Village of Cuba Landfill Site

ALLEGANY COUNTY, NEW YORK

Periodic Review Report (2016)

NYSDEC Site Number: 902012

Prepared for

Village of Cuba
17 East Main Street
Cuba, New York 14727

Prepared by

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VILLAGE OF CUBA LANDFILL SITE
SITE NUMBER 9-02-012
PERIODIC REVIEW REPORT

Allegany County, New York

For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

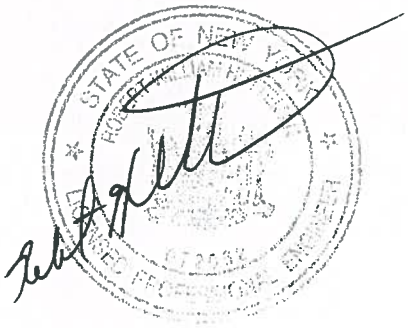
(a) The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by Division of Environmental Remediation (DER);

(b) Nothing has occurred that would impair the ability of such control to protect public health and the environment;

(c) Nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control*;

(d) Access to the Site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintenance of this control;

Lu Engineers



2-23-16

Robert Hutteman, P.E. Date
New York State Professional Engineer
No. 072062

*In accordance with correspondence with NYSDEC, only one (1) monitoring event was completed during the 2015 PRR timeframe. Furthermore that event included only VOC parameters.

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EXECUTIVE SUMMARY

The Cuba Landfill Site is a 40-acre former waste disposal facility located in the Town of Cuba, New York. The landfill Site is owned by the Village of Cuba and was operated by the Village of Cuba from the 1950s to the 1980s. The NYSDEC and the Village of Cuba entered into an Order on Consent to close the Cuba Landfill. This Order on Consent required the remedial parties, NYSDEC, and the Village of Cuba to investigate and remediate contaminated media at the Site.

During the remedial investigation (RI) conducted at the Site in 1999 and subsequent confirmatory sampling events, waste material/soil, groundwater, air, leachate, and sediment samples were collected to characterize the nature and extent of the contamination. Results of the Cuba Landfill RI indicated that the Site waste included a source of contamination that represented a threat to the environment and that off-Site contaminant migration was occurring. Analytical results showed that contaminants of concern, volatile organic compounds (VOCs) and polychlorinated biphenyls, were present in relatively low concentrations and were typical of unlined landfills that received domestic and industrial waste.

The Record of Decision dated June 2000 authorized the selected remedy of installation of a low permeability cap with passive gas venting, an up-gradient surface water diversion, a phytoremediation system for control of leachate, and long-term groundwater monitoring.

Operation, maintenance, and monitoring activities associated with the remedial action implementation are conducted at the Cuba Landfill as part of the ongoing implementation of the Site Management Plan. These monitoring activities provide the data to evaluate remedy performance, effectiveness, and protectiveness. As a part of the Site Management Plan, periodic Site inspections are conducted in addition to groundwater, surface water, and landfill gas sampling events.

In general, remedy performance monitoring data to date indicate that the remedies implemented continue to perform as expected, are effective, protective, and are progressing toward the remedial action objectives during this reporting period. Groundwater VOC concentrations have generally decreased since implementation. Inorganic concentrations, with the exception of iron and manganese, generally show slight decreases and the majority do not exceed applicable groundwater standards. Leachate indicator parameter concentrations remain below applicable standards and surface water quality does not appear to be impacted by surface water runoff from the Site.

1. INTRODUCTION

EA Science and Technology, an affiliate of EA Engineering, P.C., performed Site management activities, including quarterly sampling and Site inspection, through February 2012. In 2014 and 2015, the Village of Cuba tasked Lu Engineers (Lu) with continuing Site management activities at the Cuba Landfill Site located in the Town of Cuba, Allegany County, New York (Figure 1).

A series of groundwater monitoring wells were installed at the Site during the remedial process. The monitoring of these wells, among other tasks, is summarized under this Periodic Review Report (PRR). During this reporting period the Site management program, consisting of Site inspection and sampling of groundwater monitoring wells, a down-gradient residential well, and surface water, was conducted at the Site by EA Science and Technology in July/August 2011, November 2011, and February 2012.

Lu continued the management program in June 2015 by conducting a Site inspection and sampling of groundwater monitoring wells, surface water, and a down-gradient residential well. The June 2015 sampling event included groundwater sampling for baseline VOCs only. Site monitoring is required by, and stipulated in, the Record of Decision (ROD). The purpose of this PRR is to summarize the field activities, analytical results of the sampling events, and Site management activities that have been completed during this reporting period and to offer recommendations for future Site monitoring and maintenance activities.

1.1 BACKGROUND

The Cuba Landfill is a 40-acre former waste disposal facility located in the Town of Cuba, New York. The landfill Site is owned by the Village of Cuba and was operated by the Village of Cuba from the 1950s to the 1980s. The NYSDEC and the Village of Cuba entered into an Order on Consent (No. B9-461-94-09) to close the Cuba Landfill. This Order on Consent required the remedial parties, NYSDEC, and the Village of Cuba to investigate and remediate contaminated media at the Site. The boundaries of the Site are more fully described in the metes and bounds Site description that is part of the NYSDEC's Declaration of Covenants and Restrictions.

In 1994, results of Phase II Preliminary Site Assessment (PSA) testing at the Site conducted by URS Consultants, Inc. indicated the presence of VOCs in Site groundwater and leachate, and confirmed the disposal of hazardous waste including solvents, plating wastes, polychlorinated biphenyl capacitors, and paint sludges. After completion of the remedial work as specified within the February 2008 Contract Documents (Contract D006905), some contamination was left in the subsurface at the Site. Engineering controls (ECs) were incorporated into the Site remedy to control exposure to remaining contamination during the use of the Site to ensure protection of public health and the environment. In accordance with the New York State Solid

Waste Management Facilities Regulations (6 New York Code of Rules and Regulations Part 360-2.15[k][4]) and the Site-specific Site Management Plan (SMP), environmental monitoring sampling points have been, and continue to be maintained, monitored, and sampled to monitor surface water and groundwater quality and assess potential residual impacts to the environment immediately surrounding the landfill to support eventual Site closure.

1.2 PERIODIC REVIEW REPORT

This PRR was prepared by Lu Engineers, on behalf of the Village of Cuba, in accordance with the requirements set forth in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May, 2010 and the guidelines provided by NYSDEC. The first PRR was required 14 months after the final completion of construction in May 2010. The reporting period for this PRR is from January 25, 2015 to January 25, 2016. The following items are included in this PRR:

- Identification, assessment, and certification of each EC and Institutional Controls (IC) required by the remedy for the Site.
- Results of the Site inspection and sampling events including applicable inspection forms and other records generated for the Site during the reporting period.
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions.
- Data summary tables of groundwater and surface water contaminants of concern by media. These include a presentation of past VOC data as part of an evaluation of contaminant concentration trends.
- Laboratory analytical results, and the required laboratory data deliverables for each sample collected during the reporting period have been and will continue to be submitted electronically in a NYSDEC-approved EQuIS format.
- A Site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the Site-specific ROD.
    - The operation and the effectiveness of each treatment unit, including identification of any needed repairs or modifications.
    - Any new conclusions or observations regarding Site contamination based on inspection or lab data generated during the monitoring events.
    - Recommendations regarding any necessary changes to the remedy and/or SMP.
    - The overall performance and effectiveness of the remedy to date.

2. SITE OVERVIEW

The Cuba Landfill Site consists of two (2) adjoining parcels of property in the Town of Cuba totaling approximately 40 acres (Figure 1). The Site is bordered to the north by Deep Snow Road and a hay field, to the west by a small parcel of wooded land improved with a hunting cabin, and to the east and south by private, undeveloped wooded lands. The topography of the Site slopes steeply from north to south. The landfill ground cover consists primarily of mowed grass. Storm water drainage trenches oriented north-south and lined with rip-rap exist on the western portion of the landfill cap. These swales drain to a storm water detention pond at the toe of the slope. An unnamed intermittent tributary of the north branch of Van Campen Creek closely parallels the eastern border. Access to the Site is off Jackson Hill Road and the seasonal Deep Snow Road.

It is noted that in 2013, the Village of Cuba purchased a 10-acre rectangular parcel of land that adjoins the Site to the immediate south, as illustrated on Figure 2 and Figure 3. This parcel is not considered part of the definition or boundary of the Site. Off-Site monitoring wells MW-7, MW-10 and MW-10D are contained within the boundary of this 10-acre parcel.

Since the early 1950s, household, commercial, and industrial wastes were disposed of within the Cuba Landfill. The Village of Cuba acquired the Site in 1967 and operated it as an un-permitted municipal landfill. The facility was issued a sanitary landfill permit in 1979 by the NYSDEC and became inactive in approximately 1981. The landfill was inspected on a regular basis by NYSDEC until the Village completed an approved closure plan in 1987. Completion of Phase I and II – PSA for the NYSDEC to determine if the Site qualified for the New York State Registry of Inactive Hazardous Waste Disposal Sites indicated the presence of VOCs in Site groundwater and leachate. Based on these results and the confirmed disposal of hazardous waste, including solvents, plating wastes, polychlorinated biphenyl (PCB) capacitors and paint sludges, the Site was reclassified from Class 2a to Class 2 in 1994.

During the RI conducted at the Site in 1999 and subsequent confirmatory sampling events, waste material/soil, groundwater, air, leachate, and sediment samples were collected to characterize the nature and extent of the contamination. The RI results indicated that the Site was a source of contamination and that there was migration of contaminants off-Site. Analytical testing results showed that contaminants of concern (VOCs and PCBs) were present in relatively low concentrations typical of unlined landfills that receive domestic and industrial waste.

- Soil – Twelve (12) surface soil locations were sampled. Phenol, aroclor 1260, and several metals including arsenic, beryllium, cobalt, copper, iron, nickel, selenium, and zinc were detected at concentrations above applicable standards, criteria, and guidelines (SCGs). Subsurface soil samples from two locations did not contain concentrations of VOCs, SVOCs, pesticides, or PCBs greater than the SCGs.

- Upper Bedrock Groundwater – Primarily contaminated with VOCs in excess of applicable standards. Limited exceedances of SVOCs, pesticides, and metals were detected.

- Surface Water Sediment – No VOCs, pesticides, or PCBs were detected in any of the sediment samples analyzed. One sampling location at the southwest corner of the property contained one SVOC, phenol, and a few metals exceeding the SCGs. Both upgradient and downgradient samples from both tributaries contained similar metals concentrations.

- Groundwater Springs – Groundwater springs located downgradient and at various off-Site locations contained VOCs, endrin, aroclor 1260, and a few metals were detected at concentrations greater than the SCGs.

In 2008, the NYSDEC issued a work authorization to EA to provide construction, administration, and inspection services at the Cuba Landfill Site. EA was also retained to provide inspection services during construction activities, and to prepare the Final Engineering Report for these activities. D'Virka and Bartilucci Consulting Engineers was the design engineer of record for the landfill closure. The NYSDEC awarded the landfill closure contract to Modern Environmental Group, Inc. (Modern) for the construction activities. The Site was remediated in accordance with the NYSDEC-approved remedial design dated February 2008. The overall goal of the remedial actions at the Site is protection of human health and the environment, and meeting relevant SCGs. Specific remedial action objectives are as follows:

- Eliminate, to the extent practicable, direct human or animal exposure to waste in the landfill.

- Eliminate, to the extent practicable, the migration of contaminants from the landfill to groundwater.

- Reduce, control, or eliminate, to the extent practicable, the generation of leachate within the landfill mass.

- Eliminate, to the extent practicable, ingestion of groundwater affected by the Site that does not meet NYSDEC Class GA Ambient Water Quality Criteria.

- Eliminate, to the extent practicable, off-Site migration of groundwater that does not meet NYSDEC Class GA Ambient Water Quality Criteria.

Remedial measures were implemented at the Cuba Landfill between September 2008 and December 2009. A chronology of the significant actions/events of the remedial program for the Site is presented in the following table.

CUBA LANDFILL PERIODIC REVIEW REPORT REMEDY IMPLEMENTATION CHRONOLOGY	
Significant Action/Event	**Date**
Phase I –PSA	October 1990
Phase II –PSA	January 1994
RI Report[1]	July 1999
Feasibility Study Report[2]	December 1999
Record of Decision[3]	June 2000
Remedial Design Work Plan[4]	June 2001
Pre-Design Investigation Report	October 2003
Remedy Design Completion	February 2008
NYSDEC Design Approval	April 2008
Project Health and Safety Plan	April 2008
Remedy Implementation	September 2008
Substantial Completion	October 2009
NYSDEC Approval of Remedy Construction Completion (Final Completion)	May 2010
Site-Specific Quality Assurance Project Plan Addendum	January 2011
First Quarterly Report[5]	April 2011
NYSDEC Site Management Plan Approval	August 2011
Second Quarterly Report[5]	July 2011
Annual Report No. 1, May 2010 – July 2011[5]	September 2011
Declaration of Covenants and Restrictions	October 2011
Periodic Review Report[5]	November 2011
Third Quarterly Report (July/August 2011 event)[5]	December 2011
Fourth Quarterly Report (November 2011 event)[5]	April 2012
Fifth Quarterly Report (February 2012 event)[5]	June 2012
Sixth Inspection/Monitoring Report (July 2014 event, Lu Engineers)	November 2014
Seventh Inspection/Monitoring Report (June 2015 event, Lu Engineers)	June 2015

(1) Dvirka and Bartilucci Consulting Engineers. 1999. Remedial Investigation Report. Cuba Municipal Waste Disposal Site (Registry No. 9-02-012), Village of Cuba, Alleghany County, New York. July.

(2) Dvirka and Bartilucci Consulting Engineers. 1999. Feasibility Study Report, Cuba Municipal Waste Disposal Site (Registry No. 9-02-012), Village of Cuba, Alleghany County, New York. December.

(3) New York State Department of Environmental Conservation. 2000. Record of Decision, Village of Cuba Municipal Waste Disposal Site, Village of Cuba, Alleghany County, Site Number 9-02-012. June.

(4) Dvirka and Bartilucci Consulting Engineers. 2001. Remedial Design Work Plan, Cuba Municipal Waste Disposal Site (Registry No. 9-02-012), Village of Cuba, Alleghany County, New York. June.

(5) Prepared by EA Scient and Technology, an affiliate of EA Engineering, P.C.

3. SITE MANAGEMENT PLAN COMPLIANCE REPORT

The Cuba Landfill Site OM & M activities include media monitoring to evaluate remedy performance as follows:

- Landfill Cover System Inspection and Drainage Monitoring
- Groundwater and Surface Water Monitoring
- Landfill Gas Monitoring.

The monitoring locations, analytical testing requirements and inspection protocols for each monitoring/sampling/inspection event are outlined in the approved SMP. The results of the first three quarterly monitoring/sampling/inspection events conducted by EA Science and Technology during preceding reporting periods are summarized in their respective historic quarterly sampling reports, previously submitted. These monitoring events included activities conducted in July/August 2011 (3rd quarter), November 2011 (4th quarter), and February 2012 (1st quarter).

During the most recent monitoring/sampling/inspection event conducted by Lu (June 2015) groundwater and surface water samples were analyzed for baseline VOC parameters only. A down-gradient residential well was also sampled during this event and analyzed for baseline VOCs, as summarized in Table 1. Results of monitoring and sampling activities conducted during this event are summarized in the following tables:

- Table 1: June 2015 VOC Results
- Table 2: VOC Concentration Trend Table
- Table 3: July 2014 Leachate Indicators and Inorganics Results

The results of these monitoring programs are discussed at greater length in Section 4. The monitoring/sampling data collected in 2015 indicate the following:

- Concentrations of detected VOCs in groundwater continue to be generally lower than observed in historical data.

- There have been no apparent surface water quality impacts to down-gradient streams relative to runoff from the Site.

- Reductions in the concentrations of leachate indicator parameters from monitoring well samples were generally observed.

- Landfill gas levels are generally below the requirements of Part 360.

- Site-specific contaminants were not detected in the down-gradient residential drinking water sample collected in June 2015 from the residence located on the east side of the intersection of Jackson Hill Road and North Branch Road.

The Site inspections conducted as required by the Site Management Plan (SMP) indicate the following:

- Landfill cap drainage is effective. Ponding has not been observed on the landfill cap and structures are in good working condition.
- The placement of large tree stumps on either side of the western access road appears to be preventing vehicular trespassing.
- Minor erosion has been observed on the eastern and western access roads on the steepest portions, however, no geotextile or demarcation layer was visible in the eroded areas.
- Approximately 20% (eastern-most) of the willow trees that comprise the phytoremediation component at the Site have died.
- A seep was observed in the access road directly south of the phytoremediation area (standing water) as evidenced in the attached Appendix B, Site photographs.
- MW-1S was noted to be heaved, as evidenced in the Appendix B, Site photographs. This well will be evaluated for repair before the next PRR submittal.

Remedy monitoring data thus far indicate that the Cuba Landfill remedies are functioning as intended. In particular, the monitoring data indicate that the remedies are making progress toward the remedial action objectives as follows:

- *Control the potential for leachate within the landfill to migrate to groundwater or surface water, by reducing leachate within the Site.* The remedy appears to be successfully reducing leachate volume and head through implementation of the Site cap and phytoremediation area. The cap is serving to reduce groundwater quality impacts as observed by the reduction in leachate indicator parameters.
- *Control the potential for direct contact with waste materials, leachate, or contaminated groundwater.* Direct contact is being prevented by the engineered landfill cap, land use restrictions, and Site access controls.
- *Provide for attainment of SCGs for groundwater quality, to the extent practicable.* Number of contaminants is fewer and concentrations are generally lower than historical data, thus contributing to attainment of SCGs to the degree feasible. Natural attenuation of VOCs is also likely occurring at the Site.

- *Eliminate the potential for future ingestion, inhalation of, or dermal contact with organic contaminants in groundwater.* In June 2015, one down-gradient residential water supply was sampled for VOCs. Test results indicated that no VOCs were detected.

Monitoring programs have been and continue to be compliant with the approved SMP for the Cuba Landfill Site.

It is noted that the Site remedy does not rely on any mechanical long-term treatment systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this PRR.

In accordance with email correspondence approval from the NYSDEC, as presented in Appendix E, the sampling schedule for this PRR timeframe was revised to be conducted on an annual basis.

4. REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS EVALUATION

Operation, maintenance, and monitoring activities are conducted at the Cuba Landfill as part of the ongoing implementation of the SMP, which were previously discussed in Section 3. These activities provide the data to evaluate remedy performance, effectiveness, and protectiveness, and are summarized below.

It is important to note that during studies completed for the RI, wells were sampled to assess groundwater conditions at the Cuba Landfill. The most recent remedial action studies include groundwater analysis through well sampling. However, only a few wells currently overlap with the wells initially sampled during the RI. As such, direct comparisons between historical and current well data are limited; therefore, overall concentrations and general discussions of historical data are used to compare pre- and post-RA groundwater conditions.

Analytical data generated by Lu Engineers during the June 2015 sampling event is included in this report as Appendix C. All documentation associated with the June 2015 groundwater sampling and Site-wide inspection event are included as Appendix A and Appendix D, respectively, of this report.

4.1 SITE INSPECTIONS

In June 2015 the landfill cap grades and swales were in generally good condition. The cap had been mowed just prior to the June 2015 event. The vegetated cap system is limiting the amount of surface water infiltration through buried waste and reducing the impact on groundwater quality as determined by declining leachate indicator and other water quality parameters. A copy of the Site-wide inspection form is included as Appendix D of this report.

4.2 GROUNDWATER DATA

Data for detected VOCs from June 2015 is presented in Table 1. VOC trend data is presented in Table 2. A full list of the target analytes and other parameters such as field measurements is discussed in Section 5.

In general, concentrations of VOCs and inorganics detected during the June 2015 sampling event are lower than historical values presented in the RI report (Dvirka and Bartilucci, 1999) and previous post-remediation sampling events. A total of twelve (12) VOCs were detected at concentrations greater than the SCGs in November 1997 and nine (9) VOCs in the May 1998 sampling round, following the conclusion of the RI. In 2015, seven (7) VOCs were detected above applicable groundwater standards (see Tables 1 and 2). Down-gradient overburden

monitoring wells MW-3 and MW-13 revealed the highest chlorinated total VOC concentrations in 2015 amongst the seven (7) VOCs detected in each well. MW-8, located outside the landfill boundary limits, indicated detections in VOC concentrations above applicable groundwater standards, as well as illustrated in Figure 3.

Upgradient wells MW-1S and MW-1D revealed no exceedances of SCGs in the 2015 sampling event. It is noted that up-gradient bedrock well MW-9 did not have a sufficient volume of water to sample in June 2015.

June 2015 groundwater sample results indicate that VOC contamination still exists in down-gradient monitoring wells on and off the Site property. The most persistent VOC contaminants of concern include chlorinated VOCs tetrachloroethene, cis-1,2-dichloroethene, trichloroethene, 1,1-dichloroethene, 1,1-dicholorethane, and 1,1,1-trichloroethane. The highest VOC concentrations were generally detected in the overburden monitoring wells. It is noted that no chlorinated VOCs were detected in exceedance of SCGs in the furthest down-gradient overburden and bedrock monitoring wells, MW-10 and MW-10D, during the 2015 sampling event.

4.3 SURFACE WATER DATA

Historic data from the RI showed that off-Site surface water sampled from two tributaries of Van Campen Creek that flow near the Site indicated no exceedances of SCGs for Site-specific contaminants of concern. The tributaries are located down gradient of the Site and were likely surface water discharge locations from surface water passing through or in close proximity to the Site. Surface water flowing over the Site likely discharged into these tributaries. Surface water in the vicinity of the Site did not appear to be impacted by the landfill.

After implementation of the remedial actions, the surface water data generally showed and continue to show comparable water quality sample results between surface water discharging from the basins/swales and upstream sample points, indicating that the Site cap is effectively preventing migration of Site contaminants to surface water. The most recent surface water sample results collected in June 2015 are presented on Table 1 and Table 2. Samples were analyzed for VOCs consistent with monitoring well sampling parameters. Figure 2 illustrates the four (4) sample locations (SW-01, SW-02, SW-03, and SW-04).

June 2015 sample results indicate that VOCs were not detected in any of the four (4) surface water samples collected.

4.4 LEACHATE INDICATOR DATA

Leachate indicators, such as total organic carbon and biochemical oxygen demand, help determine the extent and magnitude of total leachate impacts throughout the landfill. Table 4

presents the most recent leachate indicator data collected in July 2014. Leachate indicators were not collected during the June 2015 sampling event.

Analytical results associated with unfiltered groundwater samples collected as part of the post- remedial sampling events in July/August 2011, November 2011, February 2012 were submitted for NYSDEC Part 360 2.11 (d) routine leachate indicator analysis. There were no exceedances of the NYSDEC AWQS values in samples collected in July/August 2011. Overburden monitoring well MW-3 exceeded the applicable NYSDEC AWQS for phenolics in November 2011. Surface water sample results from sample points SW-03 and SW-04 exceeded the applicable NYSDEC AWQS for phenolics in February 2013.

