1.306)	180	117668	200.000	200.00	70.00- 130.00	100.00	
12.840	12.840	(1.306)	182	113068			66.09- 126.09	96.09	

227 Hexachlorobutadiene CAS #: 87-68-3									
12.896	12.896	(1.312)	225	98457	200.000	200.00	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	62196			33.17- 93.17	63.17	

228 Naphthalene CAS #: 91-20-3									
12.966	12.966	(1.319)	128	21754	20.0000	20.000	70.00- 130.00	100.00	
12.966	12.966	(1.319)	127	2430			0.00- 41.17	11.17	

Report Date: 01-Jun-2015 21:30

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060112.d
 Lab Smp Id: ICAL Level 6
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 6
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 200ppbv(200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	110855	0.00
123 1,4-Difluorobenze	489861	293917	685805	489861	0.00
163 Chlorobenzene-d5	420158	252095	588221	420158	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

AREA UPPER LIMIT = + 40% of internal standard area.

AREA LOWER LIMIT = - 40% of internal standard area.

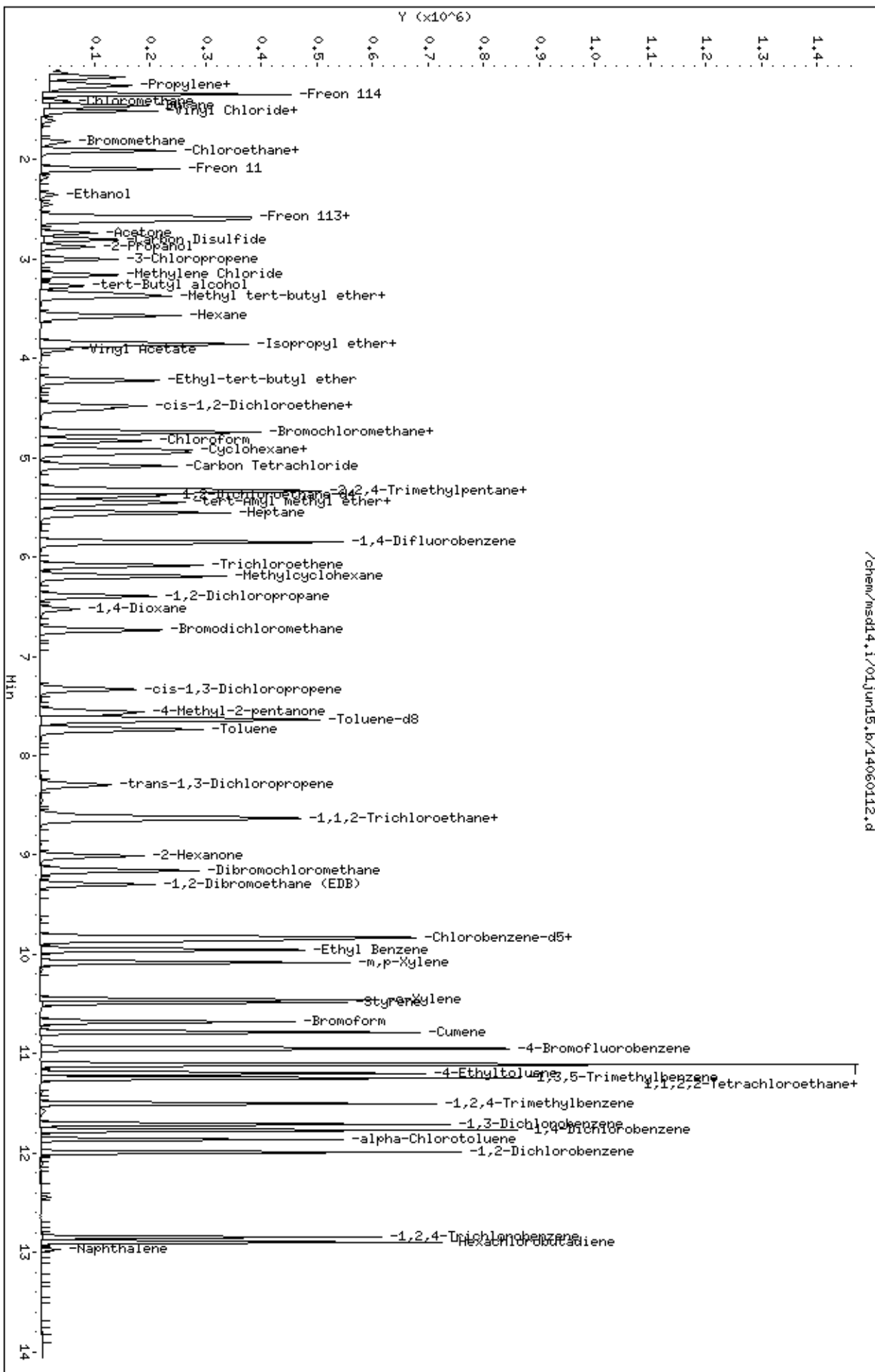
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.

RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msdd4.1/01jun15.b/14060112.d
Date: 01-JUN-2015 16:54
Client ID: ICAL Level 6
Sample Info: 50ml #2716-281

Column phase: RTX-624

Instrument: msdd4.1
Operator: md
Column diameter: 0.18



/chem/msdd4.1/01jun15.b/14060112.d

Report Date: 04-Jun-2015 16:50

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/04jun15.b/14060408.d
 Lab Smp Id: ICAL Level 7 Client Smp ID: ICAL Level 7
 Inj Date : 04-JUN-2015 14:50
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #2736-28
 Misc Info : 1000ppbv(1000ppbv) AT-1
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/04jun15.b/14550601b.m
 Meth Date : 04-Jun-2015 16:50 HR8M Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 2 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Fr152acr.v.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.739	4.739 (1.000)	130	115315	400.000	70.00- 130.00	100.00
4.739	4.739 (1.000)	128	90898		48.08- 108.08	78.83
4.739	4.739 (1.000)	49	164967		116.54- 176.54	143.06

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.844	5.844 (1.000)	114	506200	400.000	70.00- 130.00	100.00
5.844	5.844 (1.000)	88	82218		0.00- 45.72	16.24

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	442845	400.000	70.00- 130.00	100.00
9.818	9.818 (1.000)	82	243314		25.58- 85.58	54.94

10 1,1-Difluoroethane				CAS #: 75-37-6		
1.241	1.241 (0.262)	65	178687	1000.00	1063.6 80.00- 120.00	100.00
1.241	1.241 (0.262)	51	344477		0.00- 30.00	192.78

Report Date: 04-Jun-2015 16:50

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060408.d
 Lab Smp Id: ICAL Level 7
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 04-JUN-2015
 Calibration Time: 13:42
 Client Smp ID: ICAL Level 7
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/04jun15.b/14550601b.m

Misc Info: 1000ppbv(1000ppbv) AT-1

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	113467	68080	158854	115315	1.63
123 1,4-Difluorobenze	491560	294936	688184	506200	2.98
163 Chlorobenzene-d5	437963	262778	613148	442845	1.11

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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/msd14.1/04jun15.b/14060408.d

Date : 04-JUN-2015 14:50

Client ID: ICAL Level 7

Sample Info: 50ml #2736-28

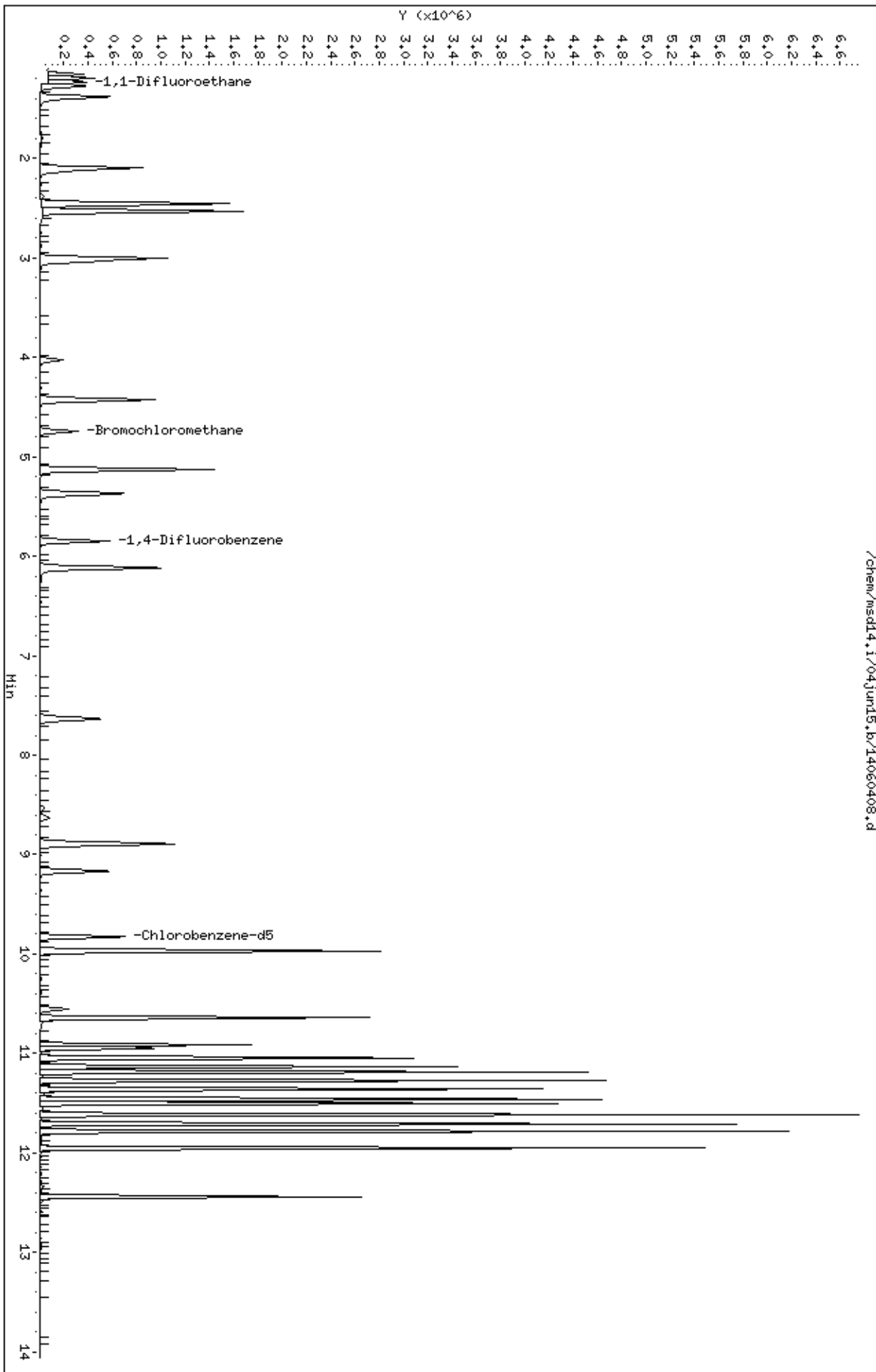
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.1/04jun15.b/14060408.d



Report Date: 01-Jun-2015 22:06

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060121.d
 Lab Smp Id: ICAL Level 7 Client Smp ID: ICAL Level 7
 Inj Date : 01-JUN-2015 20:48
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #2716-32
 Misc Info : 1000ppbv(1000ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:06 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 20:48 Cal File: 14060121.d
 Als bottle: 1 Calibration Sample, Level: 7
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12NoOxyNaph.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.753	4.753	(1.000)	130	103812	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	82375			48.08- 108.08	79.35
4.739	4.739	(1.000)	49	154748			116.54- 176.54	149.07

* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	465327	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	72539			0.00- 45.72	15.59

* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
9.832	9.832	(1.000)	117	406813	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	226102			25.58- 85.58	55.58

\$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.132)	65	157539	400.000	405.51	70.00- 130.00	100.00
5.382	5.382	(1.132)	67	79956			23.57- 83.57	50.75

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	471218	400.000	407.96	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	51582			0.00- 41.05	10.95	
7.635	7.635	(1.306)	100	334708			38.18- 98.18	71.03	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	227252	400.000	402.31	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	299574			102.26- 162.26	131.82	
10.951	10.951	(1.114)	176	213738			66.15- 126.15	94.05	

9 Propylene						CAS #: 115-07-1			
1.227	1.227	(0.258)	41	355964	1000.00	1168.8	70.00- 130.00	100.00	
1.227	1.227	(0.258)	42	236947			34.95- 94.95	66.56	
1.227	1.227	(0.258)	39	257660			42.16- 102.16	72.38	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.267)	85	1192163	1000.00	1175.3	70.00- 130.00	100.00	
1.269	1.269	(0.267)	87	386650			3.05- 63.05	32.43	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	825746	1000.00	1172.2	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	264429			1.48- 61.48	32.02	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.299)	50	411785	1000.00	1126.6	70.00- 130.00	100.00	
1.423	1.423	(0.299)	52	129469			1.15- 61.15	31.44	

23 Butane						CAS #: 106-97-8			
1.479	1.479	(0.311)	58	99232	1000.00	1158.4	70.00- 130.00	100.00	
1.479	1.479	(0.311)	43	669815			680.52- 740.52	675.00	

25 Vinyl Chloride						CAS #: 75-01-4			
1.506	1.506	(0.317)	62	428368	1000.00	1144.6	70.00- 130.00	100.00	
1.506	1.506	(0.317)	64	134751			0.94- 60.94	31.46	

26 1,3-Butadiene						CAS #: 106-99-0			
1.520	1.520	(0.320)	54	350070	1000.00	1219.4	70.00- 130.00	100.00	
1.520	1.520	(0.320)	39	338217			66.21- 126.21	96.61	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.382)	94	302408	1000.00	1251.5	70.00- 130.00	100.00	
1.814	1.814	(0.382)	96	284970			64.87- 124.87	94.23	
1.814	1.814	(0.382)	79	50640			0.00- 46.18	16.75	

30 Chloroethane						CAS #: 75-00-3			
1.898	1.898	(0.399)	64	218914	1000.00	1132.6	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.898	1.898	(0.399)	66	67690			0.00- 59.89	30.92	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.402)	43	517598	1000.00	1154.5	70.00- 130.00	100.00	
1.912	1.912	(0.402)	57	362292			39.30- 99.30	69.99	
1.912	1.912	(0.402)	72	43856			0.00- 38.88	8.47	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.441)	101	1227847	1000.00	1180.2	70.00- 130.00	100.00	
2.094	2.094	(0.441)	103	785779			34.32- 94.32	64.00	

42 Ethanol CAS #: 64-17-5									
2.360	2.360	(0.497)	45	186509	1000.00	1177.6	70.00- 130.00	100.00	
2.360	2.360	(0.497)	43	38812			0.00- 50.94	20.81	
2.360	2.360	(0.497)	46	78155			13.63- 73.63	41.90	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.544)	151	777201	1000.00	1211.2	70.00- 130.00	100.00	
2.584	2.584	(0.544)	153	496339			34.22- 94.22	63.86	
2.584	2.584	(0.544)	101	1034684			102.57- 162.57	133.13	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.550)	61	799303	1000.00	1203.7	70.00- 130.00	100.00	
2.612	2.612	(0.550)	96	459353			27.93- 87.93	57.47	
2.612	2.612	(0.550)	98	296854			6.48- 66.48	37.14	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.576)	58	235573	1000.00	1203.6	70.00- 130.00	100.00	
2.738	2.738	(0.576)	43	742374			289.79- 349.79	315.14	

56 Carbon Disulfide CAS #: 75-15-0									
2.794	2.794	(0.588)	76	1350320	1000.00	1220.9	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.605)	45	817557	1000.00	1295.0	70.00- 130.00	100.00	
2.878	2.878	(0.605)	43	162750			0.00- 50.97	19.91	
2.878	2.878	(0.605)	59	32941			0.00- 33.89	4.03	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.632)	76	218113	1000.00	1313.4	70.00- 130.00	100.00	
3.004	3.004	(0.632)	41	592199			247.13- 307.13	271.51	

66 Methylene Chloride CAS #: 75-09-2									
3.158	3.158	(0.664)	49	594547	1000.00	1178.4	70.00- 130.00	100.00	
3.172	3.172	(0.667)	84	422579			43.35- 103.35	71.08	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.158	3.158	(0.664)	51	177919			0.70- 60.70	29.93	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.353	3.353	(0.706)	73	1166664	1000.00	1351.6	70.00- 130.00	100.00	
3.353	3.353	(0.706)	57	282614			0.00- 54.09	24.22	
3.353	3.353	(0.706)	41	271254			0.00- 55.75	23.25	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.381	3.381	(0.711)	96	489940	1000.00	1242.9	70.00- 130.00	100.00	
3.381	3.381	(0.711)	61	701197			117.22- 177.22	143.12	
3.381	3.381	(0.711)	98	313313			31.31- 91.31	63.95	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.753)	57	814616	1000.00	1271.2	70.00- 130.00	100.00	
3.577	3.577	(0.753)	43	505268			33.82- 93.82	62.03	
3.577	3.577	(0.753)	86	146634			0.00- 47.96	18.00	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.871	3.871	(0.815)	63	883713	1000.00	1205.7	70.00- 130.00	100.00	
3.871	3.871	(0.815)	65	281149			0.83- 60.83	31.81	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.823)	86	87374	1000.00	1352.9	70.00- 130.00	100.00	
3.913	3.913	(0.823)	43	875902			1031.22-1091.22	1002.47	
3.913	3.913	(0.823)	42	71454			62.99- 122.99	81.78	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.944)	61	702443	1000.00	1195.1	70.00- 130.00	100.00	
4.487	4.487	(0.944)	96	520621			44.12- 104.12	74.12	
4.487	4.487	(0.944)	98	334215			18.04- 78.04	47.58	

92 2-Butanone CAS #: 78-93-3									
4.515	4.515	(0.950)	72	242239	1000.00	1278.7	70.00- 130.00	100.00	
4.515	4.515	(0.950)	43	1046442			384.18- 444.18	431.99	
4.515	4.515	(0.950)	57	82758			3.18- 63.18	34.16	

99 Tetrahydrofuran CAS #: 109-99-9									
4.725	4.725	(0.994)	42	570043	1000.00	1275.8	70.00- 130.00	100.00	
4.725	4.725	(0.994)	71	218970			6.63- 66.63	38.41	
4.725	4.725	(0.994)	72	233146			9.95- 69.95	40.90	

100 Chloroform CAS #: 67-66-3									
4.823	4.823	(1.015)	83	1024366	1000.00	1197.5	70.00- 130.00	100.00	
4.823	4.823	(1.015)	85	664020			36.11- 96.11	64.82	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
102 Cyclohexane						CAS #:	110-82-7		
4.921	4.921	(1.035)	84	686298	1000.00	1241.5	70.00- 130.00	100.00	
4.921	4.921	(1.035)	56	837290			92.51- 152.51	122.00	
4.921	4.921	(1.035)	41	436335			36.86- 96.86	63.58	

103 1,1,1-Trichloroethane						CAS #:	71-55-6		
4.949	4.949	(1.041)	97	1038506	1000.00	1230.1	70.00- 130.00	100.00	
4.949	4.949	(1.041)	99	673410			34.93- 94.93	64.84	

106 Carbon Tetrachloride						CAS #:	56-23-5		
5.088	5.088	(1.071)	119	1055062	1000.00	1306.2	70.00- 130.00	100.00	
5.088	5.088	(1.071)	117	1088211			76.39- 136.39	103.14	

113 2,2,4-Trimethylpentane						CAS #:	540-84-1		
5.326	5.326	(1.121)	57	2604624	1000.00	1243.1	70.00- 130.00	100.00	
5.326	5.326	(1.121)	56	868546			3.74- 63.74	33.35	
5.326	5.326	(1.121)	41	633902			0.00- 55.31	24.34	

116 Benzene						CAS #:	71-43-2		
5.354	5.354	(0.916)	78	1509148	1000.00	1171.1	70.00- 130.00	100.00	
5.354	5.354	(0.916)	77	358680			0.00- 53.58	23.77	

120 1,2-Dichloroethane						CAS #:	107-06-2		
5.480	5.480	(0.938)	62	659249	1000.00	1163.1	70.00- 130.00	100.00	
5.480	5.480	(0.938)	64	216237			2.61- 62.61	32.80	

121 Heptane						CAS #:	142-82-5		
5.564	5.564	(0.952)	71	545167	1000.00	1239.8	70.00- 130.00	100.00	
5.564	5.564	(0.952)	43	944194			146.34- 206.34	173.19	
5.564	5.564	(0.952)	100	191884			3.46- 63.46	35.20	

125 Trichloroethene						CAS #:	79-01-6		
6.082	6.082	(1.041)	95	696962	1000.00	1142.1	70.00- 130.00	100.00	
6.082	6.082	(1.041)	130	696664			73.37- 133.37	99.96	
6.082	6.082	(1.041)	97	449309			35.35- 95.35	64.47	

127 Methylcyclohexane						CAS #:	108-87-2		
6.194	6.194	(1.060)	83	916868	1000.00	1197.6	70.00- 130.00	100.00	
6.194	6.194	(1.060)	98	455924			19.87- 79.87	49.73	
6.194	6.194	(1.060)	55	773872			54.72- 114.72	84.40	

132 1,2-Dichloropropane						CAS #:	78-87-5		
6.404	6.404	(1.096)	63	567700	1000.00	1184.9	70.00- 130.00	100.00	
6.404	6.404	(1.096)	62	403552			40.76- 100.76	71.09	
6.404	6.404	(1.096)	41	306731			26.03- 86.03	54.03	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	CAL-AMT		ON-COL	TARGET RANGE	RATIO	
				RESPONSE	(PPEV)	(PPBV)			
==	=====	=====	=====	=====	=====	=====	=====	=====	=====

136	1,4-Dioxane					CAS #:	123-91-1		
6.530	6.530	(1.117)	88	332866	1000.00	1199.8	70.00-	130.00	100.00
6.530	6.530	(1.117)	58	241093			42.35-	102.35	72.43
6.530	6.530	(1.117)	57	77726			0.00-	53.99	23.35

138	Bromodichloromethane					CAS #:	75-27-4		
6.725	6.725	(1.151)	83	1134743	1000.00	1199.6	70.00-	130.00	100.00
6.725	6.725	(1.151)	85	728965			32.51-	92.51	64.24

144	cis-1,3-Dichloropropene					CAS #:	10061-01-5		
7.341	7.341	(1.256)	75	912176	1000.00	1357.2	70.00-	130.00	100.00
7.341	7.341	(1.256)	77	289051			0.58-	60.58	31.69
7.327	7.327	(1.254)	39	432037			18.98-	78.98	47.36

145	4-Methyl-2-pentanone					CAS #:	108-10-1		
7.565	7.565	(1.294)	85	206733	1000.00	1372.6	70.00-	130.00	100.00
7.565	7.565	(1.294)	43	1288778			626.54-	686.54	623.40
7.565	7.565	(1.294)	58	505042			227.69-	287.69	244.30

147	Toluene					CAS #:	108-88-3		
7.733	7.733	(1.323)	91	1854004	1000.00	1198.0	70.00-	130.00	100.00
7.733	7.733	(1.323)	92	1089723			28.44-	88.44	58.78

150	trans-1,3-Dichloropropene					CAS #:	10061-02-6		
8.293	8.293	(0.843)	75	790011	1000.00	1342.7	70.00-	130.00	100.00
8.293	8.293	(0.843)	77	248285			1.11-	61.11	31.43
8.293	8.293	(0.843)	39	357691			14.88-	74.88	45.28

155	1,1,2-Trichloroethane					CAS #:	79-00-5		
8.614	8.614	(0.876)	97	636825	1000.00	1207.1	70.00-	130.00	100.00
8.614	8.614	(0.876)	99	393625			32.09-	92.09	61.81
8.614	8.614	(0.876)	83	552444			58.01-	118.01	86.75

156	Tetrachloroethene					CAS #:	127-18-4		
8.628	8.628	(0.878)	166	816605	1000.00	1156.2	70.00-	130.00	100.00
8.628	8.628	(0.878)	129	640701			46.67-	106.67	78.46
8.628	8.628	(0.878)	131	612417			42.30-	102.30	75.00

158	2-Hexanone					CAS #:	591-78-6		
9.006	9.006	(0.916)	58	670194	1000.00	1422.6	70.00-	130.00	100.00
9.006	9.006	(0.916)	43	1235784			165.25-	225.25	184.39
9.006	9.006	(0.916)	100	143177			0.00-	52.77	21.36

160	Dibromochloromethane					CAS #:	124-48-1		
9.160	9.160	(0.932)	129	1144492	1000.00	1229.2	70.00-	130.00	100.00
9.160	9.160	(0.932)	127	893560			47.21-	107.21	78.07

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

161	1,2-Dibromoethane (EDB)					CAS #:	106-93-4		
9.300	9.300	(0.946)	107	989458	1000.00	1224.0	70.00-	130.00	100.00
9.300	9.300	(0.946)	109	923452			63.74-	123.74	93.33

165	Chlorobenzene					CAS #:	108-90-7		
9.860	9.860	(1.003)	112	1445088	1000.00	1168.8	70.00-	130.00	100.00
9.860	9.860	(1.003)	114	459953			2.02-	62.02	31.83
9.860	9.860	(1.003)	77	855355			30.14-	90.14	59.19

167	Ethyl Benzene					CAS #:	100-41-4		
9.958	9.958	(1.013)	106	729904	1000.00	1230.0	70.00-	130.00	100.00
9.958	9.958	(1.013)	91	2437147			306.11-	366.11	333.90

169	m,p-Xylene					CAS #:	108-38-3		
10.084	10.084	(1.026)	106	905484	1000.00	1234.6	70.00-	130.00	100.00
10.084	10.084	(1.026)	91	1888415			174.24-	234.24	208.55

171	o-Xylene					CAS #:	95-47-6		
10.461	10.461	(1.064)	106	849348	1000.00	1262.0	70.00-	130.00	100.00
10.461	10.461	(1.064)	91	1856569			191.30-	251.30	218.59

172	Styrene					CAS #:	100-42-5		
10.489	10.489	(1.067)	104	1487432	1000.00	1333.1	70.00-	130.00	100.00
10.489	10.489	(1.067)	78	748373			19.95-	79.95	50.31

174	Bromoform					CAS #:	75-25-2		
10.671	10.671	(1.085)	173	1049482	1000.00	1235.7	70.00-	130.00	100.00
10.671	10.671	(1.085)	171	544287			23.00-	83.00	51.86

175	Cumene					CAS #:	98-82-8		
10.783	10.783	(1.097)	105	2687376	1000.00	1256.6	70.00-	130.00	100.00
10.783	10.783	(1.097)	120	705699			0.00-	56.04	26.26
10.769	10.769	(1.095)	51	287924			0.00-	40.17	10.71

181	1,1,2,2-Tetrachloroethane					CAS #:	79-34-5		
11.105	11.105	(1.129)	83	1332558	1000.00	1226.5	70.00-	130.00	100.00
11.105	11.105	(1.129)	85	864078			35.69-	95.69	64.84

182	Propylbenzene					CAS #:	103-65-1		
11.105	11.105	(1.129)	91	3248976	1000.00	1226.4	70.00-	130.00	100.00
11.105	11.105	(1.129)	120	713968			0.00-	51.76	21.98
11.105	11.105	(1.129)	105	118185			0.00-	33.53	3.64

188	4-Ethyltoluene					CAS #:	622-96-8		
11.203	11.203	(1.139)	105	2616133	1000.00	1261.1	70.00-	130.00	100.00
11.203	11.203	(1.139)	120	754405			0.00-	59.33	28.84

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

190	1,3,5-Trimethylbenzene					CAS #: 108-67-8			
11.245	11.245	(1.144)	105	2209173	1000.00	1251.8	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	1060403			16.85- 76.85	48.00	

196	1,2,4-Trimethylbenzene					CAS #: 95-63-6			
11.511	11.511	(1.171)	105	2082461	1000.00	1288.3	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	943358			15.19- 75.19	45.30	

208	1,3-Dichlorobenzene					CAS #: 541-73-1			
11.707	11.707	(1.191)	146	1372416	1000.00	1169.1	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	881761			33.74- 93.74	64.25	
11.707	11.707	(1.191)	111	557290			10.77- 70.77	40.61	

209	1,4-Dichlorobenzene					CAS #: 106-46-7			
11.763	11.763	(1.196)	146	1369315	1000.00	1177.0	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	874331			33.86- 93.86	63.85	
11.763	11.763	(1.196)	111	550587			10.30- 70.30	40.21	

212	alpha-Chlorotoluene					CAS #: 100-44-7			
11.860	11.860	(1.206)	91	1726078	1000.00	1483.2	70.00- 130.00	100.00	
11.860	11.860	(1.206)	126	358288			0.00- 50.90	20.76	

214	1,2-Dichlorobenzene					CAS #: 95-50-1			
11.986	11.986	(1.219)	146	1226432	1000.00	1148.1	70.00- 130.00	100.00	
11.986	11.986	(1.219)	148	776621			33.29- 93.29	63.32	
11.986	11.986	(1.219)	111	536486			12.93- 72.93	43.74	

226	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
12.840	12.840	(1.306)	180	511460	1000.00	1080.4	70.00- 130.00	100.00	
12.840	12.840	(1.306)	182	487565			66.09- 126.09	95.33	

227	Hexachlorobutadiene					CAS #: 87-68-3			
12.896	12.896	(1.312)	225	395814	1000.00	991.83	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	251233			33.17- 93.17	63.47	

Report Date: 01-Jun-2015 22:06

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060121.d
 Lab Smp Id: ICAL Level 7
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 7
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 1000ppbv(1000ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	103812	-6.35
123 1,4-Difluorobenze	489861	293917	685805	465327	-5.01
163 Chlorobenzene-d5	420158	252095	588221	406813	-3.18

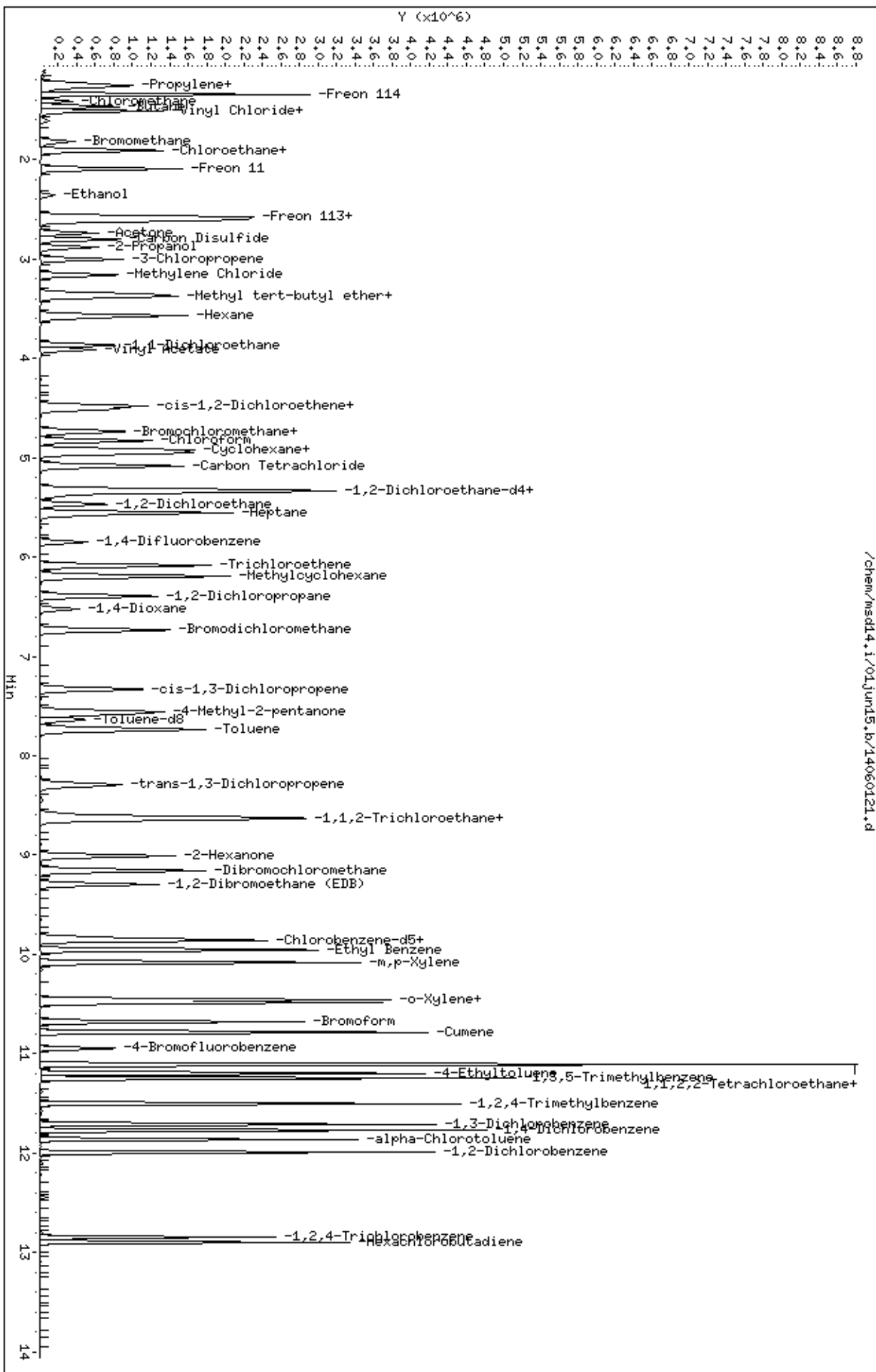
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060117.d
 Lab Smp Id: ICAL Level 8 Client Smp ID: ICAL Level 8
 Inj Date : 01-JUN-2015 18:32
 Operator : md Inst ID: msd14.i
 Smp Info : 25ml #2716-25
 Misc Info : 250ppbv(500ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:05 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 18:32 Cal File: 14060117.d
 Als bottle: 1 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: NaphICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #:	74-97-5	
4.739	4.739	(1.000)	130	102767	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	78289			48.08- 108.08	76.18
4.739	4.739	(1.000)	49	147243			116.54- 176.54	143.28

* 123 1,4-Difluorobenzene						CAS #:	540-36-3	
5.844	5.844	(1.000)	114	442390	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	71045			0.00- 45.72	16.06

* 163 Chlorobenzene-d5						CAS #:	3114-55-4	
9.832	9.832	(1.000)	117	406171	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	222075			25.58- 85.58	54.68

228 Naphthalene						CAS #:	91-20-3	
12.966	12.966	(1.319)	128	146486	250.000	188.86	70.00- 130.00	100.00
12.966	12.966	(1.319)	127	18634			0.00- 41.17	12.72

Report Date: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060117.d
 Lab Smp Id: ICAL Level 8
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 8
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 250ppbv(500ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	102767	-7.30
123 1,4-Difluorobenze	489861	293917	685805	442390	-9.69
163 Chlorobenzene-d5	420158	252095	588221	406171	-3.33

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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/msdd4.1/01jun15.b/14060117.d

Date: 01-JUN-2015 18:32

Client ID: ICAL Level 8

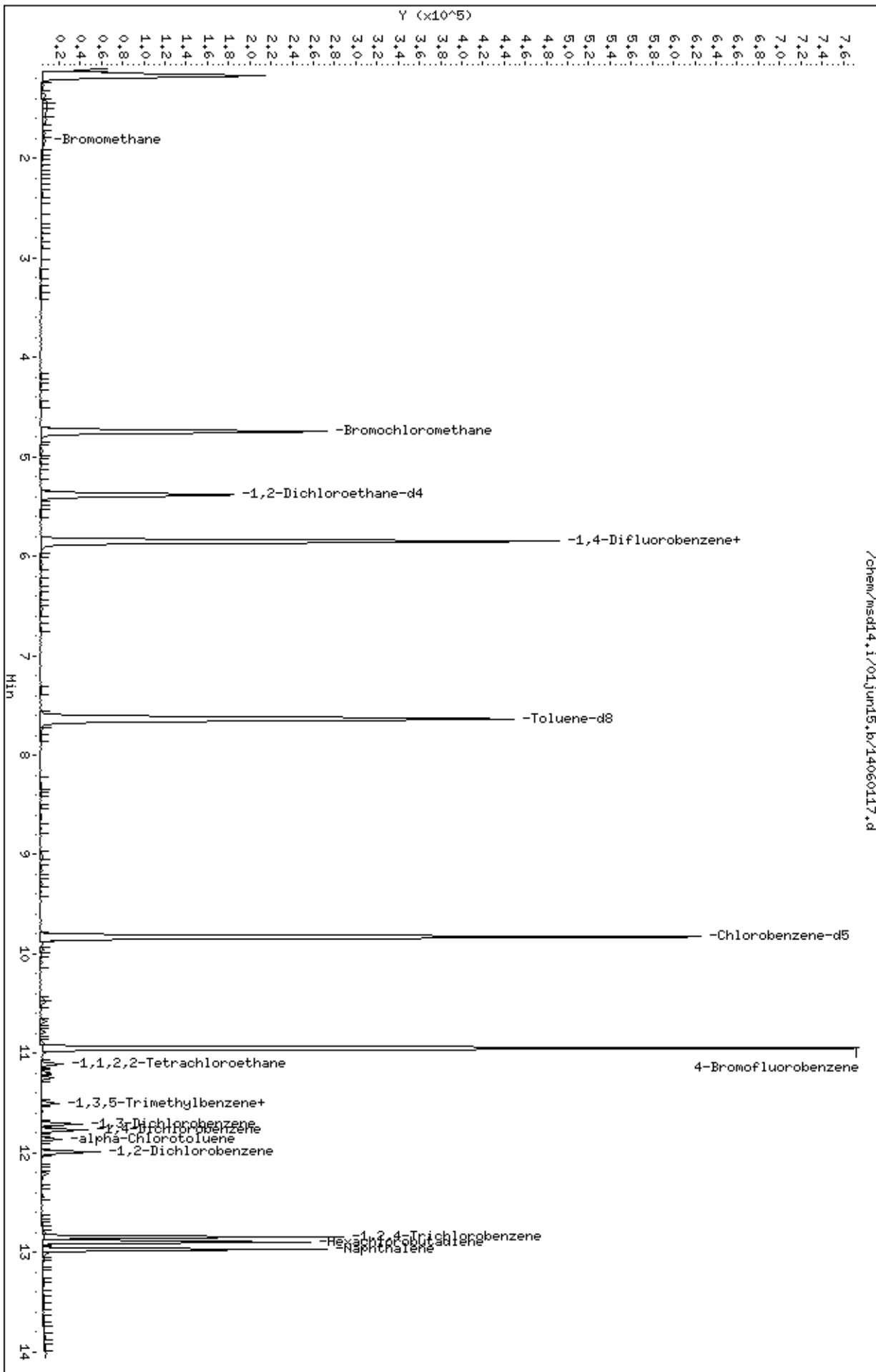
Sample Info: 25ml #2716-25

Column phase: RTX-624

Instrument: msdd4.1

Operator: md

Column diameter: 0.18



Report Date: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060114.d
 Lab Smp Id: ICAL Level 8 Client Smp ID: ICAL Level 8
 Inj Date : 01-JUN-2015 17:34
 Operator : md Inst ID: msd14.i
 Smp Info : 25ml #2716-24
 Misc Info : 2500ppbv(5000ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:05 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 18:32 Cal File: 14060117.d
 Als bottle: 1 Calibration Sample, Level: 8
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12NoOxyNaph.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	CAL-AMT	ON-COL	TARGET RANGE	RATIO
==	=====	=====	====	=====	=====	=====	=====	=====	=====
* 98 Bromochloromethane									CAS #: 74-97-5
4.753	4.753	(1.000)	130	109851	400.000			70.00- 130.00	100.00
4.753	4.753	(1.000)	128	85911				48.08- 108.08	78.21
4.739	4.739	(1.000)	49	160235				116.54- 176.54	145.87
* 123 1,4-Difluorobenzene									CAS #: 540-36-3
5.844	5.844	(1.000)	114	478023	400.000			70.00- 130.00	100.00
5.844	5.844	(1.000)	88	76984				0.00- 45.72	16.10
* 163 Chlorobenzene-d5									CAS #: 3114-55-4
9.832	9.832	(1.000)	117	414804	400.000			70.00- 130.00	100.00
9.818	9.818	(1.000)	82	228981				25.58- 85.58	55.20
§ 117 1,2-Dichloroethane-d4									CAS #: 17060-07-0
5.396	5.396	(1.135)	65	162250	400.000	394.68		70.00- 130.00	100.00
5.396	5.396	(1.135)	67	90755				23.57- 83.57	55.94

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	477568	400.000	402.47	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	55502			0.00- 41.05	11.62	
7.635	7.635	(1.306)	100	329763			38.18- 98.18	69.05	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	221782	400.000	385.06	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	298700			102.26- 162.26	134.68	
10.951	10.951	(1.114)	176	212600			66.15- 126.15	95.86	

9 Propylene						CAS #: 115-07-1			
1.241	1.241	(0.261)	41	851527	2500.00	2642.2	70.00- 130.00	100.00	
1.241	1.241	(0.261)	42	560414			34.95- 94.95	65.81	
1.241	1.241	(0.261)	39	611144			42.16- 102.16	71.77	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.267)	85	2819603	2500.00	2626.8	70.00- 130.00	100.00	
1.269	1.269	(0.267)	87	918961			3.05- 63.05	32.59	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	2018539	2500.00	2708.0	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	644898			1.48- 61.48	31.95	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.299)	50	970360	2500.00	2508.8	70.00- 130.00	100.00	
1.423	1.423	(0.299)	52	306483			1.15- 61.15	31.58	

23 Butane						CAS #: 106-97-8			
1.478	1.478	(0.311)	58	236963	2500.00	2614.2	70.00- 130.00	100.00	
1.478	1.478	(0.311)	43	1616646			680.52- 740.52	682.24	

25 Vinyl Chloride						CAS #: 75-01-4			
1.506	1.506	(0.317)	62	1006351	2500.00	2541.1	70.00- 130.00	100.00	
1.506	1.506	(0.317)	64	313576			0.94- 60.94	31.16	

26 1,3-Butadiene						CAS #: 106-99-0			
1.520	1.520	(0.320)	54	818566	2500.00	2694.6	70.00- 130.00	100.00	
1.520	1.520	(0.320)	39	788513			66.21- 126.21	96.33	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.382)	94	734160	2500.00	2871.2	70.00- 130.00	100.00	
1.814	1.814	(0.382)	96	696307			64.87- 124.87	94.84	
1.814	1.814	(0.382)	79	125896			0.00- 46.18	17.15	

30 Chloroethane						CAS #: 75-00-3			
1.898	1.898	(0.399)	64	534749	2500.00	2614.7	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.898	1.898	(0.399)	66	163422			0.00- 59.89	30.56	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.402)	43	1226139	2500.00	2584.6	70.00- 130.00	100.00	
1.912	1.912	(0.402)	57	847947			39.30- 99.30	69.16	
1.912	1.912	(0.402)	72	104642			0.00- 38.88	8.53	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.441)	101	2939450	2500.00	2670.0	70.00- 130.00	100.00	
2.094	2.094	(0.441)	103	1899846			34.32- 94.32	64.63	

42 Ethanol CAS #: 64-17-5									
2.374	2.374	(0.500)	45	391179	2500.00	2334.0	70.00- 130.00	100.00	
2.360	2.360	(0.497)	43	81583			0.00- 50.94	20.86	
2.374	2.374	(0.500)	46	168021			13.63- 73.63	42.95	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.544)	151	1733563	2500.00	2553.1	70.00- 130.00	100.00	
2.584	2.584	(0.544)	153	1098452			34.22- 94.22	63.36	
2.584	2.584	(0.544)	101	2311384			102.57- 162.57	133.33	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.550)	61	1817987	2500.00	2587.3	70.00- 130.00	100.00	
2.612	2.612	(0.550)	96	1055558			27.93- 87.93	58.06	
2.612	2.612	(0.550)	98	676943			6.48- 66.48	37.24	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.576)	58	553231	2500.00	2671.3	70.00- 130.00	100.00	
2.738	2.738	(0.576)	43	1760621			289.79- 349.79	318.24	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.591)	76	3083302	2500.00	2634.5	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.605)	45	1947684	2500.00	2915.6	70.00- 130.00	100.00	
2.878	2.878	(0.605)	43	376218			0.00- 50.97	19.32	
2.878	2.878	(0.605)	59	74747			0.00- 33.89	3.84	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.632)	76	502716	2500.00	2860.6	70.00- 130.00	100.00	
3.004	3.004	(0.632)	41	1398387			247.13- 307.13	278.17	

66 Methylene Chloride CAS #: 75-09-2									
3.158	3.158	(0.664)	49	1352946	2500.00	2534.2	70.00- 130.00	100.00	
3.172	3.172	(0.667)	84	958522			43.35- 103.35	70.85	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.158	3.158	(0.664)	51	407967			0.70- 60.70	30.15	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.353	3.353	(0.706)	73	2873499	2500.00	3146.0	70.00- 130.00	100.00	
3.353	3.353	(0.706)	57	699314			0.00- 54.09	24.34	
3.353	3.353	(0.706)	41	651051			0.00- 55.75	22.66	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.381	3.381	(0.711)	96	1059026	2500.00	2538.8	70.00- 130.00	100.00	
3.381	3.381	(0.711)	61	1544066			117.22- 177.22	145.80	
3.381	3.381	(0.711)	98	670411			31.31- 91.31	63.30	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.753)	57	1965862	2500.00	2899.0	70.00- 130.00	100.00	
3.577	3.577	(0.753)	43	1217397			33.82- 93.82	61.93	
3.577	3.577	(0.753)	86	351264			0.00- 47.96	17.87	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.871	3.871	(0.815)	63	2067971	2500.00	2666.4	70.00- 130.00	100.00	
3.871	3.871	(0.815)	65	657855			0.83- 60.83	31.81	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.823)	86	265737	2500.00	3888.4	70.00- 130.00	100.00(H)	
3.913	3.913	(0.823)	43	2613330			1031.22-1091.22	983.43	
3.913	3.913	(0.823)	42	214291			62.99- 122.99	80.64	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.944)	61	1793140	2500.00	2883.0	70.00- 130.00	100.00	
4.487	4.487	(0.944)	96	1338560			44.12- 104.12	74.65	
4.487	4.487	(0.944)	98	857383			18.04- 78.04	47.81	

92 2-Butanone CAS #: 78-93-3									
4.515	4.515	(0.950)	72	584278	2500.00	2914.6	70.00- 130.00	100.00	
4.515	4.515	(0.950)	43	2461738			384.18- 444.18	421.33	
4.515	4.515	(0.950)	57	195361			3.18- 63.18	33.44	

99 Tetrahydrofuran CAS #: 109-99-9									
4.725	4.725	(0.994)	42	1347392	2500.00	2849.7	70.00- 130.00	100.00	
4.725	4.725	(0.994)	71	518157			6.63- 66.63	38.46	
4.725	4.725	(0.994)	72	547244			9.95- 69.95	40.62	

100 Chloroform CAS #: 67-66-3									
4.823	4.823	(1.015)	83	2399069	2500.00	2650.4	70.00- 130.00	100.00	
4.823	4.823	(1.015)	85	1536880			36.11- 96.11	64.06	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		
102 Cyclohexane						CAS #:	110-82-7			
4.920	4.920	(1.035)	84	1632427	2500.00	2790.7	70.00- 130.00	100.00		
4.920	4.920	(1.035)	56	2006369			92.51- 152.51	122.91		
4.920	4.920	(1.035)	41	1051872			36.86- 96.86	64.44		

103 1,1,1-Trichloroethane						CAS #:	71-55-6			
4.948	4.948	(1.041)	97	2463202	2500.00	2757.3	70.00- 130.00	100.00		
4.948	4.948	(1.041)	99	1581070			34.93- 94.93	64.19		

106 Carbon Tetrachloride						CAS #:	56-23-5			
5.088	5.088	(1.071)	119	2492610	2500.00	2916.4	70.00- 130.00	100.00		
5.088	5.088	(1.071)	117	2596536			76.39- 136.39	104.17		

113 2,2,4-Trimethylpentane						CAS #:	540-84-1			
5.326	5.326	(1.121)	57	6273859	2500.00	2829.8	70.00- 130.00	100.00		
5.326	5.326	(1.121)	56	2093668			3.74- 63.74	33.37		
5.326	5.326	(1.121)	41	1519780			0.00- 55.31	24.22		

116 Benzene						CAS #:	71-43-2			
5.354	5.354	(0.916)	78	3552941	2500.00	2683.8	70.00- 130.00	100.00		
5.354	5.354	(0.916)	77	846221			0.00- 53.58	23.82		

120 1,2-Dichloroethane						CAS #:	107-06-2			
5.480	5.480	(0.938)	62	1554586	2500.00	2670.0	70.00- 130.00	100.00		
5.480	5.480	(0.938)	64	505345			2.61- 62.61	32.51		

121 Heptane						CAS #:	142-82-5			
5.564	5.564	(0.952)	71	1299683	2500.00	2877.2	70.00- 130.00	100.00		
5.564	5.564	(0.952)	43	2252067			146.34- 206.34	173.28		
5.564	5.564	(0.952)	100	458176			3.46- 63.46	35.25		

125 Trichloroethene						CAS #:	79-01-6			
6.082	6.082	(1.041)	95	1626905	2500.00	2595.3	70.00- 130.00	100.00		
6.082	6.082	(1.041)	130	1634733			73.37- 133.37	100.48		
6.082	6.082	(1.041)	97	1045596			35.35- 95.35	64.27		

127 Methylcyclohexane						CAS #:	108-87-2			
6.194	6.194	(1.060)	83	2152393	2500.00	2736.7	70.00- 130.00	100.00		
6.194	6.194	(1.060)	98	1092524			19.87- 79.87	50.76		
6.194	6.194	(1.060)	55	1826612			54.72- 114.72	84.86		

132 1,2-Dichloropropane						CAS #:	78-87-5			
6.404	6.404	(1.096)	63	1345990	2500.00	2734.8	70.00- 130.00	100.00(H)		
6.404	6.404	(1.096)	62	956163			40.76- 100.76	71.04		
6.404	6.404	(1.096)	41	714933			26.03- 86.03	53.12		

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
136 1,4-Dioxane						CAS #:	123-91-1		
6.530	6.530	(1.117)	88	841234	2500.00	2951.5	70.00-	130.00	100.00
6.530	6.530	(1.117)	58	603789			42.35-	102.35	71.77
6.530	6.530	(1.117)	57	195862			0.00-	53.99	23.28

138 Bromodichloromethane						CAS #:	75-27-4		
6.725	6.725	(1.151)	83	2722086	2500.00	2801.3	70.00-	130.00	100.00
6.725	6.725	(1.151)	85	1747683			32.51-	92.51	64.20

144 cis-1,3-Dichloropropene						CAS #:	10061-01-5		
7.341	7.341	(1.256)	75	1964585	2500.00	2845.3	70.00-	130.00	100.00
7.341	7.341	(1.256)	77	618373			0.58-	60.58	31.48
7.327	7.327	(1.254)	39	936936			18.98-	78.98	47.69

145 4-Methyl-2-pentanone						CAS #:	108-10-1		
7.565	7.565	(1.294)	85	480730	2500.00	3107.0	70.00-	130.00	100.00
7.565	7.565	(1.294)	43	3010394			626.54-	686.54	626.21
7.565	7.565	(1.294)	58	1181331			227.69-	287.69	245.74

147 Toluene						CAS #:	108-88-3		
7.733	7.733	(1.323)	91	4277341	2500.00	2690.4	70.00-	130.00	100.00
7.733	7.733	(1.323)	92	2509754			28.44-	88.44	58.68

150 trans-1,3-Dichloropropene						CAS #:	10061-02-6		
8.293	8.293	(0.843)	75	1941170	2500.00	3235.6	70.00-	130.00	100.00
8.293	8.293	(0.843)	77	611698			1.11-	61.11	31.51
8.293	8.293	(0.843)	39	877279			14.88-	74.88	45.19

155 1,1,2-Trichloroethane						CAS #:	79-00-5		
8.614	8.614	(0.876)	97	1480203	2500.00	2751.6	70.00-	130.00	100.00
8.614	8.614	(0.876)	99	912876			32.09-	92.09	61.67
8.614	8.614	(0.876)	83	1299148			58.01-	118.01	87.77

156 Tetrachloroethene						CAS #:	127-18-4		
8.628	8.628	(0.878)	166	1865297	2500.00	2590.2	70.00-	130.00	100.00
8.628	8.628	(0.878)	129	1458769			46.67-	106.67	78.21
8.628	8.628	(0.878)	131	1413685			42.30-	102.30	75.79

158 2-Hexanone						CAS #:	591-78-6		
9.006	9.006	(0.916)	58	1544830	2500.00	3216.1	70.00-	130.00	100.00
9.006	9.006	(0.916)	43	2861078			165.25-	225.25	185.20
9.006	9.006	(0.916)	100	330316			0.00-	52.77	21.38

160 Dibromochloromethane						CAS #:	124-48-1		
9.160	9.160	(0.932)	129	2610356	2500.00	2749.6	70.00-	130.00	100.00
9.160	9.160	(0.932)	127	2043530			47.21-	107.21	78.29

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4			
9.300	9.300	(0.946)	107	2237920	2500.00	2715.2	70.00- 130.00	100.00	
9.300	9.300	(0.946)	109	2106137			63.74- 123.74	94.11	

165	Chlorobenzene					CAS #: 108-90-7			
9.860	9.860	(1.003)	112	3265474	2500.00	2590.3	70.00- 130.00	100.00	
9.860	9.860	(1.003)	114	1037478			2.02- 62.02	31.77	
9.860	9.860	(1.003)	77	1934520			30.14- 90.14	59.24	

167	Ethyl Benzene					CAS #: 100-41-4			
9.958	9.958	(1.013)	106	1660494	2500.00	2744.4	70.00- 130.00	100.00	
9.958	9.958	(1.013)	91	5522070			306.11- 366.11	332.56	

169	m,p-Xylene					CAS #: 108-38-3			
10.083	10.083	(1.026)	106	2023481	2500.00	2705.7	70.00- 130.00	100.00	
10.083	10.083	(1.026)	91	4225390			174.24- 234.24	208.82	

171	o-Xylene					CAS #: 95-47-6			
10.461	10.461	(1.064)	106	1940686	2500.00	2827.9	70.00- 130.00	100.00	
10.461	10.461	(1.064)	91	4262777			191.30- 251.30	219.65	

172	Styrene					CAS #: 100-42-5			
10.489	10.489	(1.067)	104	3094432	2500.00	2720.0	70.00- 130.00	100.00	
10.489	10.489	(1.067)	78	1581847			19.95- 79.95	51.12	

174	Bromoform					CAS #: 75-25-2			
10.671	10.671	(1.085)	173	2287641	2500.00	2641.8	70.00- 130.00	100.00	
10.671	10.671	(1.085)	171	1177187			23.00- 83.00	51.46	

175	Cumene					CAS #: 98-82-8			
10.783	10.783	(1.097)	105	5830289	2500.00	2673.6	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	1521485			0.00- 56.04	26.10	
10.783	10.783	(1.097)	51	620589			0.00- 40.17	10.64	

181	1,1,2,2-Tetrachloroethane					CAS #: 79-34-5			
11.105	11.105	(1.129)	83	2935258	2500.00	2649.6	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	1905846			35.69- 95.69	64.93	

182	Propylbenzene					CAS #: 103-65-1			
11.105	11.105	(1.129)	91	6983273	2500.00	2585.3	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	1537918			0.00- 51.76	22.02	
11.105	11.105	(1.129)	105	255903			0.00- 33.53	3.66	

188	4-Ethyltoluene					CAS #: 622-96-8			
11.203	11.203	(1.139)	105	5600091	2500.00	2647.4	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	1628480			0.00- 59.33	29.08	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

190	1,3,5-Trimethylbenzene					CAS #: 108-67-8			
11.245	11.245	(1.144)	105	3996622	2500.00	2221.1	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	1923204			16.85- 76.85	48.12	

196	1,2,4-Trimethylbenzene					CAS #: 95-63-6			
11.511	11.511	(1.171)	105	4107255	2500.00	2491.9	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	1858757			15.19- 75.19	45.26	

208	1,3-Dichlorobenzene					CAS #: 541-73-1			
11.707	11.707	(1.191)	146	2780542	2500.00	2322.9	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	1780417			33.74- 93.74	64.03	
11.707	11.707	(1.191)	111	1155996			10.77- 70.77	41.57	

209	1,4-Dichlorobenzene					CAS #: 106-46-7			
11.762	11.762	(1.196)	146	2713094	2500.00	2287.1	70.00- 130.00	100.00	
11.762	11.762	(1.196)	148	1729626			33.86- 93.86	63.75	
11.762	11.762	(1.196)	111	1106156			10.30- 70.30	40.77	

212	alpha-Chlorotoluene					CAS #: 100-44-7			
11.860	11.860	(1.206)	91	2257206	2500.00	1902.3	70.00- 130.00	100.00	
11.860	11.860	(1.206)	126	469347			0.00- 50.90	20.79	

214	1,2-Dichlorobenzene					CAS #: 95-50-1			
11.986	11.986	(1.219)	146	2361266	2500.00	2167.8	70.00- 130.00	100.00	
11.986	11.986	(1.219)	148	1499795			33.29- 93.29	63.52	
11.986	11.986	(1.219)	111	1024798			12.93- 72.93	43.40	

226	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
12.840	12.840	(1.306)	180	628794	2500.00	1302.6	70.00- 130.00	100.00	
12.840	12.840	(1.306)	182	592327			66.09- 126.09	94.20	

227	Hexachlorobutadiene					CAS #: 87-68-3			
12.896	12.896	(1.312)	225	531552	2500.00	1306.3	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	338664			33.17- 93.17	63.71	

QC Flag Legend

H - Operator selected an alternate compound hit.

Report Date: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060114.d
 Lab Smp Id: ICAL Level 8
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 8
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 2500ppbv(5000ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	109851	-0.91
123 1,4-Difluorobenze	489861	293917	685805	478023	-2.42
163 Chlorobenzene-d5	420158	252095	588221	414804	-1.27

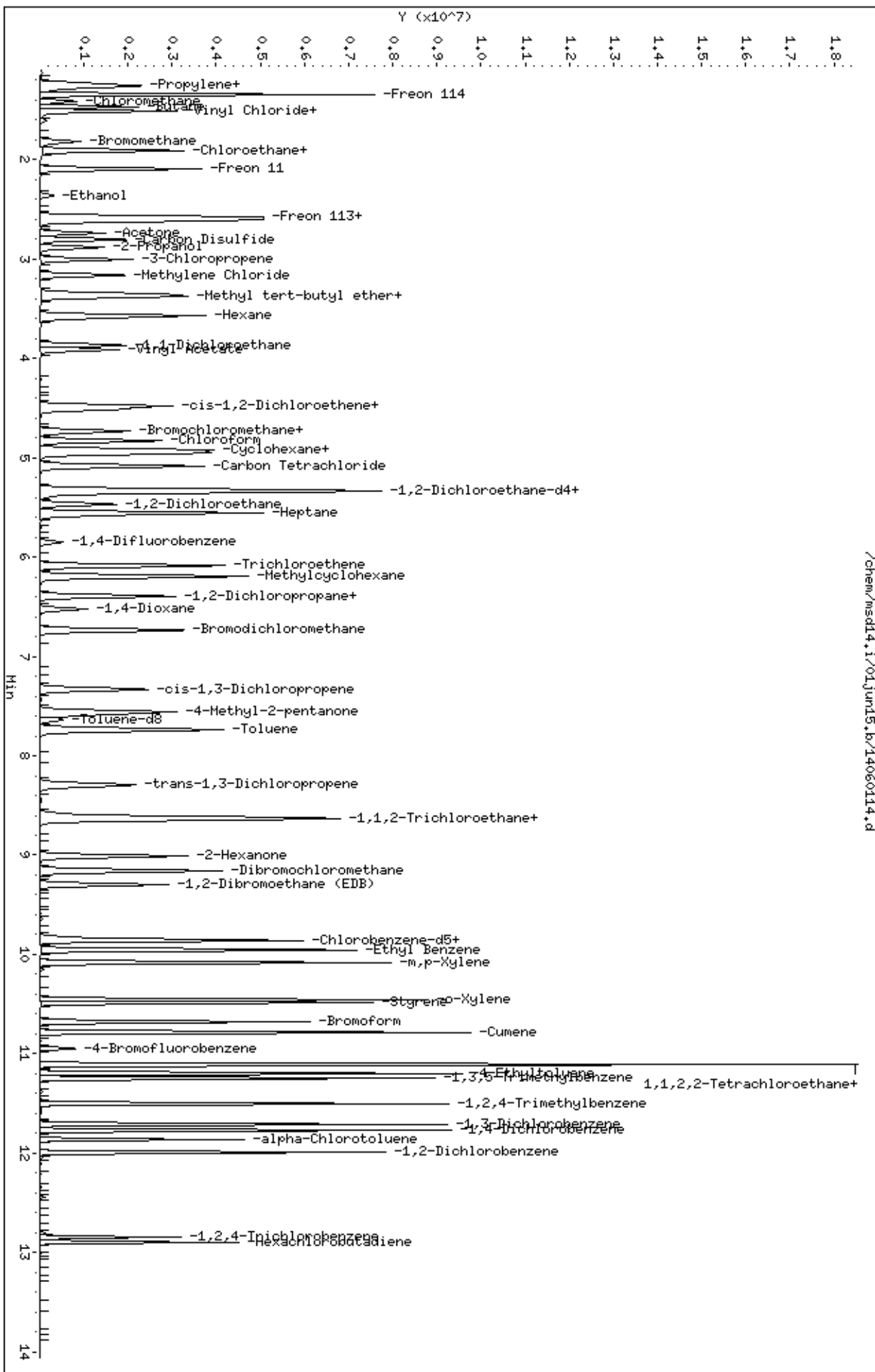
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060118.d
 Lab Smp Id: ICAL Level 9 Client Smp ID: ICAL Level 9
 Inj Date : 01-JUN-2015 18:56
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #2716-25
 Misc Info : 500ppbv(500ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:05 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 18:56 Cal File: 14060118.d
 Als bottle: 1 Calibration Sample, Level: 9
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: NaphICAL.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #:	74-97-5	
4.739	4.739	(1.000)	130	103929	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	81851			48.08- 108.08	78.76
4.739	4.739	(1.000)	49	153597			116.54- 176.54	147.79

* 123 1,4-Difluorobenzene						CAS #:	540-36-3	
5.844	5.844	(1.000)	114	451261	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	72392			0.00- 45.72	16.04

* 163 Chlorobenzene-d5						CAS #:	3114-55-4	
9.832	9.832	(1.000)	117	406544	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	224270			25.58- 85.58	55.17

228 Naphthalene						CAS #:	91-20-3	
12.966	12.966	(1.319)	128	427362	500.000	550.49	70.00- 130.00	100.00(A)
12.966	12.966	(1.319)	127	54150			0.00- 41.17	12.67

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Report Date: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060118.d
 Lab Smp Id: ICAL Level 9
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 9
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 500ppbv(500ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	103929	-6.25
123 1,4-Difluorobenze	489861	293917	685805	451261	-7.88
163 Chlorobenzene-d5	420158	252095	588221	406544	-3.24

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.74	-0.29
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	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/msd14.1/01jun15.b/14060118.d

Date : 01-JUN-2015 18:56

Client ID: ICAL Level 9

Sample Info: 50ml #2716-25

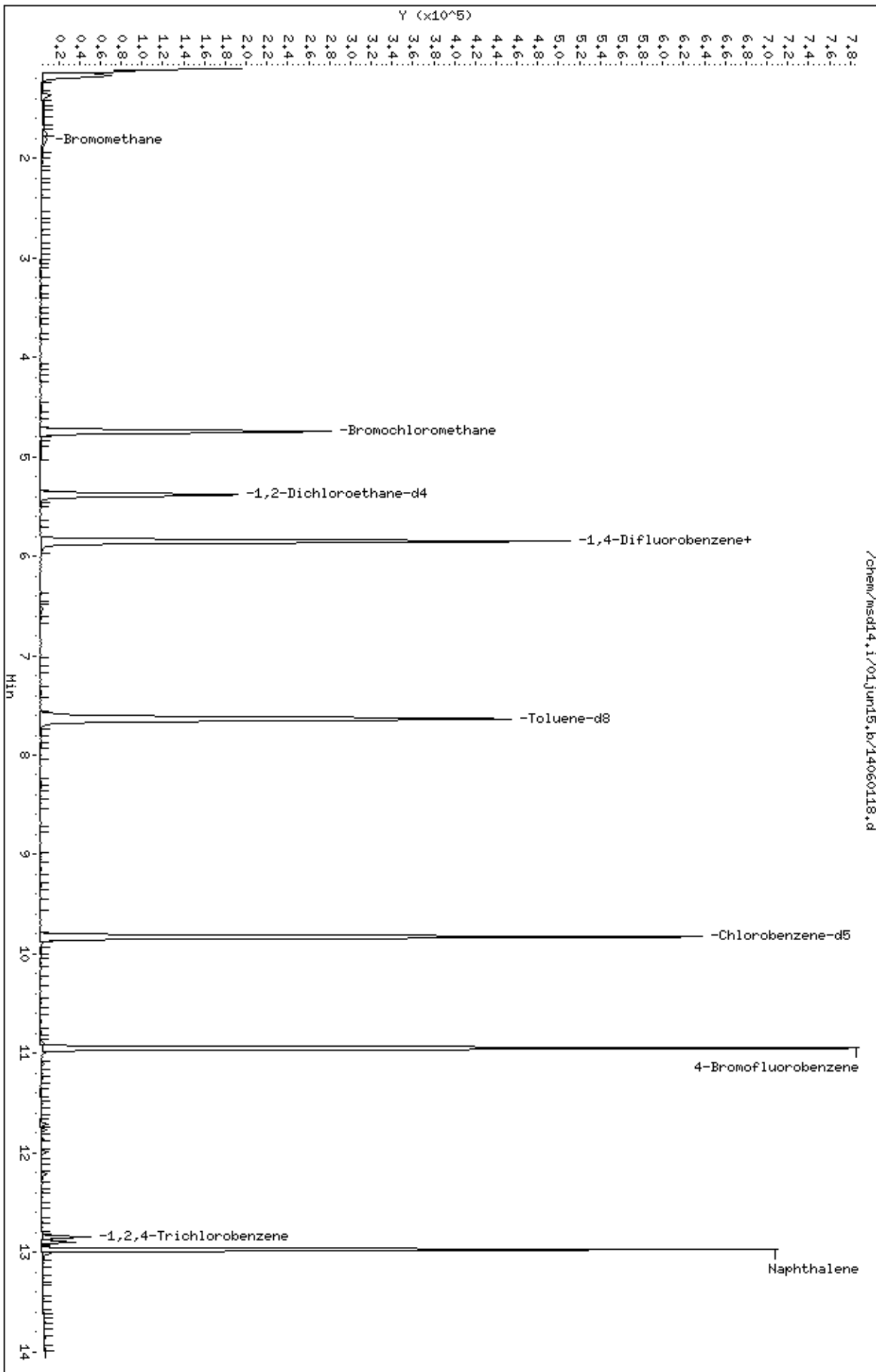
Column phase: RTX-624

Instrument: msd14.1

Operator: md

Column diameter: 0.18

/chem/msd14.1/01jun15.b/14060118.d



Report Date: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/01jun15.b/14060116.d
 Lab Smp Id: ICAL Level 9 Client Smp ID: ICAL Level 9
 Inj Date : 01-JUN-2015 18:13
 Operator : md Inst ID: msd14.i
 Smp Info : 50ml #2716-24
 Misc Info : 5000ppbv(5000ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/01jun15.b/14550601a.m
 Meth Date : 01-Jun-2015 22:05 HR8M Quant Type: ISTD
 Cal Date : 01-JUN-2015 18:56 Cal File: 14060118.d
 Als bottle: 1 Calibration Sample, Level: 9
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: AT12NoOxyNaph.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane CAS #: 74-97-5

4.753	4.753 (1.000)	130	115953	400.000		70.00- 130.00	100.00
4.753	4.753 (1.000)	128	89843			48.08- 108.08	77.48
4.739	4.739 (1.000)	49	170831			116.54- 176.54	147.33

* 123 1,4-Difluorobenzene CAS #: 540-36-3

5.858	5.858 (1.000)	114	506455	400.000		70.00- 130.00	100.00
5.844	5.844 (1.000)	88	81119			0.00- 45.72	16.02

* 163 Chlorobenzene-d5 CAS #: 3114-55-4

9.832	9.832 (1.000)	117	432101	400.000		70.00- 130.00	100.00
9.832	9.832 (1.000)	82	240033			25.58- 85.58	55.55

§ 117 1,2-Dichloroethane-d4 CAS #: 17060-07-0

5.396	5.396 (1.135)	65	180613	400.000	416.22	70.00- 130.00	100.00
5.396	5.396 (1.135)	67	89323			23.57- 83.57	49.46

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.303)	98	508098	400.000	404.16	70.00- 130.00	100.00	
7.635	7.635	(1.303)	70	60578			0.00- 41.05	11.92	
7.635	7.635	(1.303)	100	381195			38.18- 98.18	75.02	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	233282	400.000	388.81	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	307541			102.26- 162.26	131.83	
10.951	10.951	(1.114)	176	224313			66.15- 126.15	96.16	

9 Propylene						CAS #: 115-07-1			
1.241	1.241	(0.261)	41	1659223	5000.00	4877.4	70.00- 130.00	100.00	
1.241	1.241	(0.261)	42	1087333			34.95- 94.95	65.53	
1.241	1.241	(0.261)	39	1177735			42.16- 102.16	70.98	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.267)	85	5420624	5000.00	4784.3	70.00- 130.00	100.00	
1.269	1.269	(0.267)	87	1773200			3.05- 63.05	32.71	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	3912474	5000.00	4972.6	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	1255671			1.48- 61.48	32.09	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.299)	50	1915785	5000.00	4692.4	70.00- 130.00	100.00	
1.423	1.423	(0.299)	52	630001			1.15- 61.15	32.88	

23 Butane						CAS #: 106-97-8			
1.479	1.479	(0.311)	58	477657	5000.00	4992.3	70.00- 130.00	100.00	
1.479	1.479	(0.311)	43	3235167			680.52- 740.52	677.30	

25 Vinyl Chloride						CAS #: 75-01-4			
1.521	1.521	(0.320)	62	1963221	5000.00	4696.3	70.00- 130.00	100.00	
1.521	1.521	(0.320)	64	624804			0.94- 60.94	31.83	

26 1,3-Butadiene						CAS #: 106-99-0			
1.521	1.521	(0.320)	54	1653019	5000.00	5155.1	70.00- 130.00	100.00(A)	
1.521	1.521	(0.320)	39	1637011			66.21- 126.21	99.03	

29 Bromomethane						CAS #: 74-83-9			
1.815	1.815	(0.382)	94	1413138	5000.00	5235.7	70.00- 130.00	100.00(A)	
1.815	1.815	(0.382)	96	1323753			64.87- 124.87	93.67	
1.815	1.815	(0.382)	79	231466			0.00- 46.18	16.38	

30 Chloroethane						CAS #: 75-00-3			
1.912	1.912	(0.402)	64	1019419	5000.00	4722.2	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.912	1.912	(0.402)	66	311819			0.00- 59.89	30.59	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.402)	43	2462326	5000.00	4917.3	70.00- 130.00	100.00	
1.912	1.912	(0.402)	57	1718170			39.30- 99.30	69.78	
1.912	1.912	(0.402)	72	211674			0.00- 38.88	8.60	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.441)	101	5411952	5000.00	4657.2	70.00- 130.00	100.00	
2.094	2.094	(0.441)	103	3506354			34.32- 94.32	64.79	

42 Ethanol CAS #: 64-17-5									
2.374	2.374	(0.500)	45	769500	5000.00	4349.7	70.00- 130.00	100.00	
2.374	2.374	(0.500)	43	158021			0.00- 50.94	20.54	
2.374	2.374	(0.500)	46	323019			13.63- 73.63	41.98	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.544)	151	3403731	5000.00	4749.0	70.00- 130.00	100.00	
2.584	2.584	(0.544)	153	2164954			34.22- 94.22	63.61	
2.584	2.584	(0.544)	101	4566527			102.57- 162.57	134.16	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.550)	61	3618058	5000.00	4878.1	70.00- 130.00	100.00	
2.612	2.612	(0.550)	96	2100662			27.93- 87.93	58.06	
2.612	2.612	(0.550)	98	1347671			6.48- 66.48	37.25	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.576)	58	1102910	5000.00	5045.2	70.00- 130.00	100.00(A)	
2.738	2.738	(0.576)	43	3499228			289.79- 349.79	317.27	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.591)	76	6178985	5000.00	5001.8	70.00- 130.00	100.00(A)	

57 2-Propanol CAS #: 67-63-0									
2.892	2.892	(0.608)	45	3921214	5000.00	5561.0	70.00- 130.00	100.00(A)	
2.892	2.892	(0.608)	43	719383			0.00- 50.97	18.35	
2.892	2.892	(0.608)	59	154233			0.00- 33.89	3.93	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.632)	76	1007944	5000.00	5433.8	70.00- 130.00	100.00(A)	
3.004	3.004	(0.632)	41	2813683			247.13- 307.13	279.15	

66 Methylene Chloride CAS #: 75-09-2									
3.172	3.172	(0.667)	49	2678221	5000.00	4752.6	70.00- 130.00	100.00	
3.172	3.172	(0.667)	84	1902094			43.35- 103.35	71.02	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.172	3.172	(0.667)	51	805800			0.70- 60.70	30.09	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.368	3.368	(0.709)	73	5877788	5000.00	6096.5	70.00- 130.00	100.00(A)	
3.368	3.368	(0.709)	57	1434876			0.00- 54.09	24.41	
3.368	3.368	(0.709)	41	1312807			0.00- 55.75	22.34	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.382	3.382	(0.711)	96	2097584	5000.00	4763.9	70.00- 130.00	100.00	
3.382	3.382	(0.711)	61	3082285			117.22- 177.22	146.94	
3.396	3.396	(0.714)	98	1330070			31.31- 91.31	63.41	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.753)	57	3917011	5000.00	5472.3	70.00- 130.00	100.00(A)	
3.577	3.577	(0.753)	43	2435239			33.82- 93.82	62.17	
3.577	3.577	(0.753)	86	702223			0.00- 47.96	17.93	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.871	3.871	(0.815)	63	4125789	5000.00	5039.8	70.00- 130.00	100.00(A)	
3.871	3.871	(0.815)	65	1313520			0.83- 60.83	31.84	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.823)	86	589369	5000.00	8170.2	70.00- 130.00	100.00(AH)	
3.913	3.913	(0.823)	43	5812606			1031.22-1091.22	986.24	
3.913	3.913	(0.823)	42	467376			62.99- 122.99	79.30	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.944)	61	3550412	5000.00	5407.8	70.00- 130.00	100.00(A)	
4.487	4.487	(0.944)	96	2658358			44.12- 104.12	74.87	
4.487	4.487	(0.944)	98	1709983			18.04- 78.04	48.16	

92 2-Butanone CAS #: 78-93-3									
4.529	4.529	(0.953)	72	1158750	5000.00	5476.0	70.00- 130.00	100.00(A)	
4.529	4.529	(0.953)	43	4934290			384.18- 444.18	425.83	
4.529	4.529	(0.953)	57	393124			3.18- 63.18	33.93	

99 Tetrahydrofuran CAS #: 109-99-9									
4.725	4.725	(0.994)	42	2697703	5000.00	5405.4	70.00- 130.00	100.00(A)	
4.739	4.739	(0.997)	71	1027383			6.63- 66.63	38.08	
4.739	4.739	(0.997)	72	1093711			9.95- 69.95	40.54	

100 Chloroform CAS #: 67-66-3									
4.837	4.837	(1.018)	83	4766717	5000.00	4988.9	70.00- 130.00	100.00	
4.837	4.837	(1.018)	85	3097626			36.11- 96.11	64.98	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		
102 Cyclohexane						CAS #:	110-82-7			
4.921	4.921	(1.035)	84	3226966	5000.00	5226.3	70.00- 130.00	100.00(A)		
4.921	4.921	(1.035)	56	3967848			92.51- 152.51	122.96		
4.921	4.921	(1.035)	41	2051480			36.86- 96.86	63.57		

103 1,1,1-Trichloroethane						CAS #:	71-55-6			
4.963	4.963	(1.044)	97	4888447	5000.00	5184.1	70.00- 130.00	100.00(A)		
4.963	4.963	(1.044)	99	3149203			34.93- 94.93	64.42		

106 Carbon Tetrachloride						CAS #:	56-23-5			
5.089	5.089	(1.071)	119	4938041	5000.00	5473.5	70.00- 130.00	100.00(A)		
5.089	5.089	(1.071)	117	5163617			76.39- 136.39	104.57		

113 2,2,4-Trimethylpentane						CAS #:	540-84-1			
5.340	5.340	(1.124)	57	12433105	5000.00	5312.7	70.00- 130.00	100.00(A)		
5.340	5.340	(1.124)	56	4132090			3.74- 63.74	33.23		
5.326	5.326	(1.121)	41	3016264			0.00- 55.31	24.26		

116 Benzene						CAS #:	71-43-2			
5.354	5.354	(0.914)	78	7040367	5000.00	5019.6	70.00- 130.00	100.00(A)		
5.354	5.354	(0.914)	77	1666485			0.00- 53.58	23.67		

120 1,2-Dichloroethane						CAS #:	107-06-2			
5.480	5.480	(0.936)	62	3064621	5000.00	4967.9	70.00- 130.00	100.00		
5.480	5.480	(0.936)	64	998921			2.61- 62.61	32.60		

121 Heptane						CAS #:	142-82-5			
5.564	5.564	(0.950)	71	2570469	5000.00	5370.9	70.00- 130.00	100.00(A)		
5.564	5.564	(0.950)	43	4461387			146.34- 206.34	173.56		
5.564	5.564	(0.950)	100	887127			3.46- 63.46	34.51		

125 Trichloroethene						CAS #:	79-01-6			
6.082	6.082	(1.038)	95	3219292	5000.00	4847.2	70.00- 130.00	100.00		
6.096	6.096	(1.041)	130	3229935			73.37- 133.37	100.33		
6.082	6.082	(1.038)	97	2062831			35.35- 95.35	64.08		

127 Methylcyclohexane						CAS #:	108-87-2			
6.194	6.194	(1.057)	83	4270882	5000.00	5125.4	70.00- 130.00	100.00(A)		
6.208	6.208	(1.060)	98	2144853			19.87- 79.87	50.22		
6.194	6.194	(1.057)	55	3605614			54.72- 114.72	84.42		

132 1,2-Dichloropropane						CAS #:	78-87-5			
6.404	6.404	(1.093)	63	2691719	5000.00	5162.0	70.00- 130.00	100.00(AH)		
6.404	6.404	(1.093)	62	1908470			40.76- 100.76	70.90		
6.404	6.404	(1.093)	41	1410258			26.03- 86.03	52.39		

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	=====

136	1,4-Dioxane					CAS #: 123-91-1			
6.530	6.530	(1.115)	88	1563837	5000.00	5178.8	70.00- 130.00	100.00(A)	
6.530	6.530	(1.115)	58	1124549			42.35- 102.35	71.91	
6.530	6.530	(1.115)	57	370571			0.00- 53.99	23.70	

138	Bromodichloromethane					CAS #: 75-27-4			
6.740	6.740	(1.150)	83	5410855	5000.00	5255.8	70.00- 130.00	100.00(A)	
6.740	6.740	(1.150)	85	3486424			32.51- 92.51	64.43	

144	cis-1,3-Dichloropropene					CAS #: 10061-01-5			
7.341	7.341	(1.253)	75	3958943	5000.00	5411.9	70.00- 130.00	100.00(A)	
7.341	7.341	(1.253)	77	1256000			0.58- 60.58	31.73	
7.341	7.341	(1.253)	39	1873709			18.98- 78.98	47.33	

145	4-Methyl-2-pentanone					CAS #: 108-10-1			
7.579	7.579	(1.294)	85	964394	5000.00	5883.1	70.00- 130.00	100.00(A)	
7.565	7.565	(1.291)	43	5963008			626.54- 686.54	618.32	
7.565	7.565	(1.291)	58	2337769			227.69- 287.69	242.41	

147	Toluene					CAS #: 108-88-3			
7.733	7.733	(1.320)	91	8476812	5000.00	5032.4	70.00- 130.00	100.00(A)	
7.733	7.733	(1.320)	92	4966238			28.44- 88.44	58.59	

150	trans-1,3-Dichloropropene					CAS #: 10061-02-6			
8.307	8.307	(0.845)	75	3961715	5000.00	6339.2	70.00- 130.00	100.00(A)	
8.307	8.307	(0.845)	77	1244300			1.11- 61.11	31.41	
8.293	8.293	(0.843)	39	1788762			14.88- 74.88	45.15	

155	1,1,2-Trichloroethane					CAS #: 79-00-5			
8.629	8.629	(0.878)	97	2930451	5000.00	5229.4	70.00- 130.00	100.00(A)	
8.629	8.629	(0.878)	99	1820511			32.09- 92.09	62.12	
8.629	8.629	(0.878)	83	2583903			58.01- 118.01	88.17	

156	Tetrachloroethene					CAS #: 127-18-4			
8.629	8.629	(0.878)	166	3660526	5000.00	4879.5	70.00- 130.00	100.00	
8.629	8.629	(0.878)	129	2906710			46.67- 106.67	79.41	
8.629	8.629	(0.878)	131	2788491			42.30- 102.30	76.18	

158	2-Hexanone					CAS #: 591-78-6			
9.020	9.020	(0.917)	58	3059237	5000.00	6113.8	70.00- 130.00	100.00(A)	
9.020	9.020	(0.917)	43	5614038			165.25- 225.25	183.51	
9.020	9.020	(0.917)	100	652001			0.00- 52.77	21.31	

160	Dibromochloromethane					CAS #: 124-48-1			
9.160	9.160	(0.932)	129	5207146	5000.00	5265.4	70.00- 130.00	100.00(A)	
9.160	9.160	(0.932)	127	4044787			47.21- 107.21	77.68	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	====	=====	=====	=====	=====	=====	

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4			
9.300	9.300	(0.946)	107	4436278	5000.00	5166.9	70.00- 130.00	100.00(A)	
9.300	9.300	(0.946)	109	4169787			63.74- 123.74	93.99	

165	Chlorobenzene					CAS #: 108-90-7			
9.860	9.860	(1.003)	112	6436714	5000.00	4901.4	70.00- 130.00	100.00	
9.860	9.860	(1.003)	114	2057484			2.02- 62.02	31.96	
9.860	9.860	(1.003)	77	3806938			30.14- 90.14	59.14	

167	Ethyl Benzene					CAS #: 100-41-4			
9.958	9.958	(1.013)	106	3207313	5000.00	5088.7	70.00- 130.00	100.00(A)	
9.958	9.958	(1.013)	91	10610633			306.11- 366.11	330.83	

169	m,p-Xylene					CAS #: 108-38-3			
10.084	10.084	(1.026)	106	3925460	5000.00	5038.9	70.00- 130.00	100.00(A)	
10.084	10.084	(1.026)	91	8162296			174.24- 234.24	207.93	

171	o-Xylene					CAS #: 95-47-6			
10.461	10.461	(1.064)	106	3766577	5000.00	5268.9	70.00- 130.00	100.00(A)	
10.461	10.461	(1.064)	91	8326291			191.30- 251.30	221.06	

172	Styrene					CAS #: 100-42-5			
10.489	10.489	(1.067)	104	5978205	5000.00	5044.5	70.00- 130.00	100.00(A)	
10.489	10.489	(1.067)	78	3116359			19.95- 79.95	52.13	

174	Bromoform					CAS #: 75-25-2			
10.671	10.671	(1.085)	173	4474279	5000.00	4960.0	70.00- 130.00	100.00	
10.671	10.671	(1.085)	171	2336193			23.00- 83.00	52.21	

175	Cumene					CAS #: 98-82-8			
10.783	10.783	(1.097)	105	11251909	5000.00	4953.2	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	2985537			0.00- 56.04	26.53	
10.783	10.783	(1.097)	51	1237090			0.00- 40.17	10.99	

181	1,1,2,2-Tetrachloroethane					CAS #: 79-34-5			
11.105	11.105	(1.129)	83	5731268	5000.00	4966.4	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	3722223			35.69- 95.69	64.95	

182	Propylbenzene					CAS #: 103-65-1			
11.105	11.105	(1.129)	91	13038589	5000.00	4633.9	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	2991169			0.00- 51.76	22.94	
11.105	11.105	(1.129)	105	496552			0.00- 33.53	3.81	

188	4-Ethyltoluene					CAS #: 622-96-8			
11.203	11.203	(1.139)	105	10486604	5000.00	4759.1	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	3222060			0.00- 59.33	30.73	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

190	1,3,5-Trimethylbenzene					CAS #: 108-67-8			
11.245	11.245	(1.144)	105	7763902	5000.00	4142.0	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	3755732			16.85- 76.85	48.37	

196	1,2,4-Trimethylbenzene					CAS #: 95-63-6			
11.511	11.511	(1.171)	105	8090844	5000.00	4712.3	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	3670065			15.19- 75.19	45.36	

208	1,3-Dichlorobenzene					CAS #: 541-73-1			
11.707	11.707	(1.191)	146	5548487	5000.00	4449.8	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	3544635			33.74- 93.74	63.88	
11.707	11.707	(1.191)	111	2346278			10.77- 70.77	42.29	

209	1,4-Dichlorobenzene					CAS #: 106-46-7			
11.763	11.763	(1.196)	146	5347010	5000.00	4327.0	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	3408263			33.86- 93.86	63.74	
11.763	11.763	(1.196)	111	2199374			10.30- 70.30	41.13	

212	alpha-Chlorotoluene					CAS #: 100-44-7			
11.861	11.861	(1.206)	91	4689241	5000.00	3793.7	70.00- 130.00	100.00	
11.861	11.861	(1.206)	126	972763			0.00- 50.90	20.74	

214	1,2-Dichlorobenzene					CAS #: 95-50-1			
11.987	11.987	(1.219)	146	4629795	5000.00	4080.4	70.00- 130.00	100.00	
11.987	11.987	(1.219)	148	2957346			33.29- 93.29	63.88	
11.987	11.987	(1.219)	111	2065992			12.93- 72.93	44.62	

226	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
12.840	12.840	(1.306)	180	1652260	5000.00	3285.9	70.00- 130.00	100.00	
12.840	12.840	(1.306)	182	1557735			66.09- 126.09	94.28	

227	Hexachlorobutadiene					CAS #: 87-68-3			
12.896	12.896	(1.312)	225	1342405	5000.00	3166.9	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	858330			33.17- 93.17	63.94	

QC Flag Legend

- A - Target compound detected but, quantitated amount exceeded maximum amount.
- H - Operator selected an alternate compound hit.

Report Date: 01-Jun-2015 22:05

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i
 Lab File ID: 14060116.d
 Lab Smp Id: ICAL Level 9
 Analysis Type: VOA
 Quant Type: ISTD
 Operator: md

Calibration Date: 01-JUN-2015
 Calibration Time: 16:54
 Client Smp ID: ICAL Level 9
 Level: LOW
 Sample Type: AIR

Method File: /chem/msd14.i/01jun15.b/14550601a.m

Misc Info: 5000ppbv(5000ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	110855	66513	155197	115953	4.60
123 1,4-Difluorobenze	489861	293917	685805	506455	3.39
163 Chlorobenzene-d5	420158	252095	588221	432101	2.84

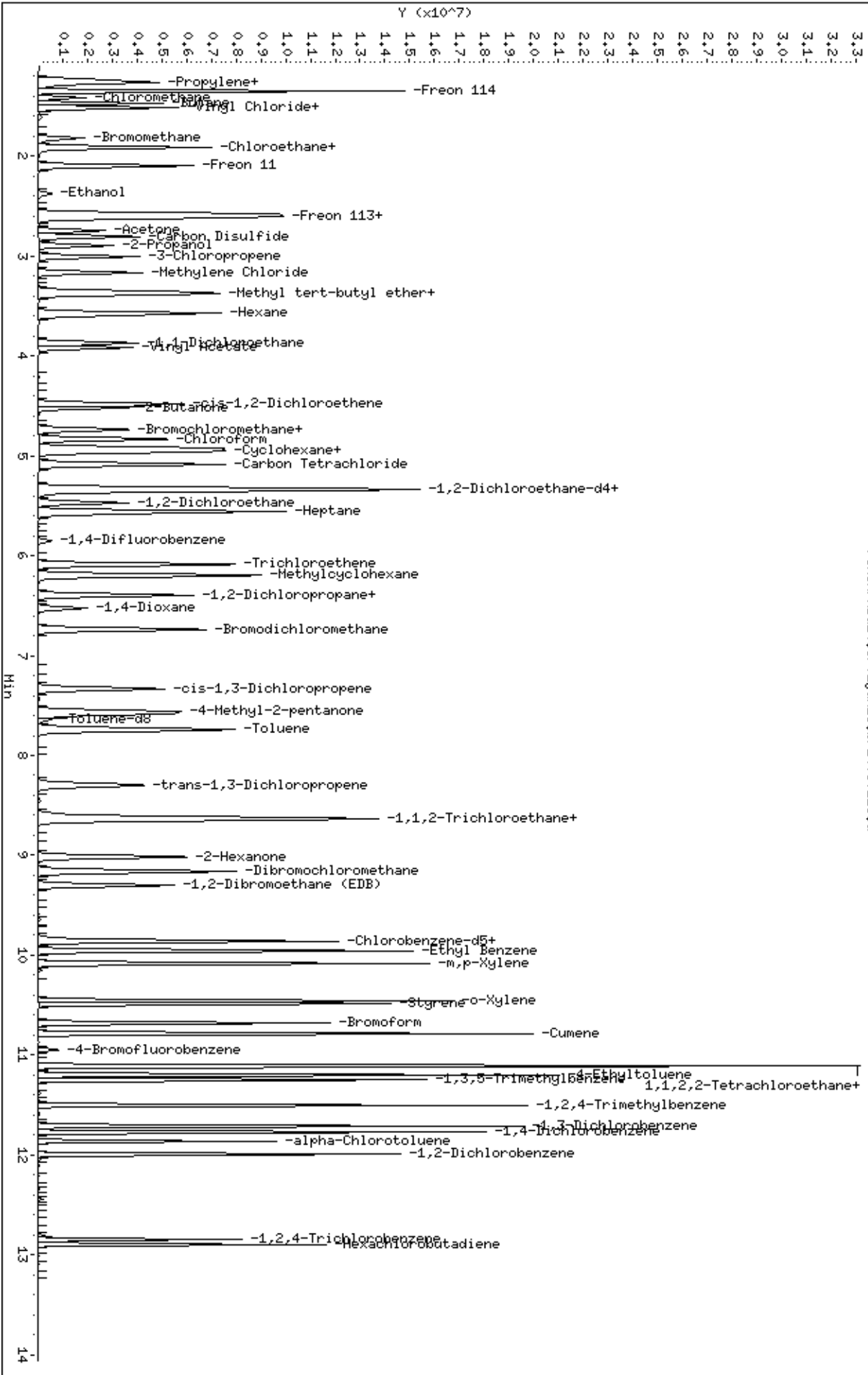
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.75	4.42	5.08	4.75	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.86	0.24
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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.



**Eurofins Air Toxics, Inc. 1Q2015 TO-14A_TO-15 5&20 Limit of Detections (LODs)
MSD-14 Effective 04-01-15**

CAS #	Analyte	Molecular				
		Weight (MW)	LOD (ppbv)	LOQ (ppbv)	LOD (ug/m3)	LOQ (ug/m3)
71-55-6	1,1,1-Trichloroethane	133.42	3	5	16.37055	27.28425
79-34-5	1,1,2,2-Tetrachloroethane	167.86	3	5	20.59632	34.3272
79-00-5	1,1,2-Trichloroethane	133.42	3	5	16.37055	27.28425
75-34-3	1,1-Dichloroethane	98.97	3	5	12.14356	20.23926
75-35-4	1,1-Dichloroethene	96.95	3	5	11.89571	19.82618
120-82-1	1,2,4-Trichlorobenzene*	181.46	7.85397	20	58.28963	148.43354
95-63-6	1,2,4-Trimethylbenzene	120.19	3	5	14.74724	24.57873
106-93-4	1,2-Dibromoethane (EDB)	187.88	3	5	23.05276	38.42127
95-50-1	1,2-Dichlorobenzene	147.01	3	5	18.03804	30.06339
107-06-2	1,2-Dichloroethane	98.96	3	5	12.14233	20.23722
78-87-5	1,2-Dichloropropane	112.99	3	5	13.8638	23.10634
108-67-8	1,3,5-Trimethylbenzene	120.19	3	5	14.74724	24.57873
106-99-0	1,3-Butadiene	54.09	3	5	6.63681	11.06135
541-73-1	1,3-Dichlorobenzene	147.01	3	5	18.03804	30.06339
106-46-7	1,4-Dichlorobenzene	147.01	3	5	18.03804	30.06339
123-91-1	1,4-Dioxane	88.11	5	20	18.0184	72.07362
540-84-1	2,2,4-Trimethylpentane	114.22	3	5	14.01472	23.35787
78-93-3	2-Butanone	72.11	5	20	14.74642	58.98569
591-78-6	2-Hexanone	100.16	5	20	20.48262	81.93047
67-63-0	2-Propanol	60.09	5	20	12.28834	49.15337
107-05-1	3-Chloropropene*	76.53	5.1502	20	16.12044	62.60123
622-96-8	4-Ethyltoluene	120.19	3	5	14.74724	24.57873
108-10-1	4-Methyl-2-pentanone	100.16	3	5	12.28957	20.48262
67-64-1	Acetone*	58.08	6.53847	20	15.53187	47.5092
100-44-7	alpha-Chlorotoluene	126.58	3	5	15.53129	25.88548
71-43-2	Benzene	78.11	3	5	9.58405	15.97342
75-27-4	Bromodichloromethane	163.83	3	5	20.10184	33.50307
75-25-2	Bromoform	252.77	3	5	31.01472	51.69121
74-83-9	Bromomethane	94.95	3	5	11.65031	19.41718
75-15-0	Carbon Disulfide	76.14	3	5	9.34233	15.57055
56-23-5	Carbon Tetrachloride	153.84	3	5	18.87607	31.46012
108-90-7	Chlorobenzene	112.56	3	5	13.81104	23.0184
75-00-3	Chloroethane*	64.52	6.34609	20	16.74641	52.7771
67-66-3	Chloroform	119.39	3	5	14.64908	24.41513
74-87-3	Chloromethane	50.49	5	20	10.32515	41.30061
156-59-2	cis-1,2-Dichloroethene	96.94	3	5	11.89448	19.82413
10061-01-5	cis-1,3-Dichloropropene	110.97	3	5	13.61595	22.69325
98-82-8	Cumene	120.19	3	5	14.74724	24.57873
110-82-7	Cyclohexane	84.16	3	5	10.32638	17.21063
124-48-1	Dibromochloromethane	208.28	3	5	25.55583	42.59305
64-17-5	Ethanol*	46.07	6.58009	20	12.39856	37.68507

1Q2015 MSD-14 Sand20 LODs

100-41-4	Ethyl Benzene	106.16	3	5	13.02577	21.70961
75-69-4	Freon 11	137.38	3	5	16.85644	28.09407
76-13-1	Freon 113	187.39	3	5	22.99264	38.32106
76-14-2	Freon 114	170.93	3	5	20.97301	34.95501
75-71-8	Freon 12	120.92	3	5	14.83681	24.72802
142-82-5	Heptane	100.2	3	5	12.29448	20.4908
87-68-3	Hexachlorobutadiene*	260.76	6.0195	20	64.19815	213.30061
110-54-3	Hexane	86.17	3	5	10.57301	17.62168
108-38-3	m,p-Xylene	106.17	3	5	13.02699	21.71166
1634-04-4	Methyl tert-butyl ether	88.15	3	5	10.81595	18.02658
75-09-2	Methylene Chloride	84.94	3	5	10.42209	17.37014
91-20-3	Naphthalene	128.17	5	20	26.21063	104.84254
95-47-6	o-Xylene	106.17	3	5	13.02699	21.71166
103-65-1	Propylbenzene	120.19	3	5	14.74724	24.57873
115-07-1	Propylene	42.08	5	20	8.60532	34.42127
100-42-5	Styrene	104.14	3	5	12.77791	21.29652
127-18-4	Tetrachloroethene	165.85	3	5	20.34969	33.91616
109-99-9	Tetrahydrofuran	72.1	3	5	8.84663	14.74438
108-88-3	Toluene	92.13	3	5	11.30429	18.84049
156-60-5	trans-1,2-Dichloroethene	96.94	3	5	11.89448	19.82413
10061-02-6	trans-1,3-Dichloropropene	110.97	3	5	13.61595	22.69325
79-01-6	Trichloroethene	131.39	3	5	16.12147	26.86912
75-01-4	Vinyl Chloride	62.5	3	5	7.66871	12.78119

ppbv - part per billion by volume

Concentration (ug/m3) = Concentration (ppbv)*MW/24.45

Instrument ID - msd14.i file msd14.i/26jan15.b/14012609a.d msd14.i/26jan15.b/14012610a.d msd14.i/15jan15.b/14011505a.d

*LOD was less then the MDL therefore was raised to equal the MDL value.