In July 2014 groundwater and surface water samples were analyzed for NYSDEC Part 360 2.11 (d) baseline leachate indicator analysis. Groundwater and surface water samples collected in July 2014 did not exceed the NYSDEC AWQS for leachate indicator parameters.

4.5 LANDFILL GAS MONITORING DATA

The landfill gas vents were monitored during the June 2015 sampling event for VOCs (see Figure 2 for gas vent locations). No VOCs were detected in the vents during the June 2015 sampling event and Site-wide inspection.

4.6 SUMMARY

In general, the preliminary remedy performance monitoring data presented above indicate that the remedies implemented are performing as expected, are effective and protective, and are making progress toward the remedial action objectives. Chlorinated VOCs remain the primary contaminants of concern at the Site. Groundwater VOC concentrations have generally decreased over time but reveal minor fluctuations in chlorinated VOC concentrations since 2011. The landfill cap is serving to reduce groundwater impacts as determined by leachate indicator parameter concentrations. Water quality does not appear to have been impacted from surface water runoff from the Site.

As the data currently supports, the factors discussed above demonstrate progress towards attaining the remediation goals set forth in the controlling documents and the ROD. The attached VOC Groundwater Results Trend Analysis (Table 2) shows the remedial remedy progress from Pre- to Post-Remediation sampling events (2011 to 2015).

5. INSTITUTIONAL CONTROL/ENGINEERING CONTROL COMPLIANCE REPORT

The Cuba Landfill Site remedies involve the use of both ICs and ECs, which include the following:

ICs:

- Land Use Restriction
- Groundwater Use Restriction
- Excavation Work Plan
- Soil Vapor Intrusion Evaluation

ECs:

- Engineered Landfill Cap
- Passive Gas Vents
- Landfill Surface Drainage
- Leachate Phytoremediation
- Site Entrance Gates
- Access Road.

Each of the above listed controls is described in Table 3. Information in Table 3 includes a description of the objective of the control, how the performance of the control is monitored, and summarizes the current performance and status of each control. Based on the information in Table 3, each of the ICs and ECs at the Cuba Landfill Site remain in place and continue to be effective.

6. OVERALL CONCLUSIONS AND RECOMMENDATIONS

6.1 COMPLIANCE WITH SITE MANAGEMENT PLANS

The controlling document for the Site is the approved SMP. The implementation of and compliance with the requirements specified in the SMP have been met during the reporting period of this PRR. The ROD for the Site requires groundwater use restrictions. NYSDEC placed a Declaration of Covenants and Restrictions on file at the Allegany County Clerk's office that restricts groundwater use in the area around the 40-acre disposal Site.

6.2 PERFORMANCE AND EFFECTIVENESS OF THE REMEDIES

Overall, the remedy performance monitoring data collected during this reporting period indicate that the remedies implemented for both of the operable units are performing as expected, are effective and protective. The landfill cap is serving to reduce groundwater impacts as determined by overall declining leachate indicator parameter concentrations. Landfill gas is typical and not impacting resources. It appears that stream and tributary water quality has not been impacted from surface water discharges from the Site. These factors demonstrate progress towards attaining the remediation goals set forth in the controlling documents and the ROD. It is noted that approximately twenty percent (20%) of the willow trees in the eastern portion of the phytoremediation planting area appear to have died.

The following repairs are recommended for Site maintenance:

- Remove dead willow trees. Re-plant with new willow saplings.

6.3 FUTURE SAMPLING SCHEDULE AND PERIODIC REVIEW REPORT SUBMITTALS

Based on the analytical data generated during this reporting period, it is evident that chlorinated VOCs remain the primary contaminants of concern at the Site. VOC contaminant concentrations generally appear to be remaining consistent with some evidence of degradation occurring. Lu Engineers recommends that the overburden and bedrock monitoring wells, and surface waters included in the SMP monitoring program be sampled annually for VOCs only, on a rotating quarterly basis. Lu Engineers recommends that the next sampling event be conducted during the third quarter (July) of 2016.

It is recommended that the next PRR be submitted approximately one year from submittal of this PRR. A final determination of the submittal schedule for future Site reporting requirements will be determined by the NYSDEC.

Appendix A

Groundwater Sampling Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-1D
Field Sample ID MW-1D
Sampling Event # __
Activity Time 14:55
Sample Time 15:30
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 76.25 feet
Measurement Point TOR
Well Diameter 2"
Final Depth to Water 73.64 feet
Well Depth 77.80 feet
Well Integrity:
Screen Length 10 feet
Pump Intake Depth N/A
Cap ✓
Total Volume Purged 1.8 gallons
PID Well Head N/A
Casing ✓
Locked ✓
Collar ✓

[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
15:40	73.9	–	10.8	8.25	7.60	1096.0	0.189	157.1	

Purge Observations: Slightly Turbid
Purge Water Containerized: No

EQUIPMENT DOCUMENTATION

Type of Pump: Bailer
Type of Tubing: ~~1/4" HDPE~~ None
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated: Yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	

LOCATION NOTES

Signature: [signature]
Checked By: _____

Groundwater Sampling
Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Location ID MW-15 Field Sample ID _____ Job # 50191-01
Activity Time 14:55 Sample Time 15:20 Sampling Event # Q3
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 26.38 feet Measurement Point TOR Well Diameter 2"
Final Depth to Water 26.55 feet Well Depth 32.42 feet Well Integrity:
Screen Length 10 feet Pump Intake Depth NA Cap ✓
Total Volume Purged ~5 gallons PID Well Head NA Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar Vault Heavy

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
15:17	26.55	—	15.2	6.94	5.60	748	0.178	136.4	

Purge Observations: Slightly turbid
Purge Water Containerized: NO

EQUIPMENT DOCUMENTATION

Type of Pump: Bailer
Type of Tubing: ~~¼" HDPE~~ None
Type of Water Quality Meter: Horiba U-22; LaMotte 2020 Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	6 x 40 ml	yes

LOCATION NOTES

Signature: Laura K Keegan
Checked By: _____

Groundwater Sampling Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Location ID MW-3 Field Sample ID MW-3 Job # 50191-01
Activity Time 11 Sample Time 11 Sampling Event # __
Date 6/9/15

SAMPLING NOTES

Initial Depth to Water 23.1 feet Measurement Point TOR Well Diameter 2"
Final Depth to Water 24.6 feet Well Depth 24.8 feet Well Integrity:
Screen Length 10 feet Pump Intake Depth NA Cap ✓
Total Volume Purged 0.9 gallons PID Well Head NA Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
11	24.6	–	9.3	7.36	6.35	79.4	0.399	64.1	

Purge Observations: Turbid
Purge Water Containerized: _____

EQUIPMENT DOCUMENTATION

Type of Pump: ~~Peristaltic~~ bailer
Type of Tubing: ~~¼" HDPE~~ None
Type of Water Quality Meter: Horiba U-22; LaMotte 2020 Calibrated: _____

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	

LOCATION NOTES

Signature: Casey Ross
Checked By: _____

Groundwater Sampling
Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-4
Field Sample ID
Sampling Event # 03
Activity Time 13:25
Sample Time 13:55
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 19.18 feet
Measurement Point TOR
Well Diameter 2"
Final Depth to Water 19.81 feet
Well Depth 32.37 feet
Well Integrity:
Screen Length 10 feet
Pump Intake Depth NA
Cap ✓
Total Volume Purged 6.4 gallons
PID Well Head NA
Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth
Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
13:55	19.81	—	10.1	6.60	4.19	16.7	0.337	171.1	

Purge Observations: no odor, clear
Purge Water Containerized: NO

EQUIPMENT DOCUMENTATION

Type of Pump: Bailer
Type of Tubing: ~~¼" HDPE~~ NA
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	yes

LOCATION NOTES

Signature: Laura K Gregor
Checked By:

Groundwater Sampling
Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-7
Field Sample ID
Sampling Event # 03
Activity Time 10:45
Sample Time 11:51
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 77.96 feet
Measurement Point TOR
Well Diameter 2"
Final Depth to Water 77.99 feet
Well Depth 98.45 feet
Well Integrity:
Screen Length 20 feet
Pump Intake Depth NA
Cap ✓
Total Volume Purged 10 gallons
PID Well Head NA
Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth
Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
11:51	77.96	—	10.3	7.65	2.58	1234	0.424	131.9	

Purge Observations: no odor, turbid
Purge Water Containerized:

EQUIPMENT DOCUMENTATION

Type of Pump: Bailer
Type of Tubing: ~~¼" HDPE~~ NA
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	yes

LOCATION NOTES

Signature: Laura K Meyer
Checked By:

Groundwater Sampling
Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Location ID MW-8 Field Sample ID MW-8 Job # 50191-01
Activity Time 11:45 Sample Time 12:00 Sampling Event # --
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 72.5 feet Measurement Point TOR Well Diameter 2"
Final Depth to Water 78.6 feet Well Depth 78.6 feet Well Integrity:
Screen Length 40 feet Pump Intake Depth NA Cap ✓
Total Volume Purged 1.5 gallons PID Well Head NA Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
12:00	78.6	–	9.7	7.54	8.93	228	0.282	116.4	

Purge Observations: No odor, Turbid
Purge Water Containerized: _____

EQUIPMENT DOCUMENTATION

Type of Pump: bailer
Type of Tubing: ~~¼" HDPE~~ NA
Type of Water Quality Meter: Horiba U-22; LaMotte 2020 Calibrated: _____

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	

LOCATION NOTES

Signature: _____
Checked By: _____

Groundwater Sampling Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-10
Field Sample ID MW-10
Sampling Event # __
Activity Time 9:10
Sample Time 9:50
Date 6/19/18

SAMPLING NOTES

Initial Depth to Water 54.15 feet
Measurement Point TOR
Well Diameter ____
Final Depth to Water 54.5 feet
Well Depth 55.55 feet
Well Integrity:
Screen Length 10 feet
Pump Intake Depth NA
Cap ____
Total Volume Purged 0.5 gallons
PID Well Head NA
Casing ____
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Locked ____
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth
Collar ____

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
950	55	—	13.2	9.3	7.17	2018	0.259	126.5	

Purge Observations: Turbid, Slight odor
Purge Water Containerized: ____

EQUIPMENT DOCUMENTATION

Type of Pump: bailer
Type of Tubing: ~~¼" HDPE~~
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated: ____

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	

LOCATION NOTES

Signature: [signature]
Checked By: ____

Groundwater Sampling Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-10D
Field Sample ID
Sampling Event # Q3
Activity Time 9:00
Sample Time 10:15
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 58.32 feet
Measurement Point TOR
Well Diameter 2"
Final Depth to Water 58.41 feet
Well Depth 85.10 feet
Well Integrity:
Screen Length 10 feet
Pump Intake Depth NA
Cap ✓
Total Volume Purged 13.10 gallons
PID Well Head NA
Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth
Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
10:15	58.41	—	11.0	7.59	2.31	142	0.410	128.1	

Purge Observations: sulfur odor, slightly turbid/gray
Purge Water Containerized: NO

EQUIPMENT DOCUMENTATION

Type of Pump: Bailer
Type of Tubing: ~~¼" HDPE~~ Acrylic
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated: YES

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	yes

LOCATION NOTES

Signature: Laura K Kleyer
Checked By:

Groundwater Sampling
Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-11
Field Sample ID MW-11
Sampling Event # --
Activity Time 1255
Sample Time 1305
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 22.45 feet
Measurement Point TOR
Well Diameter 2"
Final Depth to Water 23.45 feet
Well Depth 32.57 feet
Well Integrity:
Screen Length 10 feet
Pump Intake Depth NA
Cap ✓
Total Volume Purged 1.25 gallons
PID Well Head NA
Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth
Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
1300	23.65	-	7.4	7.35	6.26	106	0.320	144.6	

Purge Observations: Dark in color; No odor
Purge Water Containerized:

EQUIPMENT DOCUMENTATION

Type of Pump: bailer
Type of Tubing: ~~¼" HDPE~~
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated:

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	

LOCATION NOTES

Signature:
Checked By:

Groundwater Sampling
Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Location ID MW-12 Field Sample ID MW-12 Job # 50191-01
Activity Time 13:55 Sample Time 14:30 Sampling Event # __
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 34.2 feet Measurement Point TOR Well Diameter 2"
Final Depth to Water 34.2 feet Well Depth 40.23 feet Well Integrity:
Screen Length 10 feet Pump Intake Depth — Cap ✓
Total Volume Purged 6 gallons PID Well Head — Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
1430	33.1	—	3.5	7.17	4.13	604	0.70	174.9	

Purge Observations: No odor, Slightly Turbid
Purge Water Containerized: _____

EQUIPMENT DOCUMENTATION

Type of Pump: bailer
Type of Tubing: ¼" ~~HDPE~~
Type of Water Quality Meter: Horiba U-22; LaMotte 2020 Calibrated: _____

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	

LOCATION NOTES

Signature: _____
Checked By: _____

Groundwater Sampling Field Record

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

Project Name Cuba Landfill Monitoring/Inspection
Job # 50191-01
Location ID MW-13
Field Sample ID
Sampling Event # Q3
Activity Time 12:45
Sample Time 13:05
Date 6/19/15

SAMPLING NOTES

Initial Depth to Water 22.04 feet
Measurement Point TOR
Well Diameter 2"
Final Depth to Water 27.15 feet
Well Depth 29.50 feet
Well Integrity:
Screen Length 10 feet
Pump Intake Depth NA
Cap ✓
Total Volume Purged 3.65 gallons
PID Well Head NA
Casing ✓
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter]
Locked ✓
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth
Collar ✓

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
13:00	27.15	—	13.1	7.62	11.28	671	0.324	152.8	

Purge Observations: no odor, turbid
Purge Water Containerized: no

EQUIPMENT DOCUMENTATION

Type of Pump: Bailer
Type of Tubing: ~~¼" HDPE~~ NA
Type of Water Quality Meter: Horiba U-22; LaMotte 2020
Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	yes

LOCATION NOTES

Signature: Laura K Meyer
Checked By:

Appendix B



Mowed and managed roadway



Evidence of seep and minor erosion



Vegetation on cap



Willow trees (West)



Eastern willow trees (20% dying)



MW-1S Upheaval

Appendix C

1565 Jefferson Rd., Suite 360
Rochester, NY 14623
T: +1 585 288 5380
F: +1 585 288 8475
www.alsglobal.com

July 10, 2015

Analytical Report for Service Request No: R1504947

Mr. Greg Andrus
LU Engineers
175 Sully's Trail
Suite 202
Pittsford, NY 14534

Laboratory Results for: Cuba Landfill Monitoring 6/15/ 50191-01

Dear Mr. Andrus:

Enclosed are the final results report and Summary Package of the sample(s) submitted to our laboratory on June 19, 2015. For your reference, these analyses have been assigned our service request number **R1504947**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

Client:	Lu Engineers	**Service Request No.:**	R1504947
Project:	Cuba Landfill	**Date Received:**	6/19/15
Sample Matrix:	Water		

All analyses were performed consistent with the quality assurance program of ALS Environmental (ALS). This report contains analytical results for samples designated for Tier IV data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

Sample Receipt

Seventeen (17) samples were collected by the client on 6/19/15 and received for analysis at ALS on the same day via the client. All samples were received at temperatures within the 0-6° guidelines.

Volatile Organics

All samples were analyzed for Part 360 list of Volatile compounds by GC/MS Method 8260C within the required holding time. All analyzed vials were checked for pH after analysis in order to maintain the integrity of the sample. All vials were found to be properly preserved to a pH of < 2.

All surrogate recoveries were within QC limits.

All Initial and Continuing Calibration criteria were met, with the exception of Bromomethane and Iodomethane in the 6/29/185 CCV and Iodomethane and trans-1,4-Dichloro-2-butene on the 6/30/15 CCV which were outside the ±20% Difference (%D). Sample results were non-detect for these compounds and are not affected by the potential bias in quantitation.

All Laboratory Method Blanks were free from contamination.

All Laboratory Control Sample (LCS) recoveries were within QC limits.

Hits above the calibration range of the standards are flagged as "E", estimated. The sample is then repeated at the appropriate dilution for the hit. Both sets of data are included in the report. The hits on the subsequent dilution are flagged as "D".

Site QC is included in the report for sample MW-12 (ALS #R1504947-001). All Matrix Spike (MS) and MS Duplicate (MSD) recoveries and RPD's were acceptable.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details contained above Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Approved by Karen Burke **Date** 7/9/15

ALS ASP/CLP Batching Form/Login Sheet

Client Proj #: 50191-01	Batch Complete: Yes	Date Revised:
Submission: R1504947	Diskette Requested: No	Date Due: 7/13/15
Client: LU Engineers	Date: 7/9/15	Protocol: SW846
Client Rep: KBUNKER	Custody Seal: Present/Absent:	Shipping No.:
Project: Cuba Landfill Monitoring 6/15	Chain of Custody: Present/Absent:	SDG #:

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R1504947-001	MW-12	Water	8260C	6/19/15	6/19/15			
R1504947-002	MW-10	Water	8260C	6/19/15	6/19/15			
R1504947-003	MW-10D	Water	8260C	6/19/15	6/19/15			
R1504947-004	MW-3	Water	8260C	6/19/15	6/19/15			
R1504947-004.R01	MW-3	Water	8260C	6/19/15	6/19/15			
R1504947-005	MW-8	Water	8260C	6/19/15	6/19/15			
R1504947-006	MW-13	Water	8260C	6/19/15	6/19/15			
R1504947-007	MW-11	Water	8260C	6/19/15	6/19/15			
R1504947-008	MW-4	Water	8260C	6/19/15	6/19/15			
R1504947-009	MW-7	Water	8260C	6/19/15	6/19/15			
R1504947-010	MW-15	Water	8260C	6/19/15	6/19/15			
R1504947-011	MW-1D	Water	8260C	6/19/15	6/19/15			
R1504947-012	SW-01	Water	8260C	6/19/15	6/19/15			
R1504947-013	SW-04	Water	8260C	6/19/15	6/19/15			
R1504947-014	SW-03	Water	8260C	6/19/15	6/19/15			
R1504947-015	DW	Water	8260C	6/19/15	6/19/15			
R1504947-016	Blind Dupe	Water	8260C	6/19/15	6/19/15			
R1504947-017	Trip Blank	Water	8260C	6/19/15	6/19/15			

SDG

Folder Comments:

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Accredited	Nebraska Accredited	
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047	North Carolina #676	Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

27004

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE _____ OF _____

Project Name: Cuba Landfill	Project Number: 50191-01
Project Manager: Greg Andres	Report CC: gregandres@luengineers.com
Company/Address: ~~175~~ LU Engineers, 175 Sully's Trail, Suite 202, Pittsford, NY 14534	
Phone #: 585-385-1471	Email:
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA Method 6010	REMARKS/ ALTERNATE DESCRIPTION
MW-12	001	6/19/15	14:30	WA	3	X							X	Baseline VOCs only per #300
MW-10	002		9:50											
MW-10D	003		10:15											
MW-3	004		11:00											
MW-8	005		12:00											
MW-13	006		13:00											
MW-11	007		13:05											
MW-4	008		14:50											
MW-7	009		11:01											
MW-15	010		15:30											
MW-1D	011	↓	16:30	↓	↓	↓							↓	

Preservative Key
0. NONE
1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
REQUESTED REPORT DATE
SMD

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report wit
Edata X Yes _____

INVOICE INFORMATION
PO #
BILL TO:

R1504947 5
LU Engineers
Landfill Monitoring

STATE WHERE SAMPLES WERE COLLECTED NY

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Casey Bok	Signature: Denise White	Signature	Signature	Signature	Signature
Printed Name: LU Engineers	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm: 6/19/15 1942	Firm	Firm	Firm	Firm
Date/Time: 6/19 742	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

27005

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 ◦ Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE _____ OF _____

Project Name: Cuba Landfill	Project Number: 50191-01
Project Manager: Greg Andrus	Report CC: gregandrus@luengineers.com
Company/Address: LU Engineers 175 Sully's Trail, Suite 202 Pittsford, NY 14534	
Phone #: 585-385-1471	Email:
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ◦ 8260 ◦ 624 ◦ CLP	GC/MS SVOAs ◦ 8270 ◦ 625	GC VOAs ◦ 8021 ◦ 601/602	PESTICIDES ◦ 8081 ◦ 608	PCBs ◦ 8082 ◦ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA Method 6010							REMARKS/ ALTERNATE DESCRIPTION
SW-01	-012	6/19/15	13:20	WA	3	X							X							3 25ml Amber VOC only Pres 350
SW-04	-013	6/19/15	16:00	↓	↓	↓							↓							
SW-03	-014	6/19/15	16:15	↓																
DW	-015	6/19/15	16:30	WA																
Blind Dupe	-016	6/19/15		↓	↓	↓							↓							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE
STND

REPORT REQUIREMENTS
____ I. Results Only
__X__ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with
Edata __X__ Yes ____

INVOICE INFORMATION
PO #
BILL TO:

R1504947 5
LU Engineers
Landfill Monitoring

STATE WHERE SAMPLES WERE COLLECTED NY

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Corey Bak	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: LU Engineers	Printed Name: ALS	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: 6/19 7:42	Firm: 6/19/15 1942	Firm:	Firm:	Firm:	Firm:
Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservati

R1504947 5
LU Engineers
Landfill Monitoring

Project/Client LU Engineers Folder Number

Cooler received on 6/19/15 by: dlw

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)
2	**Custody papers** properly completed (ink, signed)?	(Y) N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y) N

5a	**Perchlorate** samples have required headspace?	Y N (NA)
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
6	Where did the bottles originate? ALS/ROC CLIENT	
7	Soil VOA received as: Bulk Encore 5035set (NA)	

8. Temperature Readings Date: 6/19/15 Time: _____ ID: IR#3 IR#5 From: Temp Blank Sample Bottle

Observed Temp (°C)	3.8°						
Correction Factor (°C)	-1.6°						
Corrected Temp (°C)	2.2°						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by dlw on 6/19/15 at 1947
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 6/22/15

Cooler Breakdown: Date: 6/22/15 Time: 0845 by: [illegible]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? YES (NO)
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	411010	5/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 5-022-002

Other Comments:

* Trip Blank not noted on COC

PC Secondary Review: 6/22/15 KB

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:44
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	R1504947-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9999.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:44
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	R1504947-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9999.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 12:44	
Dibromofluoromethane	100	89-119	6/29/15 12:44	
Toluene-d8	90	87-121	6/29/15 12:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 0950
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:12
Sample Name:	MW-10	**Units:**	µg/L
Lab Code:	R1504947-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0000.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	17		10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 0950
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:12
Sample Name:	MW-10	**Units:**	µg/L
Lab Code:	R1504947-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0000.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	88	85-122	6/29/15 13:12	
Dibromofluoromethane	100	89-119	6/29/15 13:12	
Toluene-d8	88	87-121	6/29/15 13:12	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1015
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:40
Sample Name:	MW-10D	**Units:**	µg/L
Lab Code:	R1504947-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0001.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1015
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:40
Sample Name:	MW-10D	**Units:**	µg/L
Lab Code:	R1504947-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0001.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 13:40	
Dibromofluoromethane	97	89-119	6/29/15 13:40	
Toluene-d8	95	87-121	6/29/15 13:40	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:08
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0002.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**33**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**27**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	**14**		5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:08
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0002.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**210**	E	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**79**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	87	85-122	6/29/15 14:08	
Dibromofluoromethane	98	89-119	6/29/15 14:08	
Toluene-d8	95	87-121	6/29/15 14:08	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 20:12
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0015.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	
71-55-6	1,1,1-Trichloroethane	**29**	D	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane	**26**	D	10	
75-35-4	1,1-Dichloroethene	10	U	10	
96-18-4	1,2,3-Trichloropropane	10	U	10	
96-12-8	1,2-Dibromo-3-chloropropane	10	U	10	
106-93-4	1,2-Dibromoethane	10	U	10	
95-50-1	1,2-Dichlorobenzene	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
106-46-7	1,4-Dichlorobenzene	10	U	10	
78-93-3	2-Butanone (MEK)	20	U	20	
591-78-6	2-Hexanone	20	U	20	
108-10-1	4-Methyl-2-pentanone (MIBK)	20	U	20	
67-64-1	Acetone	20	U	20	
107-13-1	Acrylonitrile	200	U	200	
71-43-2	Benzene	10	U	10	
74-97-5	Bromochloromethane	10	U	10	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
75-15-0	Carbon Disulfide	20	U	20	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	**12**	D	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
74-95-3	Dibromomethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
100-41-4	Ethylbenzene	10	U	10	
74-88-4	Iodomethane	20	U	20	
100-42-5	Styrene	10	U	10	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 20:12
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0015.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	10	U	10	
108-88-3	Toluene	10	U	10	
79-01-6	Trichloroethene	**170**	D	10	
75-69-4	Trichlorofluoromethane	10	U	10	
108-05-4	Vinyl Acetate	20	U	20	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**72**	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
179601-23-1	m,p-Xylenes	10	U	10	
95-47-6	o-Xylene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	
110-57-6	trans-1,4-Dichloro-2-butene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 20:12	
Dibromofluoromethane	98	89-119	6/29/15 20:12	
Toluene-d8	94	87-121	6/29/15 20:12	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1200
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:36
Sample Name:	MW-8	**Units:**	µg/L
Lab Code:	R1504947-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**10**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**5.6**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1200
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:36
Sample Name:	MW-8	**Units:**	µg/L
Lab Code:	R1504947-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**15**		5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**5.4**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	88	85-122	6/29/15 14:36	
Dibromofluoromethane	100	89-119	6/29/15 14:36	
Toluene-d8	90	87-121	6/29/15 14:36	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1300
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:04
Sample Name:	MW-13	**Units:**	µg/L
Lab Code:	R1504947-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0004.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**11**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**9.3**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1300
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:04
Sample Name:	MW-13	**Units:**	µg/L
Lab Code:	R1504947-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0004.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	**5.4**		5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**9.9**		5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**7.4**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 15:04	
Dibromofluoromethane	98	89-119	6/29/15 15:04	
Toluene-d8	95	87-121	6/29/15 15:04	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1305
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:32
Sample Name:	MW-11	**Units:**	µg/L
Lab Code:	R1504947-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**11**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**39**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1305
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:32
Sample Name:	MW-11	**Units:**	µg/L
Lab Code:	R1504947-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**8.1**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 15:32	
Dibromofluoromethane	99	89-119	6/29/15 15:32	
Toluene-d8	95	87-121	6/29/15 15:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1400
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:00
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1504947-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0006.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**32**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**68**		5.0	
75-35-4	1,1-Dichloroethene	**7.7**		5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	**12**		5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1400
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:00
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1504947-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0006.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**21**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 16:00	
Dibromofluoromethane	100	89-119	6/29/15 16:00	
Toluene-d8	95	87-121	6/29/15 16:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1151
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:28
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1504947-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0007.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1151
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:28
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1504947-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0007.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**7.1**		5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 16:28	
Dibromofluoromethane	98	89-119	6/29/15 16:28	
Toluene-d8	93	87-121	6/29/15 16:28	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:56
Sample Name:	MW-15	**Units:**	µg/L
Lab Code:	R1504947-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:56
Sample Name:	MW-15	**Units:**	µg/L
Lab Code:	R1504947-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 16:56	
Dibromofluoromethane	99	89-119	6/29/15 16:56	
Toluene-d8	97	87-121	6/29/15 16:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/30/15 14:20
Sample Name:	MW-1D	**Units:**	µg/L
Lab Code:	R1504947-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/30/15 14:20
Sample Name:	MW-1D	**Units:**	µg/L
Lab Code:	R1504947-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/30/15 14:20	
Dibromofluoromethane	98	89-119	6/30/15 14:20	
Toluene-d8	87	87-121	6/30/15 14:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1320
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 17:52
Sample Name:	SW-01	**Units:**	µg/L
Lab Code:	R1504947-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0010.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1320
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 17:52
Sample Name:	SW-01	**Units:**	µg/L
Lab Code:	R1504947-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0010.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 17:52	
Dibromofluoromethane	98	89-119	6/29/15 17:52	
Toluene-d8	96	87-121	6/29/15 17:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1600
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:20
Sample Name:	SW-04	**Units:**	µg/L
Lab Code:	R1504947-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0011.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1600
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:20
Sample Name:	SW-04	**Units:**	µg/L
Lab Code:	R1504947-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0011.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 18:20	
Dibromofluoromethane	100	89-119	6/29/15 18:20	
Toluene-d8	95	87-121	6/29/15 18:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1615
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:48
Sample Name:	SW-03	**Units:**	µg/L
Lab Code:	R1504947-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0012.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1615
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:48
Sample Name:	SW-03	**Units:**	µg/L
Lab Code:	R1504947-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0012.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	88	85-122	6/29/15 18:48	
Dibromofluoromethane	100	89-119	6/29/15 18:48	
Toluene-d8	96	87-121	6/29/15 18:48	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1630
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:16
Sample Name:	DW	**Units:**	µg/L
Lab Code:	R1504947-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0013.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1630
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:16
Sample Name:	DW	**Units:**	µg/L
Lab Code:	R1504947-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0013.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	91	85-122	6/29/15 19:16	
Dibromofluoromethane	100	89-119	6/29/15 19:16	
Toluene-d8	92	87-121	6/29/15 19:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:44
Sample Name:	Blind Dupe	**Units:**	µg/L
Lab Code:	R1504947-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0014.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:44
Sample Name:	Blind Dupe	**Units:**	µg/L
Lab Code:	R1504947-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0014.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	91	85-122	6/29/15 19:44	
Dibromofluoromethane	99	89-119	6/29/15 19:44	
Toluene-d8	94	87-121	6/29/15 19:44	

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:16
Sample Name:	Trip Blank	**Units:**	µg/L
Lab Code:	R1504947-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9998.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:16
Sample Name:	Trip Blank	**Units:**	µg/L
Lab Code:	R1504947-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9998.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 12:16	
Dibromofluoromethane	98	89-119	6/29/15 12:16	
Toluene-d8	96	87-121	6/29/15 12:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/29/15 11:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507370-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9997.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/29/15 11:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507370-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9997.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	87	85-122	6/29/15 11:46	
Dibromofluoromethane	98	89-119	6/29/15 11:46	
Toluene-d8	96	87-121	6/29/15 11:46	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/30/15 12:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507371-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/30/15 12:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507371-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	87	85-122	6/30/15 12:56	
Dibromofluoromethane	98	89-119	6/30/15 12:56	
Toluene-d8	95	87-121	6/30/15 12:56	

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Collected: 6/19/15
Date Received: 6/19/15
Date Analyzed: 6/29/15

Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-12
Lab Code: R1504947-001

Units: µg/L
Basis: NA

Analytical Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Sample Result	MW-12MS Matrix Spike RQ1507370-05 Result	Spike Amount	% Rec	MW-12DMS Duplicate Matrix Spike RQ1507370-06 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND	54.0	50.0	108	54.0	50.0	108	77 - 126	<1	30
1,1,1-Trichloroethane	ND	51.6	50.0	103	50.6	50.0	101	74 - 127	2	30
1,1,2,2-Tetrachloroethane	ND	51.8	50.0	104	50.6	50.0	101	72 - 122	2	30
1,1,2-Trichloroethane	ND	46.6	50.0	93	45.1	50.0	90	82 - 115	3	30
1,1-Dichloroethane	ND	50.5	50.0	101	49.9	50.0	100	74 - 132	1	30
1,1-Dichloroethene	ND	56.5	50.0	113	54.2	50.0	108	72 - 125	4	30
1,2,3-Trichloropropane	ND	49.3	50.0	99	47.2	50.0	94	75 - 122	5	30
1,2-Dibromo-3-chloropropane	ND	50.0	50.0	100	50.4	50.0	101	67 - 126	<1	30
1,2-Dibromoethane	ND	51.0	50.0	102	50.3	50.0	101	80 - 117	1	30
1,2-Dichlorobenzene	ND	51.5	50.0	103	50.4	50.0	101	77 - 120	2	30
1,2-Dichloroethane	ND	47.9	50.0	96	47.7	50.0	95	72 - 132	<1	30
1,2-Dichloropropane	ND	49.7	50.0	99	48.3	50.0	97	79 - 124	3	30
1,4-Dichlorobenzene	ND	49.9	50.0	100	49.5	50.0	99	72 - 124	<1	30
2-Butanone (MEK)	ND	42.9	50.0	86	45.2	50.0	90	46 - 141	5	30
2-Hexanone	ND	48.2	50.0	96	50.4	50.0	101	56 - 132	5	30
4-Methyl-2-pentanone (MIBK)	ND	45.1	50.0	90	46.8	50.0	94	60 - 141	4	30
Acetone	ND	43.3	50.0	87	45.9	50.0	92	29 - 151	6	30
Acrylonitrile	ND	240	250	96	233	250	93	69 - 131	3	30
Benzene	ND	50.3	50.0	100	48.8	50.0	98	76 - 129	3	30
Bromochloromethane	ND	50.0	50.0	100	50.1	50.0	100	82 - 125	<1	30
Bromodichloromethane	ND	51.3	50.0	103	49.6	50.0	99	76 - 127	3	30
Bromoform	ND	54.4	50.0	109	54.9	50.0	110	58 - 133	<1	30
Bromomethane	ND	30.0	50.0	60	31.6	50.0	63	10 - 162	5	30
Carbon Disulfide	ND	51.3	50.0	103	51.2	50.0	102	34 - 162	<1	30
Carbon Tetrachloride	ND	53.5	50.0	107	52.8	50.0	106	71 - 135	1	30
Chlorobenzene	ND	52.2	50.0	104	52.3	50.0	104	76 - 125	<1	30
Chloroethane	ND	53.8	50.0	108	52.6	50.0	105	70 - 140	2	30
Chloroform	ND	49.9	50.0	100	48.2	50.0	96	75 - 130	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Collected: 6/19/15
Date Received: 6/19/15
Date Analyzed: 6/29/15

Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-12
Lab Code: R1504947-001

Units: µg/L
Basis: NA

Analytical Method: 8260C
Prep Method: EPA 5030C

		MW-12MS Matrix Spike RQ1507370-05			MW-12DMS Duplicate Matrix Spike RQ1507370-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	ND	51.5	50.0	103	50.4	50.0	101	55 - 160	2	30
Dibromochloromethane	ND	54.3	50.0	109	54.6	50.0	109	72 - 128	<1	30
Dibromomethane	ND	49.7	50.0	99	48.0	50.0	96	77 - 119	3	30
Methylene Chloride	ND	53.2	50.0	106	52.8	50.0	106	75 - 121	<1	30
Ethylbenzene	ND	46.6	50.0	93	47.2	50.0	94	72 - 134	1	30
Iodomethane	ND	30.1	50.0	60	37.8	50.0	76	27 - 162	23	30
Styrene	ND	31.6	50.0	63	30.9	50.0	62	34 - 156	2	30
Tetrachloroethene	ND	50.5	50.0	101	51.2	50.0	102	67 - 137	1	30
Toluene	ND	47.1	50.0	94	46.6	50.0	93	79 - 125	1	30
Trichloroethene	ND	51.2	50.0	102	50.0	50.0	100	62 - 142	2	30
Trichlorofluoromethane	ND	54.8	50.0	110	51.9	50.0	104	72 - 142	5	30
Vinyl Acetate	ND	32.9	50.0	66	35.6	50.0	71	17 - 156	8	30
Vinyl Chloride	ND	51.6	50.0	103	50.8	50.0	102	60 - 157	2	30
cis-1,2-Dichloroethene	ND	50.8	50.0	102	49.4	50.0	99	72 - 133	3	30
cis-1,3-Dichloropropene	ND	47.7	50.0	95	47.2	50.0	94	52 - 134	<1	30
m,p-Xylenes	ND	92.9	100	93	91.8	100	92	68 - 138	1	30
o-Xylene	ND	45.5	50.0	91	45.8	50.0	92	68 - 134	<1	30
trans-1,2-Dichloroethene	ND	56.6	50.0	113	55.6	50.0	111	77 - 125	2	30
trans-1,3-Dichloropropene	ND	47.5	50.0	95	47.0	50.0	94	64 - 123	<1	30
trans-1,4-Dichloro-2-butene	ND	38.4	50.0	77	38.3	50.0	77	25 - 161	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451014

Lab Control Sample
RQ1507370-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	20.6	20.0	103	79 - 119
1,1,1-Trichloroethane	19.5	20.0	98	71 - 123
1,1,2,2-Tetrachloroethane	20.0	20.0	100	74 - 127
1,1,2-Trichloroethane	17.8	20.0	89	79 - 117
1,1-Dichloroethane	19.0	20.0	95	76 - 128
1,1-Dichloroethene	21.1	20.0	105	74 - 135
1,2,3-Trichloropropane	18.6	20.0	93	68 - 136
1,2-Dibromo-3-chloropropane	20.0	20.0	100	69 - 135
1,2-Dibromoethane	20.3	20.0	102	81 - 123
1,2-Dichlorobenzene	20.5	20.0	102	80 - 119
1,2-Dichloroethane	18.1	20.0	90	72 - 130
1,2-Dichloropropane	19.0	20.0	95	80 - 119
1,4-Dichlorobenzene	19.8	20.0	99	79 - 119
2-Butanone (MEK)	18.2	20.0	91	66 - 129
2-Hexanone	19.6	20.0	98	61 - 131
4-Methyl-2-pentanone (MIBK)	18.5	20.0	93	68 - 129
Acetone	14.6	20.0	73	51 - 146
Acrylonitrile	92.2	100	92	75 - 133
Benzene	18.5	20.0	93	76 - 118
Bromochloromethane	19.3	20.0	96	81 - 126
Bromodichloromethane	19.1	20.0	96	79 - 122
Bromoform	21.4	20.0	107	65 - 138
Bromomethane	11.4	20.0	57	41 - 159
Carbon Disulfide	19.8	20.0	99	63 - 141
Carbon Tetrachloride	19.7	20.0	99	66 - 128
Chlorobenzene	20.4	20.0	102	80 - 121
Chloroethane	18.8	20.0	94	71 - 128
Chloroform	18.8	20.0	94	76 - 120
Chloromethane	19.0	20.0	95	64 - 140
Dibromochloromethane	21.2	20.0	106	79 - 125
Dibromomethane	18.3	20.0	92	79 - 120
Methylene Chloride	20.5	20.0	103	73 - 122
Ethylbenzene	18.4	20.0	92	76 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451014

Lab Control Sample
RQ1507370-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Iodomethane	12.2	20.0	61	34 - 148
Styrene	20.1	20.0	101	81 - 122
Tetrachloroethene	19.3	20.0	96	69 - 124
Toluene	18.7	20.0	93	77 - 120
Trichloroethene	19.0	20.0	95	76 - 123
Trichlorofluoromethane	20.4	20.0	102	69 - 130
Vinyl Acetate	18.9	20.0	94	43 - 165
Vinyl Chloride	18.8	20.0	94	69 - 136
cis-1,2-Dichloroethene	19.1	20.0	95	80 - 121
cis-1,3-Dichloropropene	18.4	20.0	92	77 - 125
m,p-Xylenes	41.1	40.0	103	78 - 123
o-Xylene	20.0	20.0	100	77 - 131
trans-1,2-Dichloroethene	21.2	20.0	106	78 - 124
trans-1,3-Dichloropropene	18.9	20.0	95	72 - 123
trans-1,4-Dichloro-2-butene	17.2	20.0	86	47 - 173

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/30/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451196

Analyte Name	Lab Control Sample RQ1507371-02 Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	19.4	20.0	97	79 - 119
1,1,1-Trichloroethane	17.4	20.0	87	71 - 123
1,1,2,2-Tetrachloroethane	19.5	20.0	97	74 - 127
1,1,2-Trichloroethane	17.9	20.0	89	79 - 117
1,1-Dichloroethane	18.2	20.0	91	76 - 128
1,1-Dichloroethene	18.8	20.0	94	74 - 135
1,2,3-Trichloropropane	17.8	20.0	89	68 - 136
1,2-Dibromo-3-chloropropane	17.7	20.0	88	69 - 135
1,2-Dibromoethane	19.3	20.0	97	81 - 123
1,2-Dichlorobenzene	19.4	20.0	97	80 - 119
1,2-Dichloroethane	18.1	20.0	90	72 - 130
1,2-Dichloropropane	18.2	20.0	91	80 - 119
1,4-Dichlorobenzene	19.2	20.0	96	79 - 119
2-Butanone (MEK)	18.1	20.0	90	66 - 129
2-Hexanone	19.1	20.0	96	61 - 131
4-Methyl-2-pentanone (MIBK)	18.5	20.0	93	68 - 129
Acetone	14.2	20.0	71	51 - 146
Acrylonitrile	91.2	100	91	75 - 133
Benzene	17.6	20.0	88	76 - 118
Bromochloromethane	19.6	20.0	98	81 - 126
Bromodichloromethane	18.6	20.0	93	79 - 122
Bromoform	19.8	20.0	99	65 - 138
Bromomethane	13.6	20.0	68	41 - 159
Carbon Disulfide	20.4	20.0	102	63 - 141
Carbon Tetrachloride	17.1	20.0	86	66 - 128
Chlorobenzene	19.2	20.0	96	80 - 121
Chloroethane	18.4	20.0	92	71 - 128
Chloroform	18.0	20.0	90	76 - 120
Chloromethane	17.5	20.0	87	64 - 140
Dibromochloromethane	20.3	20.0	101	79 - 125
Dibromomethane	19.0	20.0	95	79 - 120
Methylene Chloride	20.1	20.0	100	73 - 122
Ethylbenzene	16.5	20.0	82	76 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/30/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451196

Lab Control Sample
RQ1507371-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Iodomethane	11.5	20.0	57	34 - 148
Styrene	19.4	20.0	97	81 - 122
Tetrachloroethene	17.5	20.0	88	69 - 124
Toluene	17.0	20.0	85	77 - 120
Trichloroethene	17.5	20.0	88	76 - 123
Trichlorofluoromethane	17.7	20.0	88	69 - 130
Vinyl Acetate	19.0	20.0	95	43 - 165
Vinyl Chloride	17.5	20.0	87	69 - 136
cis-1,2-Dichloroethene	18.8	20.0	94	80 - 121
cis-1,3-Dichloropropene	18.0	20.0	90	77 - 125
m,p-Xylenes	37.2	40.0	93	78 - 123
o-Xylene	18.7	20.0	93	77 - 131
trans-1,2-Dichloroethene	20.1	20.0	100	78 - 124
trans-1,3-Dichloropropene	18.0	20.0	90	72 - 123
trans-1,4-Dichloro-2-butene	11.3	20.0	56	47 - 173

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1565 Jefferson Rd., Suite 360
Rochester, NY 14623
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F: +1 585 288 8475
www.alsglobal.com

July 10, 2015

Analytical Report for Service Request No: R1504947

Mr. Greg Andrus
LU Engineers
175 Sully's Trail
Suite 202
Pittsford, NY 14534

Laboratory Results for: Cuba Landfill Monitoring 6/15/ 50191-01

Dear Mr. Andrus:

Enclosed are the final results report and Summary Package of the sample(s) submitted to our laboratory on June 19, 2015. For your reference, these analyses have been assigned our service request number **R1504947.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

ALS Environmental

SDG NARRATIVE

ALS Environmental - Rochester, NY
1565 Jefferson Rd, Bldg. 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	Lu Engineers	**Service Request No.:**	R1504947
Project:	Cuba Landfill	**Date Received:**	6/19/15
Sample Matrix:	Water		

All analyses were performed consistent with the quality assurance program of ALS Environmental (ALS). This report contains analytical results for samples designated for Tier IV data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

Sample Receipt

Seventeen (17) samples were collected by the client on 6/19/15 and received for analysis at ALS on the same day via the client. All samples were received at temperatures within the 0-6° guidelines.

Volatile Organics

All samples were analyzed for Part 360 list of Volatile compounds by GC/MS Method 8260C within the required holding time. All analyzed vials were checked for pH after analysis in order to maintain the integrity of the sample. All vials were found to be properly preserved to a pH of < 2.

All surrogate recoveries were within QC limits.

All Initial and Continuing Calibration criteria were met, with the exception of Bromomethane and Iodomethane in the 6/29/185 CCV and Iodomethane and trans-1,4-Dichloro-2-butene on the 6/30/15 CCV which were outside the ±20% Difference (%D). Sample results were non-detect for these compounds and are not affected by the potential bias in quantitation.

All Laboratory Method Blanks were free from contamination.

All Laboratory Control Sample (LCS) recoveries were within QC limits.

Hits above the calibration range of the standards are flagged as "E", estimated. The sample is then repeated at the appropriate dilution for the hit. Both sets of data are included in the report. The hits on the subsequent dilution are flagged as "D".