Report Date : 27-May-2015 14:26

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
Batch File: /chem/msd14.i/26may15.b
Inst ID: msd14.i

5.0ppbv

To-15 5+20
5/26/15
Page 1

Loaded 50mL #2736-26
5.0ppbv → 5.0ppbv

ID: MDL01 MDL02 MDL03 MDL04 MDL05 MDL06 MDL07 MDL08
FILENAME: 14052621 14052622 14052623 14052624 14052625 14052626 14052627 14052628
INJ. DATE: 26-MAY-2015 26-MAY-2015 26-MAY-2015 26-MAY-2015 26-MAY-2015 26-MAY-2015 26-MAY-2015 26-MAY-2015
INJ. TIME: 18:15 18:47 19:13 19:49 20:38 21:18 21:50 22:13

MOL verification #14052715
25mL #2736-26
5.0ppbv → 2.5ppbv

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (RTV)	RL (PPBV)
1 Dimethyl Ether	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
2 Freon 14	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
3 Acetaldehyde	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
4 Hexafluoropropene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
5 Freon 13	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
6 Freon 143a	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
7 Freon 134a	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
8 Propane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
9 Propylene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
10 1,1-Difluoroethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
11 Freon 12	5618.14	5289.85	5204.37	5749.77	5214.18	5174.95	5527.45	5759.47	5442.27	249.76	748.79	5000
12 Vinyl Fluoride	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
13 Chlorodifluoromethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
14 Ethylene Oxide	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
15 Freon 114	5603.94	4883.69	5114.02	5134.28	5894.06	5312.18	5680.65	6112.92	5466.97	424.85	1273.71	5000
16 Freon 142b	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
17 Chloromethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

Reviewer 1
Reviewer 2

[Signature]

Date: 5/27/15

X = 1057 ppbv
X = 1,057 ppbv

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
Batch File: /chem/msd14.i/26may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (PPM)
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
23 Butane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 Vinyl Chloride	6017.99	4396.21	6028.52	4999.46	5844.72	5882.61	5670.55	5372.99	5451.64	541.41	1623.14
26 1,3-Butadiene	6932.67	6467.41	5836.82	6716.82	6207.35	6239.14	5991.12	6000.60	6298.99	380.58	1140.99
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Bromomethane	6100.46	5630.10	6709.21	5417.98	5032.43	4597.05	4495.75	5355.74	5417.44	741.98	2224.44
30 Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
31 Isopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 Propan 11	5618.36	5493.31	5512.85	5492.04	5454.55	5533.27	5360.81	5872.37	5542.29	151.73	454.90
36 1-Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

R
V
(PPM)

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
Batch File: /chem/msd14.i/26may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	RL
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 1,2-Dichloro-1-fluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Freon 113	5017.33	4679.01	5555.86	5623.76	6187.47	6122.10	5590.92	5966.10	5592.82	526.67	1578.95	5000
50 1,1-Dichloroethane	3037.17	2671.36	5921.73	5806.60	6170.85	6237.64	5465.65	5987.67	5162.33	1447.14	4338.53	5000
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 Acetone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Bromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 Carbon Disulfide	5892.45	5259.69	5513.87	5775.38	5739.00	4804.60	5775.35	5611.89	5546.53	358.47	1074.70	5000
57 2-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
58 3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

MDL (RTV) (RTV) RL

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
Batch File: /chem/msd14.i/26may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	RL
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
136 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
138 Bromodichloromethane	5047.09	5811.03	4849.47	4939.54	5819.75	4735.87	5269.40	5620.20	5224.04	393.13	1178.61	5000
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
142 Bpichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
144 cis-1,3-Dichloropropen	4882.37	4567.60	5390.13	4521.05	4403.13	4629.73	4435.26	5113.45	4745.34	352.91	1058.04	5000
145 4-Methyl-2-pentanone	5295.41	3035.92	4286.86	5533.42	4753.19	6212.56	3660.09	5048.80	4728.28	1033.46	3098.31	5000
146 Toluene-d8	402747	398403	400769	403838	394757	402162	402123	395852	408081	3364.51	10086.79	5000
147 Toluene	5838.56	5462.74	5353.77	5322.72	5675.21	5373.62	5613.06	5792.73	5554.05	203.75	610.84	5000
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
150 trans-1,3-Dichloroprop	3859.38	3451.42	4273.77	3693.42	4095.40	3719.56	3805.38	3751.05	3793.67	270.20	810.06	5000
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
155 1,1,2-Trichloroethane	5498.19	5143.73	5933.40	5712.23	5242.79	4857.03	5525.69	5445.41	5417.31	336.13	1007.73	5000
156 Tetrachloroethene	5485.09	5688.02	4780.99	5340.38	5580.56	5492.01	5782.84	6284.21	5566.76	421.45	1263.52	5000
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
158 2-Hexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

MDL (PTV) (PTV) RL

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
Batch File: /chem/msd14.i/26may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (pptv)	2 (pptv)
159 Butyl Acetate	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
160 Dibromochloromethane	5338.66	5074.18	5128.83	5434.13	5638.76	5498.07	5226.09	4793.36	5266.51	269.11	806.79	5000
161 1,2-Dibromoethane (EDB)	5319.06	5075.03	5282.25	5587.42	5134.79	5111.27	4958.62	5319.34	5223.47	195.26	585.38	5000
162 1-Nonene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
* 163 Chlorobenzene-d5	400000	400000	400000	400000	400000	400000	400000	400000	400000	0.00	0.00	0.00
164 1-Chlorohexane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
165 Chlorobenzene	6082.54	5966.68	5772.07	5836.72	5224.21	5716.59	5745.78	6500.17	5855.59	361.88	1084.90	5000
166 Butyl Ether	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
167 Ethyl Benzene	5175.05	4899.48	4576.33	5444.93	4807.23	4851.21	5095.97	5634.91	5060.64	350.59	1051.08	5000
168 1,1,1,2-Tetrachloroeth	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
169 m,p-Xylene	5153.11	5147.13	5097.91	5056.68	5422.06	5147.08	5301.44	5404.68	5216.26	140.48	421.15	5000
170 Nonane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
171 o-Xylene	4883.05	4828.15	4728.68	4987.34	5326.50	4705.57	5007.72	5017.17	4929.27	201.71	604.73	5000
172 Styrene	5355.19	4916.99	4810.46	4780.82	4883.64	4984.73	5230.30	5034.10	4999.53	201.77	604.92	5000
173 2-Heptanone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
174 Bromoform	5458.27	5330.27	5160.75	5458.57	5337.27	4768.93	5374.61	5524.96	5306.70	246.11	737.84	5000
175 Cumene	5239.95	4553.17	4967.48	4928.82	4882.81	4604.51	4782.91	5111.99	4885.20	232.66	697.52	5000
176 Cyclohexanone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
* 177 4-Bromofluorobenzene	399121	403303	397754	399576	401407	393596	406492	398747	400000	3847.15	11533.77	5000
178 1-Decene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
179 alpha-Pinene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
180 Bromobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
181 1,1,2,2-Tetrachloroeth	5487.64	5185.15	5545.70	5477.45	5896.40	5333.73	5099.02	5719.49	5430.57	210.18	630.11	5000
182 Propylbenzene	5205.56	5465.08	5329.47	5503.57	5807.68	5299.16	5396.02	5523.51	5441.26	183.53	550.21	5000

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
 Batch File: /chem/msd14.i/26may15.b
 Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (PPM)	R (PPM)
206 bis(2-Chloroethyl) Eth	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
207 p-Cymene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
208 1,3-Dichlorobenzene	6277.32	5653.83	5529.71	5427.10	5339.38	5741.25	5118.14	5751.62	5604.79	346.28	1038.15	5700
209 1,4-Dichlorobenzene	6269.44	5335.95	5333.71	5063.12	6036.67	5402.23	5434.74	6054.08	5616.24	437.23	1310.82	5700
210 1,2,3-Trimethylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
211 1-Undecene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
212 alpha-Chlorotoluene	5480.78	4778.23	4523.89	4610.26	4708.99	4598.37	4403.58	4798.90	4737.87	327.63	982.23	5700
213 Butylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
214 1,2-Dichlorobenzene	6625.17	5496.21	5400.17	6076.97	5097.51	5851.81	5558.63	6416.78	5815.41	526.81	1579.39	5700
215 Undecane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
216 4-Ethyl-1,2-dimethylbe	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
217 Hexachlorocyclohexane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
218 1,3-Diethylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
219 1,4-Diethylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
220 1,2,4,5-Tetramethylben	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
221 1,2-Dibromo-3-chloroxy	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
222 1-Dodecene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
223 Nitrobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
224 1,3,5-Trichlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
225 Dodecane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
226 1,2,4-Trichlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
227 Hexachlorobutadiene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
228 Naphthalene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
229 1,2,3-Trichlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/26may15.b/14550526a.m
Batch File: /chem/msd14.i/26may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (ppt)	R.L (ppt)
230 Tridecane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
231 Quinoline	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
232 2-Methylnaphthalene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
233 1,3,5-Triethylbenzene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
234 Acenaphthylene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
235 Phenanthrene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
236 Anthracene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
M 237 1,2-Dichloroethane (Total)	11272.58	10932.23	10632.66	10962.44	10440.12	10056.98	10704.11	11567.52	10821.08	473.82	1420.50	5000
M 238 Chlorobutane (Total)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
M 239 Total Xylene	9986.16	9975.28	9826.59	10044.02	10748.56	9852.65	10309.16	10421.85	10145.53	320.48	950.81	5000
M 240 3 and 4-Ethyltoluene	5551.45	5213.57	5305.48	5252.60	4847.12	4837.16	5094.09	5443.09	5193.07	257.38	771.62	5000
241 Total Volatile Hydrocar	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
242 TPH reference to Hexan	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
243 TPH reference to Hept	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
244 TPH reference to Gasol	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
245 TPH reference Minerals	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
246 TPH reference to Stodd	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
247 TMOG reference to Hexa	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
248 TMOG reference to Hept	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
249 TMOG reference to Tolu	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
250 TMOG reference to Tolu	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
251 TMOG reference to Hexa	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
252 TMOG reference to Hept	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
253 TMOG reference to Tolu	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

Report Date : 27-May-2015 13:33

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/27may15.b/14550526a.m
Batch File: /chem/msd14.i/27may15.b
Inst ID: msd14.i

Loaded 5.0mL # 2716-281

200ppbv → 20ppbv

MDL verification: #14052716

2.5mL # 2716-281

200ppbv → 10ppbv

20ppbv

To-15 5+20
5/27/15

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	14052706	14052707	14052708	14052709	14052710	14052711	14052712	14052713
INJ. DATE:	27-MAY-2015	27-MAY-2015	27-MAY-2015	27-MAY-2015	27-MAY-2015	27-MAY-2015	27-MAY-2015	27-MAY-2015
INJ. TIME:	09:24	09:59	10:46	11:12	11:39	12:06	12:38	13:05

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (PPTV)	RL (PPTV)
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
9 Propylene	20913.41	20860.51	20241.36	20213.37	19853.50	23018.94	21884.77	20911.54	20987.17	1028.26	3082.71	20,000
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
11 Freon 12	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 Freon 114	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
17 Chloromethane	21472.10	21585.29	21665.14	22267.57	20244.08	22866.72	21638.55	22052.36	21721.48	755.80	2265.89	20,000

Reviewer 1
Reviewer 2

[Handwritten signature]

Date: 5/27/15

MS 5/27/15
X = 3.032 pptv
X = 3.032 ppbv

EUROFINS Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/27may15.b/14550526a.m
Batch File: /chem/msd14.i/27may15.b
Inst ID: msd14.1

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
88 Ethyl-tert-butyl ether	17024.07	18499.04	16730.41	16871.13	17033.44	17501.55	17699.45	16979.55	17292.33	585.01	1753.86
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
91 cis-1,2-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 2-Butanone	18239.18	16917.57	16841.42	16819.52	16204.73	18160.87	18057.39	13856.09	16887.10	1438.27	4311.95
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 98 Bromochloromethane	400000	400000	400000	400000	400000	400000	400000	400000	400000	0.00	0.00
99 Tetrahydrofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
100 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Carbon Tetrachloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

R/L
(RTV)

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.1/27may15.b/14550526a.m
Batch File: /chem/msd14.1/27may15.b
Inst ID: msd14.1

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (ppbv)	R.L (ppbv)
135 Diethyl Ketone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
136 1,4-Dioxane	16053.89	18103.07	18256.98	17903.67	18435.50	129667.92	117696.25	18396.67	18064.26	1004.39	3011.16	30,000
137 Dibromomethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
138 Bromodichloromethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
139 2-Nitropropane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
140 bis(chloromethyl) Ethhe	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
141 1-Octane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
142 Epichlorohydrin	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
143 2-Chloroethyl Vinyl Et	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
144 cis-1,3-Dichloropropan	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
145 4-Methyl-2-pentanone	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
146 Toluene-d8	397676	394820	395652	394638	401172	394741	397632	396072	396550	2228.28	6680.39	6680.39
147 Toluene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
148 Octane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
149 Vinyl Cyclohexene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
150 trans-1,3-Dichloroprop	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
151 Ethyl Methacrylate	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
152 1-Chloro-2-Bromopropan	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
153 1-Nitropropane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
154 Bromodichloroethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
155 1,1,2-Trichloroethane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
156 Tetrachloroethene	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
157 1,3-Dichloropropane	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
158 2-Hexanone	14950.76	115970.38	13747.10	12928.83	13719.67	15033.77	13275.79	13840.21	14183.32	1029.99	3087.91	30,000

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/27may15.b/14550526a.m
Batch File: /chem/msd14.i/27may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (PPM V)	RL (PPM V)
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
160 Dibromochloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
161 1,2-Dibromoethane (EDB)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 163 Chlorobenzene-d5	400000	400000	400000	400000	400000	400000	400000	400000	400000	0.00	0.00	+++++
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 Ethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
169 m,p-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
171 o-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
172 Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
174 Bromoform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
175 Cumene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 177 4-Bromofluorobenzene	404082	413942	404123	406938	401603	402166	403997	401641	404811	4086.42	12251.10	+++++
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
181 1,1,2,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
182 Propylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd14.i/27may15.b/14550526a.m
Batch File: /chem/msd14.i/27may15.b
Inst ID: msd14.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	RL
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
208 1,3-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
209 1,4-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
212 alpha-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
214 1,2-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
221 1,2-Dibromo-3-chloropri	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
226 1,2,4-Trichlorobenzene	16650.28	17361.66	16890.07	16712.86	16112.75	18425.90	14586.51	17292.13	16754.02	1108.04	3321.91	20,000
227 Hexachlorobutadiene	16580.93	16104.57	13496.99	14866.69	13897.94	18463.77	15220.88	15922.54	15569.29	1581.84	4742.37	20,000
228 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1000	1000

MDL
RL

EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	CCV	Date/Time Analyzed:	6/5/15 07:00 AM
Lab ID:	1506011BR1-13A	Dilution Factor:	1.00
Date/Time Collected:	NA - Not Applicable	Instrument/Filename:	msd14.i / 14060502a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	83
Trichloroethene	79-01-6	81

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	96
4-Bromofluorobenzene	460-00-4	79-116	100
Toluene-d8	2037-26-5	87-110	100

Report Date: 05-Jun-2015 08:19

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd14.i Injection Date: 05-JUN-2015 07:00
 Lab File ID: 14060502a.d Init. Cal. Date(s): 01-JUN-2015 04-JUN-2015
 Analysis Type: AIR Init. Cal. Times: 15:03 14:50
 Lab Sample ID: CCV Quant Type: ISTD
 Method: /chem/msd14.i/05jun15.b/14550601b.m

COMPOUND	RRF / AMOUNT	RF200	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 117 1,2-Dichloroethane-d4	1.49692	1.44053	0.010	3.76692	30.00000	Averaged
\$ 146 Toluene-d8	0.99291	0.99451	0.010	-0.16186	30.00000	Averaged
\$ 177 4-Bromofluorobenzene	0.55541	0.55779	0.010	-0.42777	30.00000	Averaged
9 Propylene	1.17352	0.99689	0.010	15.05201	30.00000	Averaged
11 Freon 12	3.90847	3.32730	0.010	14.86947	30.00000	Averaged
15 Freon 114	2.71422	2.22692	0.010	17.95329	30.00000	Averaged
17 Chloromethane	1.40840	1.16345	0.010	17.39189	30.00000	Averaged
23 Butane	0.33006	0.27103	0.010	17.88584	40.00000	Averaged
25 Vinyl Chloride	1.44207	1.18857	0.010	17.57929	30.00000	Averaged
26 1,3-Butadiene	1.10616	0.96196	0.010	13.03602	30.00000	Averaged
29 Bromomethane	0.93108	0.85259	0.010	8.42988	30.00000	Averaged
30 Chloroethane	0.74472	0.65324	0.010	12.28288	30.00000	Averaged
31 Isopentane	1.72743	1.45745	0.010	15.62916	40.00000	Averaged
35 Freon 11	4.00873	3.35632	0.010	16.27480	30.00000	Averaged
42 Ethanol	0.61027	0.56021	0.010	8.20339	30.00000	Averaged
49 Freon 113	2.47246	2.16127	0.010	12.58618	30.00000	Averaged
50 1,1-Dichloroethene	2.55860	2.20424	0.010	13.84991	30.00000	Averaged
52 Acetone	0.75412	0.66207	0.010	12.20629	30.00000	Averaged
56 Carbon Disulfide	4.26156	3.65343	0.010	14.27028	30.00000	Averaged
57 2-Propanol	2.43246	2.17974	0.010	10.38948	30.00000	Averaged
58 3-Chloropropene	0.63990	0.55544	0.010	13.19840	30.00000	Averaged
66 Methylene Chloride	1.94397	1.62000	0.010	16.66561	30.00000	Averaged
71 tert-Butyl alcohol	1.51763	1.44565	0.010	4.74230	40.00000	Averaged
72 Methyl tert-butyl ether	3.32589	2.91198	0.010	12.44520	30.00000	Averaged
73 trans-1,2-Dichloroethene	1.51890	1.32967	0.010	12.45862	30.00000	Averaged
78 Hexane	2.46922	2.17105	0.010	12.07573	30.00000	Averaged
83 Isopropyl ether	4.69682	4.35647	0.010	7.24639	40.00000	Averaged
82 1,1-Dichloroethane	2.82403	2.32872	0.010	17.53926	30.00000	Averaged
86 Vinyl Acetate	0.24885	0.11737	0.010	52.83561	30.00000	Averaged<-
88 Ethyl-tert-butyl ether	3.32357	3.40215	0.010	-2.36425	40.00000	Averaged
91 cis-1,2-Dichloroethene	2.26481	1.85665	0.010	18.02179	30.00000	Averaged
92 2-Butanone	0.72996	0.62206	0.010	14.78133	30.00000	Averaged
99 Tetrahydrofuran	1.72165	1.46196	0.010	15.08402	30.00000	Averaged
100 Chloroform	3.29606	2.75291	0.010	16.47882	30.00000	Averaged
102 Cyclohexane	2.13000	1.83643	0.010	13.78257	30.00000	Averaged
103 1,1,1-Trichloroethane	3.25291	2.76466	0.010	15.00953	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd14.i Injection Date: 05-JUN-2015 07:00
 Lab File ID: 14060502a.d Init. Cal. Date(s): 01-JUN-2015 04-JUN-2015
 Analysis Type: AIR Init. Cal. Times: 15:03 14:50
 Lab Sample ID: CCV Quant Type: ISTD
 Method: /chem/msd14.i/05jun15.b/14550601b.m

COMPOUND	RRF / AMOUNT	RF200	MIN RRF	MAX %D / %DRIFT	CURVE TYPE
106 Carbon Tetrachloride	3.11218	2.69505	0.010	13.40329	Averaged
113 2,2,4-Trimethylpentane	8.07314	6.79423	0.010	15.84153	Averaged
116 Benzene	1.10776	0.92587	0.010	16.41911	Averaged
119 tert-Amyl methyl ether	3.01111	3.00590	0.010	0.17306	Averaged
120 1,2-Dichloroethane	0.48722	0.41029	0.010	15.78871	Averaged
121 Heptane	0.37799	0.32578	0.010	13.81225	Averaged
125 Trichloroethene	0.52455	0.42600	0.010	18.78805	Averaged
127 Methylcyclohexane	0.65812	0.54849	0.010	16.65908	Averaged
132 1,2-Dichloropropane	0.41184	0.34133	0.010	17.12101	Averaged
136 1,4-Dioxane	0.23850	0.20376	0.010	14.56376	Averaged
138 Bromodichloromethane	0.81311	0.68186	0.010	16.14122	Averaged
144 cis-1,3-Dichloropropene	0.57776	0.51943	0.010	10.09581	Averaged
145 4-Methyl-2-pentanone	0.12947	0.11089	0.010	14.35086	Averaged
147 Toluene	1.33037	1.10903	0.010	16.63767	Averaged
150 trans-1,3-Dichloropropene	0.57853	0.48763	0.010	15.71182	Averaged
155 1,1,2-Trichloroethane	0.51874	0.44981	0.010	13.28853	Averaged
156 Tetrachloroethene	0.69445	0.57380	0.010	17.37326	Averaged
158 2-Hexanone	0.46320	0.36003	0.010	22.27376	Averaged
160 Dibromochloromethane	0.91547	0.77315	0.010	15.54625	Averaged
161 1,2-Dibromoethane (EDB)	0.79480	0.68378	0.010	13.96927	Averaged
165 Chlorobenzene	1.21568	1.02860	0.010	15.38895	Averaged
167 Ethyl Benzene	0.58346	0.48879	0.010	16.22493	Averaged
169 m,p-Xylene	0.72116	0.61019	0.010	15.38696	Averaged
171 o-Xylene	0.66177	0.58165	0.010	12.10586	Averaged
172 Styrene	1.09706	0.95312	0.010	13.12020	Averaged
174 Bromoform	0.83505	0.71209	0.010	14.72508	Averaged
175 Cumene	2.10286	1.86615	0.010	11.25646	Averaged
181 1,1,2,2-Tetrachloroethane	1.06828	0.93504	0.010	12.47223	Averaged
182 Propylbenzene	2.60471	2.24617	0.010	13.76481	Averaged
188 4-Ethyltoluene	2.03980	1.77911	0.010	12.78015	Averaged
190 1,3,5-Trimethylbenzene	1.73520	1.52508	0.010	12.10933	Averaged
196 1,2,4-Trimethylbenzene	1.58940	1.42444	0.010	10.37918	Averaged
208 1,3-Dichlorobenzene	1.15427	0.97262	0.010	15.73690	Averaged
209 1,4-Dichlorobenzene	1.14393	0.95715	0.010	16.32795	Averaged
212 alpha-Chlorotoluene	1.14423	1.07012	0.010	6.47677	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd14.i Injection Date: 05-JUN-2015 07:00
Lab File ID: 14060502a.d Init. Cal. Date(s): 01-JUN-2015 04-JUN-2015
Analysis Type: AIR Init. Cal. Times: 15:03 14:50
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msd14.i/05jun15.b/14550601b.m

COMPOUND	RRF / AMOUNT	RF200	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	1.05036	0.87563	0.010	16.63470	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.46547	0.40494	0.010	13.00407	30.00000	Averaged
227 Hexachlorobutadiene	0.39239	0.34478	0.010	12.13345	30.00000	Averaged
228 Naphthalene	0.76383	0.68655	0.010	10.11760	40.00000	Averaged

Average %D / Drift Results.
=====

Calculated Average %D/Drift =	13.80107
Maximum Average %D/Drift =	30.00000

* Passed Average %D/Drift Test.

Report Date: 05-Jun-2015 08:19

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060502a.d
 Lab Smp Id: CCV Client Smp ID: CCV
 Inj Date : 05-JUN-2015 07:00
 Operator : mjs Inst ID: msd14.i
 Smp Info : 50ml #2716-281
 Misc Info : 200ppbv (200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 05-Jun-2015 08:19 mskidmor Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Cont62415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

AMOUNTS

CAL-AMT ON-COL

RT	EXP RT	(REL RT)	MASS	RESPONSE	(PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane						CAS #: 74-97-5		
4.739	4.739	(1.000)	130	120084	400.000		70.00- 130.00	100.00
4.739	4.739	(1.000)	128	91955			48.08- 108.08	76.58
4.739	4.739	(1.000)	49	170213			116.54- 176.54	141.74

* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
5.844	5.844	(1.000)	114	525212	400.000		70.00- 130.00	100.00
5.844	5.844	(1.000)	88	83350			0.00- 45.72	15.87

* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
9.832	9.832	(1.000)	117	460332	400.000		70.00- 130.00	100.00
9.818	9.818	(1.000)	82	255741			25.58- 85.58	55.56

\$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
5.382	5.382	(1.136)	65	172985	400.000	384.93	70.00- 130.00	100.00
5.382	5.382	(1.136)	67	91115			23.57- 83.57	52.67

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
\$ 146 Toluene-d8						CAS #: 2037-26-5			
7.635	7.635	(1.306)	98	522330	400.000	400.65	70.00- 130.00	100.00	
7.635	7.635	(1.306)	70	58233			0.00- 41.05	11.15	
7.635	7.635	(1.306)	100	355482			38.18- 98.18	68.06	

\$ 177 4-Bromofluorobenzene						CAS #: 460-00-4			
10.951	10.951	(1.114)	174	256768	400.000	401.71	70.00- 130.00	100.00	
10.937	10.937	(1.112)	95	343661			102.26- 162.26	133.84	
10.951	10.951	(1.114)	176	247551			66.15- 126.15	96.41	

9 Propylene						CAS #: 115-07-1			
1.227	1.227	(0.259)	41	59855	200.000	169.90	70.00- 130.00	100.00	
1.227	1.227	(0.259)	42	39129			34.95- 94.95	65.37	
1.241	1.241	(0.262)	39	39634			42.16- 102.16	66.22	

11 Freon 12						CAS #: 75-71-8			
1.269	1.269	(0.268)	85	199778	200.000	170.26	70.00- 130.00	100.00	
1.269	1.269	(0.268)	87	64543			3.05- 63.05	32.31	

15 Freon 114						CAS #: 76-14-2			
1.353	1.353	(0.285)	135	133709	200.000	164.09	70.00- 130.00	100.00	
1.353	1.353	(0.285)	137	43370			1.48- 61.48	32.44	

17 Chloromethane						CAS #: 74-87-3			
1.423	1.423	(0.300)	50	69856	200.000	165.22	70.00- 130.00	100.00	
1.423	1.423	(0.300)	52	22616			1.15- 61.15	32.38	

23 Butane						CAS #: 106-97-8			
1.479	1.479	(0.312)	58	16273	200.000	164.23	70.00- 130.00	100.00	
1.479	1.479	(0.312)	43	110051			680.52- 740.52	676.28	

25 Vinyl Chloride						CAS #: 75-01-4			
1.507	1.507	(0.318)	62	71364	200.000	164.84	70.00- 130.00	100.00	
1.521	1.521	(0.321)	64	22270			0.94- 60.94	31.21	

26 1,3-Butadiene						CAS #: 106-99-0			
1.521	1.521	(0.321)	54	57758	200.000	173.93	70.00- 130.00	100.00	
1.521	1.521	(0.321)	39	54801			66.21- 126.21	94.88	

29 Bromomethane						CAS #: 74-83-9			
1.814	1.814	(0.383)	94	51191	200.000	183.14	70.00- 130.00	100.00	
1.814	1.814	(0.383)	96	47247			64.87- 124.87	92.30	
1.814	1.814	(0.383)	79	7466			0.00- 46.18	14.58	

30 Chloroethane						CAS #: 75-00-3			
1.898	1.898	(0.401)	64	39222	200.000	175.43	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
30 Chloroethane (continued)									
1.898	1.898	(0.401)	66	11841			0.00- 59.89	30.19	

31 Isopentane CAS #: 78-78-4									
1.912	1.912	(0.404)	43	87508	200.000	168.74	70.00- 130.00	100.00	
1.912	1.912	(0.404)	57	62403			39.30- 99.30	71.31	
1.912	1.912	(0.404)	72	7260			0.00- 38.88	8.30	

35 Freon 11 CAS #: 75-69-4									
2.094	2.094	(0.442)	101	201520	200.000	167.45	70.00- 130.00	100.00	
2.094	2.094	(0.442)	103	131610			34.32- 94.32	65.31	

42 Ethanol CAS #: 64-17-5									
2.360	2.360	(0.498)	45	33636	200.000	183.59	70.00- 130.00	100.00	
2.360	2.360	(0.498)	43	6725			0.00- 50.94	19.99	
2.360	2.360	(0.498)	46	13652			13.63- 73.63	40.59	

49 Freon 113 CAS #: 76-13-1									
2.584	2.584	(0.545)	151	129767	200.000	174.83	70.00- 130.00	100.00	
2.584	2.584	(0.545)	153	82055			34.22- 94.22	63.23	
2.584	2.584	(0.545)	101	171701			102.57- 162.57	132.31	

50 1,1-Dichloroethene CAS #: 75-35-4									
2.612	2.612	(0.551)	61	132347	200.000	172.30	70.00- 130.00	100.00	
2.612	2.612	(0.551)	96	75512			27.93- 87.93	57.06	
2.612	2.612	(0.551)	98	48114			6.48- 66.48	36.35	

52 Acetone CAS #: 67-64-1									
2.738	2.738	(0.578)	58	39752	200.000	175.59	70.00- 130.00	100.00	
2.738	2.738	(0.578)	43	127068			289.79- 349.79	319.65	

56 Carbon Disulfide CAS #: 75-15-0									
2.808	2.808	(0.593)	76	219359	200.000	171.46	70.00- 130.00	100.00	

57 2-Propanol CAS #: 67-63-0									
2.878	2.878	(0.607)	45	130876	200.000	179.22	70.00- 130.00	100.00	
2.878	2.878	(0.607)	43	25938			0.00- 50.97	19.82	
2.878	2.878	(0.607)	59	4912			0.00- 33.89	3.75	

58 3-Chloropropene CAS #: 107-05-1									
3.004	3.004	(0.634)	76	33350	200.000	173.60	70.00- 130.00	100.00	
3.004	3.004	(0.634)	41	88251			247.13- 307.13	264.62	

66 Methylene Chloride CAS #: 75-09-2									
3.158	3.158	(0.666)	49	97268	200.000	166.67	70.00- 130.00	100.00	
3.172	3.172	(0.669)	84	69490			43.35- 103.35	71.44	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
66 Methylene Chloride (continued)									
3.158	3.158	(0.666)	51	30014			0.70- 60.70	30.86	

71 tert-Butyl alcohol CAS #: 75-65-0									
3.270	3.270	(0.690)	59	86800	200.000	190.52	70.00- 130.00	100.00	
3.270	3.270	(0.690)	41	22380			0.00- 55.72	25.78	
3.270	3.270	(0.690)	57	9052			0.00- 41.28	10.43	

72 Methyl tert-butyl ether CAS #: 1634-04-4									
3.354	3.354	(0.708)	73	174841	200.000	175.11	70.00- 130.00	100.00	
3.354	3.354	(0.708)	57	41577			0.00- 54.09	23.78	
3.354	3.354	(0.708)	41	42462			0.00- 55.75	24.29	

73 trans-1,2-Dichloroethene CAS #: 156-60-5									
3.382	3.382	(0.714)	96	79836	200.000	175.08	70.00- 130.00	100.00	
3.382	3.382	(0.714)	61	113302			117.22- 177.22	141.92	
3.382	3.382	(0.714)	98	50253			31.31- 91.31	62.95	

78 Hexane CAS #: 110-54-3									
3.577	3.577	(0.755)	57	130354	200.000	175.85	70.00- 130.00	100.00	
3.577	3.577	(0.755)	43	79281			33.82- 93.82	60.82	
3.577	3.577	(0.755)	86	23511			0.00- 47.96	18.04	

83 Isopropyl ether CAS #: 108-20-3									
3.843	3.843	(0.811)	45	261571	200.000	185.51	70.00- 130.00	100.00	
3.857	3.857	(0.814)	87	66995			0.00- 54.15	25.61	
3.843	3.843	(0.811)	59	29993			0.00- 41.46	11.47	

82 1,1-Dichloroethane CAS #: 75-34-3									
3.871	3.871	(0.817)	63	139821	200.000	164.92	70.00- 130.00	100.00	
3.871	3.871	(0.817)	65	44760			0.83- 60.83	32.01	

86 Vinyl Acetate CAS #: 108-05-4									
3.913	3.913	(0.826)	86	7047	200.000	94.329	70.00- 130.00	100.00	
3.913	3.913	(0.826)	43	71730			1031.22-1091.22	1017.88	
3.913	3.913	(0.826)	42	6801			62.99- 122.99	96.51	

88 Ethyl-tert-butyl ether CAS #: 637-92-3									
4.221	4.221	(0.891)	59	204272	200.000	204.73	70.00- 130.00	100.00	
4.221	4.221	(0.891)	87	82457			9.73- 69.73	40.37	
4.221	4.221	(0.891)	41	39320			0.00- 49.83	19.25	

91 cis-1,2-Dichloroethene CAS #: 156-59-2									
4.487	4.487	(0.947)	61	111477	200.000	163.96	70.00- 130.00	100.00	
4.487	4.487	(0.947)	96	83496			44.12- 104.12	74.90	
4.487	4.487	(0.947)	98	53157			18.04- 78.04	47.68	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
92 2-Butanone						CAS #: 78-93-3			
4.515	4.515	(0.953)	72	37350	200.000	170.44	70.00- 130.00	100.00	
4.515	4.515	(0.953)	43	158388			384.18- 444.18	424.06	
4.515	4.515	(0.953)	57	13096			3.18- 63.18	35.06	

99 Tetrahydrofuran						CAS #: 109-99-9			
4.725	4.725	(0.997)	42	87779	200.000	169.83	70.00- 130.00	100.00	
4.725	4.725	(0.997)	71	34963			6.63- 66.63	39.83	
4.725	4.725	(0.997)	72	37482			9.95- 69.95	42.70	

100 Chloroform						CAS #: 67-66-3			
4.823	4.823	(1.018)	83	165290	200.000	167.04	70.00- 130.00	100.00	
4.823	4.823	(1.018)	85	106949			36.11- 96.11	64.70	

102 Cyclohexane						CAS #: 110-82-7			
4.921	4.921	(1.038)	84	110263	200.000	172.43	70.00- 130.00	100.00	
4.921	4.921	(1.038)	56	134066			92.51- 152.51	121.59	
4.921	4.921	(1.038)	41	70232			36.86- 96.86	63.69	

103 1,1,1-Trichloroethane						CAS #: 71-55-6			
4.949	4.949	(1.044)	97	165996	200.000	169.98	70.00- 130.00	100.00	
4.949	4.949	(1.044)	99	106814			34.93- 94.93	64.35	

106 Carbon Tetrachloride						CAS #: 56-23-5			
5.089	5.089	(1.074)	119	161816	200.000	173.19	70.00- 130.00	100.00	
5.089	5.089	(1.074)	117	167056			76.39- 136.39	103.24	

113 2,2,4-Trimethylpentane						CAS #: 540-84-1			
5.326	5.326	(1.124)	57	407939	200.000	168.32	70.00- 130.00	100.00	
5.326	5.326	(1.124)	56	136438			3.74- 63.74	33.45	
5.326	5.326	(1.124)	41	100651			0.00- 55.31	24.67	

116 Benzene						CAS #: 71-43-2			
5.354	5.354	(0.916)	78	243140	200.000	167.16	70.00- 130.00	100.00	
5.354	5.354	(0.916)	77	56803			0.00- 53.58	23.36	

119 tert-Amyl methyl ether						CAS #: 994-05-8			
5.452	5.452	(1.151)	73	180480	200.000	199.65	70.00- 130.00	100.00	
5.452	5.452	(1.151)	87	42253			0.00- 53.81	23.41	
5.452	5.452	(1.151)	55	57119			1.86- 61.86	31.65	

120 1,2-Dichloroethane						CAS #: 107-06-2			
5.466	5.466	(0.935)	62	107745	200.000	168.42	70.00- 130.00	100.00	
5.480	5.480	(0.938)	64	35734			2.61- 62.61	33.17	

121 Heptane						CAS #: 142-82-5			
5.564	5.564	(0.952)	71	85553	200.000	172.38	70.00- 130.00	100.00	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	CAL-AMT		ON-COL	TARGET RANGE	RATIO	
				RESPONSE	(PPEV)	(PPBV)			
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
121 Heptane (continued)									
5.564	5.564	(0.952)	43	148720			146.34- 206.34	173.83	
5.564	5.564	(0.952)	100	30895			3.46- 63.46	36.11	

125 Trichloroethene									
						CAS #:	79-01-6		
6.082	6.082	(1.041)	95	111870	200.000	162.42	70.00- 130.00	100.00	
6.082	6.082	(1.041)	130	111038			73.37- 133.37	99.26	
6.082	6.082	(1.041)	97	72313			35.35- 95.35	64.64	

127 Methylcyclohexane									
						CAS #:	108-87-2		
6.194	6.194	(1.060)	83	144036	200.000	166.68	70.00- 130.00	100.00	
6.194	6.194	(1.060)	98	72161			19.87- 79.87	50.10	
6.194	6.194	(1.060)	55	121191			54.72- 114.72	84.14	

132 1,2-Dichloropropane									
						CAS #:	78-87-5		
6.404	6.404	(1.096)	63	89635	200.000	165.76	70.00- 130.00	100.00	
6.404	6.404	(1.096)	62	62726			40.76- 100.76	69.98	
6.404	6.404	(1.096)	41	49703			26.03- 86.03	55.45	

136 1,4-Dioxane									
						CAS #:	123-91-1		
6.530	6.530	(1.117)	88	53509	200.000	170.87	70.00- 130.00	100.00	
6.530	6.530	(1.117)	58	39522			42.35- 102.35	73.86	
6.530	6.530	(1.117)	57	12511			0.00- 53.99	23.38	

138 Bromodichloromethane									
						CAS #:	75-27-4		
6.726	6.726	(1.151)	83	179061	200.000	167.72	70.00- 130.00	100.00	
6.726	6.726	(1.151)	85	115349			32.51- 92.51	64.42	

144 cis-1,3-Dichloropropene									
						CAS #:	10061-01-5		
7.327	7.327	(1.254)	75	136406	200.000	179.81	70.00- 130.00	100.00	
7.341	7.341	(1.256)	77	44609			0.58- 60.58	32.70	
7.327	7.327	(1.254)	39	65423			18.98- 78.98	47.96	

145 4-Methyl-2-pentanone									
						CAS #:	108-10-1		
7.565	7.565	(1.294)	85	29120	200.000	171.30	70.00- 130.00	100.00	
7.565	7.565	(1.294)	43	175100			626.54- 686.54	601.30	
7.565	7.565	(1.294)	58	73874			227.69- 287.69	253.69	

147 Toluene									
						CAS #:	108-88-3		
7.733	7.733	(1.323)	91	291238	200.000	166.72	70.00- 130.00	100.00	
7.733	7.733	(1.323)	92	173752			28.44- 88.44	59.66	

150 trans-1,3-Dichloropropene									
						CAS #:	10061-02-6		
8.293	8.293	(0.843)	75	112236	200.000	168.58	70.00- 130.00	100.00	
8.293	8.293	(0.843)	77	34708			1.11- 61.11	30.92	
8.293	8.293	(0.843)	39	50433			14.88- 74.88	44.93	

AMOUNTS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		

155	1,1,2-Trichloroethane					CAS #: 79-00-5				
8.615	8.615	(0.876)	97	103531	200.000	173.42	70.00- 130.00	100.00		
8.615	8.615	(0.876)	99	63873			32.09- 92.09	61.69		
8.615	8.615	(0.876)	83	89528			58.01- 118.01	86.47		

156	Tetrachloroethene					CAS #: 127-18-4				
8.629	8.629	(0.878)	166	132069	200.000	165.25	70.00- 130.00	100.00		
8.629	8.629	(0.878)	129	101282			46.67- 106.67	76.69		
8.629	8.629	(0.878)	131	98622			42.30- 102.30	74.67		

158	2-Hexanone					CAS #: 591-78-6				
9.006	9.006	(0.916)	58	82867	200.000	155.45	70.00- 130.00	100.00		
9.006	9.006	(0.916)	43	152646			165.25- 225.25	184.21		
9.006	9.006	(0.916)	100	17468			0.00- 52.77	21.08		

160	Dibromochloromethane					CAS #: 124-48-1				
9.160	9.160	(0.932)	129	177952	200.000	168.91	70.00- 130.00	100.00		
9.160	9.160	(0.932)	127	140225			47.21- 107.21	78.80		

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4				
9.300	9.300	(0.946)	107	157382	200.000	172.06	70.00- 130.00	100.00		
9.300	9.300	(0.946)	109	145724			63.74- 123.74	92.59		

165	Chlorobenzene					CAS #: 108-90-7				
9.860	9.860	(1.003)	112	236748	200.000	169.22	70.00- 130.00	100.00		
9.860	9.860	(1.003)	114	73080			2.02- 62.02	30.87		
9.860	9.860	(1.003)	77	142646			30.14- 90.14	60.25		

167	Ethyl Benzene					CAS #: 100-41-4				
9.958	9.958	(1.013)	106	112503	200.000	167.55	70.00- 130.00	100.00		
9.958	9.958	(1.013)	91	382597			306.11- 366.11	340.08		

169	m,p-Xylene					CAS #: 108-38-3				
10.084	10.084	(1.026)	106	140446	200.000	169.23	70.00- 130.00	100.00		
10.084	10.084	(1.026)	91	294969			174.24- 234.24	210.02		

171	o-Xylene					CAS #: 95-47-6				
10.461	10.461	(1.064)	106	133877	200.000	175.79	70.00- 130.00	100.00		
10.461	10.461	(1.064)	91	292935			191.30- 251.30	218.81		

172	Styrene					CAS #: 100-42-5				
10.489	10.489	(1.067)	104	219376	200.000	173.76	70.00- 130.00	100.00		
10.489	10.489	(1.067)	78	113173			19.95- 79.95	51.59		

174	Bromoform					CAS #: 75-25-2				
10.671	10.671	(1.085)	173	163898	200.000	170.55	70.00- 130.00	100.00		

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
174 Bromoform (continued)									
10.671	10.671	(1.085)	171	84438			23.00- 83.00	51.52	

175 Cumene									
						CAS #: 98-82-8			
10.783	10.783	(1.097)	105	429525	200.000	177.49	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	108638			0.00- 56.04	25.29	
10.769	10.769	(1.095)	51	44035			0.00- 40.17	10.25	

181 1,1,2,2-Tetrachloroethane									
						CAS #: 79-34-5			
11.105	11.105	(1.129)	83	215214	200.000	175.06	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	140263			35.69- 95.69	65.17	

182 Propylbenzene									
						CAS #: 103-65-1			
11.105	11.105	(1.129)	91	516993	200.000	172.47	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	113990			0.00- 51.76	22.05	
11.105	11.105	(1.129)	105	18811			0.00- 33.53	3.64	

188 4-Ethyltoluene									
						CAS #: 622-96-8			
11.203	11.203	(1.139)	105	409490	200.000	174.44	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	118733			0.00- 59.33	29.00	

190 1,3,5-Trimethylbenzene									
						CAS #: 108-67-8			
11.245	11.245	(1.144)	105	351021	200.000	175.78	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	170818			16.85- 76.85	48.66	

196 1,2,4-Trimethylbenzene									
						CAS #: 95-63-6			
11.511	11.511	(1.171)	105	327857	200.000	179.24	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	147157			15.19- 75.19	44.88	

208 1,3-Dichlorobenzene									
						CAS #: 541-73-1			
11.707	11.707	(1.191)	146	223865	200.000	168.53	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	142711			33.74- 93.74	63.75	
11.707	11.707	(1.191)	111	94178			10.77- 70.77	42.07	

209 1,4-Dichlorobenzene									
						CAS #: 106-46-7			
11.763	11.763	(1.196)	146	220303	200.000	167.34	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	138054			33.86- 93.86	62.67	
11.763	11.763	(1.196)	111	89157			10.30- 70.30	40.47	

212 alpha-Chlorotoluene									
						CAS #: 100-44-7			
11.861	11.861	(1.206)	91	246306	200.000	187.05	70.00- 130.00	100.00	
11.861	11.861	(1.206)	126	51930			0.00- 50.90	21.08	

214 1,2-Dichlorobenzene									
						CAS #: 95-50-1			
11.987	11.987	(1.219)	146	201541	200.000	166.73	70.00- 130.00	100.00	
11.987	11.987	(1.219)	148	126716			33.29- 93.29	62.87	

AMOUNTS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	CAL-AMT (PPEV)	ON-COL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
214 1,2-Dichlorobenzene (continued)									
11.987	11.987	(1.219)	111	87008			12.93- 72.93	43.17	

226 1,2,4-Trichlorobenzene CAS #: 120-82-1									
12.854	12.854	(1.307)	180	93204	200.000	173.99	70.00- 130.00	100.00	
12.854	12.854	(1.307)	182	86474			66.09- 126.09	92.78	

227 Hexachlorobutadiene CAS #: 87-68-3									
12.896	12.896	(1.312)	225	79357	200.000	175.73	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	51143			33.17- 93.17	64.45	

228 Naphthalene CAS #: 91-20-3									
12.980	12.980	(1.320)	128	15802	20.0000	17.976	70.00- 130.00	100.00(a)	
12.980	12.980	(1.320)	127	2048			0.00- 41.17	12.96	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 05-Jun-2015 08:19

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060502a.d

Calibration Time: 07:00

Lab Smp Id: CCV

Client Smp ID: CCV

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: mjs

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 200ppbv (200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	120084	0.00
123 1,4-Difluorobenze	525212	315127	735297	525212	0.00
163 Chlorobenzene-d5	460332	276199	644465	460332	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

AREA UPPER LIMIT = + 40% of internal standard area.

AREA LOWER LIMIT = - 40% of internal standard area.