Site QC is included in the report for sample MW-12 (ALS #R1504947-001). All Matrix Spike (MS) and MS Duplicate (MSD) recoveries and RPD's were acceptable.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details contained above Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Approved by Karen Burke **Date** 7/9/15

ALS ASP/CLP Batching Form/Login Sheet

Client Proj #:	50191-01	Batch Complete:	Yes	Date Revised:	
Submission:	R1504947	Diskette Requested:	No	Date Due:	7/13/15
Client:	LU Engineers	Date:	7/9/15	Protocol:	SW846
Client Rep:	KBUNKER	Custody Seal: Present/Absent:		Shipping No.:	
Project:	Cuba Landfill Monitoring 6/15	Chain of Custody: Present/Absent:		SDG #:	

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R1504947-001	MW-12	Water	8260C	6/19/15	6/19/15			
R1504947-002	MW-10	Water	8260C	6/19/15	6/19/15			
R1504947-003	MW-10D	Water	8260C	6/19/15	6/19/15			
R1504947-004	MW-3	Water	8260C	6/19/15	6/19/15			
R1504947-004.R01	MW-3	Water	8260C	6/19/15	6/19/15			
R1504947-005	MW-8	Water	8260C	6/19/15	6/19/15			
R1504947-006	MW-13	Water	8260C	6/19/15	6/19/15			
R1504947-007	MW-11	Water	8260C	6/19/15	6/19/15			
R1504947-008	MW-4	Water	8260C	6/19/15	6/19/15			
R1504947-009	MW-7	Water	8260C	6/19/15	6/19/15			
R1504947-010	MW-15	Water	8260C	6/19/15	6/19/15			
R1504947-011	MW-1D	Water	8260C	6/19/15	6/19/15			
R1504947-012	SW-01	Water	8260C	6/19/15	6/19/15			
R1504947-013	SW-04	Water	8260C	6/19/15	6/19/15			
R1504947-014	SW-03	Water	8260C	6/19/15	6/19/15			
R1504947-015	DW	Water	8260C	6/19/15	6/19/15			
R1504947-016	Blind Dupe	Water	8260C	6/19/15	6/19/15			
R1504947-017	Trip Blank	Water	8260C	6/19/15	6/19/15			

Folder Comments:

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Accredited	Nebraska Accredited	
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047	North Carolina #676	Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ALS Environmental

CHAINS OF CUSTODY

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

27004

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE _____ OF _____

Project Name: Cuba Landfill	Project Number: 50191-01
Project Manager: Greg Andrus	Report CC: gregandrus@luengineers.com
Company/Address: ~~1755~~ LU Engineers, 175 Sully's Trail, Suite 202, Pittsford, NY 14534	
Phone #: 585-385-1471	Email:
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA Method 6010							REMARKS/ ALTERNATE DESCRIPTION
MW-12	001	6/9/15	14:30	WA	3	X							X							Baseline VOCs only for 3rd
MW-10	002		9:50																	
MW-10D	003		10:15																	
MW-3	004		11:00																	
MW-8	005		12:00																	
MW-13	006		13:00																	
MW-11	007		13:05																	
MW-4	008		14:00																	
MW-7	009		11:51																	
MW-15	010		15:30																	
MW-1D	011		15:30																	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
REQUESTED REPORT DATE
STND

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report wit
Edata X Yes _____

INVOICE INFORMATION
PO #
BILL TO:

R1504947 5
LU Engineers
Landfill Monitoring

STATE WHERE SAMPLES WERE COLLECTED NY

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RELINQUISHED BY
Signature: Cory Bork	Signature:	Signature	Signature	Signature	Signature
Printed Name: LU Engineers	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm: 6/10/15 1442	Firm	Firm	Firm	Firm
Date/Time: 6/9 742	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

27005

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE _____ OF _____

Project Name: Cuba Landfill	Project Number: 50191-01
Project Manager: Greg Andrus	Report CC: gregandrus@luengineers.com
Company/Address: LU Engineers 175 Sully's Trail, Suite 202 Pittsford, NY 14534	
Phone #: 585-385-1471	Email:
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

GC/MS VOAs ○ 8260 ○ 624 ○ CLP
GC/MS SVOAs ○ 8270 ○ 625
GC VOAs ○ 8021 ○ 601/602
PESTICIDES ○ 8081 ○ 608
PCBs ○ 8082 ○ 608
METALS, TOTAL (List in comments below)
METALS, DISSOLVED (List in comments below)
EPA Method 6010

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	# CONTAINERS	GC/MS VOAs	EPA Method 6010	REMARKS/ ALTERNATE DESCRIPTION
SW-01	-012	6/19/15	13:20	WA	3	X	X	Baseline VOC only per 350
SW-04	-013	6/19/15	16:00	↓	↓	↓	↓	↓
SW-03	-014	6/19/15	16:15	↓	↓	↓	↓	↓
DW	-015	6/19/15	16:30	WA	↓	↓	↓	↓
Blind Dupe	-016	6/19/15		↓	↓	↓	↓	↓

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: NY

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE
STAND

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with
Edata X Yes ___

INVOICE INFORMATION
PO #
BILL TO:

R1504947 5
LU Engineers
Landfill Monitoring

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Casey Bak	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: LU Engineers	Printed Name: ALS	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: 6/19 7:42	Firm: 6/19/15 1942	Firm:	Firm:	Firm:	Firm:
Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservati

R1504947 5
LU Engineers
Landfill Monitoring

Project/Client LU Engineers Folder Number

Cooler received on 6/19/15 by: dhw

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (NP)
2	**Custody papers** properly completed (ink, signed)?	(Y) N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y) N

5a	**Perchlorate** samples have required headspace?	Y N (NA)
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
6	Where did the bottles originate?	ALS/ROC CLIENT
7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 6/19/15 Time: _____ ID: IR#3 (IR#5) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	3.8C						
Correction Factor (°C)	-1.6°						
Corrected Temp (°C)	2.2°						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by dhw on 6/19/15 at 1947
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 6/22/15

Cooler Breakdown: Date: 6/22/15 Time: 0845 by: [signature]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? YES (NO)
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114070	5/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 5-022-002

Other Comments:

* Triple Blank not noted on COC

PC Secondary Review: 6/22/15 KB

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS ENVIRONMENTAL

Chain of Custody Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
R1504947-001.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1153	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-001.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-001.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-002.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1153	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-002.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-002.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-003.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-003.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-003.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-004.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	

ALS ENVIRONMENTAL
Chain of Custody Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-004.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-004.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-005.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-005.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-005.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-006.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-006.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-006.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-007.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-007.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	

ALS ENVIRONMENTAL
Chain of Custody Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
R1504947-007.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-008.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-008.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-008.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-009.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-009.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-009.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-010.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-010.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-010.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-011.01					
	8260C				

ALS ENVIRONMENTAL
Chain of Custody Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
		6/30/15	1021	In Lab / FNAEGLER	
		6/30/15	1647	R-001-S10 / FNAEGLER	
R1504947-011.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-011.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-012.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-012.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-012.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-013.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-013.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-013.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-014.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	

ALS ENVIRONMENTAL
Chain of Custody Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-014.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-014.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-015.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-015.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-015.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-016.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1154	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-016.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-016.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
R1504947-017.01					
	8260C				
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	
		6/29/15	1153	In Lab / FNAEGLER	
		6/30/15	0912	R-001-S10 / FNAEGLER	
R1504947-017.02					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	

ALS ENVIRONMENTAL
Chain of Custody Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
R1504947-017.03					
		6/22/15	0853	SMO / JSEWARD	
		6/22/15	0853	R-001 / JSEWARD	

ALS Environmental

VOLATILE ORGANICS
QC SUMMARY

ALS Environmental - Rochester, NY
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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Collected: 6/19/15
Date Received: 6/19/15
Date Analyzed: 6/29/15

Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-12
Lab Code: R1504947-001

Units: µg/L
Basis: NA

Analytical Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Sample Result	MW-12MS Matrix Spike RQ1507370-05 Result	Spike Amount	% Rec	MW-12DMS Duplicate Matrix Spike RQ1507370-06 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND	54.0	50.0	108	54.0	50.0	108	77 - 126	<1	30
1,1,1-Trichloroethane	ND	51.6	50.0	103	50.6	50.0	101	74 - 127	2	30
1,1,2,2-Tetrachloroethane	ND	51.8	50.0	104	50.6	50.0	101	72 - 122	2	30
1,1,2-Trichloroethane	ND	46.6	50.0	93	45.1	50.0	90	82 - 115	3	30
1,1-Dichloroethane	ND	50.5	50.0	101	49.9	50.0	100	74 - 132	1	30
1,1-Dichloroethene	ND	56.5	50.0	113	54.2	50.0	108	72 - 125	4	30
1,2,3-Trichloropropane	ND	49.3	50.0	99	47.2	50.0	94	75 - 122	5	30
1,2-Dibromo-3-chloropropane	ND	50.0	50.0	100	50.4	50.0	101	67 - 126	<1	30
1,2-Dibromoethane	ND	51.0	50.0	102	50.3	50.0	101	80 - 117	1	30
1,2-Dichlorobenzene	ND	51.5	50.0	103	50.4	50.0	101	77 - 120	2	30
1,2-Dichloroethane	ND	47.9	50.0	96	47.7	50.0	95	72 - 132	<1	30
1,2-Dichloropropane	ND	49.7	50.0	99	48.3	50.0	97	79 - 124	3	30
1,4-Dichlorobenzene	ND	49.9	50.0	100	49.5	50.0	99	72 - 124	<1	30
2-Butanone (MEK)	ND	42.9	50.0	86	45.2	50.0	90	46 - 141	5	30
2-Hexanone	ND	48.2	50.0	96	50.4	50.0	101	56 - 132	5	30
4-Methyl-2-pentanone (MIBK)	ND	45.1	50.0	90	46.8	50.0	94	60 - 141	4	30
Acetone	ND	43.3	50.0	87	45.9	50.0	92	29 - 151	6	30
Acrylonitrile	ND	240	250	96	233	250	93	69 - 131	3	30
Benzene	ND	50.3	50.0	100	48.8	50.0	98	76 - 129	3	30
Bromochloromethane	ND	50.0	50.0	100	50.1	50.0	100	82 - 125	<1	30
Bromodichloromethane	ND	51.3	50.0	103	49.6	50.0	99	76 - 127	3	30
Bromoform	ND	54.4	50.0	109	54.9	50.0	110	58 - 133	<1	30
Bromomethane	ND	30.0	50.0	60	31.6	50.0	63	10 - 162	5	30
Carbon Disulfide	ND	51.3	50.0	103	51.2	50.0	102	34 - 162	<1	30
Carbon Tetrachloride	ND	53.5	50.0	107	52.8	50.0	106	71 - 135	1	30
Chlorobenzene	ND	52.2	50.0	104	52.3	50.0	104	76 - 125	<1	30
Chloroethane	ND	53.8	50.0	108	52.6	50.0	105	70 - 140	2	30
Chloroform	ND	49.9	50.0	100	48.2	50.0	96	75 - 130	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Collected: 6/19/15
Date Received: 6/19/15
Date Analyzed: 6/29/15

Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-12
Lab Code: R1504947-001

Units: µg/L
Basis: NA

Analytical Method: 8260C
Prep Method: EPA 5030C

		MW-12MS Matrix Spike RQ1507370-05			MW-12DMS Duplicate Matrix Spike RQ1507370-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	ND	51.5	50.0	103	50.4	50.0	101	55 - 160	2	30
Dibromochloromethane	ND	54.3	50.0	109	54.6	50.0	109	72 - 128	<1	30
Dibromomethane	ND	49.7	50.0	99	48.0	50.0	96	77 - 119	3	30
Methylene Chloride	ND	53.2	50.0	106	52.8	50.0	106	75 - 121	<1	30
Ethylbenzene	ND	46.6	50.0	93	47.2	50.0	94	72 - 134	1	30
Iodomethane	ND	30.1	50.0	60	37.8	50.0	76	27 - 162	23	30
Styrene	ND	31.6	50.0	63	30.9	50.0	62	34 - 156	2	30
Tetrachloroethene	ND	50.5	50.0	101	51.2	50.0	102	67 - 137	1	30
Toluene	ND	47.1	50.0	94	46.6	50.0	93	79 - 125	1	30
Trichloroethene	ND	51.2	50.0	102	50.0	50.0	100	62 - 142	2	30
Trichlorofluoromethane	ND	54.8	50.0	110	51.9	50.0	104	72 - 142	5	30
Vinyl Acetate	ND	32.9	50.0	66	35.6	50.0	71	17 - 156	8	30
Vinyl Chloride	ND	51.6	50.0	103	50.8	50.0	102	60 - 157	2	30
cis-1,2-Dichloroethene	ND	50.8	50.0	102	49.4	50.0	99	72 - 133	3	30
cis-1,3-Dichloropropene	ND	47.7	50.0	95	47.2	50.0	94	52 - 134	<1	30
m,p-Xylenes	ND	92.9	100	93	91.8	100	92	68 - 138	1	30
o-Xylene	ND	45.5	50.0	91	45.8	50.0	92	68 - 134	<1	30
trans-1,2-Dichloroethene	ND	56.6	50.0	113	55.6	50.0	111	77 - 125	2	30
trans-1,3-Dichloropropene	ND	47.5	50.0	95	47.0	50.0	94	64 - 123	<1	30
trans-1,4-Dichloro-2-butene	ND	38.4	50.0	77	38.3	50.0	77	25 - 161	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451014

Analyte Name	Lab Control Sample RQ1507370-02 Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	20.6	20.0	103	79 - 119
1,1,1-Trichloroethane	19.5	20.0	98	71 - 123
1,1,2,2-Tetrachloroethane	20.0	20.0	100	74 - 127
1,1,2-Trichloroethane	17.8	20.0	89	79 - 117
1,1-Dichloroethane	19.0	20.0	95	76 - 128
1,1-Dichloroethene	21.1	20.0	105	74 - 135
1,2,3-Trichloropropane	18.6	20.0	93	68 - 136
1,2-Dibromo-3-chloropropane	20.0	20.0	100	69 - 135
1,2-Dibromoethane	20.3	20.0	102	81 - 123
1,2-Dichlorobenzene	20.5	20.0	102	80 - 119
1,2-Dichloroethane	18.1	20.0	90	72 - 130
1,2-Dichloropropane	19.0	20.0	95	80 - 119
1,4-Dichlorobenzene	19.8	20.0	99	79 - 119
2-Butanone (MEK)	18.2	20.0	91	66 - 129
2-Hexanone	19.6	20.0	98	61 - 131
4-Methyl-2-pentanone (MIBK)	18.5	20.0	93	68 - 129
Acetone	14.6	20.0	73	51 - 146
Acrylonitrile	92.2	100	92	75 - 133
Benzene	18.5	20.0	93	76 - 118
Bromochloromethane	19.3	20.0	96	81 - 126
Bromodichloromethane	19.1	20.0	96	79 - 122
Bromoform	21.4	20.0	107	65 - 138
Bromomethane	11.4	20.0	57	41 - 159
Carbon Disulfide	19.8	20.0	99	63 - 141
Carbon Tetrachloride	19.7	20.0	99	66 - 128
Chlorobenzene	20.4	20.0	102	80 - 121
Chloroethane	18.8	20.0	94	71 - 128
Chloroform	18.8	20.0	94	76 - 120
Chloromethane	19.0	20.0	95	64 - 140
Dibromochloromethane	21.2	20.0	106	79 - 125
Dibromomethane	18.3	20.0	92	79 - 120
Methylene Chloride	20.5	20.0	103	73 - 122
Ethylbenzene	18.4	20.0	92	76 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451014

Lab Control Sample
RQ1507370-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Iodomethane	12.2	20.0	61	34 - 148
Styrene	20.1	20.0	101	81 - 122
Tetrachloroethene	19.3	20.0	96	69 - 124
Toluene	18.7	20.0	93	77 - 120
Trichloroethene	19.0	20.0	95	76 - 123
Trichlorofluoromethane	20.4	20.0	102	69 - 130
Vinyl Acetate	18.9	20.0	94	43 - 165
Vinyl Chloride	18.8	20.0	94	69 - 136
cis-1,2-Dichloroethene	19.1	20.0	95	80 - 121
cis-1,3-Dichloropropene	18.4	20.0	92	77 - 125
m,p-Xylenes	41.1	40.0	103	78 - 123
o-Xylene	20.0	20.0	100	77 - 131
trans-1,2-Dichloroethene	21.2	20.0	106	78 - 124
trans-1,3-Dichloropropene	18.9	20.0	95	72 - 123
trans-1,4-Dichloro-2-butene	17.2	20.0	86	47 - 173

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/30/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451196

Analyte Name	Lab Control Sample RQ1507371-02 Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	19.4	20.0	97	79 - 119
1,1,1-Trichloroethane	17.4	20.0	87	71 - 123
1,1,2,2-Tetrachloroethane	19.5	20.0	97	74 - 127
1,1,2-Trichloroethane	17.9	20.0	89	79 - 117
1,1-Dichloroethane	18.2	20.0	91	76 - 128
1,1-Dichloroethene	18.8	20.0	94	74 - 135
1,2,3-Trichloropropane	17.8	20.0	89	68 - 136
1,2-Dibromo-3-chloropropane	17.7	20.0	88	69 - 135
1,2-Dibromoethane	19.3	20.0	97	81 - 123
1,2-Dichlorobenzene	19.4	20.0	97	80 - 119
1,2-Dichloroethane	18.1	20.0	90	72 - 130
1,2-Dichloropropane	18.2	20.0	91	80 - 119
1,4-Dichlorobenzene	19.2	20.0	96	79 - 119
2-Butanone (MEK)	18.1	20.0	90	66 - 129
2-Hexanone	19.1	20.0	96	61 - 131
4-Methyl-2-pentanone (MIBK)	18.5	20.0	93	68 - 129
Acetone	14.2	20.0	71	51 - 146
Acrylonitrile	91.2	100	91	75 - 133
Benzene	17.6	20.0	88	76 - 118
Bromochloromethane	19.6	20.0	98	81 - 126
Bromodichloromethane	18.6	20.0	93	79 - 122
Bromoform	19.8	20.0	99	65 - 138
Bromomethane	13.6	20.0	68	41 - 159
Carbon Disulfide	20.4	20.0	102	63 - 141
Carbon Tetrachloride	17.1	20.0	86	66 - 128
Chlorobenzene	19.2	20.0	96	80 - 121
Chloroethane	18.4	20.0	92	71 - 128
Chloroform	18.0	20.0	90	76 - 120
Chloromethane	17.5	20.0	87	64 - 140
Dibromochloromethane	20.3	20.0	101	79 - 125
Dibromomethane	19.0	20.0	95	79 - 120
Methylene Chloride	20.1	20.0	100	73 - 122
Ethylbenzene	16.5	20.0	82	76 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Analyzed: 6/30/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 451196

Lab Control Sample
RQ1507371-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Iodomethane	11.5	20.0	57	34 - 148
Styrene	19.4	20.0	97	81 - 122
Tetrachloroethene	17.5	20.0	88	69 - 124
Toluene	17.0	20.0	85	77 - 120
Trichloroethene	17.5	20.0	88	76 - 123
Trichlorofluoromethane	17.7	20.0	88	69 - 130
Vinyl Acetate	19.0	20.0	95	43 - 165
Vinyl Chloride	17.5	20.0	87	69 - 136
cis-1,2-Dichloroethene	18.8	20.0	94	80 - 121
cis-1,3-Dichloropropene	18.0	20.0	90	77 - 125
m,p-Xylenes	37.2	40.0	93	78 - 123
o-Xylene	18.7	20.0	93	77 - 131
trans-1,2-Dichloroethene	20.1	20.0	100	78 - 124
trans-1,3-Dichloropropene	18.0	20.0	90	72 - 123
trans-1,4-Dichloro-2-butene	11.3	20.0	56	47 - 173

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Analyzed:**	6/29/15 11:46
Sample Matrix:	Water		

Method Blank Summary
Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	R-MS-10
Lab Code:	RQ1507370-01	**File ID:**	I:\ACQUDATA\msvoa10\data\062915\A9997.D\
Analytical Method:	8260C		
Prep Method:	EPA 5030C		

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1507370-02	I:\ACQUDATA\msvoa10\data\062915\A9995.D\	6/29/15 10:49
Trip Blank	R1504947-017	I:\ACQUDATA\msvoa10\data\062915\A9998.D\	6/29/15 12:16
MW-12	R1504947-001	I:\ACQUDATA\msvoa10\data\062915\A9999.D\	6/29/15 12:44
MW-10	R1504947-002	I:\ACQUDATA\msvoa10\data\062915\B0000.D\	6/29/15 13:12
MW-10D	R1504947-003	I:\ACQUDATA\msvoa10\data\062915\B0001.D\	6/29/15 13:40
MW-3	R1504947-004	I:\ACQUDATA\msvoa10\data\062915\B0002.D\	6/29/15 14:08
MW-8	R1504947-005	I:\ACQUDATA\msvoa10\data\062915\B0003.D\	6/29/15 14:36
MW-13	R1504947-006	I:\ACQUDATA\msvoa10\data\062915\B0004.D\	6/29/15 15:04
MW-11	R1504947-007	I:\ACQUDATA\msvoa10\data\062915\B0005.D\	6/29/15 15:32
MW-4	R1504947-008	I:\ACQUDATA\msvoa10\data\062915\B0006.D\	6/29/15 16:00
MW-7	R1504947-009	I:\ACQUDATA\msvoa10\data\062915\B0007.D\	6/29/15 16:28
MW-15	R1504947-010	I:\ACQUDATA\msvoa10\data\062915\B0008.D\	6/29/15 16:56
SW-01	R1504947-012	I:\ACQUDATA\msvoa10\data\062915\B0010.D\	6/29/15 17:52
SW-04	R1504947-013	I:\ACQUDATA\msvoa10\data\062915\B0011.D\	6/29/15 18:20
SW-03	R1504947-014	I:\ACQUDATA\msvoa10\data\062915\B0012.D\	6/29/15 18:48
DW	R1504947-015	I:\ACQUDATA\msvoa10\data\062915\B0013.D\	6/29/15 19:16
Blind Dupe	R1504947-016	I:\ACQUDATA\msvoa10\data\062915\B0014.D\	6/29/15 19:44
MW-3DL	R1504947-004	I:\ACQUDATA\msvoa10\data\062915\B0015.D\	6/29/15 20:12
MW-12MS	RQ1507370-05	I:\ACQUDATA\msvoa10\data\062915\B0016.D\	6/29/15 20:40
MW-12DMS	RQ1507370-06	I:\ACQUDATA\msvoa10\data\062915\B0017.D\	6/29/15 21:08

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Analyzed:**	6/30/15 12:56
Sample Matrix:	Water		

Method Blank Summary
Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	R-MS-10
Lab Code:	RQ1507371-01	**File ID:**	I:\ACQUDATA\msvoa10\data\063015\F0005.D\
Analytical Method:	8260C		
Prep Method:	EPA 5030C		

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1507371-02	I:\ACQUDATA\msvoa10\data\063015\F0003.D\	6/30/15 11:59
MW-1D	R1504947-011	I:\ACQUDATA\msvoa10\data\063015\F0008.D\	6/30/15 14:20

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/50191-01

Service Request: R1504947
Date Analyzed: 05/06/15 15:32

Tune Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\050615\A8250.D\
Instrument ID: R-MS-10

Analytical Method: 8260C
Analysis Lot:

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	26.7	114707	Pass
75	95	30	60	48.1	206805	Pass
95	95	100	100	100.0	430315	Pass
96	95	5	9	6.8	29200	Pass
173	174	0	2	1.0	3466	Pass
174	95	50	120	81.6	351083	Pass
175	174	5	9	7.4	25806	Pass
176	174	95	101	96.1	337237	Pass
177	176	5	9	6.4	21447	Pass