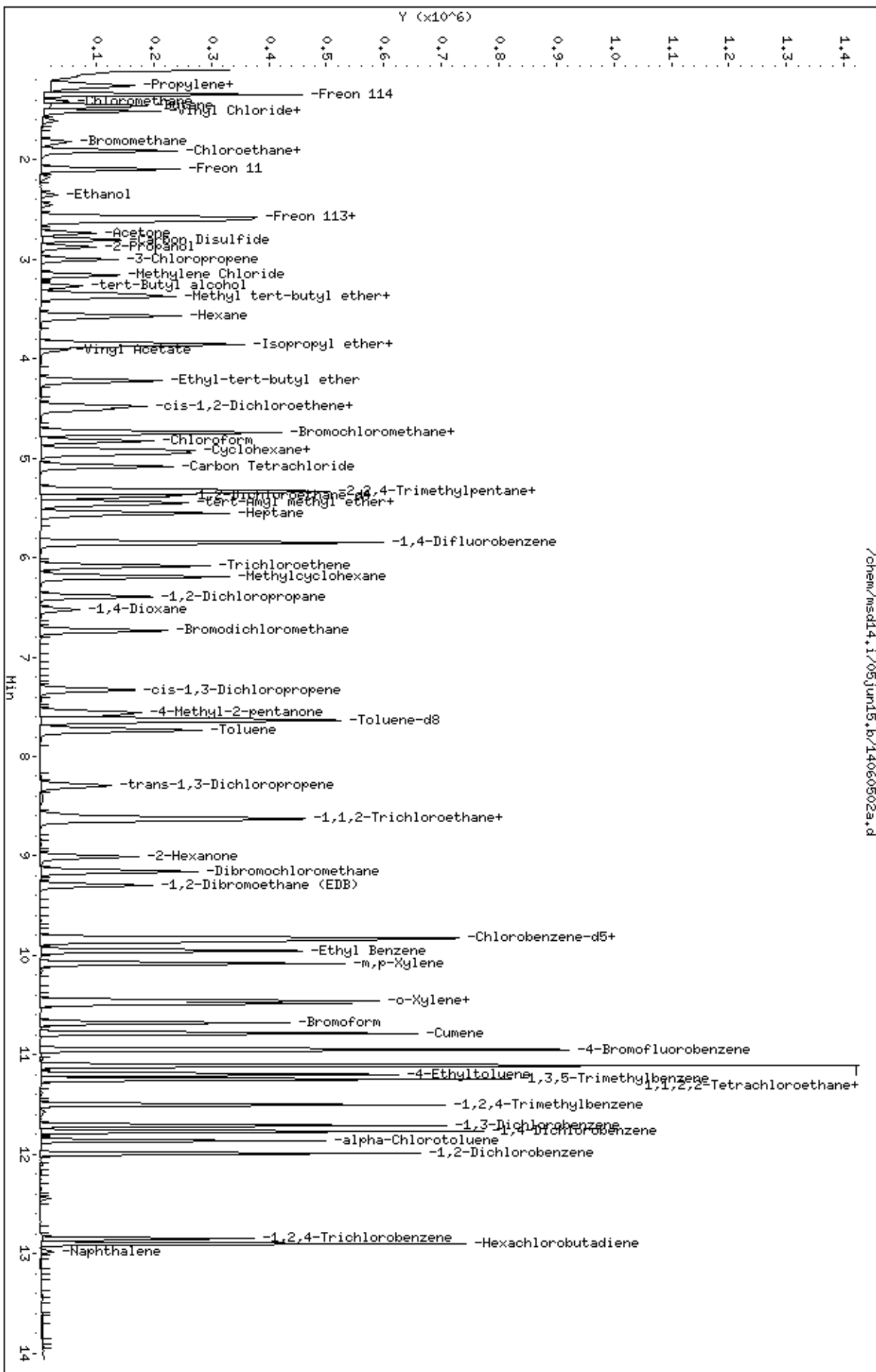
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.

RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msdd4.1/05jun15.b/14060502a.d
Date: 05-JUN-2015 07:00
Client ID: CCV
Sample Info: 50ml #2716-281

Column phase: RTX-624

Instrument: msdd4.1
Operator: mjs
Column diameter: 0.18



EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	LCS	Date/Time Analyzed:	6/5/15 07:43 AM
Lab ID:	1506011BR1-14A	Dilution Factor:	1.00
Date/Time Collected:	NA - Not Applicable	Instrument/Filename:	msd14.i / 14060503a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	96
Trichloroethene	79-01-6	106

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	98
4-Bromofluorobenzene	460-00-4	79-116	100
Toluene-d8	2037-26-5	87-110	102

* % Recovery is calculated using unrounded analytical results.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: LCS Client Smp ID: LCS
 Level: LOW Operator: mjs
 Data Type: MS DATA SampleType: LCS
 SpikeList File: ControlDOD.spk Quant Type: ISTD
 Sublist File: Cont62415.sub
 Method File: /chem/msd14.i/05jun15.b/14550601b.m
 Misc Info: 200ppbv (200ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
11 Freon 12	200.00	195.48	97.74	59-128
9 Propylene	200.00	184.79	92.40	60-140
15 Freon 114	200.00	197.77	98.88	63-121
17 Chloromethane	200.00	196.45	98.23	59-132
23 Butane	200.00	193.97	96.98	75-119
25 Vinyl Chloride	200.00	191.75	95.87	64-127
26 1,3-Butadiene	200.00	190.57	95.29	66-134
29 Bromomethane	200.00	196.90	98.45	63-134
30 Chloroethane	200.00	203.22	101.61	63-127
31 Isopentane	200.00	195.27	97.64	60-140
35 Freon 11	200.00	195.00	97.50	62-126
42 Ethanol	200.00	197.20	98.60	59-125
49 Freon 113	200.00	197.24	98.62	66-126
50 1,1-Dichloroethene	200.00	189.25	94.62	61-133
52 Acetone	200.00	192.37	96.18	58-128
56 Carbon Disulfide	200.00	173.27	86.64	57-134
57 2-Propanol	200.00	205.68	102.84	52-125
58 3-Chloropropene	200.00	194.21	97.10	71-131
66 Methylene Chloride	200.00	187.66	93.83	62-115
72 Methyl tert-butyl	200.00	197.08	98.54	66-126
73 trans-1,2-Dichloro	200.00	176.58	88.29	67-124
78 Hexane	200.00	195.11	97.56	63-120
82 1,1-Dichloroethane	200.00	192.60	96.30	68-126
86 Vinyl Acetate	200.00	111.01	55.50*	56-139
91 cis-1,2-Dichloroet	200.00	206.82	103.41	70-121
92 2-Butanone	200.00	198.72	99.36	67-130
99 Tetrahydrofuran	200.00	193.22	96.61	64-123
100 Chloroform	200.00	191.71	95.85	68-123
103 1,1,1-Trichloroeth	200.00	193.80	96.90	68-125
106 Carbon Tetrachlori	200.00	201.81	100.91	68-132
102 Cyclohexane	200.00	194.90	97.45	70-117
113 2,2,4-Trimethylpen	200.00	197.16	98.58	68-121
116 Benzene	200.00	196.14	98.07	69-119

Report Date: 05-Jun-2015 09:13

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	200.00	185.01	92.50	65-128
121 Heptane	200.00	197.70	98.85	69-123
125 Trichloroethene	200.00	211.14	105.57	71-123
127 Methylcyclohexane	200.00	191.67	95.83	60-140
132 1,2-Dichloropropan	200.00	196.95	98.47	69-123
136 1,4-Dioxane	200.00	201.98	100.99	71-122
138 Bromodichlorometha	200.00	200.44	100.22	72-128
144 cis-1,3-Dichloropr	200.00	203.38	101.69	70-128
145 4-Methyl-2-pentano	200.00	207.71	103.86	67-130
147 Toluene	200.00	193.04	96.52	66-119
150 trans-1,3-Dichloro	200.00	192.55	96.27	75-133
155 1,1,2-Trichloroeth	200.00	193.55	96.78	73-119
156 Tetrachloroethene	200.00	192.67	96.33	66-124
158 2-Hexanone	200.00	204.21	102.11	62-128
160 Dibromochlorometha	200.00	198.48	99.24	70-130
161 1,2-Dibromoethane	200.00	192.97	96.49	74-122
165 Chlorobenzene	200.00	192.29	96.15	70-119
167 Ethyl Benzene	200.00	193.29	96.65	70-124
169 m,p-Xylene	200.00	193.76	96.88	61-134
171 o-Xylene	200.00	202.99	101.50	67-125
172 Styrene	200.00	203.22	101.61	73-127
174 Bromoform	200.00	194.11	97.06	66-139
175 Cumene	200.00	198.50	99.25	68-124
181 1,1,2,2-Tetrachlor	200.00	175.10	87.55	65-127
182 Propylbenzene	200.00	198.47	99.24	69-123
188 4-Ethyltoluene	200.00	199.72	99.86	67-129
190 1,3,5-Trimethylben	200.00	204.38	102.19	67-130
196 1,2,4-Trimethylben	200.00	205.51	102.76	66-132
208 1,3-Dichlorobenzen	200.00	193.68	96.84	65-130
209 1,4-Dichlorobenzen	200.00	187.62	93.81	60-131
212 alpha-Chlorotoluen	200.00	231.83	115.91	50-147
214 1,2-Dichlorobenzen	200.00	184.92	92.46	63-129
226 1,2,4-Trichloroben	200.00	186.29	93.15	55-142
227 Hexachlorobutadien	200.00	176.19	88.09	56-138
228 Naphthalene	20.000	18.748	93.74	57-138

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	394.29	98.57	68-138
\$ 146 Toluene-d8	400.00	406.11	101.53	87-110
\$ 177 4-Bromofluorobenze	400.00	398.25	99.56	79-116

Report Date: 05-Jun-2015 09:13

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060503a.d
 Lab Smp Id: LCS Client Smp ID: LCS
 Inj Date : 05-JUN-2015 07:43
 Operator : mjs Inst ID: msd14.i
 Smp Info : 50mL #2716-297
 Misc Info : 200ppbv (200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 05-Jun-2015 08:19 mskidmor Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Cont62415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane CAS #: 74-97-5

4.739	4.739 (1.000)	130	116711	400.000	70.00- 130.00	100.00
4.739	4.739 (1.000)	128	89890		48.08- 108.08	77.02
4.739	4.739 (1.000)	49	165660		116.54- 176.54	141.94

* 123 1,4-Difluorobenzene CAS #: 540-36-3

5.844	5.844 (1.000)	114	509338	400.000	70.00- 130.00	100.00
5.844	5.844 (1.000)	88	83788		0.00- 45.72	16.45

* 163 Chlorobenzene-d5 CAS #: 3114-55-4

9.832	9.832 (1.000)	117	456148	400.000	70.00- 130.00	100.00
9.818	9.818 (1.000)	82	249094		25.58- 85.58	54.61

§ 117 1,2-Dichloroethane-d4 CAS #: 17060-07-0

5.382	5.382 (1.136)	65	172215	394.294	394.29 70.00- 130.00	100.00
5.382	5.382 (1.136)	67	86913		23.57- 83.57	50.47

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
 == == ===== == ===== ===== ===== =====

\$ 146 Toluene-d8 CAS #: 2037-26-5
 7.635 7.635 (1.306) 98 513449 406.110 406.11 70.00- 130.00 100.00
 7.635 7.635 (1.306) 70 58686 0.00- 41.05 11.43
 7.635 7.635 (1.306) 100 358667 38.18- 98.18 69.85

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
 10.951 10.951 (1.114) 174 252241 398.248 398.25 70.00- 130.00 100.00
 10.937 10.937 (1.112) 95 342532 102.26- 162.26 135.80
 10.951 10.951 (1.114) 176 242606 66.15- 126.15 96.18

9 Propylene CAS #: 115-07-1
 1.241 1.227 (0.262) 41 63275 184.794 184.79 70.00- 130.00 100.00
 1.241 1.227 (0.262) 42 42126 34.95- 94.95 66.58
 1.241 1.241 (0.262) 39 44227 42.16- 102.16 69.90

11 Freon 12 CAS #: 75-71-8
 1.269 1.269 (0.268) 85 222929 195.482 195.48 70.00- 130.00 100.00
 1.269 1.269 (0.268) 87 72179 3.05- 63.05 32.38

15 Freon 114 CAS #: 76-14-2
 1.353 1.353 (0.285) 135 156621 197.767 197.77 70.00- 130.00 100.00
 1.353 1.353 (0.285) 137 50495 1.48- 61.48 32.24

17 Chloromethane CAS #: 74-87-3
 1.423 1.423 (0.300) 50 80731 196.455 196.45 70.00- 130.00 100.00
 1.423 1.423 (0.300) 52 25598 1.15- 61.15 31.71

23 Butane CAS #: 106-97-8
 1.478 1.479 (0.312) 58 18680 193.968 193.97 70.00- 130.00 100.00
 1.478 1.479 (0.312) 43 126310 680.52- 740.52 676.18

25 Vinyl Chloride CAS #: 75-01-4
 1.520 1.507 (0.321) 62 80680 191.746 191.75 70.00- 130.00 100.00
 1.520 1.521 (0.321) 64 25511 0.94- 60.94 31.62

26 1,3-Butadiene CAS #: 106-99-0
 1.520 1.521 (0.321) 54 61507 190.570 190.57 70.00- 130.00 100.00
 1.520 1.521 (0.321) 39 59540 66.21- 126.21 96.80

29 Bromomethane CAS #: 74-83-9
 1.814 1.814 (0.383) 94 53492 196.903 196.90 70.00- 130.00 100.00
 1.814 1.814 (0.383) 96 50018 64.87- 124.87 93.51
 1.814 1.814 (0.383) 79 8807 0.00- 46.18 16.46

30 Chloroethane CAS #: 75-00-3
 1.898 1.898 (0.401) 64 44159 203.225 203.22 70.00- 130.00 100.00

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPEV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

30 Chloroethane (continued)

1.898	1.898 (0.401)	66	13537		0.00- 59.89	30.66
-------	---------------	----	-------	--	-------------	-------

31 Isopentane

CAS #: 78-78-4

1.912	1.912 (0.404)	43	98421	195.270	195.27 70.00- 130.00	100.00
1.912	1.912 (0.404)	57	71831		39.30- 99.30	72.98
1.912	1.912 (0.404)	72	8689		0.00- 38.88	8.83

35 Freon 11

CAS #: 75-69-4

2.094	2.094 (0.442)	101	228083	195.000	195.00 70.00- 130.00	100.00
2.094	2.094 (0.442)	103	147736		34.32- 94.32	64.77

42 Ethanol

CAS #: 64-17-5

2.360	2.360 (0.498)	45	35114	197.200	197.20 70.00- 130.00	100.00
2.360	2.360 (0.498)	43	7594		0.00- 50.94	21.63
2.360	2.360 (0.498)	46	14374		13.63- 73.63	40.94

49 Freon 113

CAS #: 76-13-1

2.584	2.584 (0.545)	151	142291	197.241	197.24 70.00- 130.00	100.00
2.584	2.584 (0.545)	153	91349		34.22- 94.22	64.20
2.584	2.584 (0.545)	101	184644		102.57- 162.57	129.77

50 1,1-Dichloroethene

CAS #: 75-35-4

2.612	2.612 (0.551)	61	141282	189.248	189.25 70.00- 130.00	100.00
2.612	2.612 (0.551)	96	86083		27.93- 87.93	60.93
2.612	2.612 (0.551)	98	53699		6.48- 66.48	38.01

52 Acetone

CAS #: 67-64-1

2.738	2.738 (0.578)	58	42328	192.369	192.37 70.00- 130.00	100.00
2.738	2.738 (0.578)	43	136838		289.79- 349.79	323.28

56 Carbon Disulfide

CAS #: 75-15-0

2.794	2.808 (0.590)	76	215450	173.271	173.27 70.00- 130.00	100.00
-------	---------------	----	--------	---------	----------------------	--------

57 2-Propanol

CAS #: 67-63-0

2.878	2.878 (0.607)	45	145977	205.677	205.68 70.00- 130.00	100.00
2.878	2.878 (0.607)	43	29921		0.00- 50.97	20.50
2.878	2.878 (0.607)	59	5800		0.00- 33.89	3.97

58 3-Chloropropene

CAS #: 107-05-1

3.004	3.004 (0.634)	76	36260	194.206	194.21 70.00- 130.00	100.00
3.004	3.004 (0.634)	41	96477		247.13- 307.13	266.07

66 Methylene Chloride

CAS #: 75-09-2

3.158	3.158 (0.666)	49	106441	187.658	187.66 70.00- 130.00	100.00
3.172	3.172 (0.669)	84	79908		43.35- 103.35	75.07

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
 == == ===== == ===== ===== =====

66 Methylene Chloride (continued)

3.158 3.158 (0.666) 51 32645 0.70- 60.70 30.67

72 Methyl tert-butyl ether CAS #: 1634-04-4

3.353 3.354 (0.708) 73 191247 197.076 197.08 70.00- 130.00 100.00

3.353 3.354 (0.708) 57 47470 0.00- 54.09 24.82

3.353 3.354 (0.708) 41 45025 0.00- 55.75 23.54

73 trans-1,2-Dichloroethene CAS #: 156-60-5

3.381 3.382 (0.714) 96 78257 176.580 176.58 70.00- 130.00 100.00

3.381 3.382 (0.714) 61 112381 117.22- 177.22 143.61

3.381 3.382 (0.714) 98 49960 31.31- 91.31 63.84

78 Hexane CAS #: 110-54-3

3.577 3.577 (0.755) 57 140573 195.115 195.11 70.00- 130.00 100.00

3.577 3.577 (0.755) 43 87522 33.82- 93.82 62.26

3.577 3.577 (0.755) 86 25491 0.00- 47.96 18.13

82 1,1-Dichloroethane CAS #: 75-34-3

3.871 3.871 (0.817) 63 158699 192.598 192.60 70.00- 130.00 100.00

3.857 3.871 (0.814) 65 49999 0.83- 60.83 31.51

86 Vinyl Acetate CAS #: 108-05-4

3.913 3.913 (0.826) 86 8060 111.006 111.01 70.00- 130.00 100.00(R)

3.913 3.913 (0.826) 43 79133 1031.22-1091.22 981.80

3.913 3.913 (0.826) 42 7170 62.99- 122.99 88.96

91 cis-1,2-Dichloroethene CAS #: 156-59-2

4.487 4.487 (0.947) 61 136674 206.825 206.82 70.00- 130.00 100.00

4.487 4.487 (0.947) 96 102802 44.12- 104.12 75.22

4.487 4.487 (0.947) 98 66398 18.04- 78.04 48.58

92 2-Butanone CAS #: 78-93-3

4.515 4.515 (0.953) 72 42325 198.721 198.72 70.00- 130.00 100.00

4.515 4.515 (0.953) 43 174141 384.18- 444.18 411.44

4.515 4.515 (0.953) 57 14373 3.18- 63.18 33.96

99 Tetrahydrofuran CAS #: 109-99-9

4.725 4.725 (0.997) 42 97061 193.218 193.22 70.00- 130.00 100.00

4.725 4.725 (0.997) 71 38926 6.63- 66.63 40.10

4.725 4.725 (0.997) 72 40833 9.95- 69.95 42.07

100 Chloroform CAS #: 67-66-3

4.823 4.823 (1.018) 83 184369 191.708 191.71 70.00- 130.00 100.00

4.823 4.823 (1.018) 85 120156 36.11- 96.11 65.17

CONCENTRATIONS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL (PPEV)	FINAL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		
102 Cyclohexane						CAS #:	110-82-7			
4.920	4.921	(1.038)	84	121126	194.897	194.90	70.00-	130.00	100.00	
4.920	4.921	(1.038)	56	147885			92.51-	152.51	122.09	
4.920	4.921	(1.038)	41	78483			36.86-	96.86	64.79	

103 1,1,1-Trichloroethane						CAS #:	71-55-6			
4.948	4.949	(1.044)	97	183946	193.806	193.80	70.00-	130.00	100.00	
4.948	4.949	(1.044)	99	117720			34.93-	94.93	64.00	

106 Carbon Tetrachloride						CAS #:	56-23-5			
5.088	5.089	(1.074)	119	183258	201.812	201.81	70.00-	130.00	100.00	
5.088	5.089	(1.074)	117	191728			76.39-	136.39	104.62	

113 2,2,4-Trimethylpentane						CAS #:	540-84-1			
5.326	5.326	(1.124)	57	464425	197.161	197.16	70.00-	130.00	100.00	
5.326	5.326	(1.124)	56	153585			3.74-	63.74	33.07	
5.326	5.326	(1.124)	41	112027			0.00-	55.31	24.12	

116 Benzene						CAS #:	71-43-2			
5.354	5.354	(0.916)	78	276664	196.138	196.14	70.00-	130.00	100.00	
5.354	5.354	(0.916)	77	64097			0.00-	53.58	23.17	

120 1,2-Dichloroethane						CAS #:	107-06-2			
5.480	5.466	(0.938)	62	114777	185.006	185.01	70.00-	130.00	100.00	
5.480	5.480	(0.938)	64	38420			2.61-	62.61	33.47	

121 Heptane						CAS #:	142-82-5			
5.564	5.564	(0.952)	71	95156	197.699	197.70	70.00-	130.00	100.00	
5.564	5.564	(0.952)	43	164189			146.34-	206.34	172.55	
5.564	5.564	(0.952)	100	34552			3.46-	63.46	36.31	

125 Trichloroethene						CAS #:	79-01-6			
6.082	6.082	(1.041)	95	141025	211.135	211.14	70.00-	130.00	100.00	
6.082	6.082	(1.041)	130	141128			73.37-	133.37	100.07	
6.082	6.082	(1.041)	97	88503			35.35-	95.35	62.76	

127 Methylcyclohexane						CAS #:	108-87-2			
6.194	6.194	(1.060)	83	160622	191.669	191.67	70.00-	130.00	100.00	
6.194	6.194	(1.060)	98	80811			19.87-	79.87	50.31	
6.194	6.194	(1.060)	55	134639			54.72-	114.72	83.82	

132 1,2-Dichloropropane						CAS #:	78-87-5			
6.404	6.404	(1.096)	63	103283	196.949	196.95	70.00-	130.00	100.00	
6.404	6.404	(1.096)	62	73212			40.76-	100.76	70.88	
6.404	6.404	(1.096)	41	54450			26.03-	86.03	52.72	

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	ON-COL		FINAL	TARGET RANGE	RATIO	
				RESPONSE	(PPEV)	(PPBV)			
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
136 1,4-Dioxane						CAS #:	123-91-1		
6.530	6.530	(1.117)	88	61340	201.984	201.98	70.00-	130.00	100.00
6.530	6.530	(1.117)	58	45044			42.35-	102.35	73.43
6.530	6.530	(1.117)	57	14699			0.00-	53.99	23.96

138 Bromodichloromethane						CAS #:	75-27-4		
6.725	6.726	(1.151)	83	207531	200.442	200.44	70.00-	130.00	100.00
6.725	6.726	(1.151)	85	130881			32.51-	92.51	63.07

144 cis-1,3-Dichloropropene						CAS #:	10061-01-5		
7.327	7.327	(1.254)	75	149627	203.383	203.38	70.00-	130.00	100.00
7.341	7.341	(1.256)	77	46256			0.58-	60.58	30.91
7.327	7.327	(1.254)	39	68489			18.98-	78.98	45.77

145 4-Methyl-2-pentanone						CAS #:	108-10-1		
7.565	7.565	(1.294)	85	34243	207.712	207.71	70.00-	130.00	100.00
7.565	7.565	(1.294)	43	214528			626.54-	686.54	626.49
7.565	7.565	(1.294)	58	86358			227.69-	287.69	252.19

147 Toluene						CAS #:	108-88-3		
7.733	7.733	(1.323)	91	327014	193.040	193.04	70.00-	130.00	100.00
7.733	7.733	(1.323)	92	192917			28.44-	88.44	58.99

150 trans-1,3-Dichloropropene						CAS #:	10061-02-6		
8.293	8.293	(0.843)	75	127032	192.550	192.55	70.00-	130.00	100.00
8.293	8.293	(0.843)	77	41362			1.11-	61.11	32.56
8.293	8.293	(0.843)	39	57857			14.88-	74.88	45.55

155 1,1,2-Trichloroethane						CAS #:	79-00-5		
8.614	8.615	(0.876)	97	114497	193.551	193.55	70.00-	130.00	100.00
8.614	8.615	(0.876)	99	70849			32.09-	92.09	61.88
8.614	8.615	(0.876)	83	99775			58.01-	118.01	87.14

156 Tetrachloroethene						CAS #:	127-18-4		
8.628	8.629	(0.878)	166	152579	192.668	192.67	70.00-	130.00	100.00
8.628	8.629	(0.878)	129	113986			46.67-	106.67	74.71
8.628	8.629	(0.878)	131	110721			42.30-	102.30	72.57

158 2-Hexanone						CAS #:	591-78-6		
9.006	9.006	(0.916)	58	107869	204.211	204.21	70.00-	130.00	100.00
9.006	9.006	(0.916)	43	198495			165.25-	225.25	184.01
9.006	9.006	(0.916)	100	23227			0.00-	52.77	21.53

160 Dibromochloromethane						CAS #:	124-48-1		
9.160	9.160	(0.932)	129	207205	198.478	198.48	70.00-	130.00	100.00
9.160	9.160	(0.932)	127	159894			47.21-	107.21	77.17

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE		ON-COL	FINAL	TARGET RANGE	RATIO
				(PPEV)	(PPBV)				
==	=====	=====	=====	=====	=====	=====	=====	=====	=====

161	1,2-Dibromoethane (EDB)						CAS #: 106-93-4		
9.300	9.300	(0.946)	107	174903	192.971	192.97	70.00-	130.00	100.00
9.300	9.300	(0.946)	109	163783			63.74-	123.74	93.64

165	Chlorobenzene						CAS #: 108-90-7		
9.860	9.860	(1.003)	112	266579	192.292	192.29	70.00-	130.00	100.00
9.860	9.860	(1.003)	114	82428			2.02-	62.02	30.92
9.860	9.860	(1.003)	77	156802			30.14-	90.14	58.82

167	Ethyl Benzene						CAS #: 100-41-4		
9.958	9.958	(1.013)	106	128608	193.292	193.29	70.00-	130.00	100.00
9.958	9.958	(1.013)	91	429041			306.11-	366.11	333.60

169	m,p-Xylene						CAS #: 108-38-3		
10.083	10.084	(1.026)	106	159350	193.765	193.76	70.00-	130.00	100.00
10.083	10.084	(1.026)	91	334355			174.24-	234.24	209.82

171	o-Xylene						CAS #: 95-47-6		
10.461	10.461	(1.064)	106	153191	202.994	202.99	70.00-	130.00	100.00
10.461	10.461	(1.064)	91	335186			191.30-	251.30	218.80

172	Styrene						CAS #: 100-42-5		
10.489	10.489	(1.067)	104	254241	203.222	203.22	70.00-	130.00	100.00
10.489	10.489	(1.067)	78	127897			19.95-	79.95	50.31

174	Bromoform						CAS #: 75-25-2		
10.671	10.671	(1.085)	173	184846	194.112	194.11	70.00-	130.00	100.00
10.671	10.671	(1.085)	171	95371			23.00-	83.00	51.59

175	Cumene						CAS #: 98-82-8		
10.783	10.783	(1.097)	105	476019	198.503	198.50	70.00-	130.00	100.00
10.783	10.783	(1.097)	120	123571			0.00-	56.04	25.96
10.769	10.769	(1.095)	51	50206			0.00-	40.17	10.55

181	1,1,2,2-Tetrachloroethane						CAS #: 79-34-5		
11.105	11.105	(1.129)	83	213306	175.095	175.10	70.00-	130.00	100.00
11.105	11.105	(1.129)	85	139241			35.69-	95.69	65.28

182	Propylbenzene						CAS #: 103-65-1		
11.105	11.105	(1.129)	91	589535	198.475	198.47	70.00-	130.00	100.00
11.105	11.105	(1.129)	120	126916			0.00-	51.76	21.53
11.105	11.105	(1.129)	105	22254			0.00-	33.53	3.77

188	4-Ethyltoluene						CAS #: 622-96-8		
11.203	11.203	(1.139)	105	464586	199.726	199.72	70.00-	130.00	100.00
11.203	11.203	(1.139)	120	135280			0.00-	59.33	29.12

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL (PPEV)	FINAL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

190	1,3,5-Trimethylbenzene					CAS #: 108-67-8			
11.245	11.245	(1.144)	105	404426	204.383	204.38	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	191408			16.85- 76.85	47.33	

196	1,2,4-Trimethylbenzene					CAS #: 95-63-6			
11.511	11.511	(1.171)	105	372497	205.515	205.51	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	172547			15.19- 75.19	46.32	

208	1,3-Dichlorobenzene					CAS #: 541-73-1			
11.707	11.707	(1.191)	146	254937	193.678	193.68	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	160519			33.74- 93.74	62.96	
11.707	11.707	(1.191)	111	105297			10.77- 70.77	41.30	

209	1,4-Dichlorobenzene					CAS #: 106-46-7			
11.762	11.763	(1.196)	146	244751	187.620	187.62	70.00- 130.00	100.00	
11.762	11.763	(1.196)	148	157022			33.86- 93.86	64.16	
11.762	11.763	(1.196)	111	96875			10.30- 70.30	39.58	

212	alpha-Chlorotoluene					CAS #: 100-44-7			
11.860	11.861	(1.206)	91	302499	231.827	231.83	70.00- 130.00	100.00	
11.860	11.861	(1.206)	126	61465			0.00- 50.90	20.32	

214	1,2-Dichlorobenzene					CAS #: 95-50-1			
11.986	11.987	(1.219)	146	221495	184.919	184.92	70.00- 130.00	100.00	
11.986	11.987	(1.219)	148	142789			33.29- 93.29	64.47	
11.986	11.987	(1.219)	111	99255			12.93- 72.93	44.81	

226	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
12.854	12.854	(1.307)	180	98885	186.290	186.29	70.00- 130.00	100.00	
12.854	12.854	(1.307)	182	94317			66.09- 126.09	95.38	

227	Hexachlorobutadiene					CAS #: 87-68-3			
12.896	12.896	(1.312)	225	78840	176.190	176.19	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	49877			33.17- 93.17	63.26	

228	Naphthalene					CAS #: 91-20-3			
12.980	12.980	(1.320)	128	16330	18.7475	18.748	70.00- 130.00	100.00(a)	
12.980	12.980	(1.320)	127	2069			0.00- 41.17	12.67	

QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Report Date: 05-Jun-2015 09:13

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060503a.d

Calibration Time: 07:00

Lab Smp Id: LCS

Client Smp ID: LCS

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: mjs

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 200ppbv (200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	116711	-2.81
123 1,4-Difluorobenze	525212	315127	735297	509338	-3.02
163 Chlorobenzene-d5	460332	276199	644465	456148	-0.91

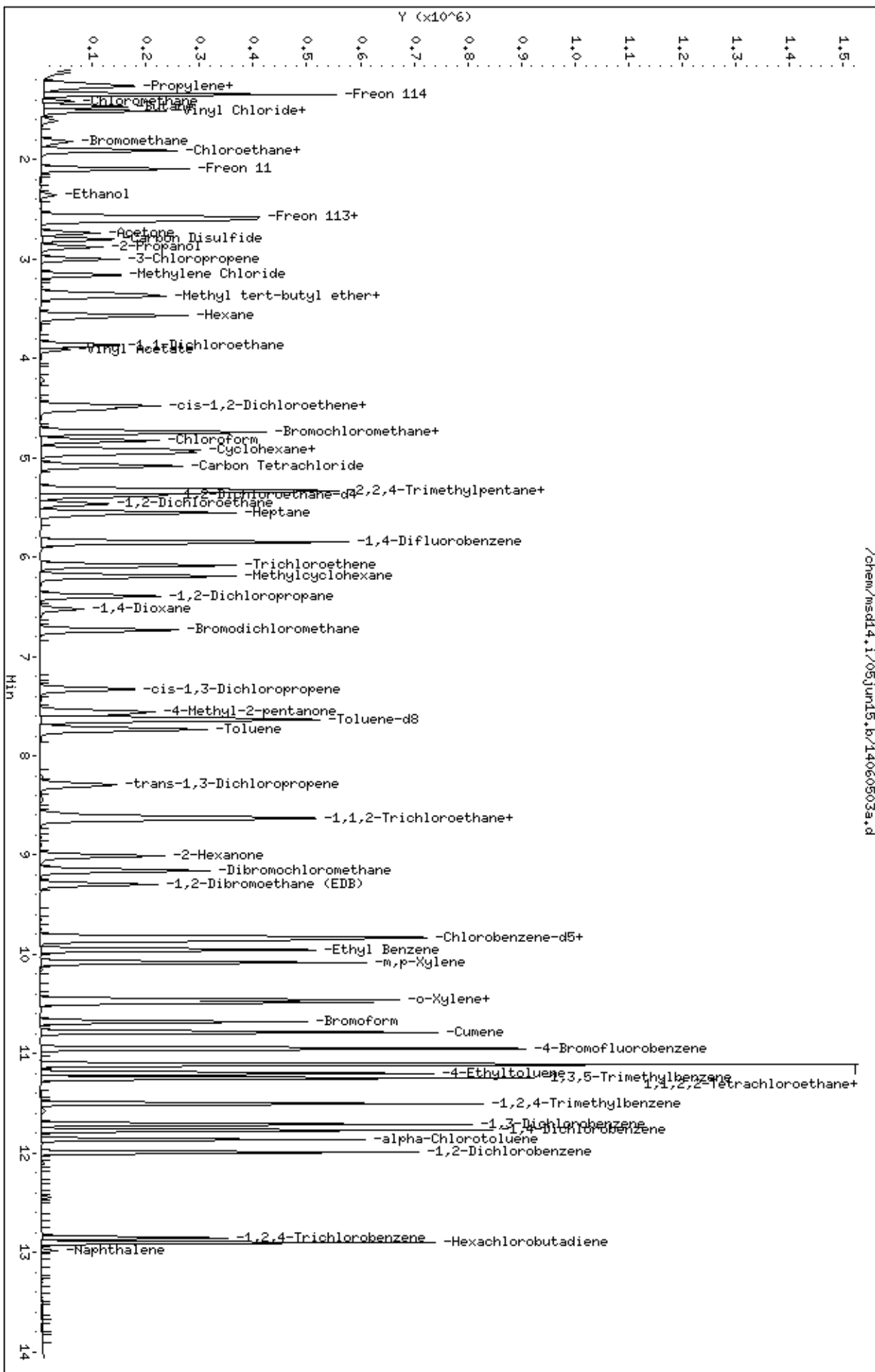
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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.



/chem/msdd14.1/05jun15.b/14060503a.d

EPA METHOD TO-15 GC/MS
SITE 12 RIFS

Client ID:	LCSD	Date/Time Analyzed:	6/5/15 08:20 AM
Lab ID:	1506011BR1-14AA	Dilution Factor:	1.00
Date/Time Collected:	NA - Not Applicable	Instrument/Filename:	msd14.i / 14060504a
Media:	NA - Not Applicable		

Compound	CAS#	%Recovery
Tetrachloroethene	127-18-4	96
Trichloroethene	79-01-6	103

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	68-138	98
4-Bromofluorobenzene	460-00-4	79-116	101
Toluene-d8	2037-26-5	87-110	100

* % Recovery is calculated using unrounded analytical results.

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 05jun15
 Sample Matrix: GAS Fraction: VOA
 Lab Smp Id: LCSD Client Smp ID: LCSD
 Level: LOW Operator: mjs
 Data Type: MS DATA SampleType: LCSD
 SpikeList File: ControlDOD.spk Quant Type: ISTD
 Sublist File: Cont62415.sub
 Method File: /chem/msd14.i/05jun15.b/14550601b.m
 Misc Info: 200ppbv (200ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
11 Freon 12	200.00	194.97	97.48	59-128
9 Propylene	200.00	190.80	95.40	60-140
15 Freon 114	200.00	201.38	100.69	63-121
17 Chloromethane	200.00	184.42	92.21	59-132
23 Butane	200.00	192.89	96.44	75-119
25 Vinyl Chloride	200.00	192.05	96.03	64-127
26 1,3-Butadiene	200.00	198.07	99.03	66-134
29 Bromomethane	200.00	192.94	96.47	63-134
30 Chloroethane	200.00	204.94	102.47	63-127
31 Isopentane	200.00	196.20	98.10	60-140
35 Freon 11	200.00	195.88	97.94	62-126
42 Ethanol	200.00	197.41	98.70	59-125
49 Freon 113	200.00	193.92	96.96	66-126
50 1,1-Dichloroethene	200.00	189.70	94.85	61-133
52 Acetone	200.00	194.22	97.11	58-128
56 Carbon Disulfide	200.00	174.13	87.06	57-134
57 2-Propanol	200.00	205.11	102.55	52-125
58 3-Chloropropene	200.00	191.82	95.91	71-131
66 Methylene Chloride	200.00	184.42	92.21	62-115
72 Methyl tert-butyl	200.00	194.94	97.47	66-126
73 trans-1,2-Dichloro	200.00	174.17	87.09	67-124
78 Hexane	200.00	199.37	99.69	63-120
82 1,1-Dichloroethane	200.00	192.17	96.09	68-126
86 Vinyl Acetate	200.00	114.99	57.50	56-139
91 cis-1,2-Dichloroet	200.00	206.68	103.34	70-121
92 2-Butanone	200.00	194.12	97.06	67-130
99 Tetrahydrofuran	200.00	195.78	97.89	64-123
100 Chloroform	200.00	188.84	94.42	68-123
103 1,1,1-Trichloroeth	200.00	197.89	98.95	68-125
106 Carbon Tetrachlori	200.00	201.15	100.58	68-132
102 Cyclohexane	200.00	196.18	98.09	70-117
113 2,2,4-Trimethylpen	200.00	196.33	98.17	68-121
116 Benzene	200.00	190.50	95.25	69-119

Report Date: 05-Jun-2015 09:13

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	200.00	190.15	95.08	65-128
121 Heptane	200.00	201.50	100.75	69-123
125 Trichloroethene	200.00	206.46	103.23	71-123
127 Methylcyclohexane	200.00	193.59	96.79	60-140
132 1,2-Dichloropropan	200.00	195.47	97.74	69-123
136 1,4-Dioxane	200.00	201.80	100.90	71-122
138 Bromodichlorometha	200.00	198.98	99.49	72-128
144 cis-1,3-Dichloropr	200.00	199.25	99.63	70-128
145 4-Methyl-2-pentano	200.00	205.72	102.86	67-130
147 Toluene	200.00	193.20	96.60	66-119
150 trans-1,3-Dichloro	200.00	192.64	96.32	75-133
155 1,1,2-Trichloroeth	200.00	195.93	97.96	73-119
156 Tetrachloroethene	200.00	191.94	95.97	66-124
158 2-Hexanone	200.00	201.42	100.71	62-128
160 Dibromochlorometha	200.00	200.34	100.17	70-130
161 1,2-Dibromoethane	200.00	195.49	97.74	74-122
165 Chlorobenzene	200.00	188.62	94.31	70-119
167 Ethyl Benzene	200.00	193.71	96.86	70-124
169 m,p-Xylene	200.00	200.54	100.27	61-134
171 o-Xylene	200.00	204.30	102.15	67-125
172 Styrene	200.00	206.74	103.37	73-127
174 Bromoform	200.00	199.94	99.97	66-139
175 Cumene	200.00	200.46	100.23	68-124
181 1,1,2,2-Tetrachlor	200.00	176.69	88.35	65-127
182 Propylbenzene	200.00	202.69	101.34	69-123
188 4-Ethyltoluene	200.00	201.47	100.74	67-129
190 1,3,5-Trimethylben	200.00	207.53	103.77	67-130
196 1,2,4-Trimethylben	200.00	209.14	104.57	66-132
208 1,3-Dichlorobenzen	200.00	193.99	96.99	65-130
209 1,4-Dichlorobenzen	200.00	192.84	96.42	60-131
212 alpha-Chlorotoluen	200.00	237.44	118.72	50-147
214 1,2-Dichlorobenzen	200.00	192.12	96.06	63-129
226 1,2,4-Trichloroben	200.00	201.29	100.64	55-142
227 Hexachlorobutadien	200.00	192.06	96.03	56-138
228 Naphthalene	20.000	19.355	96.77	57-138

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
\$ 117 1,2-Dichloroethane	400.00	392.18	98.04	68-138
\$ 146 Toluene-d8	400.00	400.57	100.14	87-110
\$ 177 4-Bromofluorobenze	400.00	404.13	101.03	79-116

Report Date: 05-Jun-2015 09:13

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd14.i/05jun15.b/14060504a.d
 Lab Smp Id: LCSD Client Smp ID: LCSD
 Inj Date : 05-JUN-2015 08:20
 Operator : mjs Inst ID: msd14.i
 Smp Info : 50mL #2716-297
 Misc Info : 200ppbv (200ppbv)
 Comment : 5 and 20 - GC/MS
 Method : /chem/msd14.i/05jun15.b/14550601b.m
 Meth Date : 05-Jun-2015 08:19 mskidmor Quant Type: ISTD
 Cal Date : 04-JUN-2015 14:50 Cal File: 14060408.d
 Als bottle: 1 QC Sample: LCSD
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: Cont62415.sub
 Target Version: 3.50 Sample Matrix: AIR
 Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE (PPBV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

* 98 Bromochloromethane				CAS #: 74-97-5		
4.739	4.739 (1.000)	130	117039 400.000		70.00- 130.00	100.00
4.739	4.739 (1.000)	128	91005		48.08- 108.08	77.76
4.739	4.739 (1.000)	49	169483		116.54- 176.54	144.81

* 123 1,4-Difluorobenzene				CAS #: 540-36-3		
5.844	5.844 (1.000)	114	514333 400.000		70.00- 130.00	100.00
5.844	5.844 (1.000)	88	83207		0.00- 45.72	16.18

* 163 Chlorobenzene-d5				CAS #: 3114-55-4		
9.832	9.832 (1.000)	117	452957 400.000		70.00- 130.00	100.00
9.818	9.818 (1.000)	82	250672		25.58- 85.58	55.34

§ 117 1,2-Dichloroethane-d4				CAS #: 17060-07-0		
5.382	5.382 (1.136)	65	171772 392.178	392.18	70.00- 130.00	100.00
5.382	5.382 (1.136)	67	89121		23.57- 83.57	51.88

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
 == == ===== == ===== ===== =====

\$ 146 Toluene-d8 CAS #: 2037-26-5
 7.635 7.635 (1.306) 98 511414 400.572 400.57 70.00- 130.00 100.00
 7.635 7.635 (1.306) 70 56993 0.00- 41.05 11.14
 7.635 7.635 (1.306) 100 354367 38.18- 98.18 69.29

\$ 177 4-Bromofluorobenzene CAS #: 460-00-4
 10.951 10.951 (1.114) 174 254178 404.134 404.13 70.00- 130.00 100.00
 10.937 10.937 (1.112) 95 344659 102.26- 162.26 135.60
 10.951 10.951 (1.114) 176 245946 66.15- 126.15 96.76

9 Propylene CAS #: 115-07-1
 1.241 1.227 (0.262) 41 65517 190.806 190.80 70.00- 130.00 100.00
 1.241 1.227 (0.262) 42 41701 34.95- 94.95 63.65
 1.241 1.241 (0.262) 39 45664 42.16- 102.16 69.70

11 Freon 12 CAS #: 75-71-8
 1.269 1.269 (0.268) 85 222969 194.970 194.97 70.00- 130.00 100.00
 1.269 1.269 (0.268) 87 73152 3.05- 63.05 32.81

15 Freon 114 CAS #: 76-14-2
 1.353 1.353 (0.285) 135 159932 201.382 201.38 70.00- 130.00 100.00
 1.353 1.353 (0.285) 137 49969 1.48- 61.48 31.24

17 Chloromethane CAS #: 74-87-3
 1.423 1.423 (0.300) 50 75997 184.417 184.42 70.00- 130.00 100.00
 1.423 1.423 (0.300) 52 25598 1.15- 61.15 33.68

23 Butane CAS #: 106-97-8
 1.479 1.479 (0.312) 58 18628 192.886 192.89 70.00- 130.00 100.00
 1.479 1.479 (0.312) 43 123725 680.52- 740.52 664.19

25 Vinyl Chloride CAS #: 75-01-4
 1.521 1.507 (0.321) 62 81035 192.050 192.05 70.00- 130.00 100.00
 1.521 1.521 (0.321) 64 25654 0.94- 60.94 31.66

26 1,3-Butadiene CAS #: 106-99-0
 1.521 1.521 (0.321) 54 64107 198.069 198.07 70.00- 130.00 100.00
 1.521 1.521 (0.321) 39 57670 66.21- 126.21 89.96

29 Bromomethane CAS #: 74-83-9
 1.814 1.814 (0.383) 94 52563 192.941 192.94 70.00- 130.00 100.00
 1.814 1.814 (0.383) 96 49956 64.87- 124.87 95.04
 1.814 1.814 (0.383) 79 8710 0.00- 46.18 16.57

30 Chloroethane CAS #: 75-00-3
 1.898 1.898 (0.401) 64 44657 204.941 204.94 70.00- 130.00 100.00

CONCENTRATIONS

ON-COL FINAL

RT EXP RT (REL RT) MASS RESPONSE (PPEV) (PPBV) TARGET RANGE RATIO
 == == ===== == ===== ===== =====

30 Chloroethane (continued)
 1.898 1.898 (0.401) 66 13278 0.00- 59.89 29.73

31 Isopentane CAS #: 78-78-4
 1.912 1.912 (0.404) 43 99169 196.203 196.20 70.00- 130.00 100.00
 1.912 1.912 (0.404) 57 72347 39.30- 99.30 72.95
 1.912 1.912 (0.404) 72 8767 0.00- 38.88 8.84

35 Freon 11 CAS #: 75-69-4
 2.094 2.094 (0.442) 101 229757 195.881 195.88 70.00- 130.00 100.00
 2.094 2.094 (0.442) 103 151389 34.32- 94.32 65.89

42 Ethanol CAS #: 64-17-5
 2.360 2.360 (0.498) 45 35250 197.409 197.41 70.00- 130.00 100.00
 2.360 2.360 (0.498) 43 7298 0.00- 50.94 20.70
 2.360 2.360 (0.498) 46 14550 13.63- 73.63 41.28

49 Freon 113 CAS #: 76-13-1
 2.584 2.584 (0.545) 151 140291 193.923 193.92 70.00- 130.00 100.00
 2.584 2.584 (0.545) 153 90079 34.22- 94.22 64.21
 2.584 2.584 (0.545) 101 188347 102.57- 162.57 134.25

50 1,1-Dichloroethene CAS #: 75-35-4
 2.612 2.612 (0.551) 61 142017 189.700 189.70 70.00- 130.00 100.00
 2.612 2.612 (0.551) 96 83132 27.93- 87.93 58.54
 2.612 2.612 (0.551) 98 55333 6.48- 66.48 38.96

52 Acetone CAS #: 67-64-1
 2.738 2.738 (0.578) 58 42855 194.218 194.22 70.00- 130.00 100.00
 2.738 2.738 (0.578) 43 135639 289.79- 349.79 316.51

56 Carbon Disulfide CAS #: 75-15-0
 2.808 2.808 (0.593) 76 217122 174.126 174.13 70.00- 130.00 100.00

57 2-Propanol CAS #: 67-63-0
 2.878 2.878 (0.607) 45 145981 205.107 205.11 70.00- 130.00 100.00
 2.878 2.878 (0.607) 43 30771 0.00- 50.97 21.08
 2.878 2.878 (0.607) 59 5661 0.00- 33.89 3.88

58 3-Chloropropene CAS #: 107-05-1
 3.004 3.004 (0.634) 76 35916 191.825 191.82 70.00- 130.00 100.00
 3.004 3.004 (0.634) 41 97421 247.13- 307.13 271.25

66 Methylene Chloride CAS #: 75-09-2
 3.158 3.158 (0.666) 49 104897 184.417 184.42 70.00- 130.00 100.00
 3.172 3.172 (0.669) 84 76667 43.35- 103.35 73.09

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT (REL RT)	MASS	RESPONSE	(PPEV)	(PPBV)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

66 Methylene Chloride (continued)

3.158	3.158 (0.666)	51	31936			0.70- 60.70	30.45
-------	---------------	----	-------	--	--	-------------	-------

72 Methyl tert-butyl ether CAS #: 1634-04-4

3.354	3.354 (0.708)	73	189707	194.942	194.94	70.00- 130.00	100.00
3.354	3.354 (0.708)	57	46070			0.00- 54.09	24.28
3.354	3.354 (0.708)	41	44991			0.00- 55.75	23.72

73 trans-1,2-Dichloroethene CAS #: 156-60-5

3.382	3.382 (0.714)	96	77406	174.170	174.17	70.00- 130.00	100.00
3.382	3.382 (0.714)	61	112745			117.22- 177.22	145.65
3.382	3.382 (0.714)	98	49707			31.31- 91.31	64.22

78 Hexane CAS #: 110-54-3

3.577	3.577 (0.755)	57	144043	199.371	199.37	70.00- 130.00	100.00
3.577	3.577 (0.755)	43	89765			33.82- 93.82	62.32
3.577	3.577 (0.755)	86	24967			0.00- 47.96	17.33

82 1,1-Dichloroethane CAS #: 75-34-3

3.871	3.871 (0.817)	63	158794	192.173	192.17	70.00- 130.00	100.00
3.871	3.871 (0.817)	65	48387			0.83- 60.83	30.47

86 Vinyl Acetate CAS #: 108-05-4

3.913	3.913 (0.826)	86	8373	114.994	114.99	70.00- 130.00	100.00
3.913	3.913 (0.826)	43	77646			1031.22-1091.22	927.34
3.913	3.913 (0.826)	42	6366			62.99- 122.99	76.03

91 cis-1,2-Dichloroethene CAS #: 156-59-2

4.487	4.487 (0.947)	61	136961	206.678	206.68	70.00- 130.00	100.00
4.487	4.487 (0.947)	96	104572			44.12- 104.12	76.35
4.487	4.487 (0.947)	98	64635			18.04- 78.04	47.19

92 2-Butanone CAS #: 78-93-3

4.515	4.515 (0.953)	72	41461	194.119	194.12	70.00- 130.00	100.00
4.515	4.515 (0.953)	43	175310			384.18- 444.18	422.83
4.515	4.515 (0.953)	57	14848			3.18- 63.18	35.81

99 Tetrahydrofuran CAS #: 109-99-9

4.725	4.725 (0.997)	42	98624	195.779	195.78	70.00- 130.00	100.00
4.725	4.725 (0.997)	71	37874			6.63- 66.63	38.40
4.725	4.725 (0.997)	72	40644			9.95- 69.95	41.21

100 Chloroform CAS #: 67-66-3

4.823	4.823 (1.018)	83	182121	188.840	188.84	70.00- 130.00	100.00
4.823	4.823 (1.018)	85	120688			36.11- 96.11	66.27

CONCENTRATIONS										
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL (PPEV)	FINAL (PPBV)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====	=====		
102 Cyclohexane						CAS #:	110-82-7			
4.921	4.921	(1.038)	84	122269	196.185	196.18	70.00- 130.00	100.00		
4.921	4.921	(1.038)	56	148107			92.51- 152.51	121.13		
4.921	4.921	(1.038)	41	79391			36.86- 96.86	64.93		

103 1,1,1-Trichloroethane						CAS #:	71-55-6			
4.949	4.949	(1.044)	97	188354	197.894	197.89	70.00- 130.00	100.00		
4.949	4.949	(1.044)	99	119079			34.93- 94.93	63.22		

106 Carbon Tetrachloride						CAS #:	56-23-5			
5.089	5.089	(1.074)	119	183174	201.154	201.15	70.00- 130.00	100.00		
5.089	5.089	(1.074)	117	187305			76.39- 136.39	102.26		

113 2,2,4-Trimethylpentane						CAS #:	540-84-1			
5.326	5.326	(1.124)	57	463767	196.330	196.33	70.00- 130.00	100.00		
5.326	5.326	(1.124)	56	153519			3.74- 63.74	33.10		
5.326	5.326	(1.124)	41	112192			0.00- 55.31	24.19		

116 Benzene						CAS #:	71-43-2			
5.354	5.354	(0.916)	78	271347	190.500	190.50	70.00- 130.00	100.00		
5.354	5.354	(0.916)	77	65372			0.00- 53.58	24.09		

120 1,2-Dichloroethane						CAS #:	107-06-2			
5.480	5.466	(0.938)	62	119128	190.155	190.15	70.00- 130.00	100.00		
5.480	5.480	(0.938)	64	39899			2.61- 62.61	33.49		

121 Heptane						CAS #:	142-82-5			
5.564	5.564	(0.952)	71	97936	201.499	201.50	70.00- 130.00	100.00		
5.564	5.564	(0.952)	43	166272			146.34- 206.34	169.78		
5.564	5.564	(0.952)	100	33179			3.46- 63.46	33.88		

125 Trichloroethene						CAS #:	79-01-6			
6.082	6.082	(1.041)	95	139254	206.459	206.46	70.00- 130.00	100.00		
6.082	6.082	(1.041)	130	141226			73.37- 133.37	101.42		
6.082	6.082	(1.041)	97	89681			35.35- 95.35	64.40		

127 Methylcyclohexane						CAS #:	108-87-2			
6.194	6.194	(1.060)	83	163822	193.589	193.59	70.00- 130.00	100.00		
6.194	6.194	(1.060)	98	81821			19.87- 79.87	49.95		
6.194	6.194	(1.060)	55	137941			54.72- 114.72	84.20		

132 1,2-Dichloropropane						CAS #:	78-87-5			
6.404	6.404	(1.096)	63	103513	195.471	195.47	70.00- 130.00	100.00		
6.404	6.404	(1.096)	62	74386			40.76- 100.76	71.86		
6.390	6.404	(1.093)	41	54326			26.03- 86.03	52.48		

CONCENTRATIONS										
RT	EXP RT	(REL RT)	MASS	ON-COL		FINAL	TARGET RANGE	RATIO		
				RESPONSE	(PPEV)	(PPBV)				
==	=====	=====	=====	=====	=====	=====	=====	=====	=====	

136	1,4-Dioxane					CAS #:	123-91-1			
6.530	6.530	(1.117)	88	61885	201.800	201.80	70.00-	130.00	100.00	
6.530	6.530	(1.117)	58	45534			42.35-	102.35	73.58	
6.530	6.530	(1.117)	57	14515			0.00-	53.99	23.45	

138	Bromodichloromethane					CAS #:	75-27-4			
6.726	6.726	(1.151)	83	208040	198.982	198.98	70.00-	130.00	100.00	
6.726	6.726	(1.151)	85	132223			32.51-	92.51	63.56	

144	cis-1,3-Dichloropropene					CAS #:	10061-01-5			
7.341	7.327	(1.256)	75	148025	199.252	199.25	70.00-	130.00	100.00	
7.341	7.341	(1.256)	77	46649			0.58-	60.58	31.51	
7.327	7.327	(1.254)	39	70526			18.98-	78.98	47.64	

145	4-Methyl-2-pentanone					CAS #:	108-10-1			
7.565	7.565	(1.294)	85	34248	205.725	205.72	70.00-	130.00	100.00	
7.565	7.565	(1.294)	43	211706			626.54-	686.54	618.16	
7.565	7.565	(1.294)	58	88273			227.69-	287.69	257.75	

147	Toluene					CAS #:	108-88-3			
7.733	7.733	(1.323)	91	330505	193.206	193.20	70.00-	130.00	100.00	
7.733	7.733	(1.323)	92	192171			28.44-	88.44	58.14	

150	trans-1,3-Dichloropropene					CAS #:	10061-02-6			
8.293	8.293	(0.843)	75	126206	192.645	192.64	70.00-	130.00	100.00	
8.293	8.293	(0.843)	77	40082			1.11-	61.11	31.76	
8.293	8.293	(0.843)	39	56559			14.88-	74.88	44.81	

155	1,1,2-Trichloroethane					CAS #:	79-00-5			
8.614	8.615	(0.876)	97	115092	195.928	195.93	70.00-	130.00	100.00	
8.614	8.615	(0.876)	99	70730			32.09-	92.09	61.46	
8.614	8.615	(0.876)	83	100165			58.01-	118.01	87.03	

156	Tetrachloroethene					CAS #:	127-18-4			
8.629	8.629	(0.878)	166	150941	191.942	191.94	70.00-	130.00	100.00	
8.629	8.629	(0.878)	129	117562			46.67-	106.67	77.89	
8.629	8.629	(0.878)	131	112263			42.30-	102.30	74.38	

158	2-Hexanone					CAS #:	591-78-6			
9.006	9.006	(0.916)	58	105652	201.422	201.42	70.00-	130.00	100.00	
9.006	9.006	(0.916)	43	198724			165.25-	225.25	188.09	
9.006	9.006	(0.916)	100	23688			0.00-	52.77	22.42	

160	Dibromochloromethane					CAS #:	124-48-1			
9.160	9.160	(0.932)	129	207682	200.336	200.34	70.00-	130.00	100.00	
9.160	9.160	(0.932)	127	158840			47.21-	107.21	76.48	

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL (PPEV)	FINAL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

161	1,2-Dibromoethane (EDB)					CAS #: 106-93-4			
9.300	9.300	(0.946)	107	175945	195.488	195.49	70.00- 130.00	100.00	
9.300	9.300	(0.946)	109	164087			63.74- 123.74	93.26	

165	Chlorobenzene					CAS #: 108-90-7			
9.860	9.860	(1.003)	112	259652	188.615	188.62	70.00- 130.00	100.00	
9.860	9.860	(1.003)	114	81728			2.02- 62.02	31.48	
9.860	9.860	(1.003)	77	154999			30.14- 90.14	59.69	

167	Ethyl Benzene					CAS #: 100-41-4			
9.958	9.958	(1.013)	106	127987	193.714	193.71	70.00- 130.00	100.00	
9.958	9.958	(1.013)	91	424981			306.11- 366.11	332.05	

169	m,p-Xylene					CAS #: 108-38-3			
10.084	10.084	(1.026)	106	163767	200.539	200.54	70.00- 130.00	100.00	
10.084	10.084	(1.026)	91	334430			174.24- 234.24	204.21	

171	o-Xylene					CAS #: 95-47-6			
10.461	10.461	(1.064)	106	153099	204.301	204.30	70.00- 130.00	100.00	
10.461	10.461	(1.064)	91	335440			191.30- 251.30	219.10	

172	Styrene					CAS #: 100-42-5			
10.489	10.489	(1.067)	104	256838	206.744	206.74	70.00- 130.00	100.00	
10.489	10.489	(1.067)	78	129080			19.95- 79.95	50.26	

174	Bromoform					CAS #: 75-25-2			
10.671	10.671	(1.085)	173	189067	199.944	199.94	70.00- 130.00	100.00	
10.671	10.671	(1.085)	171	97254			23.00- 83.00	51.44	

175	Cumene					CAS #: 98-82-8			
10.783	10.783	(1.097)	105	477349	200.460	200.46	70.00- 130.00	100.00	
10.783	10.783	(1.097)	120	125471			0.00- 56.04	26.28	
10.769	10.769	(1.095)	51	51625			0.00- 40.17	10.81	

181	1,1,2,2-Tetrachloroethane					CAS #: 79-34-5			
11.105	11.105	(1.129)	83	213744	176.691	176.69	70.00- 130.00	100.00	
11.105	11.105	(1.129)	85	138762			35.69- 95.69	64.92	

182	Propylbenzene					CAS #: 103-65-1			
11.105	11.105	(1.129)	91	597843	202.689	202.69	70.00- 130.00	100.00	
11.105	11.105	(1.129)	120	129295			0.00- 51.76	21.63	
11.105	11.105	(1.129)	105	21280			0.00- 33.53	3.56	

188	4-Ethyltoluene					CAS #: 622-96-8			
11.203	11.203	(1.139)	105	465375	201.474	201.47	70.00- 130.00	100.00	
11.203	11.203	(1.139)	120	136306			0.00- 59.33	29.29	

CONCENTRATIONS									
RT	EXP RT	(REL RT)	MASS	RESPONSE	ON-COL (PPEV)	FINAL (PPBV)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	

190	1,3,5-Trimethylbenzene					CAS #: 108-67-8			
11.245	11.245	(1.144)	105	407788	207.534	207.53	70.00- 130.00	100.00	
11.245	11.245	(1.144)	120	192566			16.85- 76.85	47.22	

196	1,2,4-Trimethylbenzene					CAS #: 95-63-6			
11.511	11.511	(1.171)	105	376419	209.141	209.14	70.00- 130.00	100.00	
11.511	11.511	(1.171)	120	169316			15.19- 75.19	44.98	

208	1,3-Dichlorobenzene					CAS #: 541-73-1			
11.707	11.707	(1.191)	146	253560	193.989	193.99	70.00- 130.00	100.00	
11.707	11.707	(1.191)	148	163056			33.74- 93.74	64.31	
11.707	11.707	(1.191)	111	102245			10.77- 70.77	40.32	

209	1,4-Dichlorobenzene					CAS #: 106-46-7			
11.763	11.763	(1.196)	146	249807	192.845	192.84	70.00- 130.00	100.00	
11.763	11.763	(1.196)	148	160780			33.86- 93.86	64.36	
11.763	11.763	(1.196)	111	101382			10.30- 70.30	40.58	

212	alpha-Chlorotoluene					CAS #: 100-44-7			
11.861	11.861	(1.206)	91	307657	237.441	237.44	70.00- 130.00	100.00	
11.861	11.861	(1.206)	126	62931			0.00- 50.90	20.45	

214	1,2-Dichlorobenzene					CAS #: 95-50-1			
11.987	11.987	(1.219)	146	228514	192.123	192.12	70.00- 130.00	100.00	
11.987	11.987	(1.219)	148	147655			33.29- 93.29	64.62	
11.987	11.987	(1.219)	111	98591			12.93- 72.93	43.14	

226	1,2,4-Trichlorobenzene					CAS #: 120-82-1			
12.854	12.854	(1.307)	180	106098	201.287	201.29	70.00- 130.00	100.00	
12.854	12.854	(1.307)	182	99693			66.09- 126.09	93.96	

227	Hexachlorobutadiene					CAS #: 87-68-3			
12.896	12.896	(1.312)	225	85340	192.059	192.06	70.00- 130.00	100.00	
12.896	12.896	(1.312)	223	54642			33.17- 93.17	64.03	

228	Naphthalene					CAS #: 91-20-3			
12.980	12.980	(1.320)	128	16741	19.3548	19.355	70.00- 130.00	100.00(a)	
12.980	12.980	(1.320)	127	2104			0.00- 41.17	12.57	

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

Report Date: 05-Jun-2015 09:13

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd14.i

Calibration Date: 05-JUN-2015

Lab File ID: 14060504a.d

Calibration Time: 07:00

Lab Smp Id: LCSD

Client Smp ID: LCSD

Analysis Type: VOA

Level: LOW

Quant Type: ISTD

Sample Type: AIR

Operator: mjs

Method File: /chem/msd14.i/05jun15.b/14550601b.m

Misc Info: 200ppbv (200ppbv)

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	120084	72050	168118	117039	-2.54
123 1,4-Difluorobenze	525212	315127	735297	514333	-2.07
163 Chlorobenzene-d5	460332	276199	644465	452957	-1.60

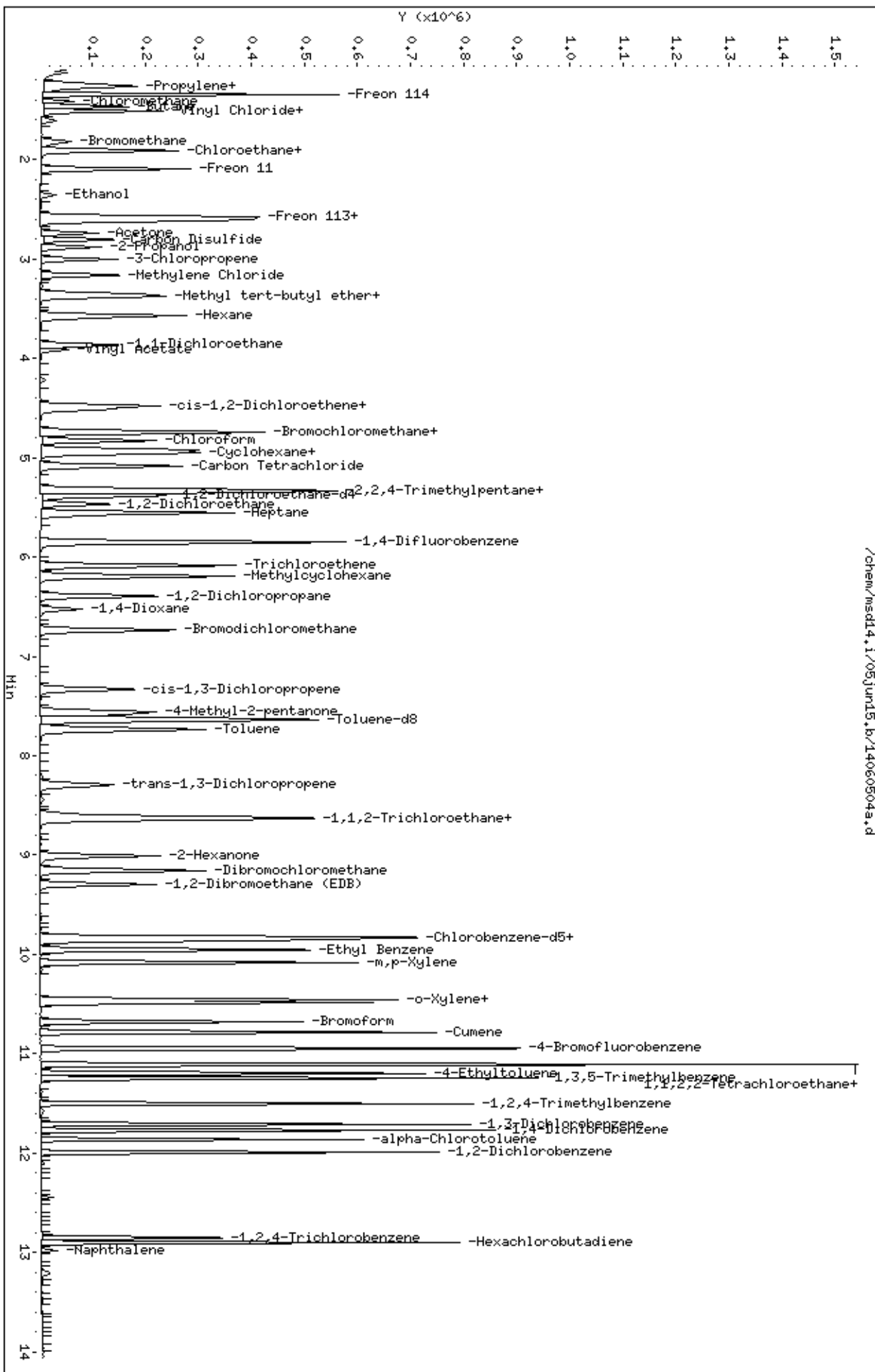
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
98 Bromochloromethan	4.74	4.41	5.07	4.74	0.00
123 1,4-Difluorobenze	5.84	5.51	6.17	5.84	0.00
163 Chlorobenzene-d5	9.83	9.50	10.16	9.83	0.00

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.



BFB Verification of 176/174 m/z Ratio: (23332/23744) * 100 = 97.84%

Tekmar Purge Flow: NA

Vacuum: 3.77 x 10⁻⁶

IS/IS Std. #:	2736-31	Exp. Date:	9/1/15
BCM			120084
1,4-DFB			525212
CB-d5			460332

Verified CCV IS vs ICAL mid-point (-40%AD): MSB

File ID: 14060803
 Compound: Toluene-d8
 Initials: MSB

Calculation Check:
 ppbv of compound = $\frac{\text{Area}_{\text{sample}}}{\text{Area}_{\text{IS}}} \times \text{Conc}_{\text{IS}}$
 $\frac{513449}{509338} \times (400.00) = 406.11$

SOP# (Circle one): 6/83/38(99)/109

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

Reported Result: 406.11

Method Name: 14550601B.M

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	14060501	BFB TUNE CHECK	2299-793	50mg	2.0µL	1.00	MSB	6/5/15	0646	MSB	
✓	02	CCV (200ppbv)	2716-281	200ppbv	50µL	1.00	MSB		0700	MSB	Exp. 8/6/15 Out. NOVA
✓	03	LCS (200ppbv)	2716-297	200ppbv	50µL	1.00	MSB		0743	MSB	Exp. 8/12/15 Out
✓	04	LSD	2736-10	100ppbv	25µL	1.00	MSB		0820	MSB	Exp. 8/20/15 AT-1
✓	05	CCVsp (200ppbv)	2516-133A	4000ppbv	2.0µL	1.00	MSB		0915	MSB	Exp. 7/13/15 TRH 10µL
✓	06	CCVsp (50ppmv)	34343	Humid	50µL	1.00	MSB		0946	MSB	
✓	07	Lab Blank	211788	18.8ps - 2128ps	50µL	1.00	MSB		1042	MSB	
✓	08	1505427-01A	34685	4.311ps - 2154ps	50µL	2.34	MSB		1129	MSB	Screen
✓	09	1505420A-02A	15750	3.711ps - 2153ps	50µL	2.32	MSB		1202	MSB	
✓	10		37729	3.911ps - 2153ps	50µL	2.33	MSB		1220	MSB	
✓	11		11431	3.111ps - 2147ps	50µL	2.34	MSB		1244	MSB	
✓	12			-06A	50µL	2.33	MSB		1303	MSB	
✓	13	1505470-01A	94915	3.511ps - 2154ps	50µL	2.32	MSB		1326	MSB	
✓	14		9468	0.411ps - 15.1ps	50µL	2.06	MSB		1349	MSB	Bag: system 3/4

Reviewed: MSB Date: 6/5/15

Use	File	Lab ID#	Can#	Pressure	Amt. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
✓	14060515	1506011B-02A	3049	5.9"Hg-219.9psi	50ml	2.51	BS	6/5/15	1417	BS	
✓	16	1b	8049	5.9"Hg-149psi	50ml	2.51	BS		1520	BS	
✓	17	17	111517	5.5"Hg-15psi	50ml	2.48	BS		1550	BS	
✓	18	18	32432	5.1"Hg-15.8psi	50ml	2.58	BS		1611	BS	
✓	19	19	32432	5.3"Hg-14.9psi	50ml	2.45	BS		1630	BS	
✓	20	20	30499	5.9"Hg-14.7psi	50ml	2.49	BS		1649	BS	
✓	21	21	141009	10.5"Hg-15psi	1.0ml	1.56	BS		1726	BS	Needle lnc
✓	22	22	↓	↓	2.0ml	7.18	BS		1748	BS	DIL TC 5mc
✓	23	23	3725	11.5"Hg-15psi	1.0ml	1.4	BS		1810	BS	over dilute lnc
✓	24	24	↓	↓	2.0ml	8.60	BS		1834	BS	DIL TC 5mc
✓	25	25	37326	4.5"Hg-15psi	25ml	4.76	BS		1854	BS	"E" 2 Butanone
✓	26	26	30475	4.5"Hg-15psi	10ml	11.9	BS		1916	BS	DIL TC
✓	27	27	↓	↓	10ml	12.1	BS		1957	BS	DIL TC
	28	28	System blank	Humid	50ml	1.00	BS				
	29	29	150601D-05A	4.9"Hg-15psi	20ml	2.12	BS				
	30										
	31										
	32										
	33										
	34										
	35										
	36										

BS

BS/BS

BS/BS

Reviewed

Date

Report Date: 01-Jun-2015 14:55

Eurofins Air Toxics Inc.

Data file : /var/chem/msd14.i/01jun15.b/14060106.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 01-JUN-2015 14:44
 Operator : md Inst ID: msd14.i
 Smp Info : 2.0ml #2299-793;BFB;BFB
 Misc Info : 50ng
 Comment :
 Method : /chem/msd14.i/01jun15.b/bfb20.m
 Meth Date : 01-Jun-2015 11:18 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

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	DLT RT	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

CAS #: 460-00-4

1 bfb							
2.468	2.483	-0.015	95	35386		100.00- 100.00	100.00
2.468	2.483	-0.015	50	7683		8.00- 40.00	21.71
2.468	2.483	-0.015	75	18832		30.00- 66.00	53.22
2.468	2.483	-0.015	96	2320		5.00- 9.00	6.56
2.468	2.483	-0.015	173	213		0.00- 1.99	0.91
2.468	2.483	-0.015	174	23490		50.01- 120.00	66.38
2.468	2.483	-0.015	175	1703		4.00- 9.00	7.25
2.468	2.483	-0.015	176	22560		93.00- 101.00	96.04
2.468	2.483	-0.015	177	1507		5.00- 9.00	6.68

Date : 01-JUN-2015 14:44

Client ID: BFB

Instrument: msd14.i

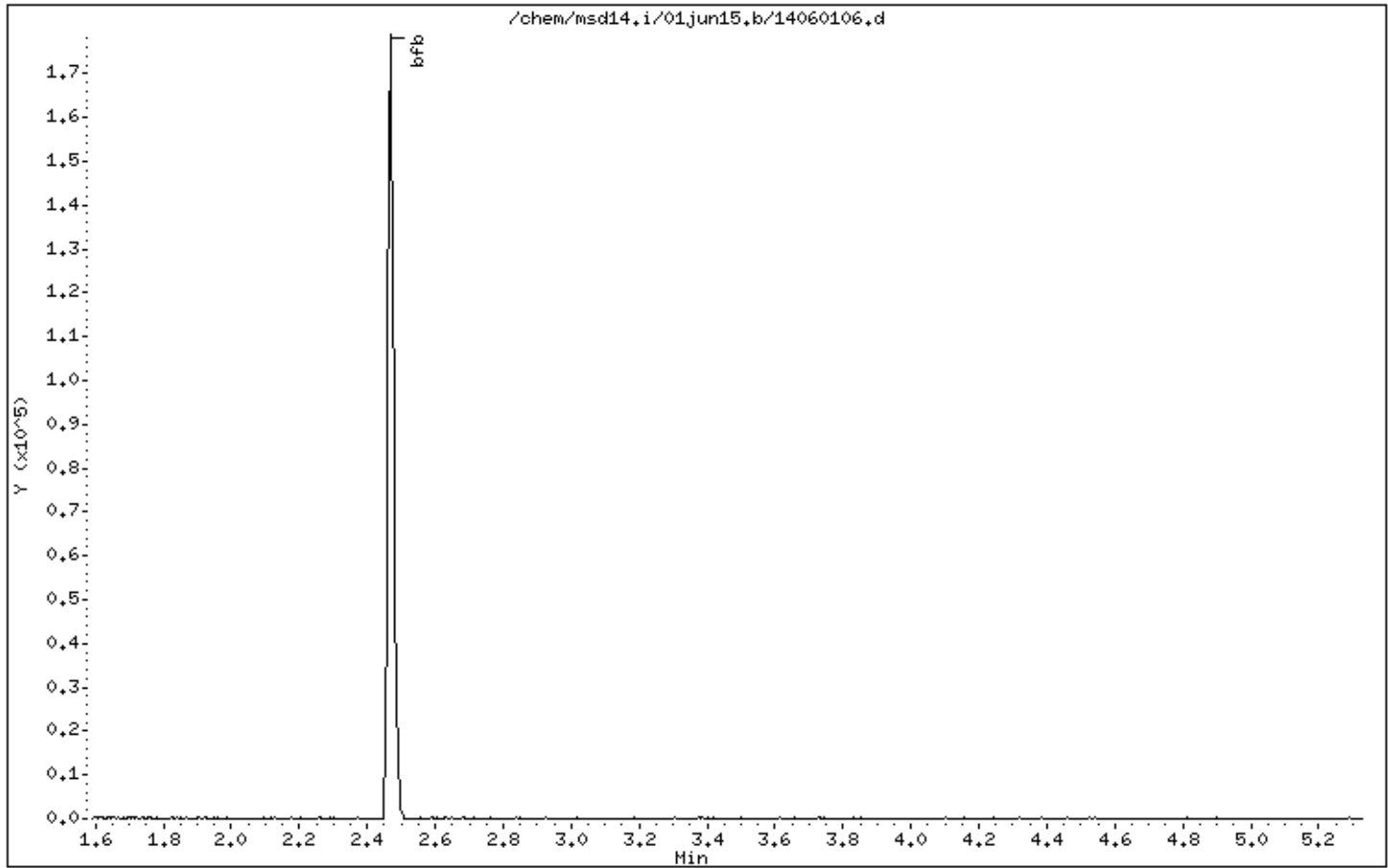
Sample Info: 2.0ml #2299-793;BFB;BFB

Volume Injected (uL): 1.0

Operator: md

Column phase:

Column diameter: 2.00



Date : 01-JUN-2015 14:44

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-793;BFB;BFB

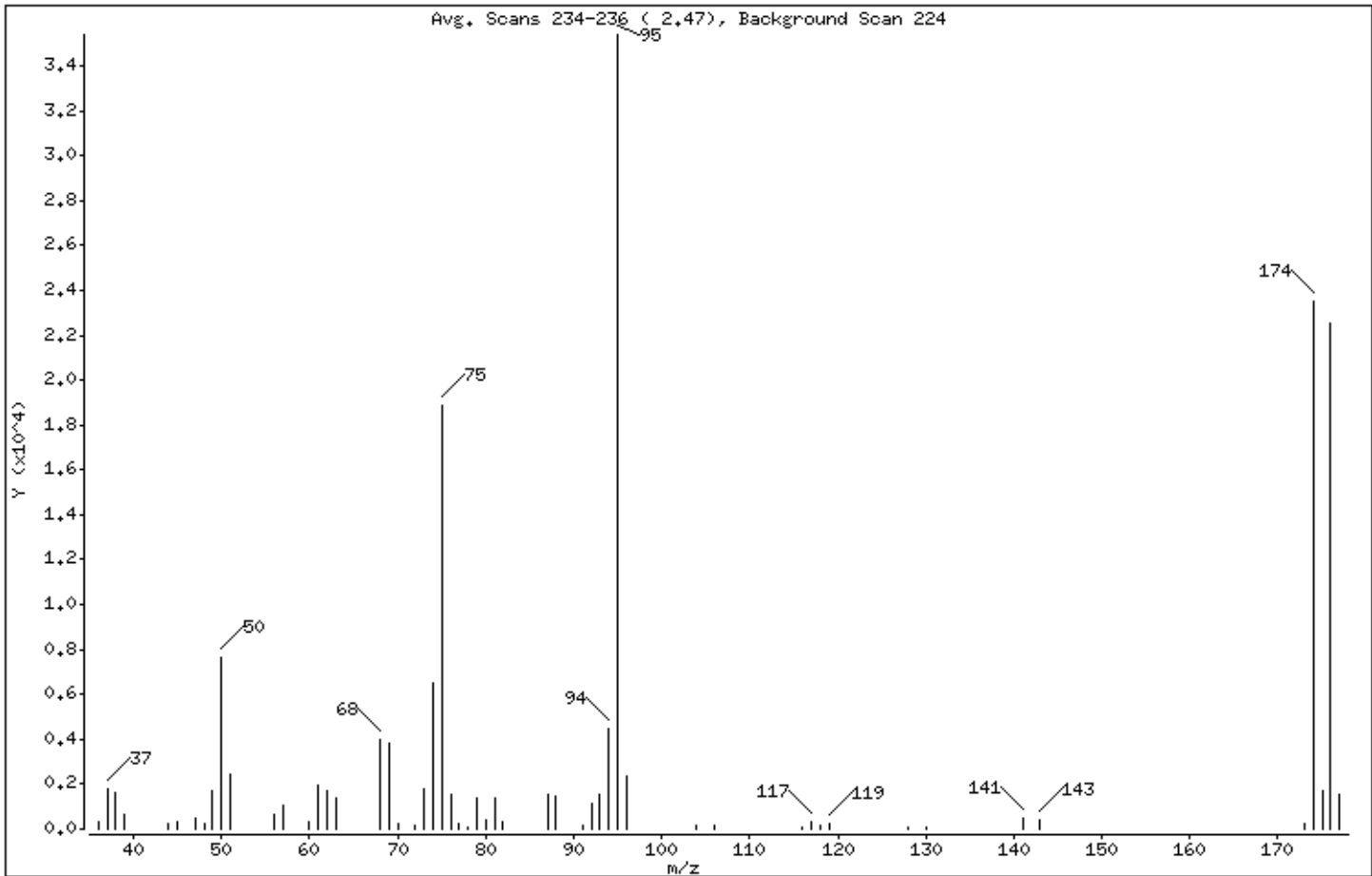
Volume Injected (uL): 1.0

Operator: md

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	21.71
75	30.00 - 66.00% of mass 95	53.22
96	5.00 - 9.00% of mass 95	6.56
173	Less than 1.99% of mass 174	0.60 (0.91)
174	50.01 - 120.00% of mass 95	66.38
175	4.00 - 9.00% of mass 174	4.81 (7.25)
176	93.00 - 101.00% of mass 174	63.75 (96.04)
177	5.00 - 9.00% of mass 176	4.26 (6.68)

Date : 01-JUN-2015 14:44

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-793;BFB;BFB

Volume Injected (uL): 1.0

Operator: md

Column phase:

Column diameter: 2.00

Data File: 14060106.d

Spectrum: Avg. Scans 234-236 (2.47), Background Scan 224

Location of Maximum: 95.00

Number of points: 54

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	344	61.00	1935	80.00	368	117.00	326
37.00	1811	62.00	1744	81.00	1365	118.00	193
38.00	1596	63.00	1350	82.00	308	119.00	209
39.00	615	68.00	3994	87.00	1585	128.00	102
44.00	232	69.00	3825	88.00	1461	130.00	53
45.00	357	70.00	283	91.00	200	141.00	456
47.00	476	72.00	201	92.00	1155	143.00	433
48.00	227	73.00	1778	93.00	1581	173.00	213
49.00	1729	74.00	6509	94.00	4471	174.00	23488
50.00	7683	75.00	18832	95.00	35384	175.00	1703
51.00	2400	76.00	1544	96.00	2320	176.00	22560
56.00	661	77.00	212	104.00	188	177.00	1507
57.00	1093	78.00	67	106.00	198		
60.00	357	79.00	1349	116.00	115		

Report Date: 04-Jun-2015 11:41

Eurofins Air Toxics Inc.

Data file : /var/chem/msd14.i/04jun15.b/14060401.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 04-JUN-2015 11:31
 Operator : mjs Inst ID: msd14.i
 Smp Info : 2.0ml #2299-793;BFB;BFB
 Misc Info : 50ng
 Comment :
 Method : /var/chem/msd14.i/04jun15.b/bfb20.m
 Meth Date : 04-Jun-2015 11:41 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

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	DLT RT	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

CAS #: 460-00-4

1 bfb							
2.468	2.483	-0.015	95	37538		100.00- 100.00	100.00
2.468	2.483	-0.015	50	8036		8.00- 40.00	21.41
2.468	2.483	-0.015	75	20016		30.00- 66.00	53.32
2.468	2.483	-0.015	96	2316		5.00- 9.00	6.17
2.468	2.483	-0.015	173	200		0.00- 1.99	0.79
2.468	2.483	-0.015	174	25469		50.01- 120.00	67.85
2.468	2.483	-0.015	175	1880		4.00- 9.00	7.38
2.468	2.483	-0.015	176	24280		93.00- 101.00	95.33
2.468	2.483	-0.015	177	1595		5.00- 9.00	6.57

Date : 04-JUN-2015 11:31

Client ID: BFB

Instrument: msd14.i

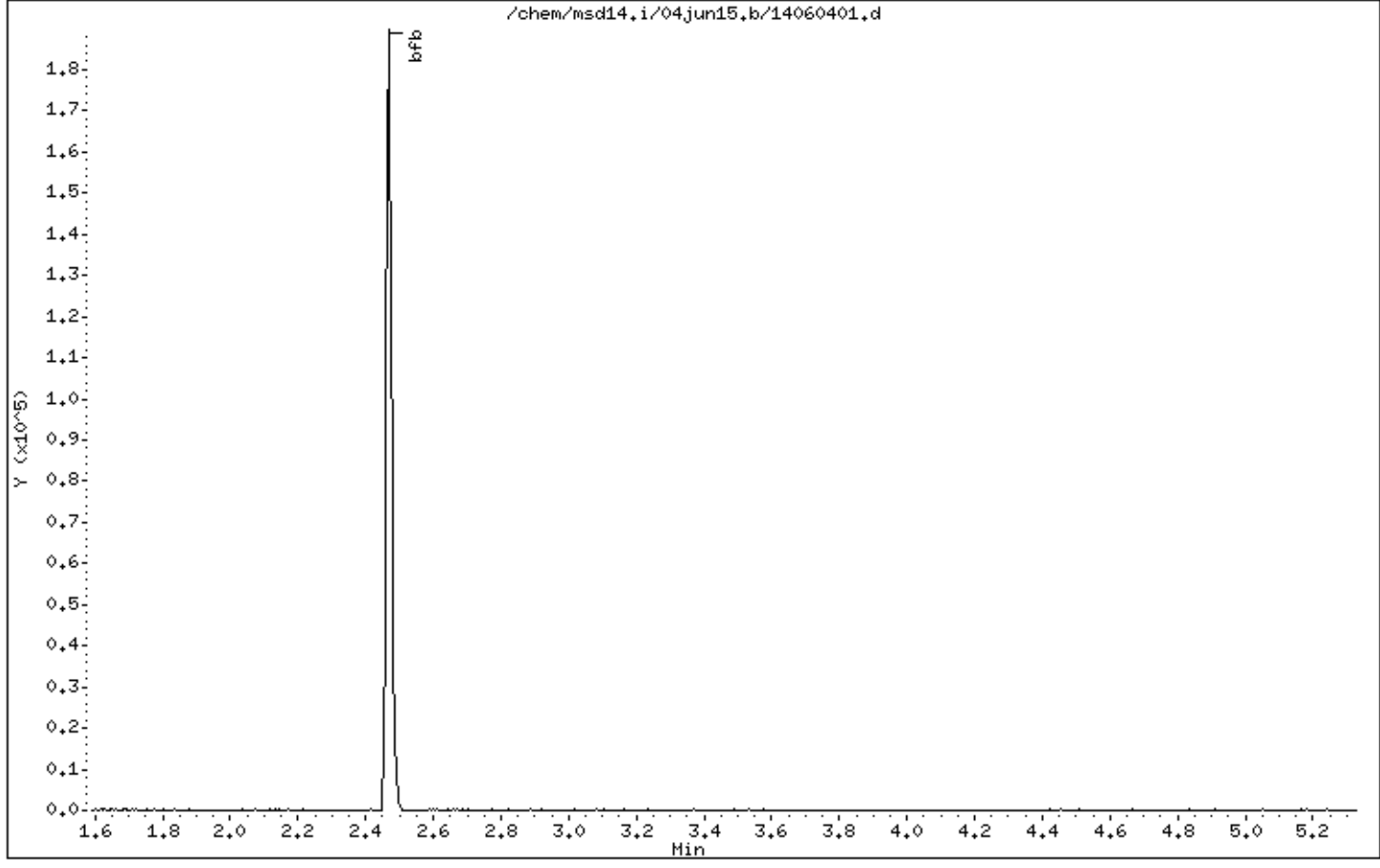
Sample Info: 2.0ml #2299-793;BFB;BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00



Date : 04-JUN-2015 11:31

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-793;BFB;BFB

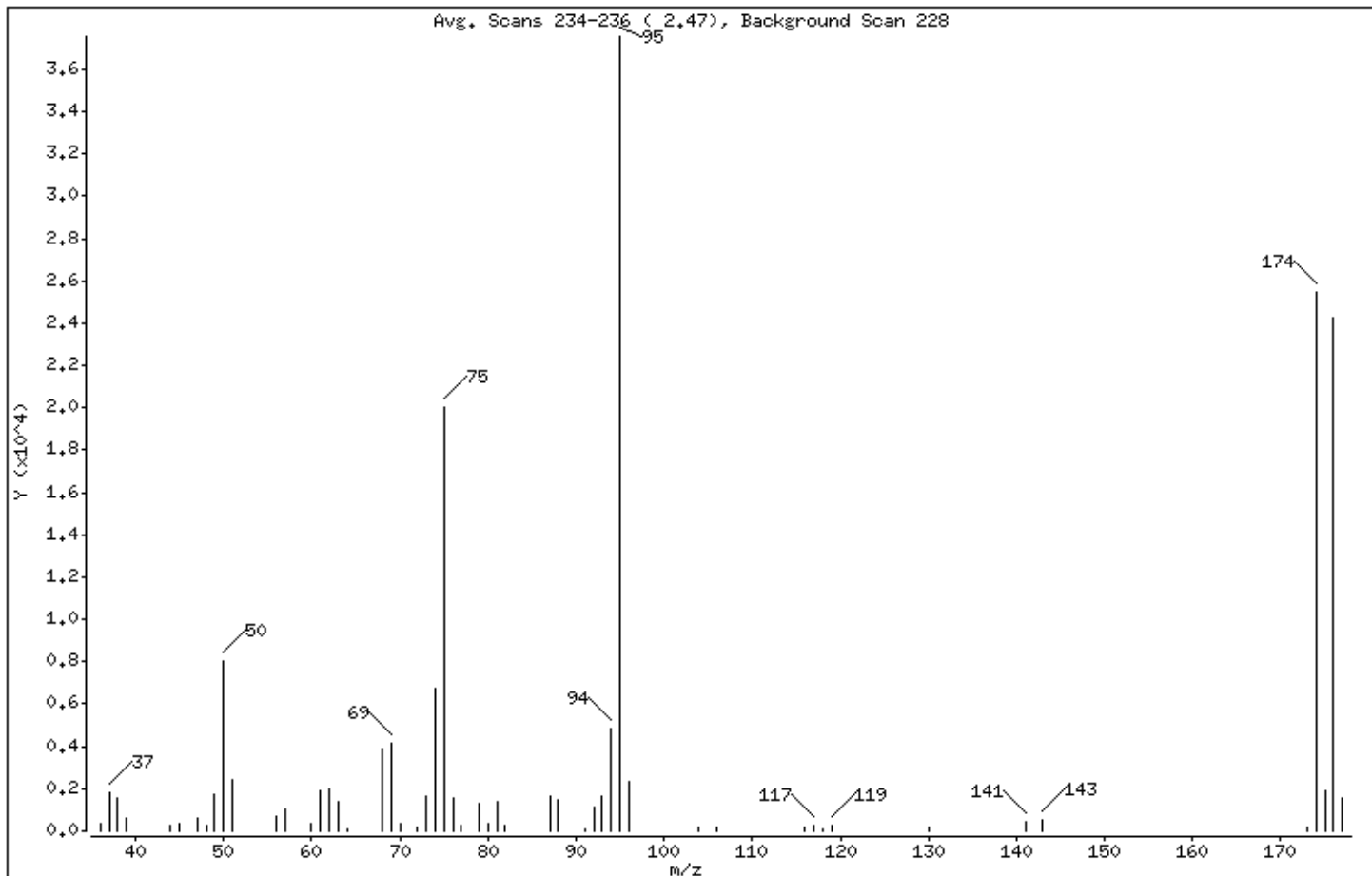
Volume Injected (uL): 1.0

Operator: mjs

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	21.41
75	30.00 - 66.00% of mass 95	53.32
96	5.00 - 9.00% of mass 95	6.17
173	Less than 1.99% of mass 174	0.53 (0.79)
174	50.01 - 120.00% of mass 95	67.85
175	4.00 - 9.00% of mass 174	5.01 (7.38)
176	93.00 - 101.00% of mass 174	64.68 (95.33)
177	5.00 - 9.00% of mass 176	4.25 (6.57)

Date : 04-JUN-2015 11:31

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-793;BFB;BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00

Data File: 14060401.d

Spectrum: Avg. Scans 234-236 (2.47), Background Scan 228

Location of Maximum: 95.00

Number of points: 53

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	332	61.00	1911	80.00	385	117.00	271
37.00	1814	62.00	1961	81.00	1365	118.00	115
38.00	1574	63.00	1405	82.00	290	119.00	239
39.00	575	64.00	52	87.00	1671	130.00	171
44.00	264	68.00	3889	88.00	1493	141.00	435
45.00	326	69.00	4146	91.00	129	143.00	505
47.00	590	70.00	334	92.00	1140	173.00	200
48.00	242	72.00	145	93.00	1600	174.00	25464
49.00	1711	73.00	1680	94.00	4853	175.00	1880
50.00	8036	74.00	6705	95.00	37536	176.00	24280
51.00	2430	75.00	20016	96.00	2316	177.00	1595
56.00	670	76.00	1592	104.00	198		
57.00	1023	77.00	222	106.00	214		
60.00	379	79.00	1328	116.00	147		

Report Date: 05-Jun-2015 06:57

Eurofins Air Toxics Inc.