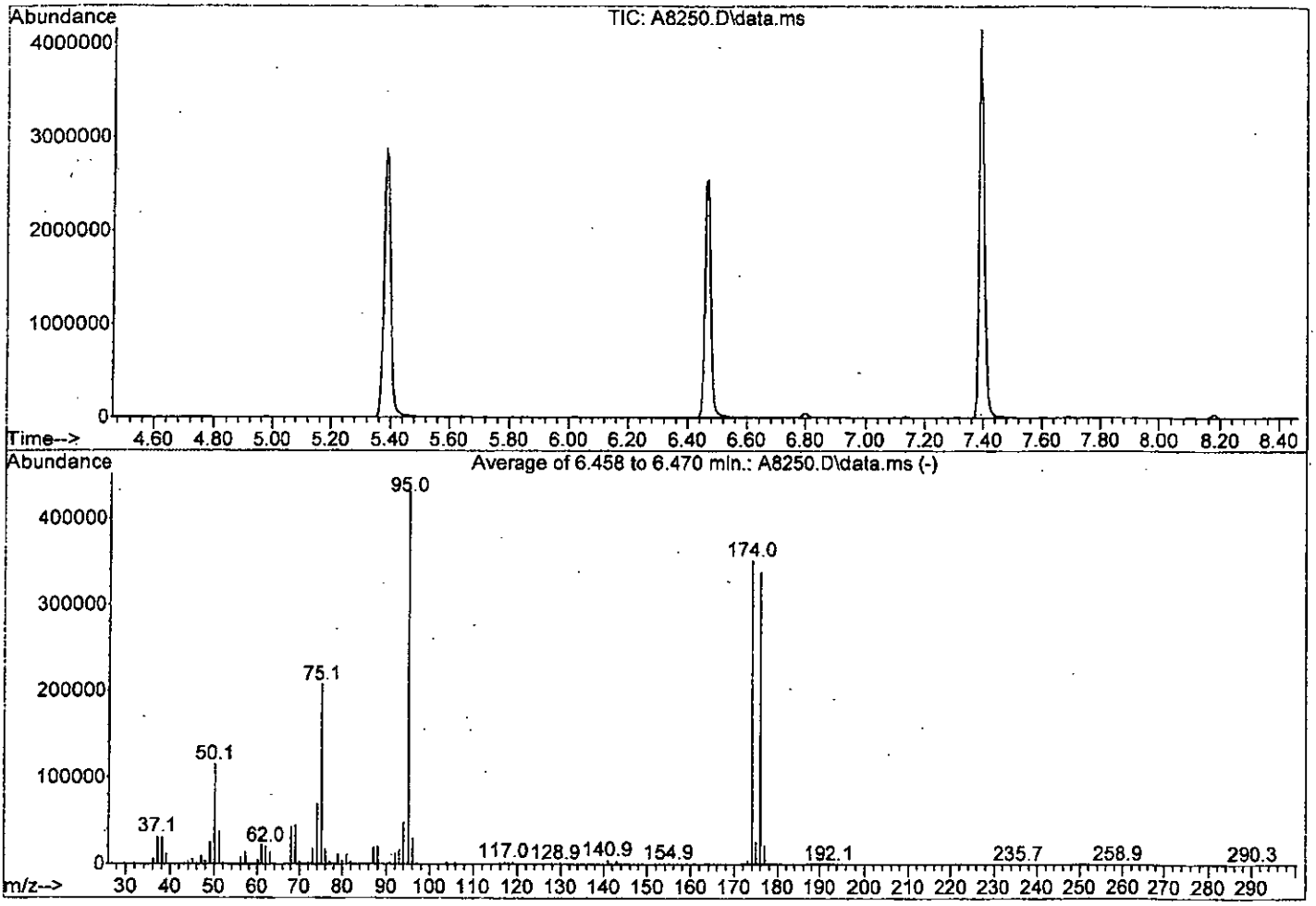
Sample Name	Lab Code	File ID	Date Analyzed	Q
Initial CalibrationICAL	0.5 ppb	I:\ACQUDATA\msvoa10\data\050615\A8252.D\	05/06/15 16:31	
Initial CalibrationICAL	1.0 ppb	I:\ACQUDATA\msvoa10\data\050615\A8253.D\	05/06/15 17:01	
Initial CalibrationICAL	2.0 ppb	I:\ACQUDATA\msvoa10\data\050615\A8254.D\	05/06/15 17:31	
Initial CalibrationICAL	5.0 ppb	I:\ACQUDATA\msvoa10\data\050615\A8255.D\	05/06/15 18:01	
Initial CalibrationICAL	20 ppb	I:\ACQUDATA\msvoa10\data\050615\A8256.D\	05/06/15 19:46	
Initial CalibrationICAL	50 ppb	I:\ACQUDATA\msvoa10\data\050615\A8257.D\	05/06/15 19:00	
Initial CalibrationICAL	100 ppb	I:\ACQUDATA\msvoa10\data\050615\A8258.D\	05/06/15 19:30	
Initial CalibrationICAL	150 ppb	I:\ACQUDATA\msvoa10\data\050615\A8259.D\	05/06/15 20:01	
Initial CalibrationICAL	200 ppb	I:\ACQUDATA\msvoa10\data\050615\A8260.D\	05/06/15 20:31	

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8250.D
Acq On : 6 May 2015 3:32 pm
Operator : F. NAEGLER
Sample : TUNE Inst : MSVOA10
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

FJ 5/7/15

Method : I:\ACQUDATA\MSVOA10\METHODS\T050615.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



AutoFind: Scans 389, 390, 391; Background Corrected with Scan 384

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.7	114707	PASS
75	95	30	60	48.1	206805	PASS
95	95	100	100	100.0	430315	PASS
96	95	5	9	6.8	29200	PASS
173	174	0.00	2	1.0	3466	PASS
174	95	50	120	81.6	351083	PASS
175	174	5	9	7.4	25806	PASS
176	174	95	101	96.1	337237	PASS
177	176	5	9	6.4	21447	PASS

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947
Date Analyzed: 6/29/15 09:48

Tune Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\062915\A9993.D\
Instrument ID: R-MS-10

Analytical Method: 8260C
Analysis Lot: 451014

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	24.95	118715	Pass
75	95	30	60	46.56	221547	Pass
95	95	100	100	100.00	475861	Pass
96	95	5	9	6.74	32093	Pass
173	174	0	2	1.02	4399	Pass
174	95	50	120	90.40	430187	Pass
175	174	5	9	7.75	33347	Pass
176	174	95	101	98.34	423061	Pass
177	176	5	9	6.56	27763	Pass

Sample Name	Lab Code	File ID	Date Analyzed	Q
Continuing Calibration Verification	RQ1507370-04	I:\ACQUDATA\msvoa10\data\062915\A9994.D\	6/29/15 10:19	
Lab Control Sample	RQ1507370-02	I:\ACQUDATA\msvoa10\data\062915\A9995.D\	6/29/15 10:49	
Method Blank	RQ1507370-01	I:\ACQUDATA\msvoa10\data\062915\A9997.D\	6/29/15 11:46	
Trip Blank	R1504947-017	I:\ACQUDATA\msvoa10\data\062915\A9998.D\	6/29/15 12:16	
MW-12	R1504947-001	I:\ACQUDATA\msvoa10\data\062915\A9999.D\	6/29/15 12:44	
MW-10	R1504947-002	I:\ACQUDATA\msvoa10\data\062915\B0000.D\	6/29/15 13:12	
MW-10D	R1504947-003	I:\ACQUDATA\msvoa10\data\062915\B0001.D\	6/29/15 13:40	
MW-3	R1504947-004	I:\ACQUDATA\msvoa10\data\062915\B0002.D\	6/29/15 14:08	
MW-8	R1504947-005	I:\ACQUDATA\msvoa10\data\062915\B0003.D\	6/29/15 14:36	
MW-13	R1504947-006	I:\ACQUDATA\msvoa10\data\062915\B0004.D\	6/29/15 15:04	
MW-11	R1504947-007	I:\ACQUDATA\msvoa10\data\062915\B0005.D\	6/29/15 15:32	
MW-4	R1504947-008	I:\ACQUDATA\msvoa10\data\062915\B0006.D\	6/29/15 16:00	
MW-7	R1504947-009	I:\ACQUDATA\msvoa10\data\062915\B0007.D\	6/29/15 16:28	
MW-15	R1504947-010	I:\ACQUDATA\msvoa10\data\062915\B0008.D\	6/29/15 16:56	
SW-01	R1504947-012	I:\ACQUDATA\msvoa10\data\062915\B0010.D\	6/29/15 17:52	
SW-04	R1504947-013	I:\ACQUDATA\msvoa10\data\062915\B0011.D\	6/29/15 18:20	
SW-03	R1504947-014	I:\ACQUDATA\msvoa10\data\062915\B0012.D\	6/29/15 18:48	
DW	R1504947-015	I:\ACQUDATA\msvoa10\data\062915\B0013.D\	6/29/15 19:16	
Blind Dupe	R1504947-016	I:\ACQUDATA\msvoa10\data\062915\B0014.D\	6/29/15 19:44	
MW-3DL	R1504947-004	I:\ACQUDATA\msvoa10\data\062915\B0015.D\	6/29/15 20:12	
MW-12MS	RQ1507370-05	I:\ACQUDATA\msvoa10\data\062915\B0016.D\	6/29/15 20:40	
MW-12DMS	RQ1507370-06	I:\ACQUDATA\msvoa10\data\062915\B0017.D\	6/29/15 21:08	

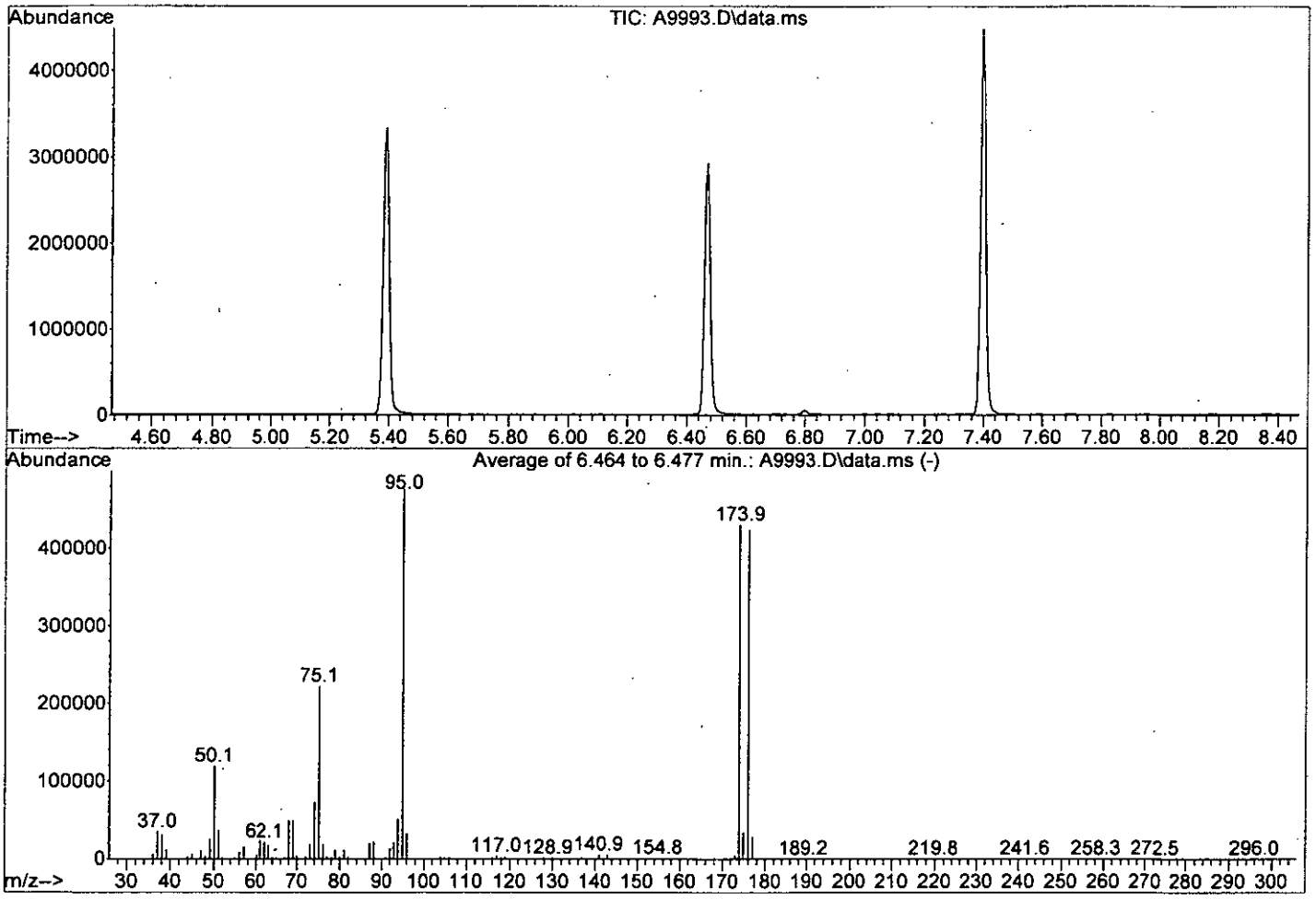
BFB

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9993.D
Acq On : 29 Jun 2015 9:48 am
Operator : F. Naegler
Sample : TUNE Inst : MSVOA10
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

Method : I:\ACQUDATA\MSVOA10\METHODS\T050615.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006

FV 6/29/15



AutoFind: Scans 390, 391, 392; Background Corrected with Scan 384

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.9	118715	PASS
75	95	30	60	46.6	221547	PASS
95	95	100	100	100.0	475861	PASS
96	95	5	9	6.7	32093	PASS
173	174	0.00	2	1.0	4399	PASS
174	95	50	120	90.4	430187	PASS
175	174	5	9	7.8	33347	PASS
176	174	95	101	98.3	423061	PASS
177	176	5	9	6.6	27763	PASS

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947
Date Analyzed: 6/30/15 11:00

Tune Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\063015\F0001.D\
Instrument ID: R-MS-10

Analytical Method: 8260C
Analysis Lot: 451196

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	23.02	106923	Pass
75	95	30	60	44.80	208064	Pass
95	95	100	100	100.00	464427	Pass
96	95	5	9	6.46	30019	Pass
173	174	0	2	1.15	4745	Pass
174	95	50	120	89.21	414336	Pass
175	174	5	9	7.32	30312	Pass
176	174	95	101	96.70	400683	Pass
177	176	5	9	6.62	26515	Pass

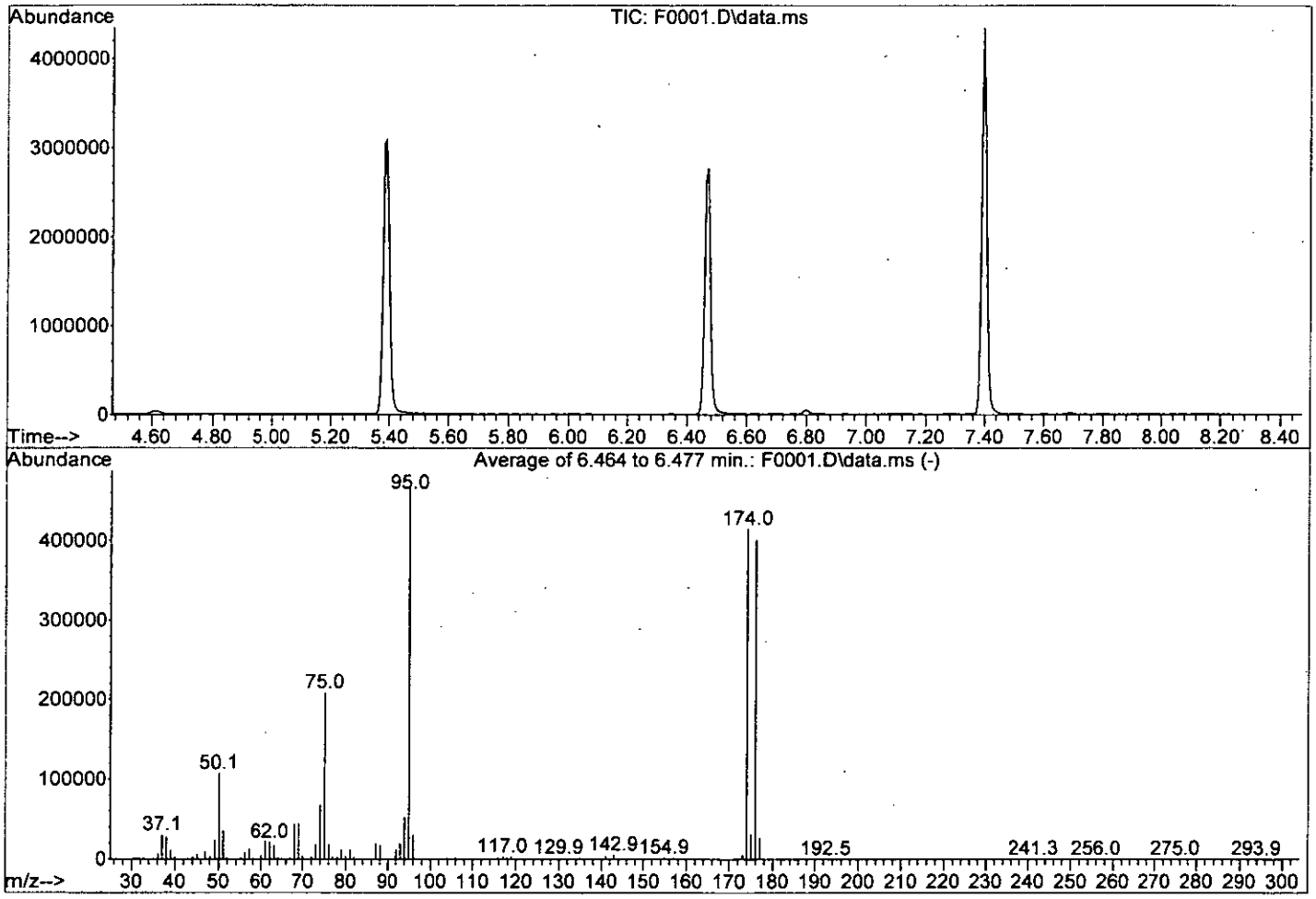
Sample Name	Lab Code	File ID	Date Analyzed	Q
Continuing Calibration Verification	RQ1507371-04	I:\ACQUDATA\msvoa10\data\063015\F0002.D\	6/30/15 11:25	
Lab Control Sample	RQ1507371-02	I:\ACQUDATA\msvoa10\data\063015\F0003.D\	6/30/15 11:59	
Method Blank	RQ1507371-01	I:\ACQUDATA\msvoa10\data\063015\F0005.D\	6/30/15 12:56	
MW-1D	R1504947-011	I:\ACQUDATA\msvoa10\data\063015\F0008.D\	6/30/15 14:20	

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0001.D
Acq On : 30 Jun 2015 11:00 am
Operator : F. Naegler
Sample : TUNE Inst : MSVOA10
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

Method : I:\ACQUDATA\MSVOA10\METHODS\T050615.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006

FJ 6/30/15



AutoFind: Scans 390, 391, 392; Background Corrected with Scan 384

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	106923	PASS
75	95	30	60	44.8	208064	PASS
95	95	100	100	100.0	464427	PASS
96	95	5	9	6.5	30019	PASS
173	174	0.00	2	1.1	4745	PASS
174	95	50	120	89.2	414336	PASS
175	174	5	9	7.3	30312	PASS
176	174	95	101	96.7	400683	PASS
177	176	5	9	6.6	26515	PASS

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947
Date Analyzed: 6/29/15 10:19

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\062915\A9994.D\
Instrument ID: R-MS-10
Analytical Method: 8260C

Lab Code: RQ1507370-04
Analysis Lot: 451014
Signal ID:

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	RT	Area	RT	Area	RT
	Results ==>	928,744	11.66	1,777,719	6.15	1,625,156	9.58
	Upper Limit ==>	1,857,488	12.16	3,555,438	6.65	3,250,312	10.08
	Lower Limit ==>	464,372	11.16	888,860	5.65	812,578	9.08
	ICAL Result ==>	825,795	11.66	1,474,627	6.15	1,395,683	9.58
Associated Analyses							
Lab Control Sample	RQ1507370-02	927,044	11.66	1,783,430	6.15	1,587,697	9.58
Method Blank	RQ1507370-01	872,525	11.66	1,722,824	6.15	1,577,902	9.58
Trip Blank	R1504947-017	862,211	11.66	1,692,873	6.15	1,551,348	9.58
MW-12	R1504947-001	840,955	11.66	1,695,709	6.15	1,559,542	9.58
MW-10	R1504947-002	880,711	11.66	1,699,434	6.15	1,580,298	9.58
MW-10D	R1504947-003	879,838	11.66	1,728,928	6.15	1,571,726	9.58
MW-3	R1504947-004	868,788	11.66	1,770,836	6.15	1,598,861	9.58
MW-8	R1504947-005	863,901	11.66	1,714,102	6.15	1,567,240	9.58
MW-13	R1504947-006	861,853	11.66	1,709,733	6.15	1,568,344	9.58
MW-11	R1504947-007	869,368	11.66	1,724,132	6.15	1,547,322	9.58
MW-4	R1504947-008	869,147	11.66	1,706,465	6.15	1,561,466	9.58
MW-7	R1504947-009	867,885	11.66	1,714,017	6.15	1,547,531	9.58
MW-15	R1504947-010	870,331	11.66	1,695,988	6.15	1,562,274	9.58
SW-01	R1504947-012	860,202	11.66	1,699,662	6.15	1,547,537	9.58
SW-04	R1504947-013	860,135	11.66	1,724,686	6.15	1,576,399	9.58
SW-03	R1504947-014	863,882	11.66	1,707,114	6.15	1,530,948	9.58
DW	R1504947-015	872,042	11.66	1,723,134	6.15	1,593,323	9.58
Blind Dupe	R1504947-016	870,581	11.66	1,688,111	6.15	1,538,093	9.58
MW-3DL	R1504947-004	856,161	11.66	1,725,110	6.15	1,602,568	9.58
MW-12MS	RQ1507370-05	940,183	11.66	1,751,245	6.15	1,580,893	9.58
MW-12DMS	RQ1507370-06	949,309	11.66	1,771,026	6.15	1,562,792	9.58

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947
Date Analyzed: 6/29/15 10:19

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\062915\A9994.D\
Instrument ID: R-MS-10
Analytical Method: 8260C

Lab Code: RQ1507370-04
Analysis Lot: 451014
Signal ID:

		Pentafluorobenzene	
		Area	**RT**
	Results ==>	1,178,418	4.97
	Upper Limit ==>	2,356,836	5.47
	Lower Limit ==>	589,209	4.47
	ICAL Result ==>	960,841	4.97
Associated Analyses			
Lab Control Sample	RQ1507370-02	1,171,393	4.97
Method Blank	RQ1507370-01	1,126,928	4.97
Trip Blank	R1504947-017	1,106,673	4.96
MW-12	R1504947-001	1,110,898	4.96
MW-10	R1504947-002	1,120,070	4.96
MW-10D	R1504947-003	1,119,577	4.97
MW-3	R1504947-004	1,162,382	4.96
MW-8	R1504947-005	1,114,827	4.97
MW-13	R1504947-006	1,119,307	4.97
MW-11	R1504947-007	1,118,635	4.97
MW-4	R1504947-008	1,119,792	4.97
MW-7	R1504947-009	1,095,805	4.97
MW-15	R1504947-010	1,098,258	4.97
SW-01	R1504947-012	1,097,412	4.96
SW-04	R1504947-013	1,119,150	4.96
SW-03	R1504947-014	1,100,929	4.96
DW	R1504947-015	1,105,360	4.96
Blind Dupe	R1504947-016	1,094,066	4.96
MW-3DL	R1504947-004	1,109,002	4.96
MW-12MS	RQ1507370-05	1,163,049	4.97
MW-12DMS	RQ1507370-06	1,170,889	4.97