Data file : /var/chem/msd14.i/05jun15.b/14060501.d
 Lab Smp Id: BFB Client Smp ID: BFB
 Inj Date : 05-JUN-2015 06:46
 Operator : mjs Inst ID: msd14.i
 Smp Info : 2.0ml #2299-793;BFB;BFB
 Misc Info : 50ng
 Comment :
 Method : /var/chem/msd14.i/05jun15.b/bfb20.m
 Meth Date : 05-Jun-2015 06:57 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

CONCENTRATIONS

ON-COL FINAL

RT	EXP RT	DLT RT	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

CAS #: 460-00-4

1 bfb							
2.471	2.483	-0.012	95	34973		100.00- 100.00	100.00
2.471	2.483	-0.012	50	7277		8.00- 40.00	20.81
2.471	2.483	-0.012	75	17778		30.00- 66.00	50.83
2.471	2.483	-0.012	96	2285		5.00- 9.00	6.53
2.471	2.483	-0.012	173	245		0.00- 1.99	1.03
2.471	2.483	-0.012	174	23744		50.01- 120.00	67.89
2.471	2.483	-0.012	175	1735		4.00- 9.00	7.31
2.471	2.483	-0.012	176	23232		93.00- 101.00	97.84
2.471	2.483	-0.012	177	1484		5.00- 9.00	6.39

Date : 05-JUN-2015 06:46

Client ID: BFB

Instrument: msd14.i

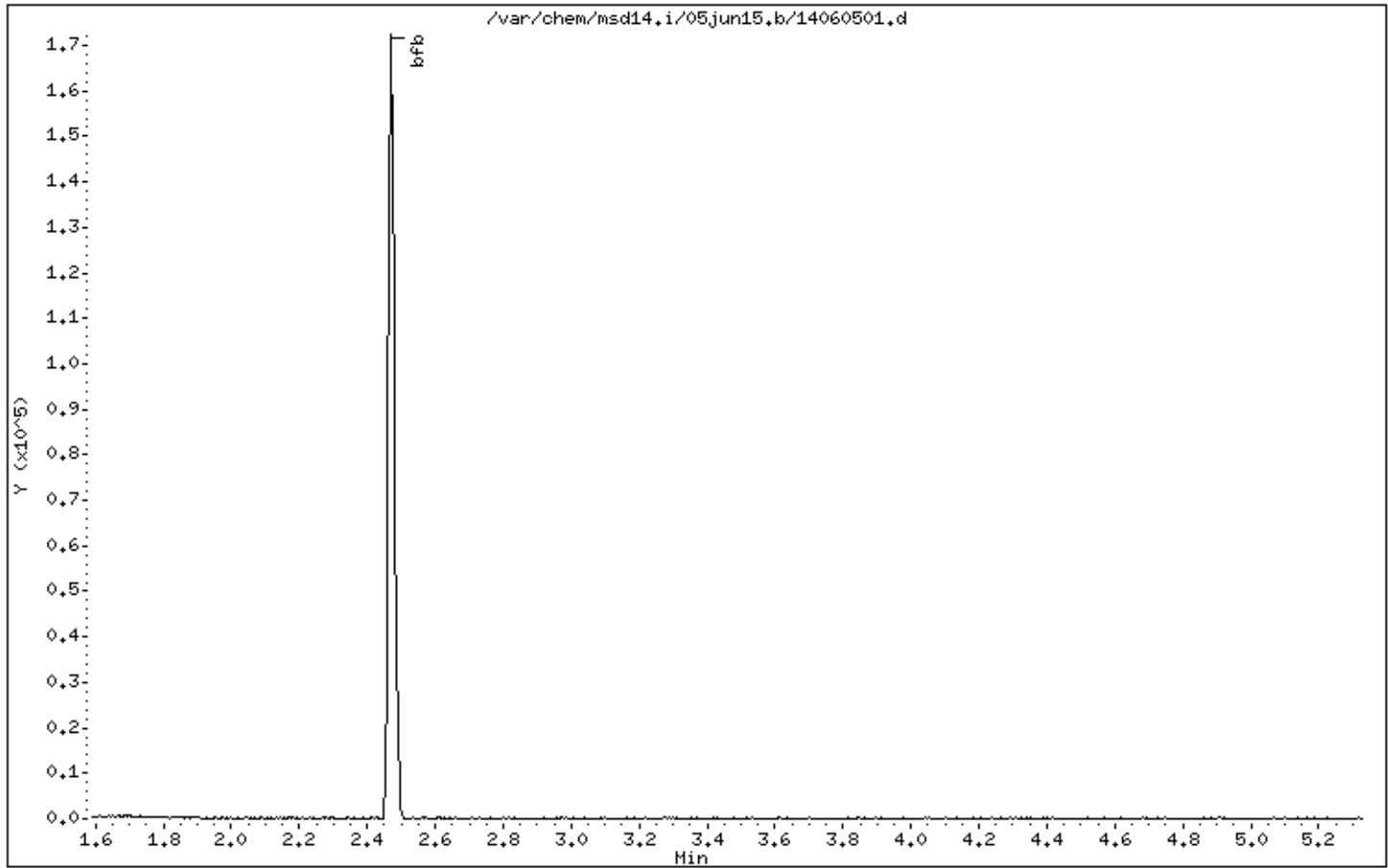
Sample Info: 2.0ml #2299-793;BFB;BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00



Date : 05-JUN-2015 06:46

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-793;BFB;BFB

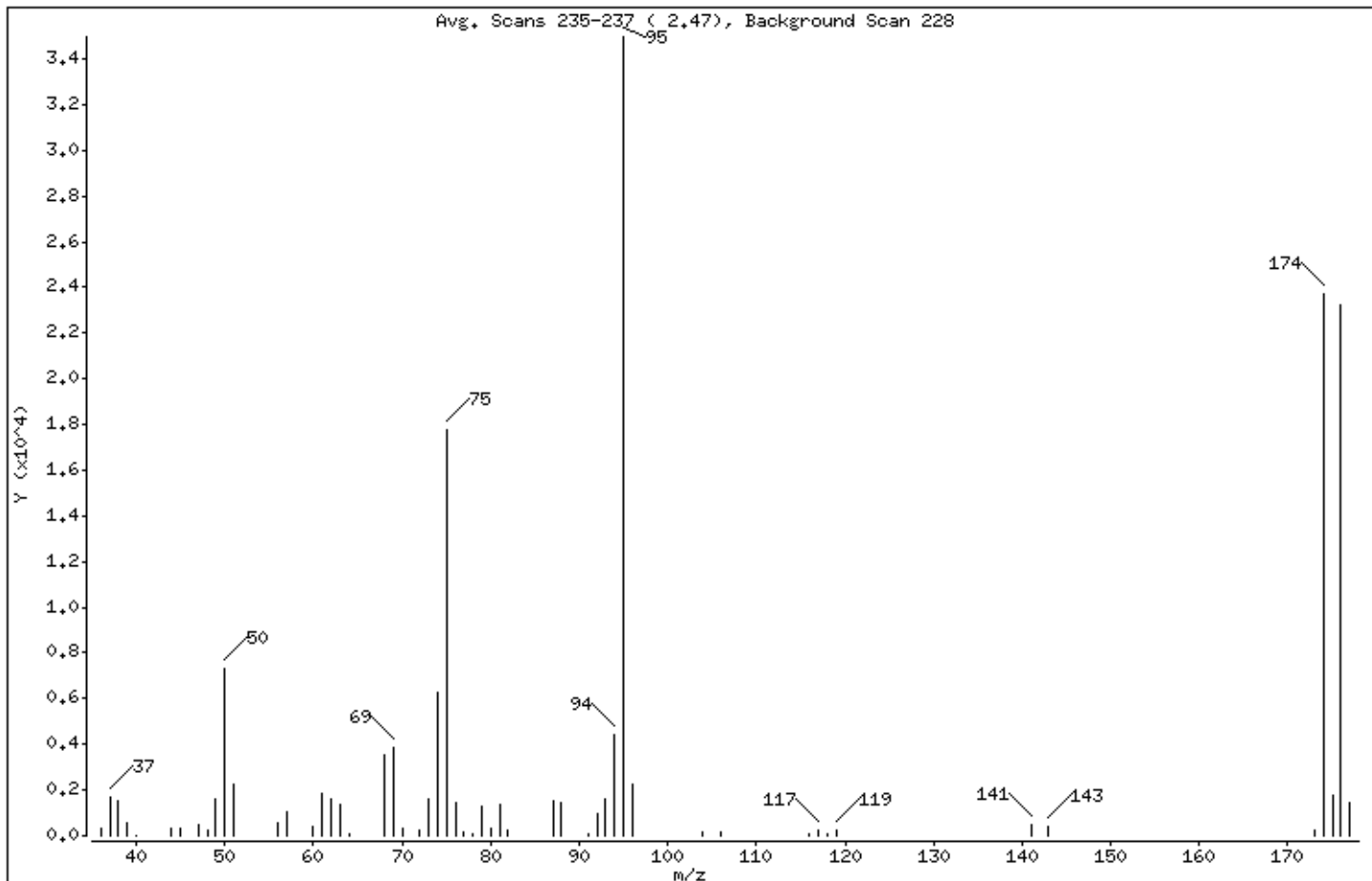
Volume Injected (uL): 1.0

Operator: mjs

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	20.81
75	30.00 - 66.00% of mass 95	50.83
96	5.00 - 9.00% of mass 95	6.53
173	Less than 1.99% of mass 174	0.70 (1.03)
174	50.01 - 120.00% of mass 95	67.89
175	4.00 - 9.00% of mass 174	4.96 (7.31)
176	93.00 - 101.00% of mass 174	66.43 (97.84)
177	5.00 - 9.00% of mass 176	4.24 (6.39)

Date : 05-JUN-2015 06:46

Client ID: BFB

Instrument: msd14.i

Sample Info: 2.0ml #2299-793;BFB;BFB

Volume Injected (uL): 1.0

Operator: mjs

Column phase:

Column diameter: 2.00

Data File: 14060501.d

Spectrum: Avg. Scans 235-237 (2.47), Background Scan 228

Location of Maximum: 95.00

Number of points: 54

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	293	60.00	378	78.00	51	106.00	167
37.00	1692	61.00	1852	79.00	1257	116.00	69
38.00	1516	62.00	1645	80.00	329	117.00	249
39.00	554	63.00	1373	81.00	1349	118.00	72
40.00	20	64.00	55	82.00	264	119.00	203
44.00	282	68.00	3544	87.00	1501	141.00	468
45.00	359	69.00	3879	88.00	1478	143.00	412
47.00	496	70.00	308	91.00	56	173.00	245
48.00	217	72.00	227	92.00	986	174.00	23744
49.00	1605	73.00	1622	93.00	1636	175.00	1735
50.00	7277	74.00	6291	94.00	4403	176.00	23232
51.00	2214	75.00	17776	95.00	34968	177.00	1484
56.00	552	76.00	1470	96.00	2285		
57.00	1029	77.00	151	104.00	180		

Shipping/ Receiving Documents

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 Discrepancies below.

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

For corrections call: **Air Toxics, Ltd. 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.

Alhina
 296 228 N
 MARTIN LIA 48033
 955-1384-8725

CHAIN OF CUSTODY

SOIL GAS / AIR

Chain of Custody # **1547**
 Canyon Dopes Miller Laboratory Willow, Ariz.

Project Information

Project Location: 307 12th Avenue CA Sampler's: MARK ELSER
 Project Name: SWEET LEAF Report To: DEBRA WEBER
 Project Number: 05055, P1.03 EMail: debra@web.com
 Sampling Client: NOVOR APPL. S&M, INC. - Laboratory EMERGENS

Analyse Requested

Laboratory/ Sample Delivery
 Grade:
 Custody Seal:

Sample Number	Sample Number/Description	Date	TIME	Soil Test #	Matrix	SUNMA Canister Collection		Soil Depth	Notes	
						Canister ID	Regulator ID			
1522M0122001E		5/29/15	0500	X		641294	PC00852	-50"	X	70-15 LOW LEVEL
1522M0122002E			0715	X		3049	30396	-30"	X	
1522M01220030			0716	X		11512	30396	-80"	X	
1522M0122004E			0735	X		35738	PC00852	-75"	X	
1522M01220050			0736	X		61001	Reg	-70"	X	
1522M0122006E			0913	X		35333	30508	-70"	X	
1522M0122007E			0940	X		37413	30508	-70"	X	
1522M0122008E			0937	X		513019	Reg	-60"	X	
1522M0122009E			0950	X		921	Reg	-70"	X	
1522M0122010E			0935	X		61112	30508	-65"	X	
1522M0122011E			1200	X		36499	30521	-65"	X	
1522M0122012E			0930	X		1591	30096	-70"	X	

Turnaround Time:

Next Day: 3-5 Day Rush 48 Hour Rush 24 Hour Rush

Shipment Method:

Tracking ID:

GENERAL SAMPLES = INTERIOR AIR SOIL GAS = SCUB STAIRS
 (NEW) 1st CONTAINER / MINOR REPAIR PAUSED. NEW DRUM = 611252, NEW REG = PC00852

Chain of Custody Tracking:

Delivered by: [Signature] Date/Time: 5/29/15 11:15
 Received by: [Signature] Date/Time: 5/29/15 11:15
 Rejected by: _____
 Rejected by laboratory: _____
 Date/Time: _____

1506011 Date/Time: _____

Table 42. Method RSK-175 Water Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
74-86-2	Acetylene	719	99.6	9.8	70	129
106-97-8	Butane	262	97.3	7.3	75	119
124-38-9	Carbon dioxide	441	100.8	6.9	80	122
74-84-0	Ethane	2240	102.6	9.6	74	131
74-85-1	Ethylene	2284	102.5	10.2	72	133
75-28-5	Isobutane	267	97.6	6.6	78	117
74-82-8	Methane	2459	99.2	8.7	73	125
74-98-6	Propane	900	98.1	8.2	74	123

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
630-20-6	1,1,1,2-Tetrachloroethane	1344	97.9	10.5	67	129
71-55-6	1,1,1-Trichloroethane	5436	96.7	9.5	68	125
79-34-5	1,1,2,2-Tetrachloroethane	5273	95.9	10.4	65	127
79-00-5	1,1,2-Trichloroethane	5332	95.9	7.7	73	119
76-13-1	1,1,2-Trifluoro-1,2,2-trichloroethane [Freon-113]	5351	96.1	10	66	126
75-34-3	1,1-Dichloroethane	5422	97	9.7	68	126
75-35-4	1,1-Dichloroethene	3503	97.3	11.9	61	133
96-18-4	1,2,3-Trichloropropane	465	99.6	8	76	124
120-82-1	1,2,4-Trichlorobenzene	4545	98.5	14.5	55	142
95-63-6	1,2,4-Trimethylbenzene	4699	99.2	11.1	66	132

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
106-93-4	1,2-Dibromoethane	4655	98.2	7.9	74	122
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	4572	92.4	9.7	63	121
95-50-1	1,2-Dichlorobenzene	4739	95.7	11	63	129
107-06-2	1,2-Dichloroethane	5467	96.8	10.5	65	128
78-87-5	1,2-Dichloropropane	4729	95.7	8.9	69	123
108-67-8	1,3,5-Trimethylbenzene	4679	98.3	10.4	67	130
106-99-0	1,3-Butadiene	3167	99.8	11.4	66	134
541-73-1	1,3-Dichlorobenzene	4737	97.1	10.9	65	130
142-28-9	1,3-Dichloropropane	165	105.2	14.4	62	148
542-75-6	1,3-Dichloropropene	560	100.7	8.1	77	125
106-46-7	1,4-Dichlorobenzene	4719	95.8	11.8	60	131
123-91-1	1,4-Dioxane	2656	96.5	8.6	71	122
540-84-1	2,2,4-Trimethylpentane [Isooctane]	3008	94.3	8.8	68	121
78-93-3	2-Butanone [MEK]	4635	98.4	10.4	67	130
95-49-8	2-Chlorotoluene	1092	101.9	9.2	74	130
591-78-6	2-Hexanone	4600	95.4	11	62	128
67-63-0	2-Propanol [Isopropyl alcohol]	3069	88.4	12.3	52	125
622-96-8	4-Ethyltoluene	4673	97.9	10.3	67	129
108-10-1	4-Methyl-2-pentanone [MIBK]	4646	98.5	10.5	67	130
67-64-1	Acetone	4600	92.7	11.6	58	128
75-05-8	Acetonitrile	1999	97.3	11.6	63	132
107-02-8	Acrolein [Propenal]	2469	93.8	10.6	62	126
107-13-1	Acrylonitrile	2105	103.7	10.9	71	137
107-05-1	Allyl chloride	2980	101.1	10.1	71	131

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
98-83-9	alpha-Methylstyrene	1976	97.3	10.2	67	128
71-43-2	Benzene	5436	93.8	8.4	69	119
100-44-7	Benzyl chloride	4419	98.7	16.2	50	147
75-27-4	Bromodichloromethane	4682	99.9	9.3	72	128
75-25-2	Bromoform	4638	102.3	12.1	66	139
74-83-9	Bromomethane	2657	98.6	11.8	63	134
106-97-8	Butane	587	96.2	10.9	64	129
75-15-0	Carbon disulfide	4756	95.6	12.7	57	134
56-23-5	Carbon tetrachloride	4202	99.6	10.7	68	132
108-90-7	Chlorobenzene	4652	94.5	8	70	119
124-48-1	Chlorodibromomethane	4628	99.9	10	70	130
75-45-6	Chlorodifluoromethane	559	102.1	14.3	59	145
75-00-3	Chloroethane	5370	94.7	10.6	63	127
67-66-3	Chloroform	5481	95.3	9.3	68	123
74-87-3	Chloromethane	4540	95.2	12.2	59	132
156-59-2	cis-1,2-Dichloroethene	5320	95.6	8.4	70	121
10061-01-5	cis-1,3-Dichloropropene	4691	98.8	9.7	70	128
110-82-7	Cyclohexane	3178	93.5	7.7	70	117
124-18-5	Decane	1982	93.8	7.9	70	118
75-71-8	Dichlorodifluoromethane [Freon-12]	5307	93.6	11.5	59	128
108-20-3	Diisopropyl ether	2309	93.5	8	70	117
64-17-5	Ethanol	2981	91.8	11.1	59	125
141-78-6	Ethyl acetate	2836	96.4	10.5	65	128
100-41-4	Ethylbenzene	5420	96.8	9	70	124
142-82-5	Heptane	3163	95.7	8.9	69	123

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
87-68-3	Hexachlorobutadiene	4551	96.7	13.7	56	138
110-54-3	Hexane	3150	91.6	9.5	63	120
98-82-8	Isopropylbenzene	3022	95.6	9.3	68	124
179601-23-1	m/p-Xylene [3/4-Xylene]	5019	97.3	12.3	61	134
80-62-6	Methyl methacrylate	3037	98.9	9.7	70	128
1634-04-4	Methyl tert-butyl ether [MTBE]	4681	95.5	10	66	126
75-09-2	Methylene chloride	5314	88.8	8.9	62	115
71-36-3	n-Butyl alcohol	1981	97.5	11.7	62	133
104-51-8	n-Butylbenzene	2656	97.7	10.6	66	130
112-40-3	n-Dodecane	1932	104.4	14.1	62	147
103-65-1	n-Propylbenzene	2570	95.7	9	69	123
91-20-3	Naphthalene	2439	97.5	13.4	57	138
111-84-2	Nonane	2617	95.4	10.8	63	128
95-47-6	o-Xylene	5334	96.3	9.7	67	125
111-65-9	Octane	2514	95	8.7	69	121
99-87-6	p-Isopropyltoluene [p-Cymene]	2694	98.1	10.5	67	130
109-66-0	Pentane	712	96.7	11.3	63	131
115-07-1	Propene	3193	96.6	13.3	57	136
135-98-8	sec-Butylbenzene	2665	96.4	9.6	68	125
100-42-5	Styrene	4735	100.1	9	73	127
75-65-0	tert-Butyl alcohol	2997	86.8	20.9	24	150
98-06-6	tert-Butylbenzene	2710	94.3	9.8	65	124
127-18-4	Tetrachloroethene	5432	95.2	9.7	66	124
109-99-9	Tetrahydrofuran	3192	93.7	9.8	64	123
108-88-3	Toluene	5406	92.7	8.8	66	119
156-60-5	trans-1,2-Dichloroethene	5411	95.5	9.5	67	124

Table 43. Method TO-15 Gas Matrix

CAS ID	Analyte	N Records	Mean	Standard Deviation	Lower Control Limit	Upper Control Limit
10061-02-6	trans-1,3-Dichloropropene	4621	104	9.6	75	133
79-01-6	Trichloroethene	5478	96.7	8.7	71	123
75-69-4	Trichlorofluoromethane [Freon-11]	5376	93.7	10.6	62	126
1120-21-4	Undecane	1976	96.1	9	69	123
108-05-4	Vinyl acetate	4599	97.4	13.7	56	139
593-60-2	Vinyl bromide	1054	98.4	9.2	71	126
75-01-4	Vinyl chloride	5445	95.1	10.4	64	127

12/24/2014

Air Toxics Ltd.

TO-14A/TO-15 5&20 SURR Control Limits

Effective Dates 12/24/14 - 06/24/15 For Instruments: msd14.i,msdj.i

Data Point Analysis Dates 06/24/14 - 12/24/14

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
1,2-Dichloroethane-d4	138	68	150	57	126	80
4-Bromofluorobenzene	116	79	123	73	110	85
Toluene-d8	110	87	114	84	106	91

SAMPLE RECEIPT SUMMARY

WORKORDER 1506011BR1

Client
 Ms. Holly Dillon
 AHTNA
 296 12th Street
 Marina, CA 93933

Phone
 831-384-3735

Fax

Date Promised: 09/01/15
Date Completed: 9/1/15
Date Received: 5/29/15
PO#: PO0500288
Project#: 05055.01.09 SITE 12 RIFS

Sales Rep: DV

Total \$: \$ 0.00
Logged By: CC

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Receipt Vac./Pres.</u>	<u>Amount\$</u>
02A	1522M212202F	Modified TO-15 (5&20 ppbv)	5/27/2015	5.9 "Hg	\$0.00
02AA	1522M212202F Lab Duplicate	Modified TO-15 (5&20 ppbv)	5/27/2015	5.9 "Hg	\$0.00
03A	1522M212203D	Modified TO-15 (5&20 ppbv)	5/27/2015	5.5 "Hg	\$0.00
06A	1522M212206F	Modified TO-15 (5&20 ppbv)	5/27/2015	5.9 "Hg	\$0.00
07A	1522M212207F	Modified TO-15 (5&20 ppbv)	5/27/2015	5.3 "Hg	\$0.00
11A	1522M212211F	Modified TO-15 (5&20 ppbv)	5/28/2015	5.9 "Hg	\$0.00
12A	Lab Blank	Modified TO-15 (5&20 ppbv)	NA	NA	\$0.00
13A	CCV	Modified TO-15 (5&20 ppbv)	NA	NA	\$0.00
14A	LCS	Modified TO-15 (5&20 ppbv)	NA	NA	\$0.00
14AA	LCSD	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#: Fort Ord Task #1/20154

BILL TO: Accounts Payable
 AHTNA
 110 West 38th Ave
 Suite 200A
 Anchorage, AK 99503

Analysis Code: TO-15 (5&20)

TERMS: NET 30

Reporting Method: TO-15 (5&20 ppbv) (Sh)-PCE and TCE
 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

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	15 psi
	Final Pressure Dilution Factor	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	15 psi
	Final Pressure Dilution Factor	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		15 psi	
	Final Pressure Dilution Factor	Final Pressure Dilution Factor	Final Pressure Dilution Factor	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		15 psi	
	Final Pressure Dilution Factor	Final Pressure Dilution Factor	Final Pressure Dilution Factor	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 Listing

TO-15 (5&20 ppbv) (Sh)-PCE and TCE

CAS Number	Compound	Detection Limit	Type
79-01-6	Trichloroethene	5.0	
127-18-4	Tetrachloroethene	5.0	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		

Kara McKiernan

From: Holly Dillon [hdillon@ahtna.net]
Sent: Tuesday, March 10, 2015 2:35 PM
To: Kyle Vagadori
Subject: RE: EATL Variance

Thanks I have no objections.

Holly Dillon | Environmental Scientist

Phone 831-384-3735 | Fax 831-384-3930 | Cell 831-324-3299 | hdillon@ahtna.net



Ahtna Engineering Services, LLC

296 12th street | Marina, CA 93933 | www.ahtnaes.com

This email may contain AES confidential, official use only, or proprietary information for the sole use of the intended recipient. Any review or distribution by others is strictly prohibited. Unless stated to the contrary, any opinions or comments are personal to the writer and do not represent the official view of AES. If you have received this e-mail in error, please notify the sender immediately by reply e-mail and then delete this message from your system.

From: Kyle Vagadori [mailto:KyleVagadori@eurofinsUS.com]
Sent: Tuesday, March 10, 2015 2:25 PM
To: Holly Dillon
Subject: EATL Variance

Hi Holly,

Thanks for speaking to me about the start of the project. Can you please confirm that Ahtna has no objections to the included variances?

Kyle Vagadori
Project Manager

Ask me about our new **Helium Shroud!**

<https://www.youtube.com/watch?v=gSc0iM6hY98>

PLEASE NOTE MY CURRENT WEEKLY SCHEDULE:

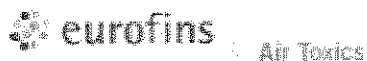
I will be out of the office on Thursdays. During that time my emails will be monitored.

Please contact one of our other Project Managers if you need immediate assistance:

Kelly Buettner (x3378, kellybuettner@eurofinsus.com)

Ausha Scott (x3344, aushascott@eurofinsus.com)

Brian Whittaker (x3355, brianwhittaker@eurofinsus.com)



Eurofins Air Toxics, Inc.
180 Blue Ravine Road, Suite B
Folsom, CA 95630
Direct | 916-605-3339
Tel | 1-800-985-5955 x3339

Please note my new email address: kylevagadori@eurofinsus.com

CONFIDENTIALITY NOTICE: This communication and any accompanying documents are confidential and

4/7/2015

privileged. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If you received this transmission in error, you are advised that any disclosure, copying, distribution, or the taking of any action in reliance upon the communication is strictly prohibited. If you have received this communication in error, please contact Eurofins Air Toxics, Inc. at (916)-985-1000.

Notify us [here](#) to report this email as spam.

S	S	S	S	D	Section 1 - Spec Out				
1	2	3	4		Initials/Instrument/Date	S1: MSD-14 MSD 6/5/15	S2:	S3:	S4:
<input checked="" type="checkbox"/>					Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
<input checked="" type="checkbox"/>					Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
<input checked="" type="checkbox"/>					Manual Integrations included and approved				
<input checked="" type="checkbox"/>					Chain of Custody verified for special comments (add comments below)				
<input checked="" type="checkbox"/>					Non-standard Target sublist printed				

Profile, analyses, reporting, special notes and unusual circumstances:
 S1: Duff QC
 PRT: J-flag to LOD, Blank 1/2 R.L., cont. Lim. for surr, DOD for CO, dup/batch

A	A	A	A	D	Section 2 - Sample Analysis				
1	2	3	4		Initials/Date	A1: DJ 6/5/15	A2:	A3:	A4:
<input checked="" type="checkbox"/>					Internal Standard/Surrogate Recoveries, Dilution Factors, Load Volumes, Initial/Final Pressures, and Canister #s Verified				
<input checked="" type="checkbox"/>					a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg of instrument				
<input checked="" type="checkbox"/>					Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
<input checked="" type="checkbox"/>					12/24 Hr clock time & Hold Time met for all samples				
<input checked="" type="checkbox"/>					Re-analysis of sample(s) have been evaluated for comparability and/or samples have been checked for trends (Inf/Eff).				
<input checked="" type="checkbox"/>					All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds etc)				

Analytical and special notes: 02A, 02AA Dup, 02A, 03A, 06A, 07A, 11A = Full load

D	D	D	D	T	3	Section 3 - Target		Technical Review Needed?		
1	2	3	4			Data Reduction	Circle one: Yes/No		T:	
						Initials/Instrument/Date	D1: MC 6/11/15	D2:	D3:	D4:
<input checked="" type="checkbox"/>						CAR # (if applicable)				
<input checked="" type="checkbox"/>						Spectra Verified (documentation of spectral defense included if applicable)				
<input checked="" type="checkbox"/>						TICs resemble reference spectra/ TICs between sample dups. are consistent (if applicable)				
<input checked="" type="checkbox"/>						Lab Narrative is correct				
<input checked="" type="checkbox"/>						TPH/NMOC calculations complete and included in folder				

Special notes: 1. J flag to LOD
2. DOD 8/24/15

A	3	Section 4- Atlas Data Entry			Lumen verified and included in folder		Circle one: Yes/No		
1	T	Initials/Date:	MC 6/11/15	3 rd Tier:	(needed only for DOD or per client request) ED 6/11/15				
<input checked="" type="checkbox"/>		Sample Discrepancy Report (SDR) complete and approved (if applicable)							
<input checked="" type="checkbox"/>		Manually entered results are checked							
<input checked="" type="checkbox"/>		At least one result per sample is verified against Target quant sheets							
<input checked="" type="checkbox"/>		Appropriate data qualifier flags are applied							
<input checked="" type="checkbox"/>		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

Workorder # :					Reason for Reissue: <i>Revise to fly between RL and MDL instead of LOD</i>					
<i>1506011BR1</i>										
W	T	3T	Q							
<input checked="" type="checkbox"/>				Reissue Request form Present						
<input checked="" type="checkbox"/>				Client or QA or Lab contact present with reason for reissue						
<input checked="" type="checkbox"/>				Review all affected data						
<input checked="" type="checkbox"/>				Report header has correct R1, R2 etc						
<input checked="" type="checkbox"/>				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)						
<input checked="" type="checkbox"/>				Date for Reissue in Report Header matches date in Lab Narrative						
<input checked="" type="checkbox"/>				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)						
<input checked="" type="checkbox"/>				Corrective Action issued - #						
<input checked="" type="checkbox"/>				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 <small>* 3rd Tier Report Review is for DoD & Client Specific projects only</small> (Initials/Date)			QA Review (Initials/Date)		
<i>mc 9/1/15</i>					<i>65 9/1/15</i>					

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 <small>* 3rd Tier Report Review is for DoD & Client Specific projects only</small> (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

ATTACHMENT 5

VALIDATION SUMMARY REPORT

Validation Summary Report

Supplement No. 1, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California

Michaels and REI Indoor Investigation at Site 12

Prepared by:

Ahtna Environmental Inc.
296 12th Street
Marina, California 93933-6001

June 25, 2015 (revised September 8, 2015)

Project No. 05055.01.09

Validation Summary Report

Supplement No. 1 Remedial Investigation/Feasibility Study Addendum
Michaels and REI Indoor Investigation at Site 12
Former Fort Ord, California

June 25, 2015 (revised September 8, 2015)
Project No. 05055.01.09



Christopher Ohland
Program Chemist

**Validation Summary Report
Supplement No. 1 Remedial Investigation/Feasibility Addendum
Michaels and REI Indoor Investigation at Site 12
Former Fort Ord, California**

Project No. 05055.01.09

This document was prepared by Ahtna Environmental Inc. at the direction of the U.S. Army Corps of Engineers (USACE) for the sole use of the U.S. Department of the Army (Army) and regulatory agencies, the only intended beneficiaries of this work. No other party should rely on the information contained herein without prior written consent of the USACE and Army. This report and the interpretations, conclusions, and recommendations contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

TABLE OF CONTENTS

	Page
ABBREVIATIONS.....	V
1.0 INTRODUCTION	1
2.0 SUMMARY DATA QUALITY ASSESSMENT	2
2.1 SAMPLE PRESERVATION AND HOLDING TIME.....	2
2.2 INSTRUMENT CALIBRATION.....	3
2.3 METHOD AND AMBIENT BLANKS	3
2.4 SURROGATES AND INTERNAL STANDARDS	3
2.5 LABORATORY CONTROL SAMPLES	4
2.6 TARGET COMPOUND IDENTIFICATION	4
2.7 ANALYTICAL SENSITIVITY	4
3.0 FIELD QC SAMPLES	5
3.1 FIELD DUPLICATES.....	5
4.0 DEVIATIONS FROM THE QAPP	5
5.0 RECONCILIATION OF DATA QUALITY OBJECTIVES	6
5.1 REJECTED DATA.....	6
5.2 USABILITY.....	6
6.0 CONCLUSIONS AND RECOMMENDATIONS.....	7
6.1 CORRECTIVE ACTIONS.....	7
7.0 REFERENCES	8

TABLES

Table 1	Sample Cross Reference
Table 2	Surrogate Spike Recovery Deficiencies
Table 3	Surrogate Spike Control Limits
Table 4	Field Duplicate Precision
Table 5	Laboratory Variances
Table 6	Qualified Sample Results
Table 7	Summary of Validated Results

ABBREVIATIONS

Ahtna	Ahtna Environmental, Inc.
Army	United States Department of the Army
CQC	Contractor's Quality Control
DOD	Department of Defense
ELAP	Environmental Laboratory Accreditation Program
FSP	Field Sampling Plan
Hg	Mercury
LCS	Laboratory Control Sample
MDL	Method Detection Limit
MS	Matrix spike
MSD	Matrix spike duplicate
%	Percent
PAL	Project Action Levels
PCE	Tetrachloroethene
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
RL	reporting limit
RPD	Relative Percent Difference
TCE	Trichloroethene
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

This Validation Summary Report presents Level III and Level IV data validation results for samples collected during the Michaels and REI Indoor Investigation at Site 12 for the Supplement No. 1 Remedial Investigation/Feasibility Study Addendum (RI/FS Addendum). Data review was performed in accordance with the procedures specified in the following documents:

- *EM-200-1-10, Guidance for Evaluating Performance-based Chemical Data (United States Army Corps of Engineers [USACE], 2005)*
- *Quality Assurance Project Plan/Field Sampling Plan (QAPP/FSP), Former Fort Ord, California, Final Revision 0, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12. September. (United States Department of the Army [Army], 2013)*
- *The Department of Defense (DOD) Quality Systems Manual (QSM) for Environmental Laboratories Version 4.2, October. (DOD, 2010)*

Each of the analytical results from the monitoring event were subjected to Level III review, which comprises an evaluation of Quality Control (QC) summary results for sample holding times, initial and continuing calibrations, surrogates, internal standards, laboratory duplicates, laboratory control samples (LCS), matrix spike and matrix spike duplicate (MS/MSD) samples, method blanks, calibration blanks, and field duplicate samples, as applicable.

Additionally, to confirm sample quantitation and identification, a Level IV evaluation of the QC summary forms and the raw data was performed on a minimum 10 percent (%) of the sample results. A sample cross reference, including sample identification numbers and level of review is presented as Table 1. Copies of the chain of custodies and laboratory reports are included as Appendix 1.

Table 1: Sample Cross Reference

Lab Sample ID	Field Sample Name	Site Location	Matrix - QC Type	Parent Sample ID	Sampled	Level of Review	Tests Performed
1506011A-01A	1522M212201F	AMBIENT AIR	AA - N		05/27/15 05:20	Level III	TO-15 MOD LL
1506011A-04A	1522M212204F	IA-12-26	IA - N		05/27/15 07:35	Level III	TO-15 MOD LL
1506011A-05A	1522M212205D	IA-12-26	IA - FD	1522M212204F	05/27/15 07:36	Level IV	TO-15 MOD LL
1506011A-08A	1522M212208F	IA-12-27	IA - N		05/27/15 09:37	Level III	TO-15 MOD LL
1506011A-09A	1522M212209F	IA-12-29	IA - N		05/27/15 09:50	Level III	TO-15 MOD LL
1506011A-10A	1522M212210F	AMBIENT AIR	AA - N		05/28/15 07:35	Level III	TO-15 MOD LL
1506011A-12A	1522M212212F	IA-12-28	IA - N		05/28/15 09:30	Level III	TO-15 MOD LL
1506011B-02A	1522M212202F	SS-12-26	SS - N		05/27/15 07:15	Level III	TO-15 MOD
1506011B-03A	1522M212203D	SS-12-26	SS - FD	1522M212202F	05/27/15 07:16	Level III	TO-15 MOD

Lab Sample ID	Field Sample Name	Site Location	Matrix - QC Type	Parent Sample ID	Sampled	Level of Review	Tests Performed
1506011B-06A	1522M212206F	SS-12-27	SS - N		05/27/15 09:13	Level III	TO-15 MOD
1506011B-07A	1522M212207F	SS-12-29	SS - N		05/27/15 09:42	Level III	TO-15 MOD
1506011B-11A	1522M212211F	SS-12-28	SS - N		05/28/15 09:20	Level III	TO-15 MOD

2.0 SUMMARY DATA QUALITY ASSESSMENT

The overall quality of the data was acceptable. Sample analysis for United States Environmental Protection Agency (USEPA) Test Method TO-15 Modified and TO-15 Modified Low-level were performed by Eurofins Air Toxics Inc. (Eurofins) in Folsom, California. Eurofins Folsom laboratory is currently certified through the DOD Environmental Laboratory Accreditation Program (ELAP) number ADE - 1451.

Level III review was performed on 100% of the data from this monitoring event using Ahtna Environmental Inc.'s automated data review program. Flagging conventions specified in the QAPP were incorporated with the program's reference library to assess compliance with project requirements.

The data review program was used as an electronic validation tool for the following QC checks:

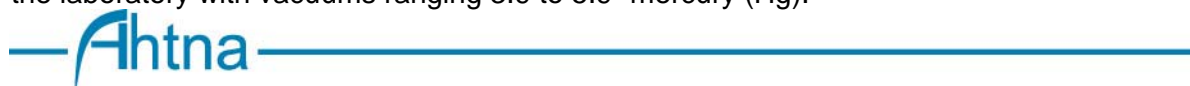
- Holding Times
- Surrogates
- Laboratory Control Samples
- Method Blank Contamination
- Field Blank Contamination
- Laboratory Duplicates
- Field Duplicates

Initial, continuing calibration, instrument tuning and internal standards were validated manually.

For the monitoring event, an additional Level IV review was performed on 10% of the results (one sample). The Level IV review included the elements of the Level III review plus target compound identification, target compound quantitation, and an evaluation of the raw data and incorporated QC criteria from the QAPP. The findings of the Level III and Level IV data review are presented in the following sections.

2.1 SAMPLE PRESERVATION AND HOLDING TIME

Samples were properly collected and stored in SUMMA canisters. Canisters were received at the laboratory with vacuums ranging 3.9 to 5.9" mercury (Hg).



The 30-day holding time criteria for sub-slab gas and indoor and ambient air samples were met.

2.2 INSTRUMENT CALIBRATION

Instrument tuning, initial calibration, second source, and continuing calibrations met the method specified frequency, accuracy, and precision requirements for the TO-15 Modified protocol. Similarly, they were met for the TO-15 Modified Low-level protocol, except trichloroethene (TCE) and tetrachloroethene (PCE). The laboratory met the Final 2015 Soil Gas QAPP requirements; whereas, the 2013 RI/FS Addendum QAPP/FSP is the enforcement document.

Under the 2013 RI/FS Addendum QAPP/FSP, the initial and continuing calibrations for TCE were marginally outside the QAPP control limits for all associated samples analyzed under the low-level protocol. For PCE results analyzed with the low-level protocol, continuing calibrations were marginally outside the QAPP control limits for samples 1522M212209F, 1522M212210F, and 1522M212212F. All associated sample results are reported as non-detected. TCE results (all low-level samples) and PCE results (low-level samples 1522M212209F, 1522M212210F, and 1522M212212F) have been qualified as estimates and flagged “UJ.”

2.3 METHOD AND AMBIENT BLANKS

Method blanks were analyzed at the frequency required by the QAPP of one per analytical batch. No target compounds were detected in the method blanks. Outdoor ambient air samples were also absent target compounds.

2.4 SURROGATES AND INTERNAL STANDARDS

Surrogates and internal standards were added to investigative and QC samples as required by the QAPP.

Reported recoveries of surrogate compounds for project samples were within the QAPP specified acceptance limits, with the exceptions listed in Table 2. Control limits are shown in Table 3. In all samples except the laboratory blank (1506011A-13B) only one of three surrogates slightly exceed the laboratory derived upper control limit (all samples were within the method published limits (70% – 130%). No action was taken to qualify the sample results for this minor deficiency.

Table 2: Surrogate Spike Recovery Deficiencies

Work Order No.	Matrix/ QC Type	Sample ID	SUR 01	SUR 02	SUR 03	--	--
1506011A	AIR / LCS	1506011A-15A	126				
1506011A	AIR / MB	1506011A-13A	130				
1506011A	AIR / MB	1506011A-13B	127	81			
1506011A	IA / FD	1522M212205D	127				

Table 2: Surrogate Spike Recovery Deficiencies

Work Order No.	Matrix/ QC Type	Sample ID	SUR 01	SUR 02	SUR 03	--	--
1506011A	IA / LR	1522M212205DDUP	129				
1506011A	IA / N	1522M212209F	128				
1506011A	IA / N	1522M212201F	128				

Table 3: Surrogate Spike Control Limits

TO – 15 Control Limits			
Surrogate	Name	QC Limits	
		Indoor \ Ambient Air	Sub-slab Gas
SUR01	1,2-Dichloroethane-d4	80 – 125	68 – 138
SUR02	4-Bromofluorobenzene	83 – 116	79 – 116
SUR03	Toluene-D8	90 – 108	87 – 110

Internal standard retention times and area counts were within the method specified acceptance criteria.

2.5 LABORATORY CONTROL SAMPLES

LCS and LCS duplicates were analyzed at the frequency required by the QAPP of one per analytical batch. The %R and relative percent differences (RPD) for laboratory control sample duplicates were within QAPP specified acceptance limits.

2.6 TARGET COMPOUND IDENTIFICATION

Chromatograms and mass spectra from the raw data associated with one project sample was evaluated as part of the Level IV review. Target compound identifications and quantitations were found to be acceptable. The Level IV review included both recalculation of reported results and review of the raw data for transcription errors. Results evaluated as part of the Level IV review were re-calculated and verified as being correctly reported by the laboratory.

2.7 ANALYTICAL SENSITIVITY

Laboratory reporting limits (RL) reviewed as part of the Level III review met the QAPP specified requirements.

The raw data associated with one project sample was evaluated for instrument sensitivity as part of the Level IV review. The instrument sensitivity was found to be sufficient to support project action levels (PAL; also known as screening levels).

Sample results are not qualified based on raised RLs; however, a deficiency will be noted when the project action level (PAL) is not achieved. Procedural dilutions occur when the sample

canister is prepared, when target compounds exceed the calibration range, and when non-target analytes saturate the detector.

RLs were elevated due to procedural dilutions (range 1.55 to 2.51X) because the Summa canisters required additional make-up gas to achieve the 5 psi needed for sample analysis. PALs were met for indoor air non-detected results (based on the LOD) and sub-slab non detected results (based on the MDL).

3.0 FIELD QC SAMPLES

3.1 FIELD DUPLICATES

A total of 2 field duplicate sample pairs were collected and analyzed. The following equation was used to calculate the RPD:

$$RPD = \frac{D1 - D2}{\left(\frac{1}{2}\right)(D1 + D2) \times 100}$$

Where:

D1 = primary sample result

D2 = duplicate sample result

The RPDs between the primary and duplicate samples were evaluated and were below the QAPP specified 20% acceptance criteria or had an absolute value difference of less than twice the RL. A summary of the field duplicate relative percent differences is presented in Table 4.

Table 4: Field Duplicate Precision

Sample ID	Analyte	LOQ	Native	Duplicate	RPD
1522M212202F	Tetrachloroethene	85	520	530	1.9%
1522M212204F	Tetrachloroethene	1.1	1.9	2.0	5.0%

4.0 DEVIATIONS FROM THE QAPP

Project samples collected and submitted during the monitoring period were analyzed as described in the 2015 Soil Gas QAPP. Laboratory reporting limits met the QAPP specified requirements. The laboratory should have followed the 2013 RI/FS Addendum QAPP/FSP.

The laboratory had two variances to the DoD QSM 5.0 as listed in the table below.

Table 5: Laboratory Variances

Requirement	TO-15 DoD QSM 5.0	ATL Modifications
DoD QSM 5.0 Module 4 (1.7.1.1.j, 1.5.2.1.b, 1.5.2.2.c) Surrogates	Quantification of surrogates requires a multi-point calibration and determination of DL and LOQ.	Quantification achieved using a multipoint calibration at a single concentration, analogous to internal standards. DLs and LOQs are not established.
DoD QSM 5.0 Section 2.2.1 PT Requirement	Two PT samples per year for each analyte-matrix-method combination are required.	Not all analyte-matrix-method combinations on the scope of accreditation are available from the current PT providers.

5.0 RECONCILIATION OF DATA QUALITY OBJECTIVES

The sample results generated were subject to a rigorous 100% Level III and 10% Level IV raw data review, as described in Section 1.0. The data review verified that the data is of a known quality that is in compliance with QAPP criteria, the general guidance of the DOD QSM Version 4.2, and the published analytical methods.

5.1 REJECTED DATA

No data gaps were identified as a result of the validation effort. No data generated for the monitoring period was rejected.

5.2 USABILITY

The data are considered usable for the intended purpose as reported by the laboratory. Data validation qualifiers were applied as shown in Table 6. A summary of the validated results is shown in Table 7.

Table 6: Qualified Data Results

Field Sample Name	Analytical Method	Chemical Name	Lab Result	DV Value	DV Qualifier	DV Basis ¹
1522M212209F	TO-15 MOD LL	Tetrachloroethene	0.56 U	0.56	UJ	CCH
1522M212210F	TO-15 MOD LL	Tetrachloroethene	0.55 U	0.55	UJ	CCH
1522M212212F	TO-15 MOD LL	Tetrachloroethene	0.55 U	0.55	UJ	CCH
1522M212201F	TO-15 MOD LL	Trichloroethene	0.42 U	0.42	UJ	ICR
1522M212204F	TO-15 MOD LL	Trichloroethene	0.43 U	0.43	UJ	ICR
1522M212205D	TO-15 MOD LL	Trichloroethene	0.45 U	0.45	UJ	ICR
1522M212208F	TO-15 MOD LL	Trichloroethene	0.42 U	0.42	UJ	ICR
1522M212209F	TO-15 MOD LL	Trichloroethene	0.44 U	0.44	UJ	ICR
1522M212210F	TO-15 MOD LL	Trichloroethene	0.44 U	0.44	UJ	ICR
1522M212212F	TO-15 MOD LL	Trichloroethene	0.44 U	0.44	UJ	ICR

¹ CCH: high continuing calibration factor; ICR: RSD failed in the initial calibration

Table 7: Summary of Validated Results

Lab Sample ID	Field Sample Name	Matrices	Test Method	Sample Collected	Concentration ($\mu\text{g}/\text{m}^3$)	
					PCE	TCE
1506011A-01A	1522M212201F	Ambient Air	TO-15 MOD LL	5/27/2015	0.52 U	0.42 UJ
1506011A-04A	1522M212204F	Indoor Air	TO-15 MOD LL	5/27/2015	1.9	0.43 UJ
1506011A-05A	1522M212205D	Indoor Air	TO-15 MOD LL	5/27/2015	2.0	0.45 UJ
1506011A-08A	1522M212208F	Indoor Air	TO-15 MOD LL	5/27/2015	0.53 U	0.42 UJ
1506011A-09A	1522M212209F	Indoor Air	TO-15 MOD LL	5/27/2015	0.56 UJ	0.44 UJ
1506011A-10A	1522M212210F	Ambient Air	TO-15 MOD LL	5/28/2015	0.55 UJ	0.44 UJ
1506011A-12A	1522M212212F	Indoor Air	TO-15 MOD LL	5/28/2015	0.55 UJ	0.44 UJ
1506011B-02A	1522M212202F	Sub-slab Gas	TO-15 MOD	5/27/2015	520	14 U
1506011B-03A	1522M212203D	Sub-slab Gas	TO-15 MOD	5/27/2015	530	14 U
1506011B-06A	1522M212206F	Sub-slab Gas	TO-15 MOD	5/27/2015	120	14 U
1506011B-07A	1522M212207F	Sub-slab Gas	TO-15 MOD	5/27/2015	42 J	14 U
1506011B-11A	1522M212211F	Sub-slab Gas	TO-15 MOD	5/28/2015	21 U	14 U

6.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical data quality assessment for the sample results generated for the First Quarter 2015 monitoring period established that the overall project requirements and completeness levels specified in the QAPP were met.

6.1 CORRECTIVE ACTIONS

No field corrective actions are recommended on the basis of the data validation. The laboratory should be instructed to follow the appropriate QAPP requirements for future sampling events during the Contractor's Quality Control (CQC) preparatory meeting.

7.0 REFERENCES

The Department of Defense (DOD) Quality Systems Manual (QSM) for Environmental Laboratories Version 4.2, October. (DOD, 2010) U.S. Army Corps of Engineers (USACE), 2005. EM-200-1-10, Guidance for Evaluation Performance Based Chemical Data. June.

Quality Assurance Project Plan/Field Sampling Plan (QAPP/FSP), Former Fort Ord, California, Final Revision 0, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12. September. (United States Department of the Army [Army], 2013)

United States Army Corps of Engineers (USACE). EM-200-1-10, Guidance for Evaluating Performance-based Chemical Data. (USACE, 2005)

ATTACHMENT 6

HUMAN HEALTH RISK ASSESSMENT



**Final Supplement No. 1
Remedial Investigation/Feasibility Study Addendum
at Sites 2 and 12, Former Fort Ord, California**

Attachment 6 – Human Health Risk Assessment

Prepared for:

Department of the Army
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814-2924

Prepared by:

Ahtna Environmental Inc.
296 12th Street
Marina, California 93933-6001

USACE Contract # W91238-14-C-0048

A handwritten signature in black ink, appearing to read 'Estelle Shiroma', written over a horizontal line.