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947
Date Analyzed: 6/30/15 11:25

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\063015\F0002.D\
Instrument ID: R-MS-10
Analytical Method: 8260C

Lab Code: RQ1507371-04
Analysis Lot: 451196
Signal ID:

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	867,949	11.66	1,655,393	6.15	1,505,383	9.58
	Upper Limit ==>	1,735,898	12.16	3,310,786	6.65	3,010,766	10.08
	Lower Limit ==>	433,975	11.16	827,697	5.65	752,692	9.08
	ICAL Result ==>	825,795	11.66	1,474,627	6.15	1,395,683	9.58
Associated Analyses							
Lab Control Sample	RQ1507371-02	874,490	11.66	1,674,879	6.15	1,516,429	9.58
Method Blank	RQ1507371-01	829,262	11.66	1,681,231	6.15	1,520,830	9.58
MW-1D	R1504947-011	825,481	11.66	1,611,528	6.15	1,486,781	9.58

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01

Service Request: R1504947
Date Analyzed: 6/30/15 11:25

Internal Standard Area and RT Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\msvoa10\data\063015\F0002.D\
Instrument ID: R-MS-10
Analytical Method: 8260C

Lab Code: RQ1507371-04
Analysis Lot: 451196
Signal ID:

		Pentafluorobenzene	
		Area	**RT**
	Results ==>	1,096,917	4.96
	Upper Limit ==>	2,193,834	5.46
	Lower Limit ==>	548,459	4.46
	ICAL Result ==>	960,841	4.97
Associated Analyses			
Lab Control Sample	RQ1507371-02	1,101,299	4.96
Method Blank	RQ1507371-01	1,071,974	4.96
MW-1D	R1504947-011	1,056,975	4.97

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Environmental

VOLATILE ORGANICS
SAMPLE DATA

ALS Environmental - Rochester, NY
1565 Jefferson Rd, Bldg. 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:44
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	R1504947-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9999.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:44
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	R1504947-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9999.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 12:44	
Dibromofluoromethane	100	89-119	6/29/15 12:44	
Toluene-d8	90	87-121	6/29/15 12:44	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9999.D
Acq On : 29 Jun 2015 12:44 pm
Operator : F. Naegler
Sample : R1504947-001|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 13:41:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1110898	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1695709	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1559542	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	840955	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	530508	50.13	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 100.26%			
46) surr1,1,2-dichloroetha...	5.408	65	524120	48.20	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 96.40%			
64) SURR3,Toluene-d8	8.042	98	1822134	45.17	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 90.34%			
69) SURR2,BFB	10.675	95	737278	44.97	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.94%			
Target Compounds						Qvalue
15) Acetone	2.226	43	2940	Below Cal		93
27) 1,1-Diclethane	3.305	63	5833	0.28	ug/L	100
40) 1,1,1-Trichloroethane	4.853	97	4653m	0.30	ug/L	
53) Trichloroethene	6.493	130	3277	0.28	ug/L #	84

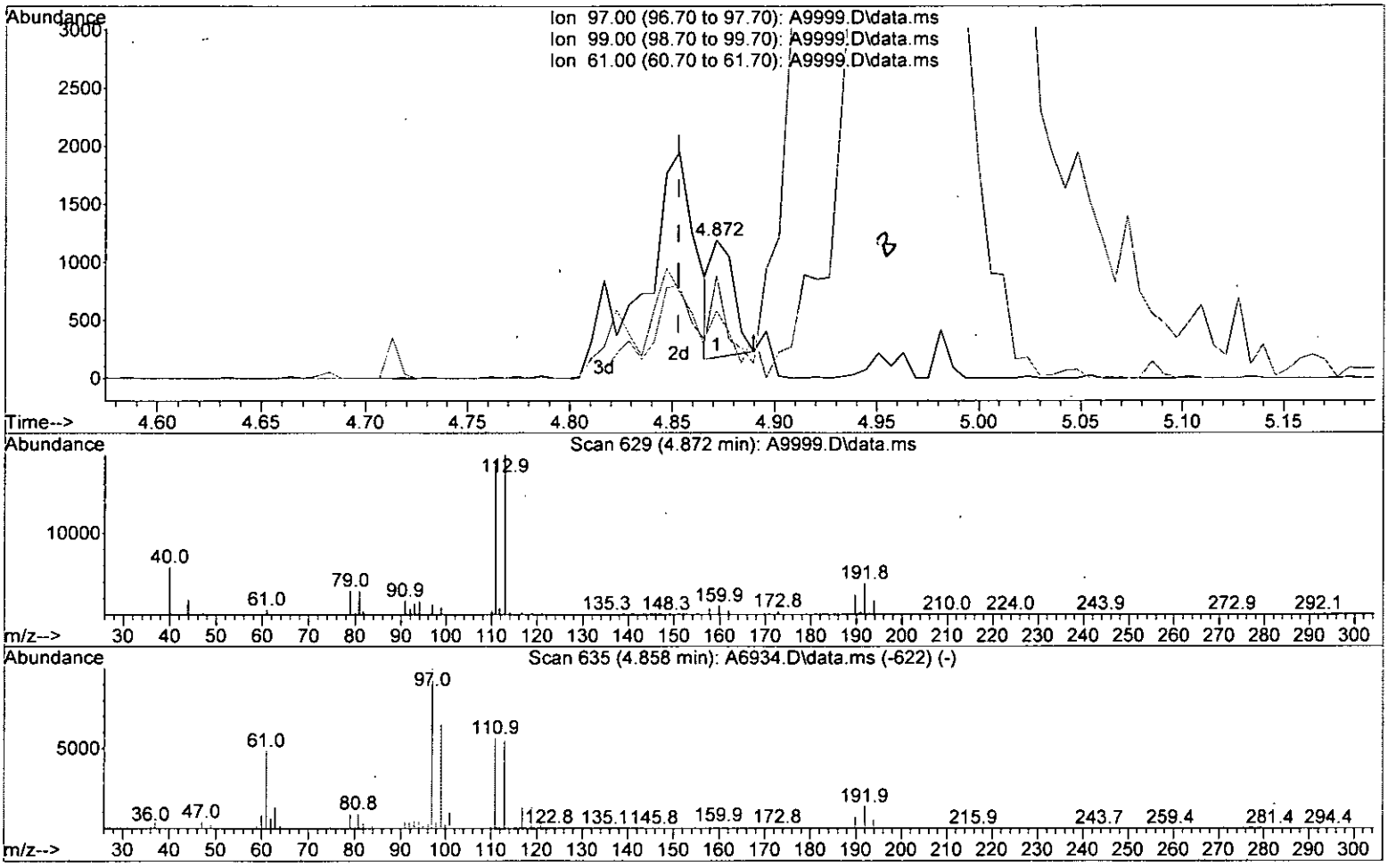
(#) = qualifier out of range (m) = manual integration (+) = signals summed

FJ
7/2/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9999.D
Acq On : 29 Jun 2015 12:44 pm
Operator : F. Naegler
Sample : R1504947-001|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 29 12:58:06 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: A9999.D\data.ms

(40) 1,1,1-Trichloroethane (P)

4.872min (+0.019) 0.05 ug/L

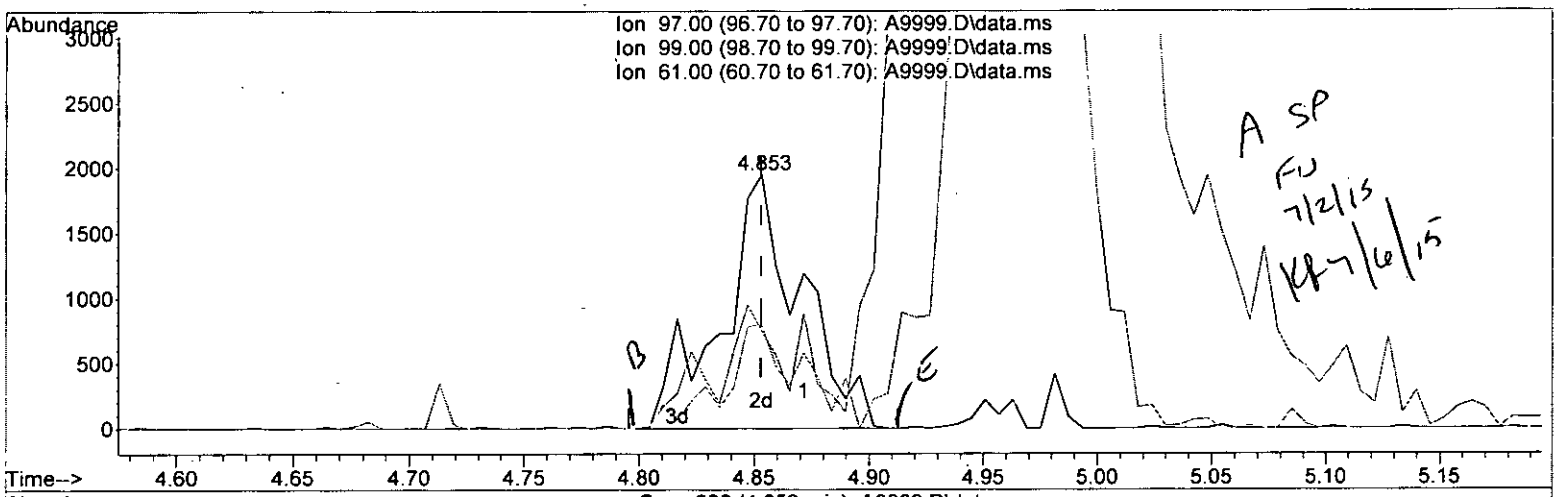
response 762

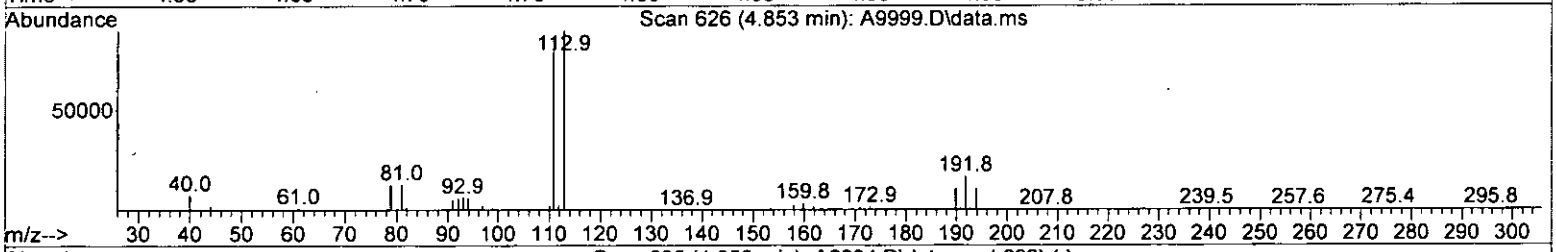
Ion	Exp%	Act%
97.00	100	100
99.00	60.90	74.16
61.00	45.20	50.08
0.00	0.00	0.00

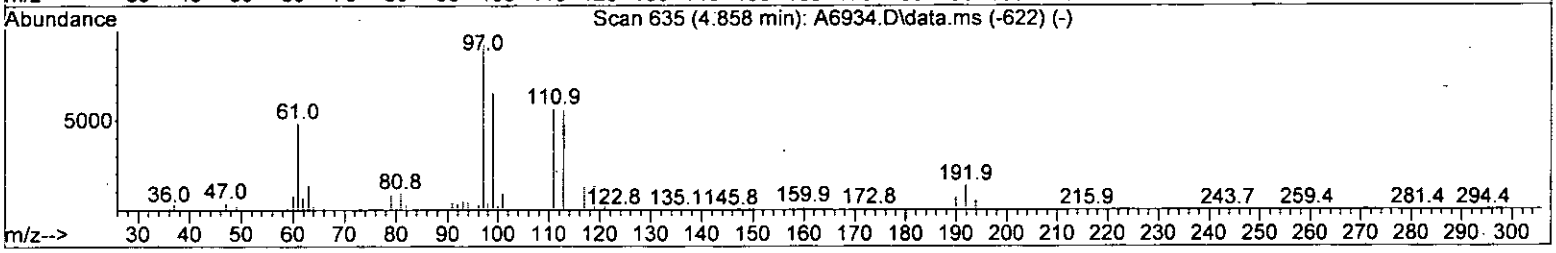
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9999.D
Acq On : 29 Jun 2015 12:44 pm
Operator : F. Naegler
Sample : R1504947-001|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 29 12:58:06 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: A9999.D\data.ms

(40) 1,1,1-Trichloroethane (P)

4.853min (+0.000) 0.30 ug/L m

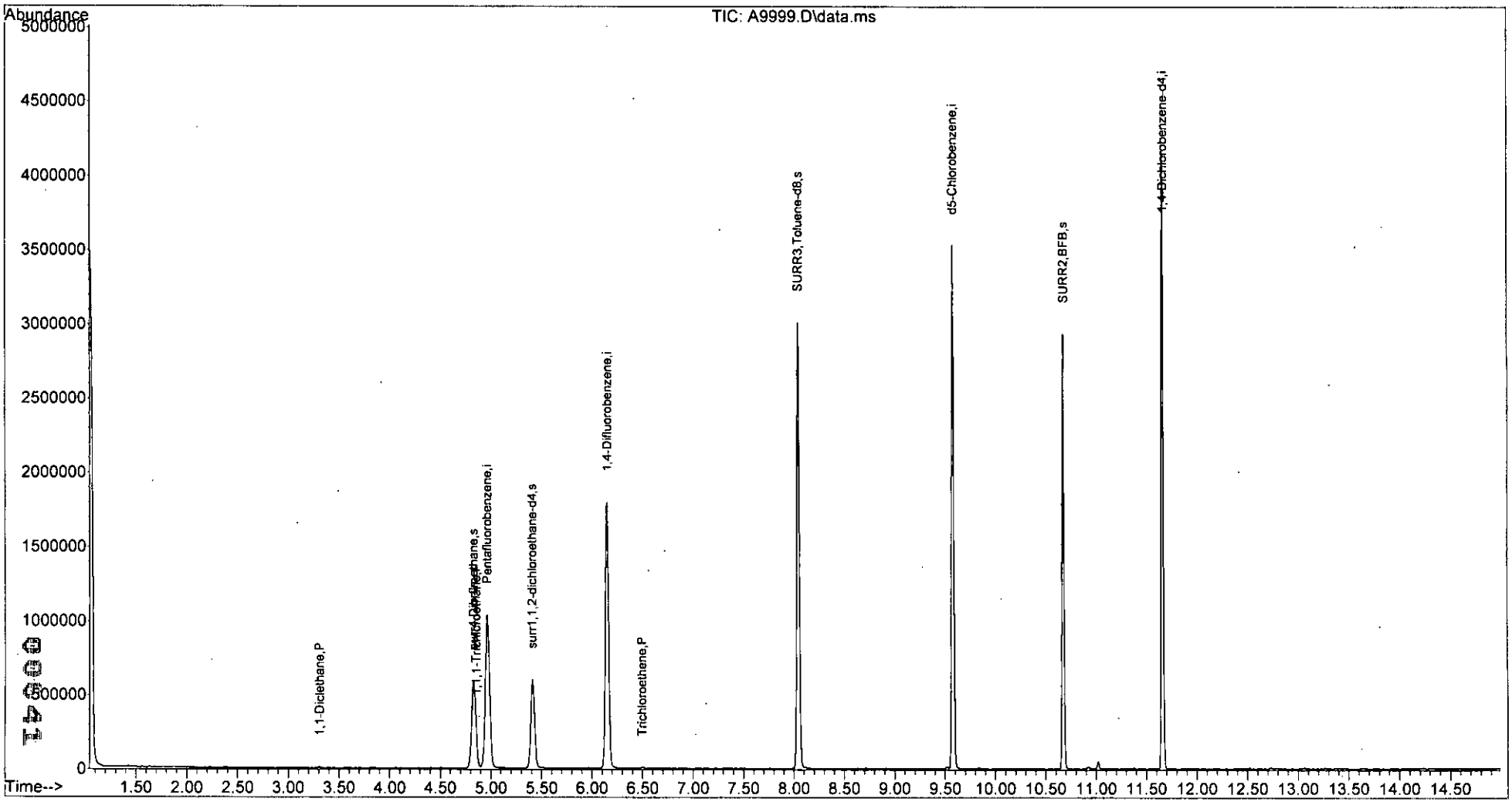
response 4653

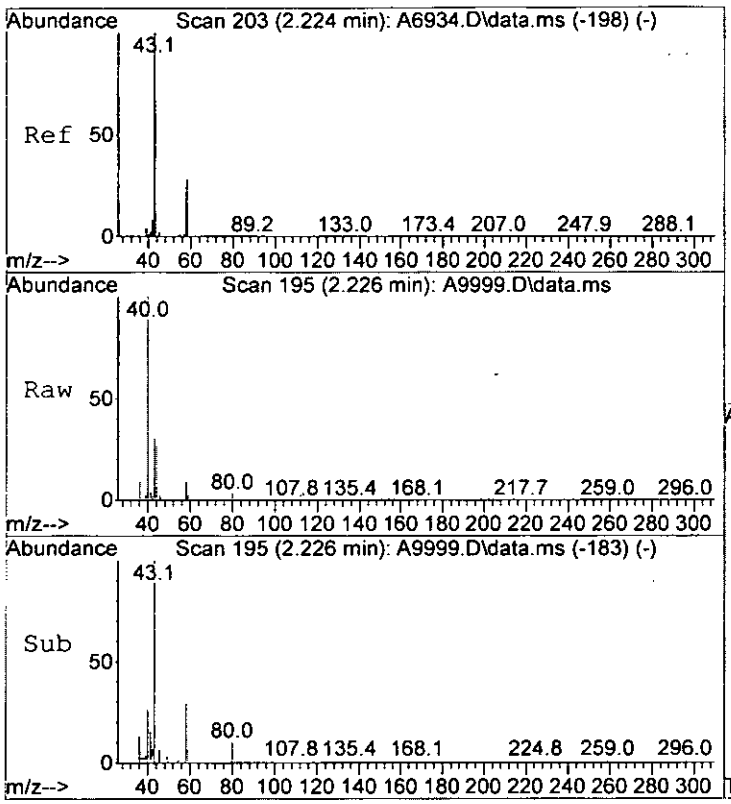
Ion	Exp%	Act%
97.00	100	100
99.00	60.90	38.51#
61.00	45.20	41.18
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9999.D
Acq On : 29 Jun 2015 12:44 pm
Operator : F. Naegler
Sample : R1504947-001|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 13:41:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

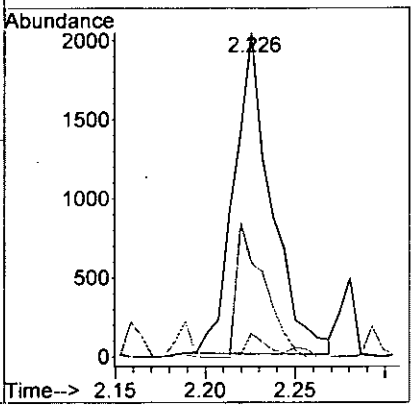


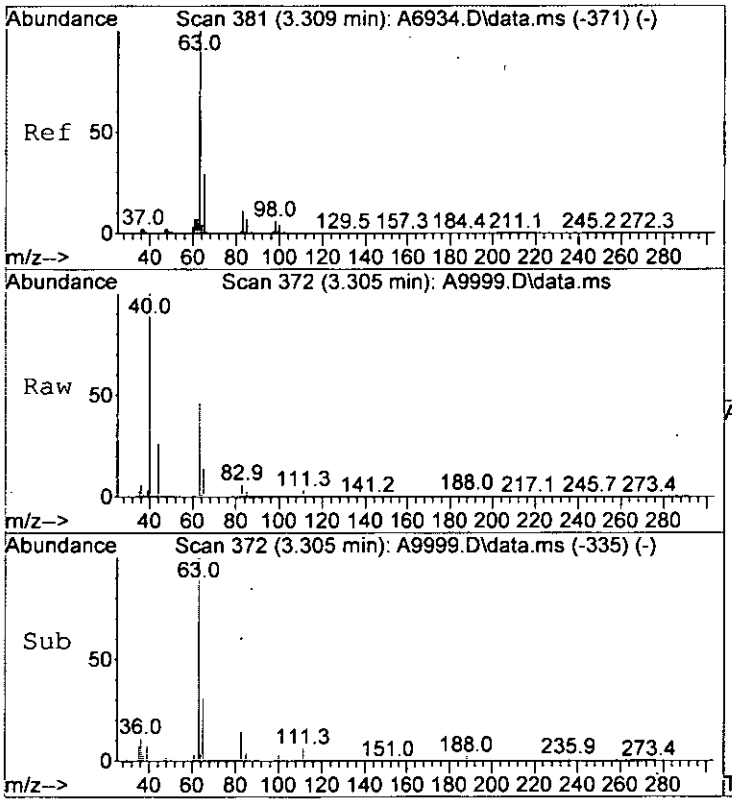


#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: A9999.D
Acq: 29 Jun 2015 12:44 pm

Tgt Ion: 43 Resp: 2940

Ion	Ratio	Lower	Upper
43	100		
58	29.1	4.8	44.8
42	7.2	0.0	28.0

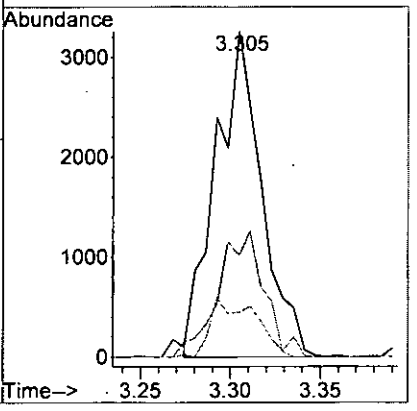


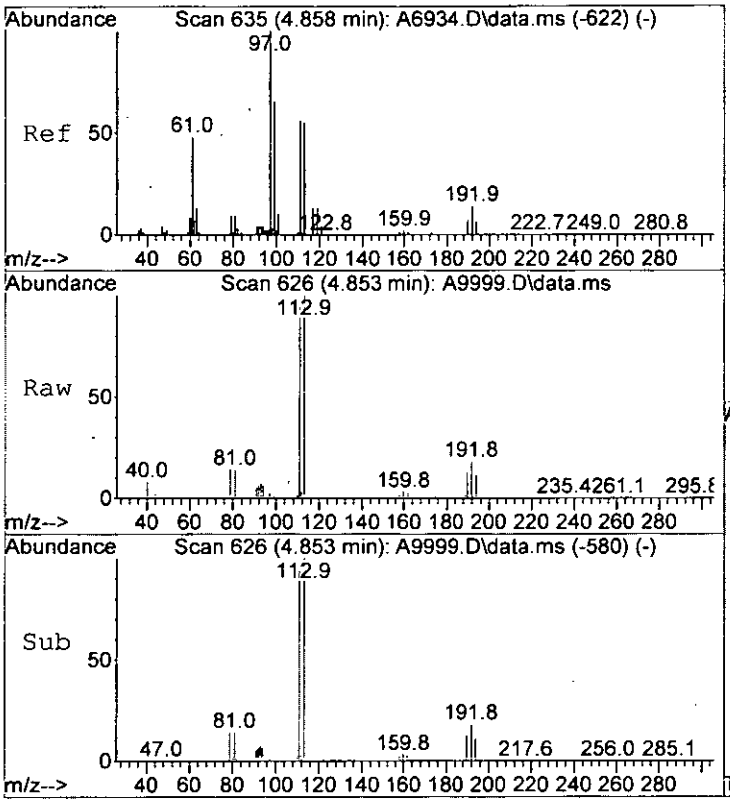


#27
1,1-Diclethane
Concen: 0.28 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: A9999.D
Acq: 29 Jun 2015 12:44 pm

Tgt Ion: 63 Resp: 5833

Ion	Ratio	Lower	Upper
63	100		
65	31.1	11.0	51.0
83	13.6	0.0	33.3

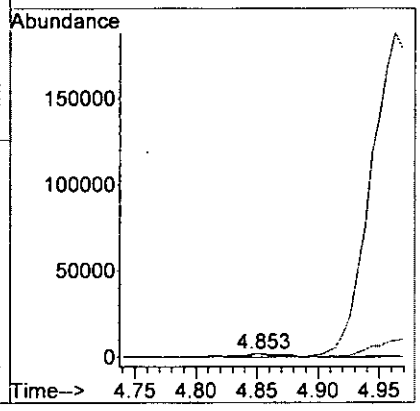


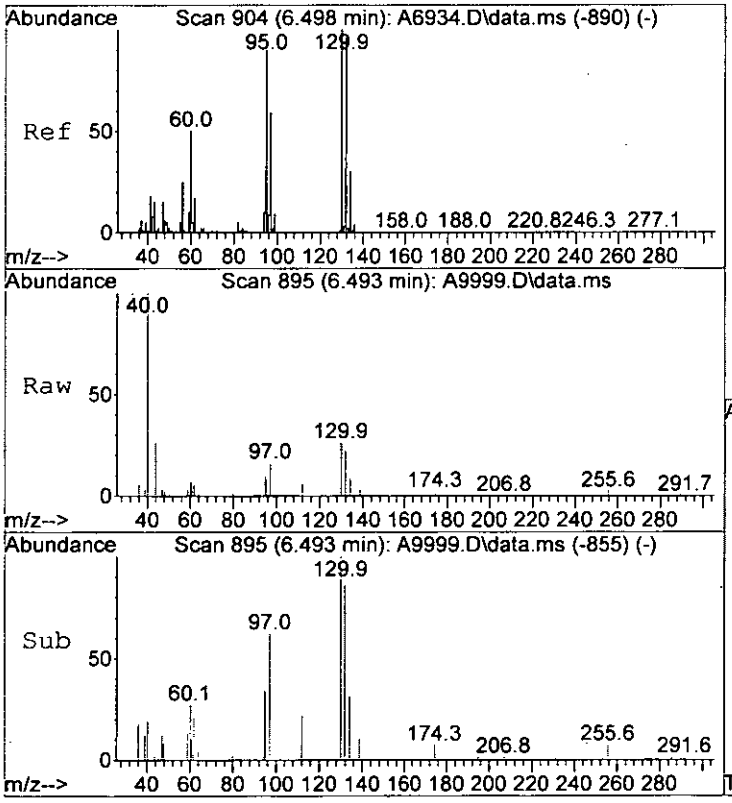


#40
1,1,1-Trichloroethane
Concen: 0.30 ug/L m
RT: 4.853 min Scan# 626
Delta R.T. 0.000 min
Lab File: A9999.D
Acq: 29 Jun 2015 12:44 pm

Tgt Ion: 97 Resp: 4653

Ion	Ratio	Lower	Upper
97	100		
99	38.5	40.9	80.9#
61	41.2	25.2	65.2

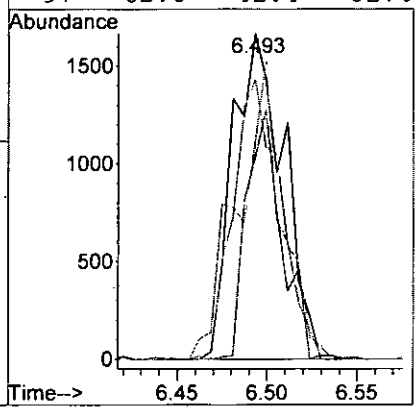




#53
Trichloroethene
Concen: 0.28 ug/L
RT: 6.493 min Scan# 895
Delta R.T. -0.006 min
Lab File: A9999.D
Acq: 29 Jun 2015 12:44 pm

Tgt Ion:130 Resp: 3277

Ion	Ratio	Lower	Upper
130	100		
132	85.8	76.6	116.6
95	67.0	76.5	116.5#
97	62.0	42.4	82.4



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 0950
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:12
Sample Name:	MW-10	**Units:**	µg/L
Lab Code:	R1504947-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0000.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	17		10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 0950
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:12
Sample Name:	MW-10	**Units:**	µg/L
Lab Code:	R1504947-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0000.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	88	85-122	6/29/15 13:12	
Dibromofluoromethane	100	89-119	6/29/15 13:12	
Toluene-d8	88	87-121	6/29/15 13:12	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0000.D
Acq On : 29 Jun 2015 1:12 pm
Operator : F. Naegler
Sample : R1504947-002|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 02 13:55:13 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1120070	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1699434	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1580298	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	880711	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	528631	49.85	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.70%			
46) surr1,1,2-dichloroetha...	5.414	65	539988	49.55	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 99.10%			
64) SURR3,Toluene-d8	8.042	98	1782403	44.08	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 88.16%			
69) SURR2,BFB	10.675	95	722991	44.00	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 88.00%			
Target Compounds						Qvalue
15) Acetone	2.220	43	66466	17.47	ug/L	92
63) 4-Methyl-2-pentanone	7.950	43	9549	0.89	ug/L	92

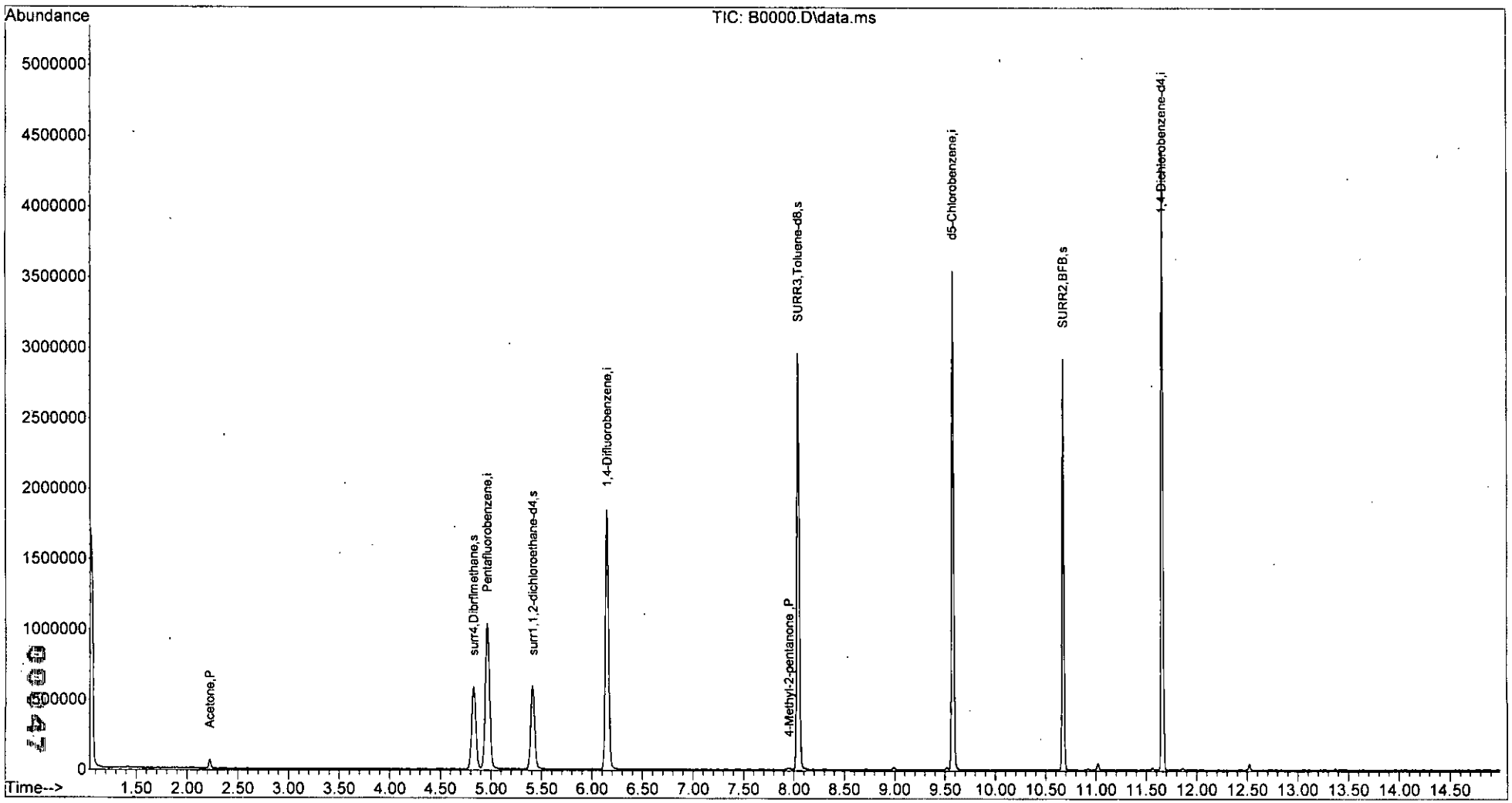
(#) = qualifier out of range (m) = manual integration (+) = signals summed

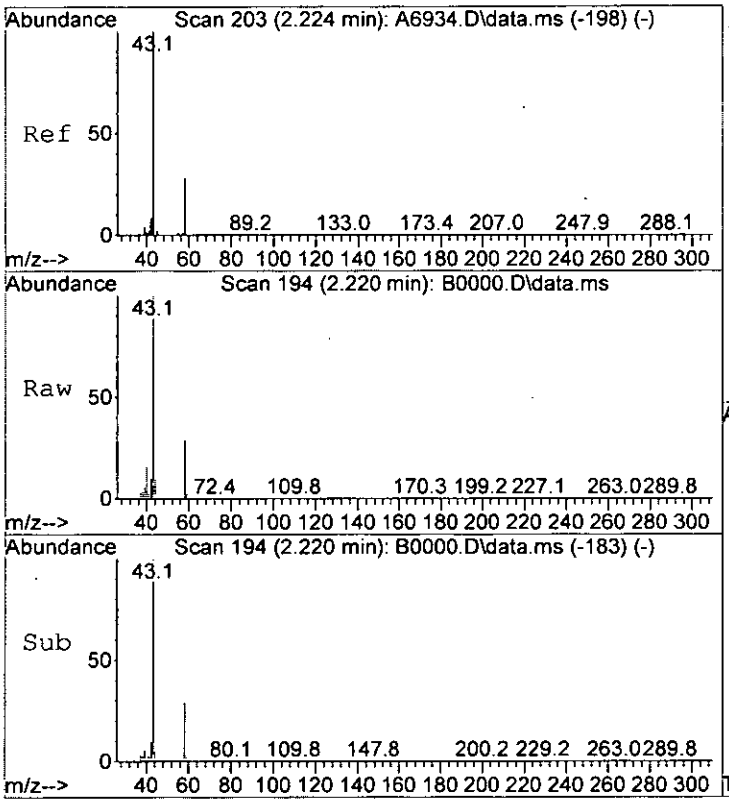
FJ 7/2/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0000.D
Acq On : 29 Jun 2015 1:12 pm
Operator : F. Naegler
Sample : R1504947-002|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 02 13:55:13 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

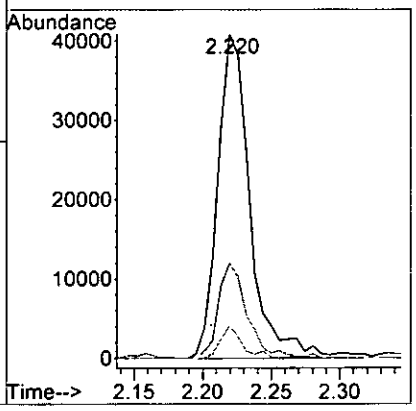


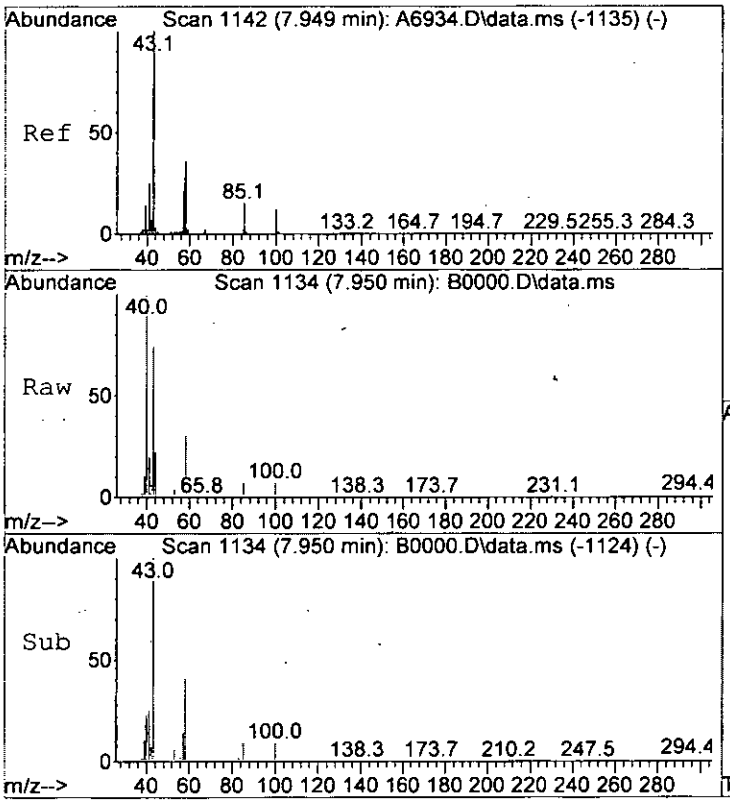


#15
Acetone
Concen: 17.47 ug/L
RT: 2.220 min Scan# 194
Delta R.T. -0.005 min
Lab File: B0000.D
Acq: 29 Jun 2015 1:12 pm

Tgt Ion: 43 Resp: 66466

Ion	Ratio	Lower	Upper
43	100		
58	29.3	4.8	44.8
42	9.9	0.0	28.0

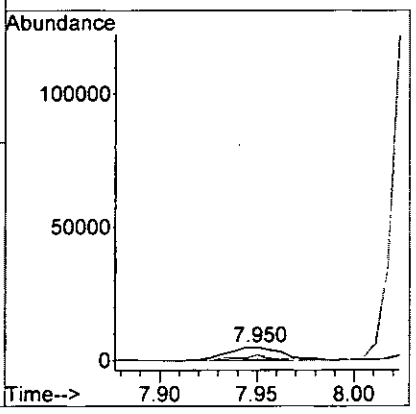




#63
4-Methyl-2-pentanone
Concen: 0.89 ug/L
RT: 7.950 min Scan# 1134
Delta R.T. 0.000 min
Lab File: B0000.D
Acq: 29 Jun 2015 1:12 pm

Tgt Ion: 43 Resp: 9549

Ion	Ratio	Lower	Upper
43	100		
58	40.7	16.5	56.5
100	9.4	0.0	33.7



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba Landfill Monitoring 6/15/ 50191-01
Sample Matrix: Water

Service Request: R1504947
Date Collected: 6/19/15 1015
Date Received: 6/19/15
Date Analyzed: 6/29/15 13:40

Sample Name: MW-10D
Lab Code: R1504947-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Prep Method: EPA 5030C
Data File Name: I:\ACQUDATA\msvoa10\data\062915\B0001.D\

Analysis Lot: 451014
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1015
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 13:40
Sample Name:	MW-10D	**Units:**	µg/L
Lab Code:	R1504947-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0001.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 13:40	
Dibromofluoromethane	97	89-119	6/29/15 13:40	
Toluene-d8	95	87-121	6/29/15 13:40	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0001.D
Acq On : 29 Jun 2015 1:40 pm
Operator : F. Naegler
Sample : R1504947-003|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 02 13:57:15 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1119577	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.145	114	1728928	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1571726	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	879838	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	525587	48.71	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.42%			
46) surr1,1,2-dichloroetha...	5.414	65	531843	47.97	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 95.94%			
64) SURR3,Toluene-d8	8.041	98	1959369	47.63	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.26%			
69) SURR2,BFB	10.675	95	751715	44.97	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.94%			
Target Compounds						Qvalue
15) Acetone	2.219	43	3845	Below Cal		89
27) 1,1-Diclethane	3.305	63	7051	0.34	ug/L	86
33) cis-1,2-Dichloroethene	4.061	96	4864	0.44	ug/L #	74
40) 1,1,1-Trichloroethane	4.853	97	15660m	1.00	ug/L	
53) Trichloroethene	6.493	130	5809	0.49	ug/L #	89

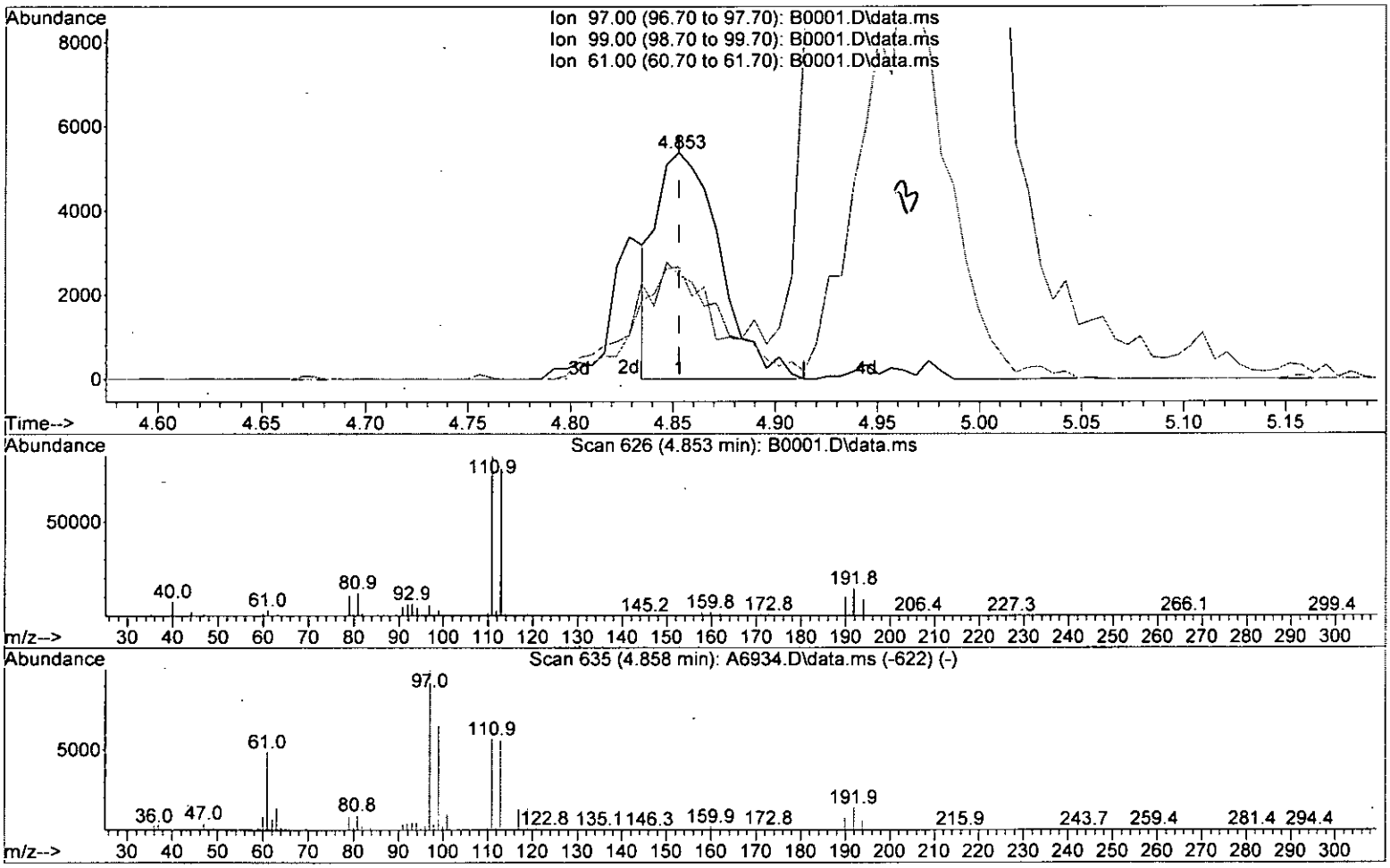
(#) = qualifier out of range (m) = manual integration (+) = signals summed

FJ
7/2/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0001.D
Acq On : 29 Jun 2015 1:40 pm
Operator : F. Naegler
Sample : R1504947-003|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 29 13:54:21 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0001.D\data.ms

(40) 1,1,1-Trichloroethane (P)