Estelle Shiroma, D.Env
Senior Project Manager, Risk Assessor

January 2016

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	IV
1.0 INTRODUCTION	1
2.0 HAZARD ASSESSMENT.....	2
3.0 EXPOSURE ASSESSMENT	3
3.1 CONCEPTUAL SITE MODEL	3
3.2 EXPOSURE SETTING	3
3.3 EXPOSURE PATHWAYS AND RECEPTORS.....	3
3.3.1 Relevant Exposure Pathways.....	4
3.3.2 Potentially Exposed Populations.....	4
3.3.2.1 <i>Indoor Retail Worker</i>	4
3.3.2.2 <i>Indoor Child and Adult Shopper</i>	5
3.3.4 Exposure Assumptions	5
3.3.5 Quantification of Exposure	5
3.3.6 Indoor Air Concentrations of VOCs	5
3.3.7 Inhalation Intake Factor	6
4.0 TOXICITY ASSESSMENT	7
4.1 NON-CANCER REFERENCE CONCENTRATIONS	7
4.2 MUTAGENIC MODE OF ACTION.....	7
4.3 INHALATION UNIT RISK FACTORS	7
5.0 RISK CHARACTERIZATION.....	9
5.1 NON-CANCER HEALTH EFFECTS CALCULATION METHODOLOGY	9
5.2 CANCER RISK CALCULATION METHODOLOGY	10
5.3 RISK CHARACTERIZATION RESULTS	10
5.3.1 Michaels Indoor Retail Worker	11
5.3.2 Michaels Indoor Child and Adult Shopper	11
5.3.3 REI Indoor Retail Worker.....	12
5.3.4 REI Child and Adult Shopper	13
5.4 DISCUSSION OF RISK RESULTS.....	13
5.5 UNCERTAINTY DISCUSSION	14
5.5.1 Data Evaluation	14
5.5.2 Exposure Assessment	15
5.5.3 Toxicity Assessment.....	16
6.0 SUMMARY AND CONCLUSIONS	17
7.0 REFERENCES.....	18

FIGURE

6-1 Risk Assessment Conceptual Site Model

TABLES

6-1 Exposure Parameter Values for Receptors Evaluated in the Risk Assessment

6-2 Inhalation Intake Factor and Risk Assessment Equations

6-3 Toxicity Factors

6-4 PCE Risk Calculations for Michaels and REI Indoor Retail Worker

6-5 PCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

6-6 TCE Risk Calculations for Michaels and REI Indoor Retail Worker

6-7 TCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

6-8 Summary of Cancer Risks and Non-cancer Hazards

ACRONYMS AND ABBREVIATIONS

<	less than
µg/g	microgram per gram
µg/L	micrograms per liter
µg/m ³	micrograms per cubic meter
(µg/m ³) ⁻¹	the inverse of µg/m ³ or 1 divided by µg/m ³
µg/mg	micrograms per milligram
ADAF	age dependent adjustment factors
AES	Ahtna Engineering Services
Ahtna	Ahtna Environmental Inc.
AT	averaging time
atm-m ³ /mol	atmosphere cubic meter per mole
bgs	below ground surface
CA	Contaminant concentration in air
Cal/EPA	California Environmental Protection Agency
CF	conversion factor
CFR	Code of Federal Regulations
cm	centimeter
COPC	Chemical of Potential Concern
CSM	Conceptual Site Model
DTSC	Department of Toxic Substances Control
ED	exposure duration
EPC	Exposure Point Concentration
ET	exposure time
g/mol	grams per mole
HHRA	human health risk assessment
HI	Hazard Index
HQ	Hazard Quotient
IA-SL	indoor air screening level
IF	Intake Factor
IRIS	Integrated Risk Information System
IUR	Inhalation Unit Risk
LOD	Limit of Detection
mg/L	milligrams per liter
mg/m ³	milligrams per cubic meter
NCEA	National Center for Environmental Assessment (NCEA)
NCP	National Oil and Hazardous Substances Pollution Contingency Plan (or National Contingency Plan)
ND	not detected
OEHHA	Office of Environmental Health Hazards Assessment
OSWER	Office of Solid Waste and Emergency Response
PCE	perchloroethene <i>or</i> tetrachloroethene
RfC	Reference Concentration
RI/FS	Remedial Investigation/Feasibility Study
RL	Reporting Limit
RME	Reasonable Maximum Exposure

RI/FS Addendum Supplement No. 1 – Attachment 6

Sites 2/12	Sites 2 and 12
TCE	trichloroethene
UCL	Upper Confidence Limit
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

1.0 INTRODUCTION

This human health risk assessment (HHRA) has been prepared for the *Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Supplement No. 1, Former Fort Ord, California* (RI/FS Addendum Supplement No. 1; Ahtna, 2015). Sites 2 and 12 (2/12) has been developed as a regional retail shopping center bordered by Highway 1 to the west, Imjin Parkway to the north, and 2nd Avenue to the east. The south area of the existing shopping center is currently being developed as a multi-theater complex.

The objective of the risk assessment was to evaluate potential human exposures and health risks using indoor air data collected with co-located sub-slab soil gas data at Michaels and REI to supplement data collected in October 2013 (AES, 2015). The data were collected by Ahtna Environmental Inc. (Ahtna) in accordance with an approved Work Plan (AES, 2013) during a supplemental RI/FS investigation conducted in May 2015 to confirm whether indoor air concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) are similar to concentrations that were greater than indoor air screening levels (RI/FS Addendum Supplement No. 1, Table 1) and whether sub-slab concentrations of PCE and TCE indicate a potential vapor intrusion pathway or Army activity-related sub-slab sources of PCE and TCE.

A four-step process was used to conduct the HHRA, consistent with U.S. Environmental Protection Agency (USEPA) and California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC) guidance is described briefly below.

Hazard Identification. This step includes identification and tabulation of sampling data for use in the subsequent steps of the HHRA process. The data were examined for data quality to verify that the data were appropriate for use in a quantitative risk assessment. In the Hazard Identification step, chemicals that may result in adverse effects to human health are identified as Chemicals of Potential Concern (COPCs).

Exposure Assessment. The exposure assessment describes the current land use and exposure setting, identifies potential exposure scenarios and potentially complete exposure pathways, identifies potential exposure points, estimates exposure point concentrations (EPCs), and estimates chemical intakes.

Toxicity Assessment. In this step, toxicity criteria (e.g., non-cancer chronic reference doses and cancer slope factors) are identified and compiled for the COPCs at the Site. In the absence of toxicity criteria for a particular COPC, the chemical was evaluated using toxicity criteria for a surrogate chemical with similar chemical and physical properties, where appropriate, or qualitatively describing toxic effects.

Risk Characterization. The results of the exposure analysis were then combined with toxicity criteria to estimate risk. The significance of potential adverse health outcomes was expressed as a Hazard Index representing a numerical ratio of the intake to a reference criterion for non-carcinogens, and as a probability statement in terms of incremental risk cancer outcomes for carcinogens.

These four steps are discussed in Section 2.0 through Section 5.0 of this report. Conclusions of the HHRA are summarized in Section 6.0, and the cited references are presented in Section 7.0. Figures and tables follow this report.

2.0 HAZARD ASSESSMENT

The purpose of the hazard assessment is to identify those COPCs that will be quantitatively assessed in the HHRA. The chemicals evaluated in this HHRA were PCE and TCE, selected because concentrations in indoor air data at Michaels and REI exceeded screening levels during the October 2013 investigation (AES, 2015). The data set evaluated in this HHRA consisted of indoor air data collected with co-located sub-slab soil gas samples by Ahtna in May 2015, as discussed in Section 2.0 of the RI/FS Addendum Supplement No. 1.

Analytical results for PCE and TCE analyzed in indoor air and sub-slab soil gas at Michaels and REI in 2013 and 2015 are summarized in RI/FS Addendum Supplement No. 1 Tables 2 and 3, respectively. RI/FS Addendum Supplement No. 1 Table 4 presents ambient air PCE and TCE results, which were reported as not detected at two sampling locations, as discussed in Section 3.0 of the RI/FS Addendum Supplement No. 1.

3.0 EXPOSURE ASSESSMENT

In evaluating the potential human health risks posed by a Site, it is necessary to identify the populations that may potentially be exposed to the chemicals present, and to determine the pathways by which these exposures may occur. Identification of the potentially exposed populations requires evaluating the human activity and anticipated land-use at the Site within the context of a conceptual site model (CSM).

USEPA (1991) identifies three components of an exposure assessment: (1) characterization of the exposure setting, (2) identification of the complete exposure pathways and potential receptors, and (3) quantification of the magnitude of exposures. A characterization of the exposure setting is based on a discussion of current and future land uses. The conditions for the identification of complete exposure pathways and potential receptors as a requirement for exposure are presented in a discussion of site-specific exposure scenarios. The quantification of exposures is based on the development of exposure point concentrations and the estimation of chemical intakes.

3.1 Conceptual Site Model

A CSM for potential exposure pathways is used to show the relationship between a chemical source, exposure pathway, and potential receptor at a site. The CSM identifies all potential or suspected chemical sources, potentially impacted media, and potential receptors. It also identifies the potential human exposure routes for contacting impacted media. These source-pathway-receptor relationships provide the basis for the quantitative exposure assessment. Only those complete source-pathway-receptor relationships are included in the quantitative risk evaluation. The risk assessment CSM for the Site is shown on Figure 6-1.

3.2 Exposure Setting

The exposure setting is based on current and future land use of Sites 2/12 as a retail shopping center and is focused on two retail locations: Michaels on the west side of the shopping center and REI, adjacent to Target, on the north side of the shopping center as shown on Figure 1 of the RI/FS Addendum Supplement No. 1. The retail shopping center is 365,000 square feet in area and currently consists of two main one-story buildings housing multiple stores. Best Buy, Old Navy, Kohl's, Bed Bath & Beyond, Michaels and Party City occupy the west side of the shopping center, bordered by Highway 1. Target is the main occupant of the building on the north side of the shopping center adjacent to Imjin Parkway; Famous Footwear, an empty space, and REI occupy the retail spaces to the east of Target. A multi-theater cinema complex was under construction October 2014 through October 2015 and is now open at the south side of the shopping center. The shopping center has a paved asphalt parking lot with landscaping in limited areas. Potentially exposed populations were identified based on the baseline scenario, where current site conditions are maintained with existing buildings.

3.3 Exposure Pathways and Receptors

Exposure to chemicals in the environment is determined to occur when certain conditions are met. These conditions are summarized as a complete exposure pathway, which is composed of four components: 1) a source and mechanism of chemical release, 2) a retention or transport medium (in cases where chemical dispersion is observed, multiple media may be affected), 3) an exposure point

(that is, a setting where potential human contact with the chemical-affected medium or media occur), and 4) a route of exposure at the exposure point (for example, inhalation). A complete exposure pathway is present when these four components are present, and these components are used to describe potential exposure scenarios.

The source of sub-slab PCE and TCE is presumed to be a soil gas plume originating from surface disposal of those compounds near the former Directorate of Logistics Automotive Yard and the former Cannibalization Yard while Fort Ord was still an active military installation (AES, 2015). These facilities were located in the area of the retail shopping center parking lot. The various chemical and physical properties of the COPCs account for their transport and fate. The potential environmental media at the Site that may contribute to exposures include soil, groundwater, outdoor air, and indoor air. Potential release and transport mechanisms include volatilization, diffusion, advection, and airborne dispersion of volatile emissions. These mechanisms account for the unique potential exposure pathways associated with specific chemicals. For this HHRA, inhalation exposures to sub-slab PCE and TCE in indoor air were evaluated.

Based on the current and future land uses at the Site, potentially exposed populations were identified for the baseline risk assessment. The potential human receptors associated with exposure to COPCs at the shopping center are described below.

3.3.1 Relevant Exposure Pathways

Retail workers and shoppers could potentially be exposed to compounds migrating from soil gas into indoor air via the inhalation pathway. Risks to these receptors were evaluated for the conservative scenario in which no further action is taken to address Site conditions (i.e., baseline conditions would continue indefinitely). The inhalation pathway would result in the highest exposure to potential receptors. Other exposure pathways, such as incidental ingestion and dermal contact, are not applicable to this HHRA.

3.3.2 Potentially Exposed Populations

Based on the current land use, current and future exposed populations under baseline conditions include an Indoor Retail Worker and the Indoor Child and Adult Shopper. Outdoor exposures were not evaluated for these receptors because indoor air exposures provide a more conservative estimate of risk. Indoor air is contained air, whereas VOCs in outdoor air are diluted in moving air. The Retail Worker and Indoor Child and Adult Shopper receptors and the exposure pathways that are considered complete are described below. Values for the exposure parameters for these Baseline Scenario receptors are presented in Table 6-1.

3.3.2.1 Indoor Retail Worker

The Indoor Retail Worker is assumed to spend his/her days primarily indoors, working in a retail store. For conservativeness, the building is assumed to be climate-controlled (i.e., air-conditioning and heating) with no open windows. Inhalation of volatile emissions from soil gas in indoor air is the complete exposure pathway that was evaluated for the Indoor Retail Worker. It is assumed that this receptor works on-Site 8 hours per day (hours/day), 250 days per year (days/year) for 25 years.

3.3.2.2 Indoor Child and Adult Shopper

For the shopper receptor, information relevant to a local resident who patronizes the regional shopping center was incorporated in the exposure assumptions. Inhalation of volatile emissions from soil gas and groundwater in indoor air is the complete exposure pathway that was evaluated for the Indoor Child and Adult Shopper over an exposure duration of 6 years for the child and 24 years for the adult. These parameters are based on the residential exposure duration of a total of 30 years (USEPA, 1991; Cal/EPA, 2011a). The exposure parameters have been revised to decrease the exposure duration for the adult resident to 20 years and the resident (including child) exposure duration to 26 years (USEPA, 2014). However, for comparability of the risk calculations presented in the RI/FS Addendum (AES, 2015), the exposure duration factors were not updated. It is assumed that the indoor child and adult shopper spend a total of two hours in stores during each visit to the shopping center, three times a week for 52 weeks per year.

3.3.4 Exposure Assumptions

Assumptions for route-specific exposure parameters used to estimate intakes at the Site are specific to the potentially exposed population and the route of exposure. In general, exposure assumptions corresponding to a reasonable maximum exposure (RME) scenario were used. Intake assumptions for the RME scenario represent “the highest exposure that is reasonably expected to occur at the site” (USEPA, 1989). According to the USEPA, the intent of the RME scenario is “to estimate a conservative exposure case (i.e., well above the average case) that is still within the range of possible exposures” (USEPA, 1989). The RME is estimated using “many conservative and upper-bound parameter values and assumptions” (USEPA, 1989).

3.3.5 Quantification of Exposure

An exposure point concentration (EPC) of a COPC is the estimated concentration to which a receptor may be exposed over an assumed duration of time. Due to the limited dataset of indoor air samples at the stores evaluated, the data were evaluated using the maximum indoor air concentrations detected and also on a sampling location-specific basis to show the range of risks for indoor air concentrations.

Exposure assumptions and parameter values used to estimate intake factors for the potential populations of concern are summarized in RI/FS Addendum Supplement No. 1 Table 4.

3.3.6 Indoor Air Concentrations of VOCs

Based on guidance from USEPA (2004) and Cal/EPA (2011b), only chemicals that easily volatilize are included in the evaluation of indoor air. These include chemicals with a Henry’s Law constant of greater than 1×10^{-5} atmosphere-cubic meter per mole (atm-m³/mol) and a molecular weight of less than 200 grams per mole (g/mol) (USEPA, 2004; Yaws and Yang, 1992) along with any chemicals detected in soil gas. Both PCE and TCE are considered VOCs.

The measured indoor air concentrations were used as EPCs in the receptor-specific calculations to estimate non-cancer hazards and incremental cancer risks for the Indoor Retail Worker and Indoor Child and Adult Shopper receptors. RI/FS Addendum Supplement No. 1 Tables 2 and 3 present the indoor air data used as EPCs for the risk evaluation of the Michaels and REI stores.

3.3.7 Inhalation Intake Factor

The Intake Factor is an upper-bound estimate of the theoretical intake for each of the potentially exposed human populations via the inhalation pathway. Estimates of human intake are a function of exposure parameters such as duration, frequency, and contact rates. This section provides assumptions and equations used to develop the intake factors used in the calculation of the risk. The generalized equations for the calculation of intake factors, non-cancer hazard, and cancer risk are also shown in Table 6-2.

The approaches adopted by the USEPA's *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation of Risk Assessment)* (USEPA, 2009) were used to estimate intakes in this assessment. The generalized equations used in this assessment are presented below.

The following intake equation was used to estimate exposures via inhalation of vapors migrating into indoor air from soil gas:

$$IF = \frac{CA \times ET \times EF \times ED}{CF \times AT}$$

Where:

- IF = Intake Factor (micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) for soil gas
- CA = Contaminant concentration in indoor air ($\mu\text{g}/\text{m}^3$)
- ET = Exposure Time (hours/day)
- EF = Exposure Frequency (days/year)
- ED = Exposure Duration (years)
- CF = Conversion Factor (day/24 hours)
- AT = Averaging Time; period over which exposure is averaged (days)

These estimates of intake were combined with toxicity values, discussed below in Section 4.0 and presented in Table 6-3, to estimate risk for the Indoor Retail Worker and Indoor Child and Adult Shopper receptors.

4.0 TOXICITY ASSESSMENT

Cal/EPA and USEPA have developed toxicity criteria for various chemicals that are quantitative estimates of the chemicals' potentially toxic effects to humans. There are two types of toxicity criteria that reflect the USEPA's dichotomous classification of chemicals into non-carcinogens and carcinogens. Non-cancer chronic reference concentrations (RfCs) are used to evaluate the potential of adverse health effects for non-carcinogens, and unit factors are used to evaluate potential incremental cancer risks for carcinogens. These two types of toxicity criteria are described below. The toxicity criteria for PCE and TCE evaluated in this HHRA are presented in Table 6-3.

4.1 Non-cancer Reference Concentrations

Non-cancer chronic RfCs represent non-cancer toxicity concentrations (expressed as milligrams per cubic meter [mg/m^3]) and are estimates of a continuous inhalation exposure to humans (including sensitive populations) that is likely to be without appreciable risk of adverse effects during a lifetime of exposure. RfCs are specific to the chemical, exposure route, and duration of exposure. Route-specific RfCs are available to evaluate oral and inhalation exposures. The source of the PCE RfC used in this HHRA was the Cal/EPA Office of Environmental Health Hazards Assessment (OEHHA)'s Toxicity Criteria Database (Cal/EPA, 2015).¹ For TCE, the RfC is from the USEPA Integrated Risk Information System (IRIS) Toxicity Criteria Database (USEPA, 2015).²

The non-cancer RfCs for PCE and TCE evaluated in this HHRA are presented in Table 6-3.

4.2 Mutagenic Mode of Action

The Supplemental Guidance for Assessing Susceptibility from Early-life Exposure to Carcinogens (USEPA, 2005) addresses the increased susceptibility of children exposed to carcinogens that occur through the mutagenic mode of action for certain carcinogens. To account for the increased susceptibility, cancer risks were weighted by a factor of ten for exposures occurring the first two years of life, a factor of three from age two years to less than 16 years of age, and no adjustment for ages 16 years and up (USEPA, 2005). For this HHRA, TCE was identified as a chemical that could result in a higher risk of the occurrence of cancer from early-life exposure. The age dependent adjustment factors (ADAFs) for these chemicals were applied to the intake factor presented in Section 3.2.4 and Table 6-2.

4.3 Inhalation Unit Risk Factors

An inhalation unit risk (IUR) factor expressed as $(\mu\text{g}/\text{m}^3)^{-1}$, is defined as the upper-bound excess lifetime cancer risk estimated to result from continuous exposure to an agent at a concentration of $1 \mu\text{g}/\text{m}^3$ in air. The interpretation of inhalation unit risk would be: if unit risk = 2×10^{-6} per $\mu\text{g}/\text{m}^3$, two excess cancer cases (upper bound estimate) are expected to develop per one million people if exposed daily for a lifetime to 1 microgram of the chemical in 1 cubic meter of air. IURs are specific to the chemical and inhalation route of exposure. The primary source of the PCE IUR for this HHRA was the Cal/EPA

¹ Online at <http://oehha.ca.gov/risk/chemicaldb/index.asp> (accessed on July 1, 2015).

² Online at <http://www2.epa.gov/iris>.

OEHHA's Toxicity Criteria Database (Cal/EPA, 2015).¹ For TCE, the IUR is from the USEPA IRIS Toxicity Criteria Database (USEPA, 2015).²

The IURs for PCE and TCE evaluated in this HHRA are presented in Table 6-3.

5.0 RISK CHARACTERIZATION

Risk characterization is the process of quantifying the significance of residual chemicals in the environment in terms of its potential to cause adverse health effects. The quantitative estimates are expressed in terms of a Hazard Index (HI) for the likelihood of adverse non-cancer health effects, and a probability statement for the potential theoretical incremental cancer risks. The methodology used to estimate non-cancer hazards and incremental cancer risk are presented in Sections 5.1 and 5.2, respectively.

5.1 Non-cancer Health Effects Calculation Methodology

Potential exposures resulting in non-cancer adverse health effects through the inhalation route of exposure are evaluated by comparing the calculated chronic daily intake attributable to potential exposures to the COPCs with a chemical-specific RfC (USEPA, 2009). The resulting numerical ratio is an indicator of the likelihood of an adverse outcome. When calculated for a single chemical, this comparison yields a ratio termed the hazard quotient (HQ):

$$\text{Chemical/Pathway-specific HQ (unitless)} = \text{Intake } (\mu\text{g}/\text{m}^3) / [\text{RfC } (\text{mg}/\text{m}^3) * \text{Conversion Factor } (1,000 \mu\text{g}/\text{mg})]$$

A chemical-specific HQ greater than 1 indicates that there is a likelihood of an adverse health outcome due to potential exposures to a specific chemical. Although the likelihood of an adverse health outcome is indicated by the HQ, it does not indicate the magnitude of the likelihood. When the HQ exceeds 1, it simply indicates that an adverse outcome is possible. The potential for non-cancer adverse health effects from exposure to multiple chemicals are evaluated by summing the HQs for all chemicals for a given media, yielding an exposure pathway-specific HI as follows (USEPA, 1989):

$$\text{Pathway-specific HI (unitless)} = \sum \text{Pathway-specific HQ [unitless]}$$

Pathway-specific HIs for a given media are then summed to estimate a total HI for a given media for each receptor.

$$\text{Total HI (unitless)} = \sum \text{Pathway-specific HI [unitless]}$$

The total HI reflects the assumption that the effects of the various COPCs are additive. For the Indoor Shopper receptor, the HI calculated for the Child Shopper was used to represent the total Indoor Shopper HI, consistent with USEPA guidelines for a resident (USEPA, 1989). For the Indoor Retail Worker receptor, the sum of the non-cancer HQs associated with the inhalation exposure pathways comprise the total HI for the specific receptor.

A non-cancer HI of 1 is the target, where an HI greater than 1 indicates a potential for adverse non-cancer health effects to occur. Although the HI is shown as a numerical value in the risk assessment tables, HIs that are less than (<) one are reported as HI <1. The equations used to calculate non-cancer hazards for the human receptors evaluated at the Site are presented in Table 6-2.

5.2 Cancer Risk Calculation Methodology

Incremental cancer risks associated with exposure to COPCs classified by the USEPA as carcinogens are characterized as an estimate of the probability (risk) that an individual will develop cancer over a lifetime (USEPA, 1989). This estimated theoretical lifetime incremental risk is expressed as a unitless probability. For example, an incremental cancer risk of 1E-05 indicates an individual has a one-in-one hundred thousand chance of developing cancer during a 70-year lifetime as a result of the assumed exposure conditions. The lifetime incremental risk of cancer resulting from exposure to the COPCs was estimated in two steps:

First, estimates of incremental cancer risk for a chemical-specific, media-specific component of a potential exposure pathway was calculated by multiplying the chemical intake by the chemical-specific cancer slope factor:

$$\text{Chemical-specific Risk (unitless)} = \text{Intake } (\mu\text{g}/\text{m}^3) \times \text{IUR } ([\mu\text{g}/\text{m}^3]^{-1})$$

Second, because only one exposure pathway was evaluated for this HHRA, the sum of the inhalation pathway risk was equal to Total Cancer Risk.

$$\text{Total Cancer Risk (unitless)} = \Sigma(\text{Inhalation-specific Cancer Risk [unitless]})$$

For the Indoor Shopper receptor, the sum of the adult and child incremental cancer risks was used to represent the total Indoor Shopper lifetime incremental cancer risk. For the Indoor Retail Worker receptors, the sum of the incremental cancer risks associated with the various exposure pathways comprises the total lifetime incremental cancer risk for the specific receptor. A lifetime incremental cancer risk of 1E-06 is a commonly accepted target, where a total lifetime incremental cancer risk greater than 1E-06 indicates an exceedance of the target risk level. The equations used to calculate incremental cancer risks are presented in Table 6-2.

5.3 Risk Characterization Results

Risk characterization is the process of quantifying estimates of adverse non-cancer health effects and theoretical incremental cancer risks for each receptor under evaluation. A non-cancer HI of 1 is the regulatory target, where a HI greater than 1 indicates a potential for adverse non-cancer health effects to occur. Because PCE and TCE non-cancer hazards were calculated for individual chemicals and not summed, HQs were reported in the risk calculation tables. Similarly, an incremental cancer risk of 1E-06 is the regulatory target.

Summaries of non-cancer hazard indices and incremental cancer risks are presented for the Indoor Air Retail Worker and Shopper (Adult and Child) receptors evaluated under the indoor air scenarios in Tables 6-4 through 6-7. Indoor air concentrations of PCE and TCE were used as the EPCs in the risk calculations. Sub-slab data for co-located indoor air samples are shown on these tables for informational purposes. The estimates of hazards and cancer risks for PCE and TCE for the Michaels and REI Indoor Retail Worker are presented in Tables 6-4 and Table 6-5, respectively. The Child and Adult Shopper receptor hazards and cancer risks for PCE are presented in Table 6-6 and Table 6-7 for TCE. A

summary of non-cancer hazard and incremental cumulative cancer risks for the Retail Worker and Shopper (Adult and Child) receptors is presented in Table 6-8.

5.3.1 Michaels Indoor Retail Worker

Inhalation of volatile chemicals in indoor air was the only complete exposure pathway evaluated for the Indoor Retail Worker at the Michaels store footprint. The HIs were less than the target HI of 1 for the PCE indoor air concentrations at the sampling locations for both the 2015 and 2013 investigations (AES 2015), suggesting that no adverse non-cancer effects are expected.

For the current investigation, PCE was detected in indoor air at $1.9 \mu\text{g}/\text{m}^3$ and $2.0 \mu\text{g}/\text{m}^3$ (duplicate) at IA-12-26 at the southeast corner of the store. The cancer risk associated with these samples was $9\text{E}-07$, slightly lower than the target risk of $1\text{E}-06$. The maximum concentration of PCE in indoor air ($2.2 \mu\text{g}/\text{m}^3$) was detected during the October 2013 investigation (AES, 2015) from two locations: IA-12-08 (center paper area) and IA-12-09 (southeast front area), as shown on RI/FS Addendum Supplement No. 1 Figure 1. The cancer risk attributed to PCE for the indoor retail worker at these sampling locations was $1\text{E}-06$ and equal to the target risk. The indoor air PCE concentrations were within the same order of magnitude over both investigations, ranging from $1.9 \mu\text{g}/\text{m}^3$ to $2.2 \mu\text{g}/\text{m}^3$.

During the current investigation, indoor air TCE concentrations at the Michaels store sampling locations were reported as not detected (ND) while the highest TCE concentration was reported at IA-12-08 (center papers area) at a concentration of $0.22 \mu\text{g}/\text{m}^3$ during the October 2013 investigation (AES, 2015). HIs for indoor air data collected during both investigations were less than 1 for the locations sampled, indicating that no adverse non-cancer impacts are anticipated. For purposes of calculating cancer risk, the reporting limit was conservatively assumed to be the detected indoor air concentration. Cancer risks were $1.4\text{E}-07$ and $1.5\text{E}-07$ (duplicate) corresponding to the ND indoor air concentrations at sampling location IA-12-26. The cancer risk attributed to the maximum TCE indoor air concentration of $0.22 \mu\text{g}/\text{m}^3$ during the October 2013 investigation (AES, 2015) is $7.4\text{E}-08$ and two orders of magnitude less than the target risk of $1\text{E}-06$.

The non-cancer HI is less than 1 and the incremental cumulative risk is $1\text{E}-06$ for the Michaels Indoor Retail Worker based on the estimated exposure to maximum concentrations of PCE and TCE detected in indoor air during the 2013 and 2015 investigations (Table 6-8).

5.3.2 Michaels Indoor Child and Adult Shopper

The Indoor Child and Adult Shopper at the Michaels store were evaluated for indoor air exposure through the inhalation of volatile chemicals in indoor air. The HIs for the Child and Adult Shopper receptors were less than the HI target of 1 for both receptors exposed to PCE and TCE in indoor air during the 2015 and 2013 investigations (AES, 2015), suggesting that no adverse non-cancer effects are expected.

The cancer risks associated with the indoor air concentration of $2.0 \mu\text{g}/\text{m}^3$ for samples collected at IA-12-26 during the current investigation were $3.6\text{E}-08$ for the Child shopper and $1.6\text{E}-07$ for the Adult Shopper. The indoor air maximum PCE concentration of $2.2 \mu\text{g}/\text{m}^3$ was reported for the IA-12-08 sampling location during the 2013 investigation (AES, 2015); the cancer risk for the Child Shopper was

4E-08 and 1.6E-07 for the Adult Shopper. The cancer risks attributed to the PCE indoor air concentrations from both investigations are below the regulatory cancer threshold of 1E-06 for the Child Shopper and Adult Shopper receptors.

TCE concentrations reported as ND for the current investigation resulted in Child Shopper cancer risks of 2.9E-08 for indoor air data collected at IA-12-26 and 3.0E-08 for the duplicate sample. Adult Shopper cancer risks were 7.5E-08 for the indoor air sample at IA-12-26 and 7.9E-08 for the duplicate indoor air data. The cancer risks attributed to the maximum TCE indoor air concentration of 0.22 $\mu\text{g}/\text{m}^3$ during the October 2013 investigation (AES, 2015) are 1.5E-08 for the Child Shopper and 3.9E-08 for the Adult Shopper. The estimated cancer risks for the Child and Adult Shopper receptors during both the 2015 and 2013 (AES, 2015) investigations were two orders of magnitude less than the target risk of 1E-06.

The non-cancer HI is less than 1 for both the Indoor Child Shopper and Indoor Adult Shopper, and the cumulative cancer risk for the total shopper (child and adult) is 3E-07 based on the estimated exposure to maximum concentrations of PCE and TCE detected in indoor air during the 2013 and 2015 investigations (Table 6-8).

5.3.3 REI Indoor Retail Worker

Inhalation of volatile chemicals in indoor air was the only complete exposure pathway evaluated for the Indoor Retail Worker at the REI store footprint. The HIs were less than the target HI of 1 for the PCE indoor air concentrations at the sampling locations for both the 2015 and 2013 investigations (AES 2015), suggesting that no adverse non-cancer effects are expected.

For the current investigation, PCE was reported as ND at three indoor air sampling locations: IA-12-27 (southwest check out area); IA-12-28 (center retail area); and IA-12-29 (northwest backroom area). For purposes of calculating cancer risk, the reporting limit was conservatively assumed to be the detected indoor air concentration. Cancer risks were in the 2E-07 range for the indoor worker receptor at all three sampling locations and one order of magnitude lower than the target risk of 1E-06. The maximum concentration of PCE in indoor air (0.13 $\mu\text{g}/\text{m}^3$) was detected during the October 2013 investigation (AES, 2015) at IA-12-25 (southwest checkout area), as shown on RI/FS Addendum Supplement No. 1 Figure 1. The cancer risk attributed to PCE for the indoor retail worker at these sampling locations was 6.3E-08 and two orders of magnitude lower than the target risk.

During the current investigation, indoor air TCE concentrations at the REI store sampling locations were reported as ND, while the highest TCE concentration was reported at IA-12-25 (southwest checkout area) at a concentration of 6.8 $\mu\text{g}/\text{m}^3$ during the October 2013 investigation (AES, 2015). HIs for indoor air data collected during both investigations were less than 1 for the locations sampled, indicating that no adverse non-cancer impacts are anticipated. For purposes of calculating cancer risk, the reporting limit was conservatively assumed to be the detected indoor air concentration. Cancer risks were in the 1E-07 range, as shown in Table 6-5, corresponding to the ND indoor air concentrations at sampling locations IA-12-27, IA-12-28, and IA-12-29. The cancer risk attributed to the maximum TCE indoor air concentration of 6.8 $\mu\text{g}/\text{m}^3$ during the October 2013 investigation (AES, 2015) is 2.3E-06 and 2.3 times higher than the target risk of 1E-06.

The non-cancer HI is less than 1 and the incremental cumulative risk is 3E-06 for the REI Indoor Retail Worker based on the estimated exposure to maximum concentrations of PCE and TCE detected in indoor air during the 2013 and 2015 investigations (Table 6-8).

5.3.4 REI Child and Adult Shopper

The Indoor Child and Adult Shopper at the REI store were evaluated for indoor air exposure through the inhalation of volatile chemicals in indoor air. The HIs for the Child and Adult Shopper receptors were less than the HI target of 1 for both receptors exposed to PCE and TCE in indoor air during the 2015 and 2013 investigations (AES, 2015), suggesting that no adverse non-cancer effects are expected.

PCE indoor air concentrations at the REI sampling locations were reported as ND. For purposes of calculating cancer risk, the reporting limit was conservatively assumed to be the detected indoor air concentration. Cancer risks for the Child Shopper were in the 1E-09 range and 1E-08 range for the Adult Shopper as shown in Table 6-6. These cancer risks correspond to the indoor air concentrations reported as ND at sampling locations IA-12-27, IA-12-28, and IA-12-29. The indoor air maximum PCE concentration of 0.13 $\mu\text{g}/\text{m}^3$ was reported for the IA-12-25 sampling location during the 2013 investigation (AES, 2015); the corresponding cancer risks were 2.3E-09 for the Child Shopper and 9.4E-09 for the Adult Shopper. The cancer risks attributed to the PCE indoor air concentrations from both investigations are below the regulatory cancer threshold of 1E-06 for the Child Shopper and Adult Shopper receptors.

TCE concentrations used in the Child and Adult Shopper scenario were the reporting limits for the indoor air data reported as ND. The resulting Child Shopper cancer risks were in the 1E-08 range and 7E-08 range for the Adult Shopper. The cancer risks attributed to the maximum TCE indoor air concentration of 6.8 $\mu\text{g}/\text{m}^3$ during the October 2013 investigation (AES, 2015) were 4.5E-07 for the Child Shopper and 1.2E-06 for the Adult Shopper. The estimated TCE cancer risk for the Child Shopper receptor during the 2013 investigation (AES, 2015) was one order of magnitude less than the target risk. For the Adult Shopper, the TCE cancer risk was slightly higher than the target risk during the 2013 investigation (AES 2015).

The non-cancer HI is less than 1 for both the Indoor Child Shopper and Indoor Adult Shopper, and the cumulative cancer risk for the total shopper (child and adult) is 2E-06 based on the estimated exposure to maximum concentrations of PCE and TCE detected in indoor air during the 2013 and 2015 investigations (Table 6-8).

5.4 Discussion of Risk Results

The calculated non-cancer hazards for the Indoor Retail Worker and the Indoor Child and Adult Shopper receptors at the Michaels and REI stores were less than the regulatory target of 1 based on measured PCE and TCE indoor air concentrations. An HI less than or equal to one represents a condition for assumed exposures that is unlikely to cause adverse non-cancer health effects, even for sensitive populations (USEPA, 1989). Consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) at 40 CFR §300.430(e)(2)(i)(A)(1), an HI less than or equal to one is considered an acceptable exposure level.

The PCE and TCE cancer risks for the location-specific data collected at Michaels and REI were below the regulatory threshold of $1E-06$ for the Indoor Retail Worker and Child and Adult Shopper receptors based on the indoor air data collected in the 2015 investigation. However, it is noted that during the 2013 investigation (AES, 2015), the incremental cancer risks for the Michaels Indoor Retail Worker at two sampling locations (IA-12-08 and IS-12-09) were at the regulatory point of departure (Table 6-4).

As presented in Table 6-8, for the combined 2013 and 2015 data set, the HIs were less than 1 and the cumulative incremental cancer risks for the Michaels Indoor Retail Worker and Total Shopper were at or below the point of departure of $1E-06$ based on the maximum concentrations of PCE and TCE detected. For the REI Indoor Retail Worker and Total Shopper, the HIs were less than 1, but the cumulative incremental cancer risks were $3E-06$ for the Indoor Retail Worker and $2E-06$ for the total shopper. The incremental cancer risks greater than the regulatory threshold of $1E-06$ were driven by the elevated TCE detection ($6.8 \mu\text{g}/\text{m}^3$) in indoor air during the 2013 investigation, though cancer risks associated with the indoor air samples collected during the 2015 investigation were below the point of departure.

The NCP, at 40 CFR §300.430(e)(2)(i)(A)(2), provides a definition of an acceptable incremental cancer risk range of $1E-06$ through $1E-04$ for the selection of remedial actions that protect human health and the environment. The actual level of acceptable risk is a site-specific risk management decision, with $1E-06$ as the point of departure. The cumulative incremental cancer risks for both the Michaels and REI Indoor Retail Worker, as well as the total shopper receptors, were well within the risk management range.

5.5 Uncertainty Discussion

There are various sources of uncertainty in the quantitative estimates of potential non-cancer health hazards and incremental cancer risks presented in this HHRA that affect the overall outcome of the risk assessment. The methods, calculation procedures, assumptions, and the use of various factors and parameters in the quantification of risk incorporate conservativeness that are designed to prevent or reduce the possibility that the calculated risks do not underestimate actual risks. The approach used in this HHRA has been health protective whenever possible and tends to overestimate exposures. A discussion of the key uncertainties used in this risk assessment is presented below.

5.5.1 Data Evaluation

The HHRA dataset used for this evaluation is based on the soil gas data for PCE and TCE from two sampling events with limited data collection and may not be representative of actual exposure conditions and associated risk. Based on historic data it is expected that VOCs in soil, soil gas, and groundwater will likely attenuate and decrease in concentrations over time. Natural attenuation was not considered in this assessment. Further, a groundwater extraction and treatment system is currently operating at Sites 2/12 and has demonstrated decreasing trends in TCE concentrations (AES, 2015) although PCE concentrations have increased in one monitoring well at Site 12 (AES, 2015). Therefore, the risks estimated by current data sets may overestimate the long-term risks to future populations from TCE but underestimate risks from PCE assuming current conditions and no additional remedial action.

In the 2013 investigation (AES, 2015) PCE was detected at $2.2 \mu\text{g}/\text{m}^3$ in two locations within the same retail space (Michaels), which exceeded its indoor air screening level (IA-SL) of $2.08 \mu\text{g}/\text{m}^3$; PCE was detected at $2.0 \mu\text{g}/\text{m}^3$ in a third sample. As noted in the previous HHRA conducted for the RI/FS Addendum at Sites 2/12 (AES, 2015), while these concentrations are comparable to the PCE IA-SL, the differences between these results and the IA-SL are not statistically significant. Michaels is a “specialty retailer of arts, crafts, framing, home décor & seasonal products for hobbyists and DIY decorators” and products sold or used in the store (e.g., degreasers, spot removers, paint thinners) may be a source of the PCE detected in the indoor air samples. In the 2015 investigation PCE was detected at $1.9 \mu\text{g}/\text{m}^3$ and $2.0 \mu\text{g}/\text{m}^3$ in one location within Michaels. Since these results were less than the PCE IA-SL of $2.08 \mu\text{g}/\text{m}^3$, no further investigation was conducted to determine whether products sold/used at Michaels contain PCE in accordance with the Work Plan (AES, 2013). Further, due to the expected high turnover of inventory at Michaels, a post-sampling evaluation of products containing PCE sold or present inside the store may not be representative of the same products present at the time samples were collected and results in uncertainty in the data evaluation.

A single exceedance of the TCE screening value was reported for an indoor air sample collected in REI during the October 2013 investigation. However, the exceedance of the TCE concentration in the REI indoor air sample did not appear to be related to sub-surface soil gas migration. The estimated indoor air concentration for TCE, based on a sub-slab soil gas concentration of $7.0 \mu\text{g}/\text{m}^3$ and the measured indoor air concentration of $6.8 \mu\text{g}/\text{m}^3$ were essentially the same and did not reflect attenuation through the slab. These data are further confirmed by the May 2015 TCE sub-slab and co-located indoor air sample data, which were both reported as ND at the Michaels and REI stores. This also suggests an indoor source of TCE at REI during the 2013 investigation (e.g., products associated with bicycle repair, and other products such as cleaning supplies, adhesives, spot removers, paints, and metal cleaners).

5.5.2 Exposure Assessment

Numerous assumptions must be made in order to estimate human exposure to chemicals. These assumptions include parameters such as exposure time, exposure duration, human activity patterns, and others. Most of the exposure assumptions used in the calculation of risk for this assessment are recommended by Cal/EPA and USEPA, and are often the upper 90th or 95th percentile values. The use of 90th or 95th percentile values, when available, is recommended by the USEPA in order to estimate the “Reasonable Maximum Exposure” that may occur at a site. However, the combination of several upper-bound estimates used as exposure parameters may substantially overestimate chemical intake. Thus, the risks calculated in this assessment are therefore likely to be more conservative than may be required to be protective of public health.

Only the inhalation exposure pathway for indoor receptors was evaluated in this HHRA. However, other pathways for exposure to VOCs may include inhalation of outdoor air, dermal contact to subsurface soils, and incidental ingestion of subsurface soils to landscape and utility maintenance workers and were not evaluated in this HHRA. Inhalation of outdoor air, direct contact and incidental ingestion of subsurface soil outdoor workers may be possible during landscape maintenance or utility work. During redevelopment of other areas of Sites 2/12, grading and construction activities may result in outdoor exposures to VOCs in soil, soil gas, and shallow groundwater. Human health risks from exposure to

VOCs through these other exposure pathways were not evaluated and therefore, may represent an underestimate of risk at Sites 2/12.

The sources of chemical exposure present an uncertainty because products containing VOCs are used or sold in the stores that were investigated. The data from the current investigation appear to confirm that TCE and PCE in products used or sold in the stores may have resulted in the elevated PCE and TCE concentrations in indoor air during the 2013 investigation and resulted in an overestimate of risk attributed to indoor air migration of VOCs from soil gas.

5.5.3 Toxicity Assessment

Available scientific information is insufficient to provide a complete understanding of all the toxic properties of each of the chemicals to which humans may be exposed. The primary uncertainties associated with the toxicity assessment are related to derivation of toxicity criteria. To derive the toxicity criteria, several assumptions are made that tend to overestimate the actual hazard or risk to human health. Because data from human studies are generally unavailable, the RfCs and IURs are typically derived from animal studies. Uncertainty factors and modifying factors are then applied to the data to provide toxicity criteria that are considered adequately protective of human health. For many compounds, this approach is anticipated to result in an overestimate of non-cancer adverse health effects and incremental cancer risks.

For this HHRA, TCE was evaluated as a chemical that could result in a higher risk of the occurrence of cancer from early-life exposure. It was assumed that shoppers reside in the Sites 2/12 vicinity and would be exposed to VOCs during frequent visits to the retail shopping center. Because children were identified as a potential receptor, the mutagenic mode of action ADAFs were applied to the intake factor for the child shopper receptor from 0 to 6 years old and the adult shopper from 6 to 16 years old. This resulted in additional conservatism in the risk estimates for the indoor shopper receptor.

6.0 SUMMARY AND CONCLUSIONS

The purpose of this HHRA was to evaluate potential human exposures and health risks based on the indoor air and sub-slab soil gas data collected at Michaels and REI to supplement data collected in October 2013 (AES, 2015). In order to assess whether residual chemical concentrations in soil gas at the Site were within acceptable risk ranges based on current and future land use, indoor air samples were collected with co-located sub-slab soil gas samples. Measured indoor air concentrations of PCE and TCE, the primary risk drivers, were used as EPCs in the risk calculations for the receptors evaluated. Non-cancer and cancer risks were estimated for the Indoor Retail Worker and Indoor Shopper receptors and found to be well below or at regulatory risk targets. Results of the HHRA suggest that if VOCs are migrating into the stores, indoor air concentrations are *de minimis*, as supported by actual indoor air data for PCE and TCE collected during the supplemental RI/FS investigation.

Indoor air data for PCE and TCE collected in Michaels and REI stores during the RI Addendum supplemental investigation were generally one to two orders of magnitude below risk-based indoor air screening values for these chemicals. Corresponding cancer risks and non-cancer hazards for the Indoor Retail Worker and Child and Adult Shopper receptors were below threshold criteria and do not present an unacceptable risk to workers or shoppers.

7.0 REFERENCES

Ahtna Engineering Services (AES). 2013. *Final Work Plan, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California*. August. AR# BW-2665-A.

AES. 2015. *Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California (RI/FS Addendum)*. February 27. AR# BW-2721B.

California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC). 2011a. Office of Human and Ecological Risk (HERO), Human Health Risk Assessment Note 1, *Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities*. May 20.

Cal/EPA, DTSC. 2011b. *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*. Final. October.

Cal/EPA, Office of Environmental Health Hazard Assessment (OEHHA). 2015. Toxicity Criteria Database. Online: <http://www.oehha.ca.gov/risk/chemicalDB/index.asp>; accessed on July 1, 2015.

Code of Federal Regulations (CFR) Title 40 – Protection of the Environment. 40 CFR §300.430(e)(2)(i)(A)(1). July 1, 2012.

U.S. Environmental Protection Agency (USEPA). 1989. *Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual (Part A)*. EPA 540/1-89/002. December.

USEPA. 1991. *Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors*. Interim Final. OSWER Directive 9285.6-03. March.

USEPA. 2004. *User's Guide for Evaluating Subsurface Vapor Intrusion Into Buildings*. Office of Emergency and Remedial Response. June 19.

USEPA. 2005. *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposures to Carcinogens*. Risk Assessment Forum. EPA/630/R-03/003F. Washington, D.C. March.

USEPA. 2009. *Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment)*. Final. EPA-540-R-070-002; OSWER 9285.7-82. Office of Superfund Remediation and Technology Innovation. Washington, D.C. January.

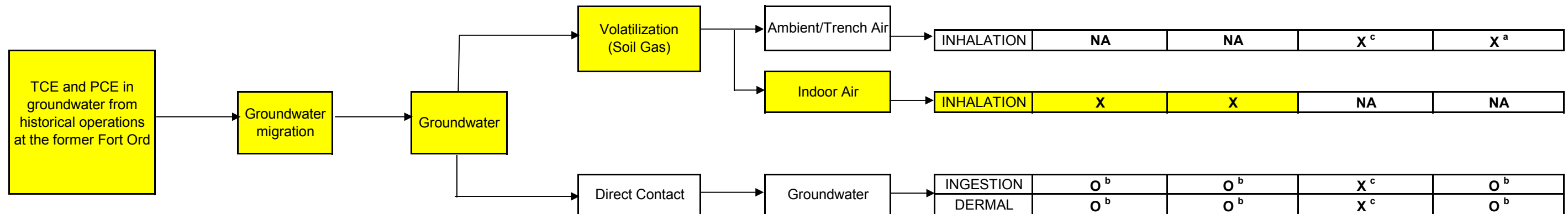
USEPA. 2014. *Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors*, OSWER 9200.1-120.

USEPA. 2015. *Integrated Risk Information System (IRIS) Toxicity Criteria Database*, online at <http://www2.epa.gov/iris>.

Yaws and Yang, 1992. *Henry's law constant for compound in water*. In C. L. Yaws, editor, *Thermodynamic and Physical Property Data*, pages 181–206. Gulf Publishing Company, Houston, TX.

FIGURE

PRIMARY SOURCE	PRIMARY RELEASE MECHANISM	POTENTIAL SECONDARY SOURCE	POTENTIAL RELEASE MECHANISM	EXPOSURE MEDIA	EXPOSURE ROUTE	INDOOR RECEPTORS		OUTDOOR RECEPTORS	
						On-Site Commercial Worker	On-Site Shopper	Construction/Trench Worker	On-site Shopper



Notes:

X Potential Complete Exposure Pathway

O Incomplete exposure pathway; will not be evaluated in risk assessment

NA- Not applicable

^a Assumes that indoor vapor intrusion pathway is protective of outdoor soil vapor exposures for the commercial receptors. Therefore ambient air exposures were not evaluated for volatile chemicals.

^b Direct contact with groundwater is not anticipated for the commercial worker and shopper receptors because the Upper 180-foot aquifer is not used as a source of potable water.

^c Construction workers may be exposed to VOCs in groundwater during dewatering activities.

The yellow highlighted boxes indicate the exposure pathways evaluated in the Human Health Risk Assessment for Sites 2/12



**Risk Assessment
Conceptual Site Model**

Attachment 6
Supplement No. 1, RI/FS Addendum
at Sites 2/12, Former Fort Ord, California

Figure

6-1

TABLES

Table 6-1. Exposure Parameter Values for Receptors Evaluated in the Risk Assessment

Exposure Pathways and Parameters	Acronym	Value	Units	Source
On-Site Indoor Retail Worker Receptor				
<i>Inhalation of Volatile Emissions</i>				
General Parameters				
Exposure Time	ET	8	hours	8 hour work day for commercial worker; U.S. EPA 1991
Exposure Frequency	EF	250	days/year	USEPA 1991; DTSC 2011
Exposure Duration	ED	25	years	USEPA 1991; DTSC 2011
Averaging Time-Non-carcinogenic	AT _{NC}	9125	days	Calculated (ED [25 years] * 365 days/year)
Averaging Time-Carcinogenic	AT _C	25550	days	USEPA 1991; DTSC 2011
On-Site Indoor Adult Shopper Receptor				
<i>Inhalation of Volatile Emissions</i>				
General Parameters				
Exposure Time	ET _{Ad Shopper}	2	hours	Professional judgement - 2 hours per day in store
Exposure Frequency	EF _{Ad Shopper}	156	days/year	Professional judgement - 3 days per week x 52 weeks/year
Exposure Duration	ED _{Ad Shopper}	24	years	Based on adult resident; USEPA 1991; DTSC 2011
Averaging Time-Non-carcinogenic	AT _{NC}	8760	days	Calculated (ED [24 years] * 365 days/year)
Averaging Time-Carcinogenic	AT _C	25550	days	Calculated (ED [70 years] * 365 days/year)
On-Site Indoor Child Shopper Receptor				
<i>Inhalation of Volatile Emissions</i>				
General Parameters				
Exposure Time	ET _{Ch Shopper}	2	hours	Professional judgement - 2 hours per day in store
Exposure Frequency	EF _{Ch Shopper}	156	days/year	Professional judgement - 3 days per week x 52 weeks/year
Exposure Duration	ED _{Ch Shopper}	6	years	Based on child resident; USEPA 1991; DTSC 2011
Averaging Time-Non-carcinogenic	AT _{NC}	2190	days	Calculated (ED [6 years] * 365 days/year)
Averaging Time-Carcinogenic	AT _C	25550	days	Calculated (ED [70 years] * 365 days/year)

References:

California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC). 2011a. Office of Human and Ecological Risk (HERO), Human Health Risk Assessment Note 1, Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities. May 20.

U.S. Environmental Protection Agency (U.S. EPA). 1991. *Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual. Supplemental Guidance: "Standard Default Exposure Parameters"*. Interim Final. March.

Note:

The exposure duration (ED) for a resident was revised by the USEPA in a memorandum "Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors (February 6, 2014). However, because the risk assessment for the Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12 had been prepared prior to that date, the USEPA (1991) and DTSC (2011) ED factors were used for the Indoor Child and Adult Shopper calculations. For comparability of the risk calculations, the ED factors have not been updated for this report.

Table 6-2. Inhalation Intake Factor and Risk Assessment Equations

Equation Parameters	Acronym	Units	Risk Equation
Indoor Air Receptor			
<i>Inhalation Pathway</i> Inhalation Intake Factor	Inh IF	µg/m ³	$Inh\ IF = \frac{CA * ET * EF * ED}{CF * AT}$
Inhalation Intake Factor (mutagenic mode of action)	Inh IF _{moa}	µg/m ³	$Inh\ IF_{moa} = \left(\frac{CA * ET * EF * ED_{moa}}{CF * AT} \right) * ADAF$
Inhalation Noncarcinogenic Hazard Quotient	Inh HQ	unitless	$Inh\ HQ = \frac{IF}{RfCi * CF2}$
Inhalation Carcinogenic Risk	Inh Risk	unitless	$Inh\ Risk = IUR * IF$
Inhalation Carcinogenic Risk (mutagenic mode of action)	Inh Risk _{moa}	unitless	$Inh\ Risk_{moa} = (IUR * IF_{moa})\ \text{ages 0-}<2 + (IUR * IF_{moa})\ \text{ages 2-6, etc.}$
TOTAL HAZARD	HI	unitless	$\sum HQs\ \text{for Chemicals Evaluated}$
TOTAL CANCER RISK	RISK	unitless	$\sum \text{Cancer Risks for Chemicals Evaluated}$

Acronym	Parameter	Units	Notes
ADAF	Age dependent adjustment factor:		
	0-2 years:	10	Unitless
	2-6 years:	3	Unitless
	6-16 years:	3	Unitless
	16-70 years:	1	Unitless
Inh	Inhalation	--	
IF	Intake Factor	µg/m ³	micrograms per cubic meter
nh IF _{moa}	Intake Factor (mutagenic mode of action)	µg/m ³	micrograms per cubic meter
CA	Chemical concentration in air	µg/m ³	micrograms per cubic meter
ET	Exposure Time	hours/day	Receptor-specific; see Table 6-1
EF	Exposure Frequency	days/year	Receptor-specific; see Table 6-1
ED	Exposure Duration	years	Receptor-specific; see Table 6-1
ED _{moa}	Exposure Duration (mutagenic mode of action)	years	Age-specific
CF1	Conversion Factor 1	day/24 hours	
AT	Averaging time	ED * 365 days/year	Receptor-specific; see Table 6-1
HQ	Hazard Quotient	Unitless	
RfCi	Reference Concentration	mg/m ³	milligrams per cubic meter; Chemical-specific; see Table 6-3
IUR	Inhalation Unit Risk	(µg/m ³) ⁻¹	1 divided by (µg/m ³) ⁻¹ ; Chemical-specific; see Table 6-3
CF2	Conversion Factor 2	1000 µg/mg	for noncancer HQ calculation; RfCi in units of mg/kg
HI	Hazard Index	Unitless	
RISK	Cancer Risk	Unitless	

Table 6-3. Toxicity Factors

Chemical	Noncarcinogenic Toxicity Factors		Carcinogenic Toxicity Factors	
	Inhalation (RfC _i) (mg/m ³)	Source	Inhalation Unit Risk (IUR) (µg/m ³) ⁻¹	Source
Volatile Organic Compounds				
Tetrachloroethene	3.5E-02	Cal/EPA, 2015	5.9E-06	Cal/EPA, 2015
Trichloroethene (m)	2.0E-03	U.S.EPA, 2015	4.1E-06	U.S. EPA, 2015

Notes:

- Not applicable
- mg/m³ milligram per cubic meter
- (µg/m³)⁻¹ 1 divided by micrograms per cubic meter
- (m) mutagen
- CalEPA California Environmental Protection Agency, Office of Environmental Health Hazard Assessment
- DTSC California Department of Toxic Substances Control
- IUR Inhalation Unit Risk
- NC No toxicity criterion available
- RfC_i Reference concentration (inhalation)

References:

California Environmental Protection Agency (CalEPA), Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Toxicity Criteria Database*. <http://www.oehha.ca.gov/risk/chemicalDB/index.asp> Accessed on July 1, 2015.

U.S. Environmental Protection Agency (U.S. EPA), 2015. *Integrated Risk Information System (IRIS)*. Online at: <http://www2.epa.gov/iris>

Table 6-4. PCE Risk Calculations for Michaels and REI Indoor Retail Worker

ADULT INDOOR RETAIL WORKER												
Risk Calculation Parameters	Acronym	Units	Value	Michaels Subslab Sample ID/ Indoor Air Sample ID Sampling Date					REI Subslab Sample ID/Indoor Air Sample ID Sample Date			
				SS-12-08/ IA-12-08 10/14/2013	SS-12-09/ IA-12-09 10/2/2013	SS-12-10/ IA-12-10 10/2/2013	SS-12-26/ IA-12-26 5/27/2015	SS-12-26/ IA-12-26 (DUP) 5/27/2015	SS-12-25/ IA-12-25 10/2-10/2013	SS-12-27/ IA-12-27 5/27/2015	SS-12-28/ IA-12-28 5/28/2015	SS-12-29/ IA-12-29 5/28/2015
Exposure Point Concentration												
PCE Soil Gas Concentration	C _{soil gas}	µg/m ³	Chem-spec	160	170	170	520	530	130	120	42	< 21
Indoor Air Concentration	C _{indoor air}	µg/m ³	Chem-spec	2.2	2.2	2.0	1.9	2.0	0.13	< 0.53	< 0.55	< 0.56
Inhalation Pathway Parameters												
Exposure Time	ET	hours/day	8	--	--	--	--	--	--	--	--	--
Exposure Frequency	EF	days/year	250	--	--	--	--	--	--	--	--	--
Exposure Duration	ED	years	25	--	--	--	--	--	--	--	--	--
Conversion Factor 1	CF1	day/hours	24	--	--	--	--	--	--	--	--	--
Averaging Time - Noncarcinogenic	ATnc	days	9,125	--	--	--	--	--	--	--	--	--
Averaging Time - Carcinogenic	ATc	days	25,550	--	--	--	--	--	--	--	--	--
Exposure Concentration												
Intake Factor - Noncarcinogenic	IFnc	µg/m ³	Chem-Spec	5.0E-01	5.0E-01	4.6E-01	4.3E-01	4.6E-01	3.0E-02	1.2E-01	1.3E-01	1.3E-01
Intake Factor - Carcinogenic	IFc	µg/m ³	Chem-Spec	1.8E-01	1.8E-01	1.6E-01	1.5E-01	1.6E-01	1.1E-02	4.3E-02	4.5E-02	4.6E-02
Toxicity Criteria												
Inhalation Reference Concentration	RfC	mg/m ³	Chem-Spec	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02
Conversion Factor 2	CF2	µg/m ³	1,000	--	--	--	--	--	--	--	--	--
Inhalation Unit Risk Factor	IUR	(µg/m ³) ⁻¹	Chem-Spec	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06
Noncarcinogenic Hazard												
Inhalation (Volatiles) Noncarcinogenic Hazard Quotient	Worker HQ	unitless	Chem-Spec	0.01	0.01	0.01	0.01	0.01	0.001	0.003	0.004	0.004
Carcinogenic Risk												
Inhalation (Volatiles) Carcinogenic Risk	WorkerRISK	unitless	Chem-Spec	1.1E-06	1.1E-06	9.6E-07	9.1E-07	9.6E-07	6.3E-08	2.5E-07	2.6E-07	2.7E-07

Notes:
 Bolded values indicate sub-slab or indoor air concentrations that exceed risk-based screening levels (see Table 1, RI/FS Addendum Supplement No. 1).

- < Less than
- Not applicable
- µg/m³ micrograms per cubic meter
- mg/m³ milligrams per cubic meter
- (µg/m³)⁻¹ 1 divided by µg/m³

Acronym	Parameter	Units	Notes
ET	Exposure Time	hours/day	Receptor-specific; see Table 6-1
EF	Exposure Frequency	days/year	Receptor-specific; see Table 6-1
ED	Exposure Duration	years	Receptor-specific; see Table 6-1
CF1	Conversion Factor 1	day/24 hours	
AT	Averaging time	ED * 365 days/year	Receptor-specific; see Table 6-1
IF	Intake Factor	µg/m ³	micrograms per cubic meter
nc	noncarcinogen		
c	carcinogen		
HQ	Hazard Quotient	Unitless	
RfCi	Reference Concentration - inhalation	mg/m ³	milligrams per cubic meter; Chemical-specific; see Table 6-3
CF2	Conversion Factor 2	1000 mg/mg	for noncancer HQ calculation; RfCi in units of mg/kg
IUR	Inhalation Unit Risk	(µg/m ³) ⁻¹	1 divided by (µg/m ³) ⁻¹ ; Chemical-specific; see Table 6-3



Table 6-5. PCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

CHILD INDOOR SHOPPER												
Risk Calculation Parameters	Acronym	Units	Value	Michaels Subslab Sample ID/ Indoor Air Sample ID Sampling Date					REI Subslab Sample ID/Indoor Air Sample ID Sample Date			
				SS-12-08/ IA-12-08 10/14/2013	SS-12-09/ IA-12-09 10/2/2013	SS-12-10/ IA-12-10 10/2/2013	SS-12-26/ IA-12-26 5/27/2015	SS-12-26/ IA-12-26 (DUP) 5/27/2015	SS-12-25/ IA-12-25 10/2-10/2013	SS-12-27/ IA-12-27 5/27/2015	SS-12-28/ IA-12-28 5/28/2015	SS-12-29/ IA-12-29 5/28/2015
Exposure Point Concentrations												
PCE Subslab Air Concentration	SS _{volatile}	µg/m ³	Chem-Spec	160	170	170	520	530	130	120	42	< 21
PCE Indoor Air EPC - Volatiles	C _{volatile}	µg/m ³	Chem-Spec	2.2	2.2	2.0	1.9	2.0	0.13	< 0.53	< 0.55	< 0.56
Inhalation Pathway Parameters												
Exposure Time	ET	hours/day	2	--	--	--	--	--	--	--	--	--
Exposure Frequency	EF	days/year	156	--	--	--	--	--	--	--	--	--
Exposure Duration (child)	ED _{child}	years	6	--	--	--	--	--	--	--	--	--
Conversion Factor 1	CF1	hours/day	24	--	--	--	--	--	--	--	--	--
Averaging Time - Noncarcinogenic	AT _{nc}	days	2,190	--	--	--	--	--	--	--	--	--
Averaging Time - Carcinogenic	AT _c	days	25,550	--	--	--	--	--	--	--	--	--
Exposure Concentration												
Intake Factor - Noncarcinogenic	IF _{nc}	µg/m ³	Chem-Spec	7.8E-02	7.8E-02	7.1E-02	6.8E-02	7.1E-02	4.6E-03	1.9E-02	2.0E-02	2.0E-02
Intake Factor - Carcinogenic	IF _c	µg/m ³	Chem-Spec	6.7E-03	6.7E-03	6.1E-03	5.8E-03	6.1E-03	4.0E-04	1.6E-03	1.7E-03	1.7E-03
Toxicity Criteria												
Inhalation Reference Concentration	RfC	mg/m ³	Chem-Spec	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02
Conversion Factor 2	mg/m ³	1,000	1,000	--	--	--	--	--	--	--	--	--
Inhalation Unit Risk Factor	IUR	(µg/m ³) ⁻¹	Chem-Spec	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06
Noncarcinogenic Hazard												
Noncarcinogenic Hazard Quotient - Child Shopper	ChShopperHQ	unitless	Chem-Spec	0.002	0.002	0.002	0.002	0.002	0.0001	0.001	0.001	0.001
Carcinogenic Risk												
Carcinogenic Risk - Child Shopper	CHShopperRISK	unitless	Chem-Spec	4.0E-08	4.0E-08	3.6E-08	3.4E-08	3.6E-08	2.3E-09	9.5E-09	9.9E-09	1.0E-08

Table 6-5. PCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

ADULT INDOOR SHOPPER												
Risk Calculation Parameters	Acronym	Units	Value	Michaels Subslab Sample ID/ Indoor Air Sample ID Sampling Date					REI Subslab Sample ID/Indoor Air Sample ID Sample Date			
				SS-12-08/ IA-12-08 10/14/2013	SS-12-09/ IA-12-09 10/2/2013	SS-12-10/ IA-12-10 10/2/2013	SS-12-26/ IA-12-26 5/27/2015	SS-12-26/ IA-12-26 (DUP) 5/27/2015	SS-12-25/ IA-12-25 10/2-10/2013	SS-12-27/ IA-12-27 5/27/2015	SS-12-28/ IA-12-28 5/28/2015	SS-12-29/ IA-12-29 5/28/2015
				Exposure Point Concentrations								
PCE Subslab Air Concentration	SSvolatile	µg/m ³	Chem-Spec	160	170	170	520	530	130	120	42	< 21
PCE Indoor Air EPC - Volatiles	C _{volatile}	µg/m ³	Chem-Spec	2.2	2.2	2.0	1.9	2.0	0.13	< 0.53	< 0.55	< 0.56
Inhalation Pathway Parameters												
Exposure Time	ET	hours/day	2	--	--	--	--	--	--	--	--	--
Exposure Frequency	EF	days/year	156	--	--	--	--	--	--	--	--	--
Exposure Duration (adult)	ED _{adult}	years	24	--	--	--	--	--	--	--	--	--
Conversion Factor 1	CF1	day/hours	24	--	--	--	--	--	--	--	--	--
Averaging Time - Noncarcinogenic	AT _{nc}	days	8,760	--	--	--	--	--	--	--	--	--
Averaging Time - Carcinogenic	AT _c	days	25,550	--	--	--	--	--	--	--	--	--
Exposure Concentration												
Intake Factor - Noncarcinogenic	IF _{nc}	mg/m ³	Chem-Spec	7.8E-02	7.8E-02	7.1E-02	7.1E-02	7.1E-02	4.6E-03	1.9E-02	2.0E-02	2.0E-02
Intake Factor - Carcinogenic	IF _c	µg/m ³	Chem-Spec	2.7E-02	2.7E-02	2.4E-02	2.4E-02	2.4E-02	1.6E-03	6.5E-03	6.7E-03	6.8E-03
Toxicity Criteria												
Inhalation Reference Concentration	RfCi	mg/m ³	Chem-Spec	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02	3.5E-02
Conversion Factor 2	CF2	µg/mg	1,000	--	--	--	--	--	--	--	--	--
Inhalation Unit Risk Factor	IUR	(µg/m ³) ⁻¹	Chem-Spec	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06
Noncarcinogenic Hazard												
Noncarcinogenic Hazard Quotient - Adult Shopper	AdShopperHQ	unitless	Chem-Spec	0.002	0.002	0.002	0.002	0.002	0.0001	0.001	0.001	0.001
Carcinogenic Risk												
Carcinogenic Risk - Adult Shopper	AdShopperRISK	unitless	Chem-Spec	1.6E-07	1.6E-07	1.4E-07	1.4E-07	1.4E-07	9.4E-09	3.8E-08	4.0E-08	4.0E-08

Notes:

Bolded values indicate sub-slab or indoor air concentrations that exceed risk-based screening levels (see Table 1, RI/FS Addendum Supplement No. 1).

- Not applicable
- < Less than
- µg/m³ micrograms per cubic meter
- mg/m³ milligrams per cubic meter
- (µg/m³)⁻¹ 1 divided by µg/m³

Acronym	Parameter	Units	Notes
ET	Exposure Time	hours/day	Receptor-specific; see Table 6-1
EF	Exposure Frequency	days/year	Receptor-specific; see Table 6-1
ED	Exposure Duration	years	Receptor-specific; see Table 6-1
CF1	Conversion Factor 1	day/24 hours	
AT	Averaging time	ED * 365 days/year	Receptor-specific; see Table 6-1
IF	Intake Factor	µg/m ³	micrograms per cubic meter
nc	noncarcinogen		
c	carcinogen		
HQ	Hazard Quotient	Unitless	
RfCi	Reference Concentration - inhalation	mg/m ³	milligrams per cubic meter; Chemical-specific; see Table 6-3
CF2	Conversion Factor 2	1000 mg/mg	for noncancer HQ calculation; RfCi in units of mg/kg
IUR	Inhalation Unit Risk	(µg/m ³) ⁻¹	1 divided by (µg/m ³) ⁻¹ ; Chemical-specific; see Table 6-3

Table 6-6. TCE Risk Calculations for Michaels and REI Indoor Retail Worker

ADULT INDOOR RETAIL WORKER												
Risk Calculation Parameters	Acronym	Units	Value	Michaels Sample ID Sampling Date					REI Subslab Sample ID/Indoor Air Sample ID Sample Date			
				SS-12-08/ IA-12-08 10/14/2013	SS-12-09/ IA-12-09 10/2/2013	SS-12-10/ IA-12-10 10/2/2013	SS-12-26/ IA-12-26 5/27/2015	SS-12-26/ IA-12-26 (DUP) 5/27/2015	SS-12-25/ IA-12-25 10/2-10/2013	SS-12-27/ IA-12-27 5/27/2015	SS-12-28/ IA-12-28 5/28/2015	SS-12-29/ IA-12-29 5/28/2015
Exposure Point Concentration												
TCE Soil Gas Concentration	C _{soil gas}	µg/m ³	Chem-spec	3.1	4.9	42	< 14	< 14	7.0	< 14	< 14	< 14
TCE Indoor Air Concentration	C _{indoor air}	µg/m ³	Chem-spec	0.22	0.12	0.13	< 0.43	< 0.45	6.8	< 0.42	< 0.44	< 0.44
Inhalation Pathway Parameters												
Exposure Time	ET	hours/day	8	--	--	--	--	--	--	--	--	--
Exposure Frequency	EF	days/year	250	--	--	--	--	--	--	--	--	--
Exposure Duration	ED	years	25	--	--	--	--	--	--	--	--	--
Conversion Factor 1	CF1	day/hours	24	--	--	--	--	--	--	--	--	--
Averaging Time - Noncarcinogenic	ATnc	days	9,125	--	--	--	--	--	--	--	--	--
Averaging Time - Carcinogenic	ATc	days	25,550	--	--	--	--	--	--	--	--	--
Exposure Concentration												
Intake Factor - Noncarcinogenic	IFnc	µg/m ³	Chem-Spec	5.0E-02	2.7E-02	3.0E-02	9.8E-02	1.0E-01	1.6E+00	9.6E-02	1.0E-01	1.0E-01
Intake Factor - Carcinogenic	IFc	µg/m ³	Chem-Spec	1.8E-02	9.8E-03	1.1E-02	3.5E-02	3.7E-02	5.5E-01	3.4E-02	3.6E-02	3.6E-02
Toxicity Criteria												
Inhalation Reference Concentration	RfC	mg/m ³	Chem-Spec	2.E-03	2.E-03	2.E-03	2.E-03	2.E-03	2.E-03	2.E-03	2.E-03	2.E-03
Conversion Factor 2	CF2	µg/m ³	1,000	--	--	--	--	--	--	--	--	--
Inhalation Unit Risk Factor	IUR	(µg/m ³) ⁻¹	Chem-Spec	4.1E-06	4.1E-06	4.1E-06	4.1E-06	4.1E-06	4.1E-06	4.1E-06	4.1E-06	4.1E-06
Noncarcinogenic Hazard												
Inhalation (Volatiles) Noncarcinogenic Hazard Quotient	Worker HQ	unitless	Chem-Spec	0.03	0.01	0.01	0.05	0.05	0.78	0.05	0.05	0.05
Carcinogenic Risk												
Inhalation (Volatiles) Carcinogenic Risk	WorkerRISK	unitless	Chem-Spec	7.4E-08	4.0E-08	4.3E-08	1.4E-07	1.5E-07	2.3E-06	1.4E-07	1.5E-07	1.5E-07

Notes:
 Bolded values indicate sub-slab or indoor air concentrations that exceed risk-based screening levels (see Table 1, RI/FS Addendum Supplement No. 1).

- Not applicable
- < Less than
- µg/m³ micrograms per cubic meter
- mg/m³ milligrams per cubic meter
- (µg/m³)⁻¹ 1 divided by µg/m³

Acronym	Parameter	Units	Notes
ET	Exposure Time	hours/day	Receptor-specific; see Table 6-1
EF	Exposure Frequency	days/year	Receptor-specific; see Table 6-1
ED	Exposure Duration	years	Receptor-specific; see Table 6-1
CF1	Conversion Factor 1	day/24 hours	
AT	Averaging time	ED * 365 days/year	Receptor-specific; see Table 6-1
IF	Intake Factor	µg/m ³	micrograms per cubic meter
nc	noncarcinogen		
c	carcinogen		
HQ	Hazard Quotient	Unitless	
RfCi	Reference Concentration - inhalation	mg/m ³	milligrams per cubic meter; Chemical-specific; see Table 6-3
CF2	Conversion Factor 2	1000 mg/mg	for noncancer HQ calculation; RfCi in units of mg/kg
IUR	Inhalation Unit Risk	(µg/m ³) ⁻¹	1 divided by (µg/m ³) ⁻¹ ; Chemical-specific; see Table 6-3



Table 6-7. TCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

CHILD INDOOR SHOPPER													
Risk Calculation Parameters	Acronym	Units	Value	Michaels Subslab Sample ID/ Indoor Air Sample ID Sampling Date					REI Subslab Sample ID/Indoor Air Sample ID Sample Date				
				SS-12-08/ IA-12-08 10/14/2013	SS-12-09/ IA-12-09 10/2/2013	SS-12-10/ IA-12-10 10/2/2013	SS-12-26/ IA-12-26 5/27/2015	SS-12-26/ IA-12-26 (DUP) 5/27/2015	SS-12-25/ IA-12-25 10/2-10/2013	SS-12-27/ IA-12-27 5/27/2015	SS-12-28/ IA-12-28 5/28/2015	SS-12-29/ IA-12-29 5/28/2015	
Exposure Point Concentrations													
TCE Subslab Air Concentration	SS _{volatile}	µg/m ³	Chem-Spec	3.1	4.9	42	< 14	< 14		7.0	< 14	< 14	< 14
TCE Indoor Air EPC - Volatiles	C _{volatile}	µg/m ³	Chem-Spec	0.22	0.12	0.13	< 0.43	< 0.45		6.8	< 0.42	< 0.44	< 0.44
Inhalation Pathway Parameters													
Exposure Time	ET	hours/day	2	--	--	--	--	--	--	--	--	--	--
Exposure Frequency	EF	days/year	156	--	--	--	--	--	--	--	--	--	--
Exposure Duration (non-carcinogenic)	ED _{nc}	years	6	--	--	--	--	--	--	--	--	--	--
Exposure Duration (carcinogenic)	ED _c	years	70	--	--	--	--	--	--	--	--	--	--
Exposure Duration (0-<2 years - mutagenic)	ED (0-<2)	years	2	--	--	--	--	--	--	--	--	--	--
Age-Dependent Adjustment Factor (0-<2 years)	ADAF (0-<2)	unitless	10	--	--	--	--	--	--	--	--	--	--
Exposure Duration (2-6 years mutagenic)	ED (2-6)	years	4	--	--	--	--	--	--	--	--	--	--
Age-Dependent Adjustment Factor (0-6 years)	ADAF (2-6)	unitless	3	--	--	--	--	--	--	--	--	--	--
Conversion Factor 1	CF1	hours/day	24	--	--	--	--	--	--	--	--	--	--
Averaging Time - Noncarcinogenic	AT _{nc}	days	2,190	--	--	--	--	--	--	--	--	--	--
Averaging Time - Carcinogenic	AT _c	days	25,550	--	--	--	--	--	--	--	--	--	--
Exposure Concentration													
Intake Factor - Noncarcinogenic	IF _{nc}	µg/m ³	Chem-Spec	7.8E-03	4.3E-03	4.6E-03	1.5E-02	1.6E-02		2.4E-01	1.5E-02	1.6E-02	1.6E-02
Intake Factor - 0-2 mutagenic	IF(0-2)	µg/m ³	Chem-Spec	2.2E-03	1.2E-03	1.3E-03	4.4E-03	4.6E-03		6.9E-02	4.3E-03	4.5E-03	4.5E-03
Intake Factor - 2-6 mutagenic	IF(2-6)	µg/m ³	Chem-Spec	1.3E-03	7.3E-04	7.9E-04	2.6E-03	2.7E-03		4.2E-02	2.6E-03	2.7E-03	2.7E-03
Toxicity Criteria													
Inhalation Reference Concentration	RfC	mg/m ³	Chem-Spec	2.E-03	2.E-03	2.E-03	2.E-03	2.E-03		2.E-03	2.E-03	2.E-03	2.E-03
Conversic CF2	mg/m3	1,000	1,000	--	--	--	--	--		--	--	--	--
Inhalation Unit Risk Factor	IUR	(µg/m3) ⁻¹	Chem-Spec	4.1E-06	4.1E-06	4.1E-06	4.1E-06	4.1E-06		4.1E-06	4.1E-06	4.1E-06	4.1E-06
Noncarcinogenic Hazard													
Noncarcinogenic Hazard Quotient - Child Shopper	ChShopperHQ	unitless	Chem-Spec	0.004	0.002	0.002	0.008	0.008		0.12	0.01	0.01	0.01
Carcinogenic Risk													
Carcinogenic Risk - Child Shopper	CHShopperRISK	unitless	Chem-Spec	1.5E-08	8.0E-09	8.7E-09	2.9E-08	3.0E-08		4.5E-07	2.8E-08	2.9E-08	2.9E-08

Table 6-7. TCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

ADULT INDOOR SHOPPER												
Risk Calculation Parameters	Acronym	Units	Value	Michael's Subslab Sample ID/ Indoor Air Sample ID Sampling Date					REI Subslab Sample ID/Indoor Air Sample ID Sample Date			
				SS-12-08/ IA-12-08 10/14/2013	SS-12-09/ IA-12-09 10/2/2013	SS-12-10/ IA-12-10 10/2/2013	SS-12-26/ IA-12-26 5/27/2015	SS-12-26/ IA-12-26 (DUP) 5/27/2015	SS-12-25/ IA-12-25 10/2-10/2013	SS-12-27/ IA-12-27 5/27/2015	SS-12-28/ IA-12-28 5/28/2015	SS-12-29/ IA-12-29 5/28/2015
Exposure Point Concentrations												
TCE Subslab Air Concentration	SS _{volatile}	µg/m ³	Chem-Spec	3.1	4.9	42	< 14	< 14	7.0	< 14	< 14	< 14
TCE Indoor Air EPC - Volatiles	C _{volatile}	µg/m ³	Chem-Spec	0.22	0.12	0.13	< 0.43	< 0.45	6.8	< 0.42	< 0.44	< 0.44
Inhalation Pathway Parameters												
Exposure Time	ET	hours/day	2	--	--	--	--	--	--	--	--	--
Exposure Frequency	EF	days/year	156	--	--	--	--	--	--	--	--	--
Exposure Duration (non-carcinogenic)	EDnc	years	24	--	--	--	--	--	--	--	--	--
Exposure Duration (carcinogenic)	EDc	years	70	--	--	--	--	--	--	--	--	--
Exposure Duration (6-<16 years - mutagenic)	EDmoa(6-<16)	years	10	--	--	--	--	--	--	--	--	--
Age-Dependent Adjustment Factor (6-<16 years)	ADAF (6-<16)	unitless	3	--	--	--	--	--	--	--	--	--
Exposure Duration (16-70 years mutagenic)	EDmoa(16-70)	years	54	--	--	--	--	--	--	--	--	--
Age-Dependent Adjustment Factor (16-70 years)	ADAF (16-70)	unitless	1	--	--	--	--	--	--	--	--	--
Conversion Factor 1	CF1	day/hours	24	--	--	--	--	--	--	--	--	--
Averaging Time - Noncarcinogenic	AT _{nc}	days	8,760	--	--	--	--	--	--	--	--	--
Averaging Time - Carcinogenic	ATc	days	25,550	--	--	--	--	--	--	--	--	--
Exposure Concentration												
Intake Factor - Noncarcinogenic	IFnc	mg/m ³	Chem-Spec	7.8E-03	4.3E-03	4.6E-03	1.5E-02	1.6E-02	2.4E-01	1.5E-02	1.6E-02	1.6E-02
Intake Factor - 6-16 years (mutagenic)	IF(6-<16)	µg/m ³	Chem-Spec	3.4E-03	1.8E-03	2.0E-03	6.6E-03	6.9E-03	1.0E-01	6.4E-03	6.7E-03	6.7E-03
Intake Factor - 16-70 years (mutagenic)	IF(16-70)	µg/m ³	Chem-Spec	6.0E-03	3.3E-03	3.6E-03	1.2E-02	1.2E-02	1.9E-01	1.2E-02	1.2E-02	1.2E-02
Toxicity Criteria												
Inhalation Reference Concentration	RfCi	mg/m ³	Chem-Spec	2.00E-03	2.00E-03	2.00E-03	2.00E-03	2.00E-03	2.00E-03	2.00E-03	2.00E-03	2.00E-03
Conversion Factor 2	CF2	µg/mg	1,000	--	--	--	--	--	--	--	--	--
Inhalation Unit Risk Factor	IUR	(µg/m ³) ⁻¹	Chem-Spec	4.10E-06	4.10E-06	4.10E-06	4.10E-06	4.10E-06	4.10E-06	4.10E-06	4.10E-06	4.10E-06
Noncarcinogenic Hazard												
Noncarcinogenic Hazard Quotient - Adult Shopper	AdShopperHQ	unitless	Chem-Spec	0.004	0.002	0.002	0.008	0.008	0.12	0.007	0.008	0.008
Carcinogenic Risk												
Carcinogenic Risk - Adult Shopper	AdShopperRISK	unitless	Chem-Spec	3.9E-08	2.1E-08	2.3E-08	7.5E-08	7.9E-08	1.2E-06	7.4E-08	7.7E-08	7.7E-08

Table 6-7. TCE Risk Calculations for Michaels and REI Indoor Child and Adult Shopper

Notes:

Bolded values indicate sub-slab or indoor air concentrations that exceed risk-based screening levels (see Table 1, RI/FS Addendum Supplement No. 1).

- Not applicable
- < Less than
- µg/m³ micrograms per cubic meter
- mg/m³ milligrams per cubic meter
- (µg/m³)⁻¹ 1 divided by µg/m³

Acronym	Parameter	Units	Notes
ADAF	Age dependent adjustment factor:		
	0-2 years: 10	Unitless	
	2-6 years: 3	Unitless	
	6-16 years: 3	Unitless	
	16-70 years: 1	Unitless	
ET	Exposure Time	hours/day	Receptor-specific; see Table 6-1
EF	Exposure Frequency	days/year	Receptor-specific; see Table 6-1
ED	Exposure Duration	years	Receptor-specific; see Table 6-1
nc	noncarcinogen		
c	carcinogen		
ED moa	Exposure Duration (mutagenic mode of action)	years	Age-specific
CF1	Conversion Factor 1	day/24 hours	
AT	Averaging time	ED * 365 days/year	Receptor-specific; see Table 6-1
IF	Intake Factor	µg/m ³	micrograms per cubic meter
HQ	Hazard Quotient	Unitless	
RfCi	Reference Concentration	mg/m ³	milligrams per cubic meter; Chemical-specific; see Table 6-3
CF2	Conversion Factor 2	1000 mg/mg	for noncancer HQ calculation; RfCi in units of mg/kg
IUR	Inhalation Unit Risk	(µg/m ³) ⁻¹	1 divided by (µg/m ³) ⁻¹ ; Chemical-specific; see Table 6-3

Table 6-8. Summary of Cancer Risks and Non-cancer Hazards

Receptor	Tetrachloroethene (PCE)		Trichloroethene (TCE)		Cumulative Risk	
	Excess Lifetime Cancer Risk	Noncancer Hazard	Excess Lifetime Cancer Risk	Noncancer Hazard	Excess Lifetime Cancer Risk	Hazard Index
Michaels						
Indoor Retail Worker	1.1E-06	0.01	1.5E-07	0.05	1E-06	<1
Child Shopper	4.0E-08	0.002	3.0E-08	0.008	7E-08	<1
Adult Shopper	1.6E-07	0.002	7.9E-08	0.008	2E-07	<1
Total Shopper	2.0E-07	--	1.1E-07	--	3E-07	--
REI						
Indoor Retail Worker	2.7E-07	0.004	2.3E-06	0.78	3E-06	<1
Child Shopper	1.0E-08	0.001	4.5E-07	0.12	5E-07	<1
Adult Shopper	4.0E-08	0.001	1.2E-06	0.12	1E-06	<1
Total Shopper	5.0E-08	--	1.7E-06	--	2E-06	--

Notes:

Cancer risk and non-cancer hazard are based on the maximum chemical concentration detected in indoor air from the AES (2013) and AES (2015) investigations.

Total Shopper excess lifetime cancer risks are the sum of the Child Shopper and Adult Shopper cancer risks.

-- No cumulative value; non-cancer hazard for the adult and child shopper are evaluated separately.

ATTACHMENT 7
RESPONSES TO COMMENTS ON THE DRAFT SUPPLEMENT NO. 1

GENERAL COMMENTS - HUMAN HEALTH RISK ASSESSMENT

Main Text

1. Section 4.0 — Human Health Risk Assessment.
 - a. The second paragraph on page 7 states, “Non-cancer and cancer risk were estimated for the Indoor Retail Worker and Indoor Shopper receptors and found to be at levels well below regulatory risk targets. Results of the Human Health Risk Assessment (HHRA) suggest that if VOCs are migrating into indoor air, concentrations are so low as to be negligible, as supported by the actual indoor air data for PCE and TCE collected in May 2015.” HERO has the following comments on these statements.
 - i. Please reference Attachment 6, the Human Health Risk Assessment in the text. The cancer risks and non-cancer hazards from the PCE and TCE indoor air concentrations detected are discussed in Attachment 6. There are no cancer risks or non-cancer hazards listed in the main text of the Report. At the least, these results need to be referenced in the main text of the Report. HERO would prefer that a summary of the cancer risks and non-cancer hazards for the two receptors are provided in the main text of the Report.
 - ii. The statement that the estimate cancer risks are “well below regulatory risk targets” is not completely accurate. According to Table 6-4, the cancer risk for the indoor retail worker at two indoor air sampling locations collected during the October 2013 sampling event were at the point of departure, 1.1E-06 (IA-12-08 and IA-12-09). Please acknowledge this in the Report.
 - b. The third paragraph on page 7 states, “Indoor air data for PCE and TCE collected in Michaels and REI stores during the RI Addendum supplemental investigation were generally one to two orders of magnitude below risk-based indoor air screening values for these chemicals.” HERO concurs with this statement for the results from the indoor air samples collected in the REI store. However, several of the detected PCE indoor air concentrations in the Michaels were at or slightly lower than the indoor air screening level, not one to two orders of magnitude below risk-based indoor air screening values. Please revise this sentence for accuracy.

RESPONSE TO COMMENT 1:

- a(i). Attachment 6, the Human Health Risk Assessment, is already referenced in the first sentence of Section 4.0; however, Section 4.0 was revised to also include references to Attachment 6 in the second and third paragraphs, and to add a summary of the cancer risks and non-cancer hazards for the Indoor Retail Worker and Shopper receptors.
- a(ii). The statement that the estimated cancer risks are “well below regulatory risk targets” was revised to acknowledge that cancer risk for the indoor retail worker at two indoor air sampling locations collected during the October 2013 sampling event were at the point of departure, 1.1E-06 (IA-12-08 and IA-12-09).
- b. The third paragraph on page 7 was revised to state that the detected PCE indoor air concentrations in Michaels were lower than the indoor air screening level.

2. Section 6.0 — Conclusions and Recommendations. The text on page 9 states, “Analytical results from samples collected at REI in the spring 2015 confirm sub-slab concentrations of PCE and TCE do not indicate a potential vapor intrusion pathway or Army activity related sub-slab sources of PCE and TCE.” PCE was detected in two sub-slab samples at concentrations greater than the screening level of 42 µg/m³, SS-12-25 at 130 µg/m³ (10/2013) and SS-12-27 at 120 µg/m³ (5/2015). The corresponding PCE indoor air concentrations were either not detected above the limit of detection (5/2015) or orders of magnitude below the indoor air screening level (10/2013), indicating that the indoor air pathway from the sub-slab is not of concern. However, the source of the two sub-slab detected concentrations should be discussed in the report since these concentrations were greater than the screening levels.

RESPONSE TO COMMENT 2:

The text was revised to state “Analytical results from samples collected at REI in spring 2015 do not indicate a potential vapor intrusion pathway or unacceptable risk to indoor receptors.” The statement “sub-slab concentrations of PCE and TCE do not indicate... Army activity related sub-slab sources of PCE and TCE” was inaccurate in the context of the conceptual site model presented in the RI/FS Addendum.

3. A summary table of the calculated cumulative cancer risks and non-cancer hazards should be included in table section of the main document.

RESPONSE TO COMMENT 3:

A summary table of the calculated cumulative cancer risks and non-cancer hazards is provided as Table 4 in the main document.

Attachment 6— Human Health Risk Assessment

4. Section 4.0 — Toxicity Assessment and Table 6-3 — Toxicity Factors. The text and table reference that the source of the toxicity criteria used for PCE and TCE is the Cal/EPA Office of Environmental Health Hazards Assessment (OEHHA) Toxicity Criteria Database. The toxicity criteria for PCE is from the OEHHA Toxicity Criteria Database, however, the toxicity criteria for TCE is from the USEPA Integrated Risk Information System (IRIS) Toxicity Criteria Database. For accuracy, please update the text (Sections 4.1 and 4.3) and Table 6-3. Please note that HERO concurs with the toxicity criteria being utilized in this HHRA.

RESPONSE TO COMMENT 4:

The toxicity criteria for TCE was revised to cite the USEPA IRIS Toxicity Criteria Database in Sections 4.1 and 4.3, as well as Table 6-3.

5. Section 5.0 — Risk Characterization. Incremental cumulative cancer risk and non-cancer hazard needs to be calculated and presented in the Report. Cumulative risks are calculated not only for all exposure pathways evaluated, but also include all chemicals detected in that exposure pathway. For the HHRA at Sites 2 and 12, we have a single exposure pathway, inhalation; however, we have two chemicals that have been detected in the indoor air samples, PCE and TCE. The cumulative cancer risk and non-cancer hazard needs to be calculated and presented for all chemicals detected in indoor air for the inhalation exposure pathway as shown in Table 6-2. Please update the text in Sections 5.3, 5.3.1, 5.3.2, 5.3.3,

5.3.4 and 5.4. Please also include a summary table that lists the cumulative cancer risks and non-cancer hazards for the two receptors evaluated in the HHRA.

RESPONSE TO COMMENT 5:

The text in Sections 5.3, 5.3.1, 5.3.2, 5.3.3, 5.3.4, and 5.4 was updated to include a discussion of cumulative cancer risk and non-cancer hazard. Table 6-8 was added to present the cumulative cancer risks and non-cancer hazards for the Indoor Retail Worker and Child and Adult Shopper receptors.

6. Section 5.4 — Discussion of Risk Results. The text on page 12 states, “The PCE and TCE cancer risks for the location-specific data collected at Michaels and REI were below the regulatory threshold of 1E-06 for the Indoor Retail Worker...” According to Table 6-4, the cancer risk for the indoor retail worker at two indoor air sampling locations collected during the October 2013 sampling event were at the point of departure, 1.1E-06 (IA-12-08 and IA-12-09). Please acknowledge this in the Report. HERO acknowledges that the cancer risks for the May 2015 indoor air samples were below the point of departure.

RESPONSE TO COMMENT 6:

Section 5.4 was revised to cite the cancer risks for the Indoor Retail Worker based on the indoor air results from the October 2013 sampling event.

7. Section 5.5.1 Uncertainty Discussion — Data Evaluation. The text on page 13 states, “Michaels is a “specialty retailer of arts, crafts, framing, home decor & seasonal products for hobbyists and DIY decorators” and products sold or used in the store (e.g., degreasers, spot removers, paint thinners) may be a source of the PCE detected in the indoor air samples.” Products near one of the sampling locations in the Michaels are shown in Picture 5, Attachment 3. Please clarify in the uncertainty discussion as to whether additional investigation was conducted to determine if any of the products shown in Picture 5 or sold/used at Michaels do actually contain PCE.

RESPONSE TO COMMENT 7:

The Uncertainty Discussion in Section 5.5.1 was revised to clarify that no further investigation was conducted to determine if products sold/used at Michaels contain PCE since detections of PCE in indoor air samples collected in the May 2015 sampling event were less than the PCE IA-SL.

ATTACHMENT 8
RESPONSES TO COMMENTS ON THE DRAFT FINAL SUPPLEMENT
NO. 1

Responses to Comments submitted by the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO)¹

SCOPE OF [HERO] REVIEW:

The responses to comments, the main report, and the revised Attachment 6 – Human Health Risk Assessment were reviewed to evaluate if HERO's comments² [on the *Draft Supplement No. 1, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12, Former Fort Ord, California*] were addressed adequately and incorporated.

GENERAL COMMENTS – September 28, 2015²

1. Response to General Comment #1 – Main Text

- 1a(i). Comment was incorporated by referring to Attachment 6 in the second and third paragraphs of Section 4.
- 1a(ii). Comment was addressed and incorporated. The last line in the fourth paragraph of Section 4 states that the incremental cancer risks for the Michaels Indoor Retail worker at two sampling locations (IA-12-08 and IS-12-09) were at the regulatory point of departure.
- 1b. Comments was addressed and incorporated. The statement in the third paragraph, page 7, was revised to indicate that detected PCE indoor air in Michaels were lower than the indoor air screening levels, not one to two orders of magnitude (as previously stated) below risk-based indoor air screening values.

2. Response to General Comment #2 – Main Text

Comment was not adequately addressed. HERO had commented that the source of the two sub-slab detected concentrations should be discussed in the report because these concentrations were greater than the screening levels. A revised statement that indicates the absence of a potential vapor intrusion pathway of unacceptable risk to indoor air receptors still does not discuss the source of the detected concentrations in the sub-slab.

The conceptual site model (CSM) shown in Figure 6-1 identifies historical operations as the source of PCE and TCE in groundwater. Section 3.2.3, Conceptual Site Model, should be the first sub-section in Section 3, Exposure Assessment, in Attachment 6. The CSM should be moved to Section 3.1, with the exposure setting discussed within the context of the CSM. In the current format, Exposure Setting discusses the current and future land use, but does not discuss the former land use that was the source of the released chemicals.

The CSM illustrates, and Section 3.2 discusses, the four components of a complete exposure pathway. A more detailed discussion of the source of chemical release or source of detected sub-slab concentrations should be provided In Section 3.2.

RESPONSE TO COMMENT 2:

¹ In a letter dated December 18, 2015 (see Administrative Record No. [AR#] BW-2721B.7).

² In a letter dated October 2, 2015 (see AR# BW-2721B.4). The comments and the Army's responses to the comments are provided in Attachment 7.

Per the original Comment 2 from September 28, 2015, the text in Section 1.0 of the main text was revised to include information about the source of sub-slab concentrations of PCE and TCE. Per the comment from December 17, 2015, the description of the CSM is now the first subsection under Section 3.0 of the HHRA (Attachment 6) and information about the source of sub-slab concentrations was added to Section 3.2 (Exposure Pathways and Receptors, now Section 3.3).

3. Response to General Comment #3 — Main Text

Comment addressed and incorporated. Table 4 summarizes the incremental cancer risk and hazard index estimates presented in Tables 6-4 through 6-7 in Attachment 6.

4. Response to Comment #4 — Attachment 6

Comment addressed and incorporated. The source of the toxicity criteria for TCE was corrected to USEPA Integrated Risk Information System (IRIS) Toxicity Criteria Database.

5. Response to Comment #5 — Attachment 6

Comment addressed and incorporated. Sections 5.3, 5.3.1 through 5.3.4, and 5.4 were revised to include a discussion of the chemical-specific and cumulative cancer risk and hazard index estimates, which were also presented in Table 6-8.

6. Response to Comment #6 — Attachment 6

Comment addressed and incorporated. The discussion of risk results was revised to reflect HERO's comment.

7. Response to Comment #7 — Attachment 6

Comment is not addressed. The second paragraph in Section 5.5.1 indicates that no further investigation was conducted to determine if products sold at Michaels really contain PCE because the indoor air concentrations were lower than the corresponding indoor air screening level.

It should be noted that although the indoor air concentrations of PCE in 2015 (1.9 and 2 $\mu\text{g}/\text{m}^3$, see Table 2) were lower than the indoor air screening level for PCE, the ambient air concentration of PCE [0.52(U) $\mu\text{g}/\text{m}^3$] collected outside of Michaels (see Figure 1 of main report) was lower than the indoor air concentration. Therefore, the indoor air concentrations of PCE cannot be attributed to entry of outdoor air concentrations of PCE into the building. By not collecting additional information regarding the compounds in products sold or present inside the store, the source/sources of low levels of PCE reported inside Michaels remain an uncertainty and should be discussed in Section 5.5.1.

RESPONSE TO COMMENT 7:

The original Comment 7 from September 28, 2015 only asked for clarification whether there was additional investigation to determine if products sold or used at Michaels contain PCE and the text was revised appropriately to respond to the comment. Further, as stated in the RI/FS Addendum Work Plan (AES, 2013) and concurred with by DTSC, inventories of store products would only be conducted if detections of PCE or TCE in indoor air exceeded screening levels, which they did not. Product turnover at Michaels is anticipated to vary seasonally; therefore, post-sampling inventory is

not expected to be representative of products in the store at the time samples were collected. However, to address HERO's concern there was no further investigation regarding the PCE content in products sold or used at the store, Section 5.5.1 of the HHRA was revised to identify this as an uncertainty in the data evaluation.

The Army does not make any argument that concentrations of PCE in indoor air at Michaels are attributed to entry of outdoor air. As established in the RI/FS Addendum (AES, 2015), the lines of evidence indicate PCE detected in indoor air at Michaels is likely from an indoor source (i.e., products sold or used in the store) and the Army will not assume responsibility for indoor sources of contamination that are not attributable to Army activities, which would be outside the CERCLA process. Regardless, the detected indoor air concentrations of PCE were used for the HHRA and corresponding cancer risks and non-cancer hazards for receptors were still below threshold criteria and do not present an unacceptable risk. Taking these factors into consideration, any uncertainty associated with sources of PCE in Michaels is not relevant to the conclusions of the RI/FS Addendum Supplement No. 1 and the HHRA.