4.853min (0.000) 0.74 ug/L

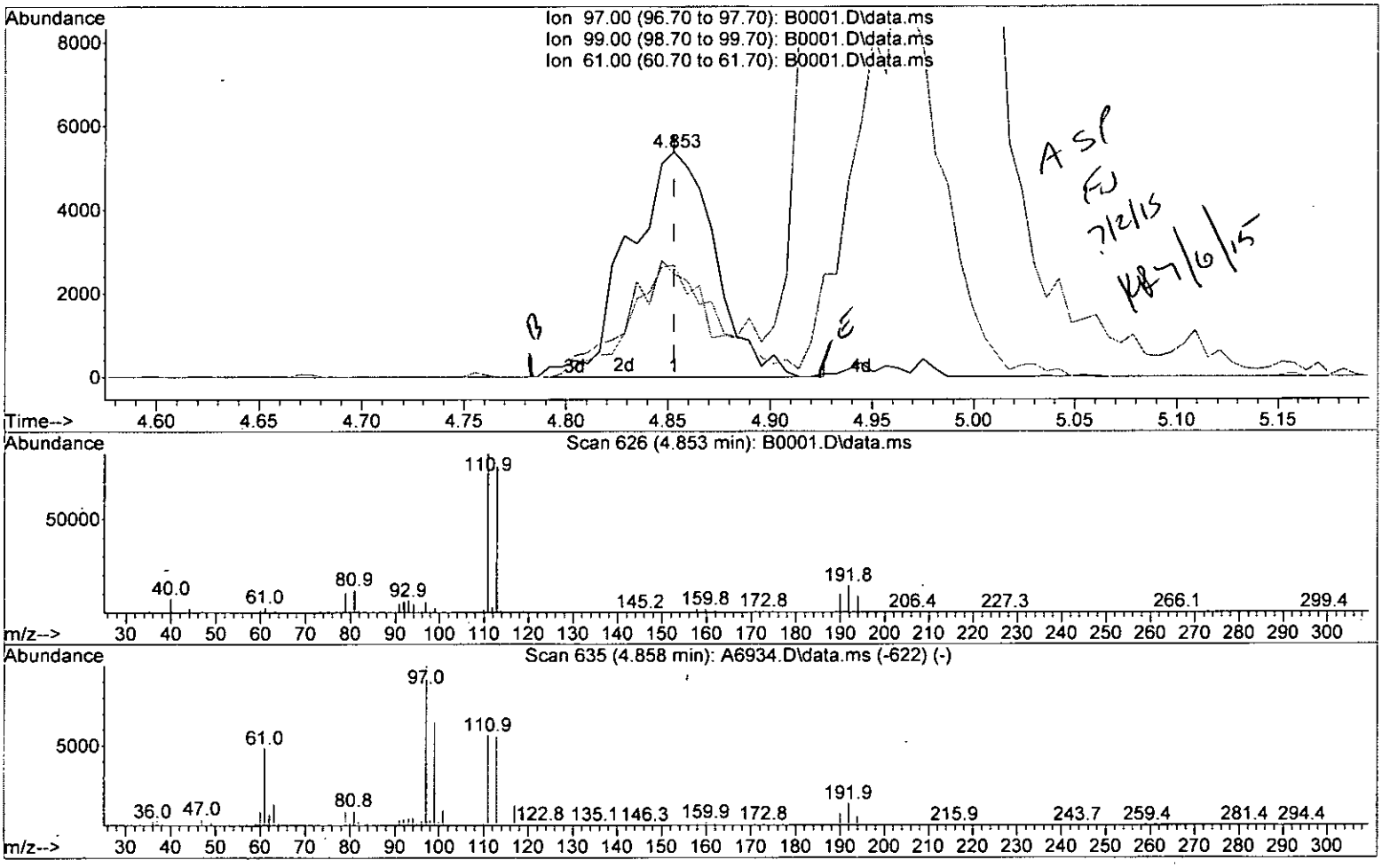
response 11592

Ion	Exp%	Act%
97.00	100	100
99.00	60.90	45.67
61.00	45.20	49.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0001.D
Acq On : 29 Jun 2015 1:40 pm
Operator : F. Naegler
Sample : R1504947-003|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 29 13:54:21 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0001.D\data.ms

(40) 1,1,1-Trichloroethane (P)

4.853min (0.000) 1.00 ug/L m

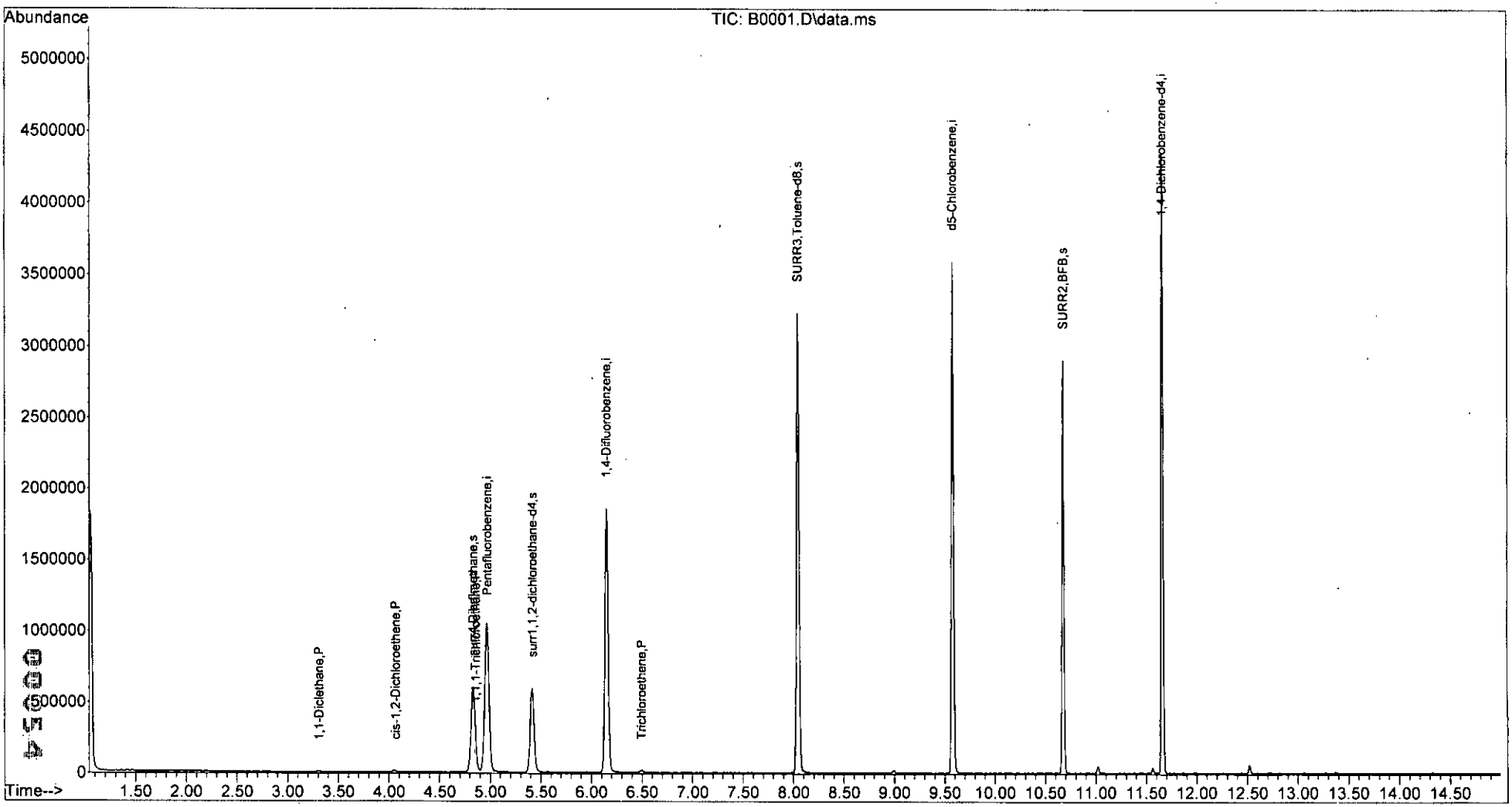
response 15660

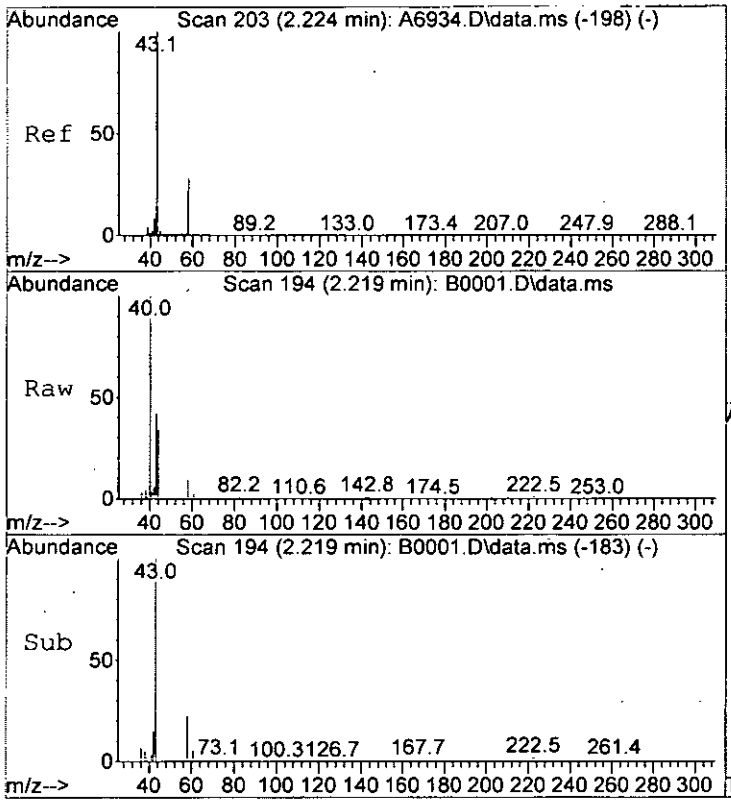
Ion	Exp%	Act%
97.00	100	100
99.00	60.90	45.67
61.00	45.20	49.67
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0001.D
Acq On : 29 Jun 2015 1:40 pm
Operator : F. Naegler
Sample : R1504947-003|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 02 13:57:15 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

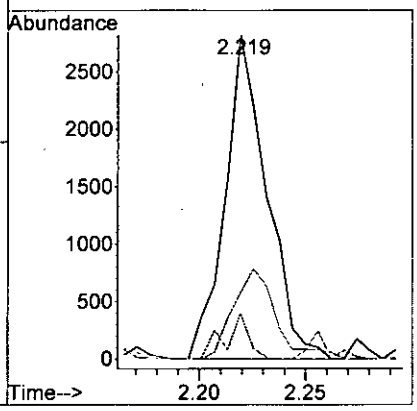


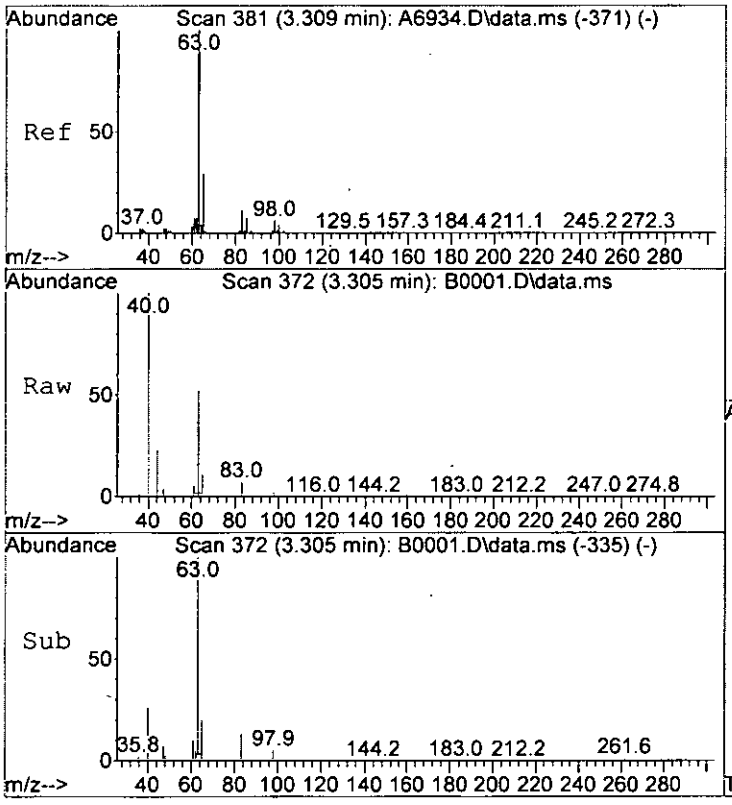


#15
Acetone
Concen: Below Cal
RT: 2.219 min Scan# 194
Delta R.T. -0.006 min
Lab File: B0001.D
Acq: 29 Jun 2015 1:40 pm

Tgt Ion: 43 Resp: 3845

Ion	Ratio	Lower	Upper
43	100		
58	20.4	4.8	44.8
42	14.0	0.0	28.0

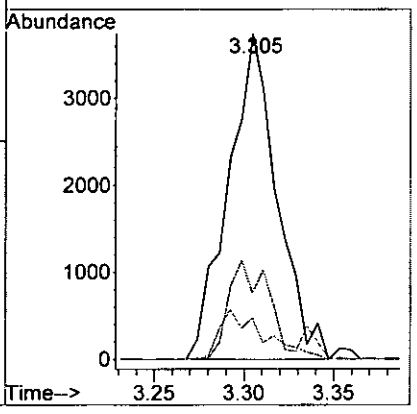


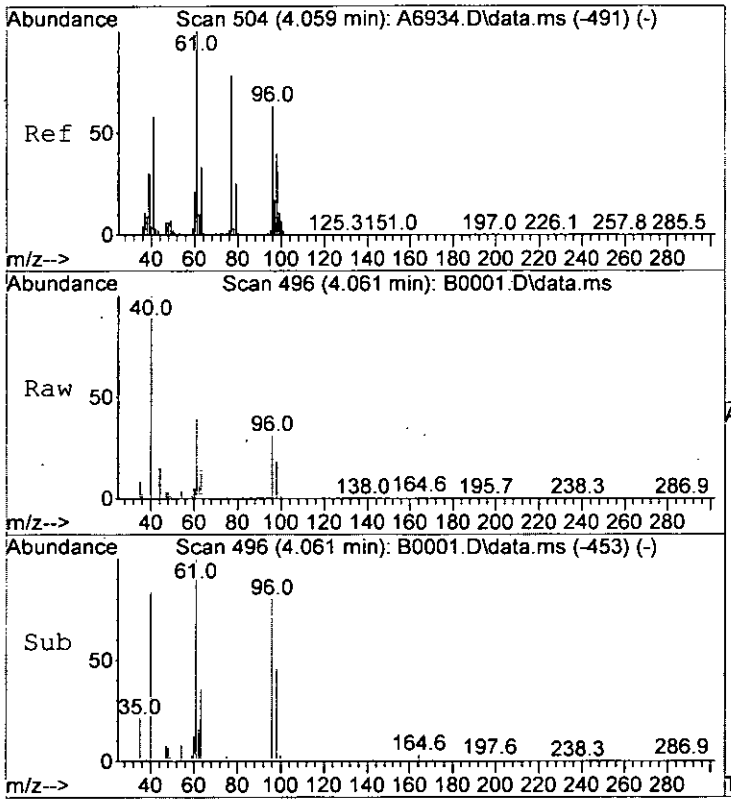


#27
1,1-Diclethane
Concen: 0.34 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: B0001.D
Acq: 29 Jun 2015 1:40 pm

Tgt Ion: 63 Resp: 7051

Ion	Ratio	Lower	Upper
63	100		
65	20.4	11.0	51.0
83	12.6	0.0	33.3

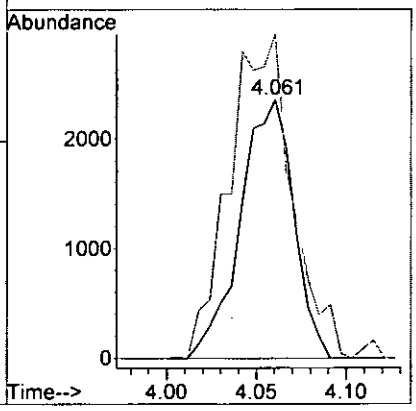


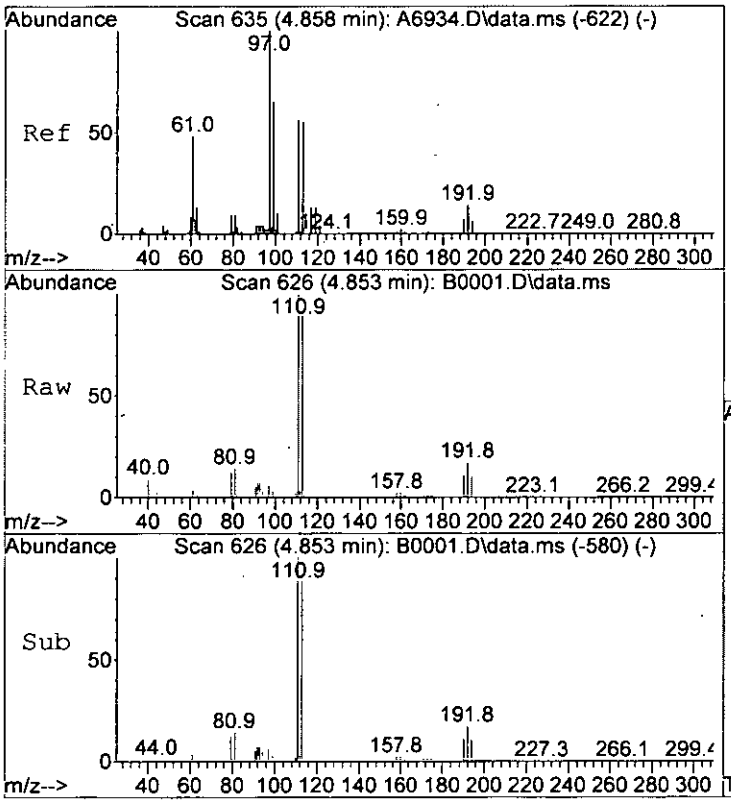


#33
cis-1,2-Dichloroethene
Concen: 0.44 ug/L
RT: 4.061 min Scan# 496
Delta R.T. 0.006 min
Lab File: B0001.D
Acq: 29 Jun 2015 1:40 pm

Tgt Ion: 96 Resp: 4864

Ion	Ratio	Lower	Upper
96	100		
61	125.2	138.8	178.8#

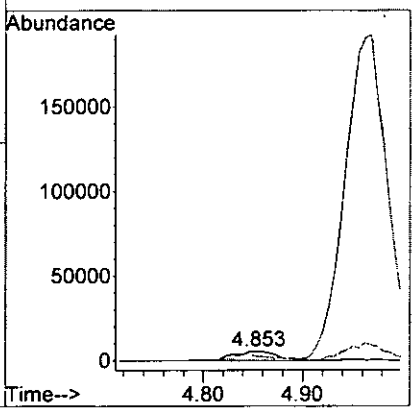


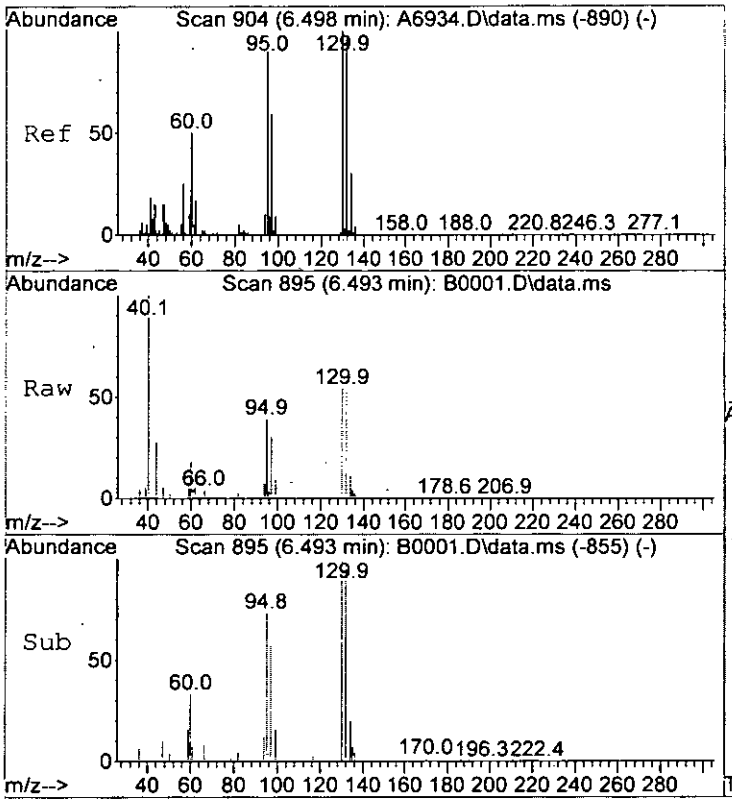


#40
1,1,1-Trichloroethane
Concen: 1.00 ug/L m
RT: 4.853 min Scan# 626
Delta R.T. 0.000 min
Lab File: B0001.D
Acq: 29 Jun 2015 1:40 pm

Tgt Ion: 97 Resp: 15660

Ion	Ratio	Lower	Upper
97	100		
99	45.7	40.9	80.9
61	49.7	25.2	65.2

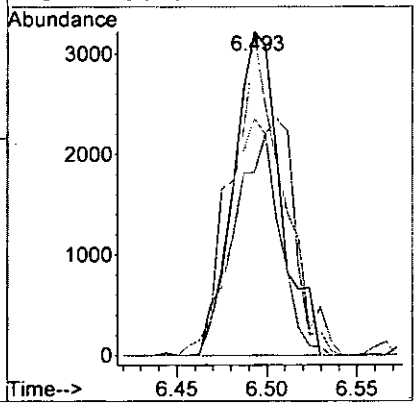




#53
Trichloroethene
Concen: 0.49 ug/L
RT: 6.493 min Scan# 895
Delta R.T. -0.006 min
Lab File: B0001.D
Acq: 29 Jun 2015 1:40 pm

Tgt Ion:130 Resp: 5809

Ion	Ratio	Lower	Upper
130	100		
132	98.0	76.6	116.6
95	73.1	76.5	116.5#
97	56.5	42.4	82.4



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:08
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0002.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**33**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**27**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	**14**		5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:08
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0002.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**210**	E	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**79**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	87	85-122	6/29/15 14:08	
Dibromofluoromethane	98	89-119	6/29/15 14:08	
Toluene-d8	95	87-121	6/29/15 14:08	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0002.D
Acq On : 29 Jun 2015 2:08 pm
Operator : F. Naegler
Sample : R1504947-004|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 02 14:00:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1162382	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1770836	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1598861	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	868788	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	543561	49.19	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 98.38%			
46) surr1,1,2-dichloroetha...	5.408	65	540652	47.61	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 95.22%			
64) SURR3,Toluene-d8	8.042	98	2010501	47.72	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.44%			
69) SURR2,BFB	10.675	95	746683	43.61	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 87.22%			
Target Compounds						Qvalue
4) Vinyl Chloride	1.348	62	21699m	1.35	ug/L	
6) Chloroethane	1.634	64	109415	13.85	ug/L	93
9) Diethyl Ether	2.018	59	2934	0.31	ug/L #	72
13) 1,1-Diclethene	2.189	96	21899	2.56	ug/L	89
15) Acetone	2.220	43	6506	Below Cal		79
26) trans-1,2-Dichloroethene	2.860	96	3272	0.34	ug/L #	86
27) 1,1-Diclethane	3.305	63	578760	26.89	ug/L	97
33) cis-1,2-Dichloroethene	4.055	96	912659	79.00	ug/L	99
39) Chloroform	4.561	83	4079	0.21	ug/L #	57
40) 1,1,1-Trichloroethane	4.847	97	530415	32.57	ug/L	95
53) Trichloroethene	6.499	130	2618960	213.56	ug/L	95 E
105) 1,4-Dclbenz	11.675	146	6114	0.23	ug/L #	24

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Report + Rpt 1/2

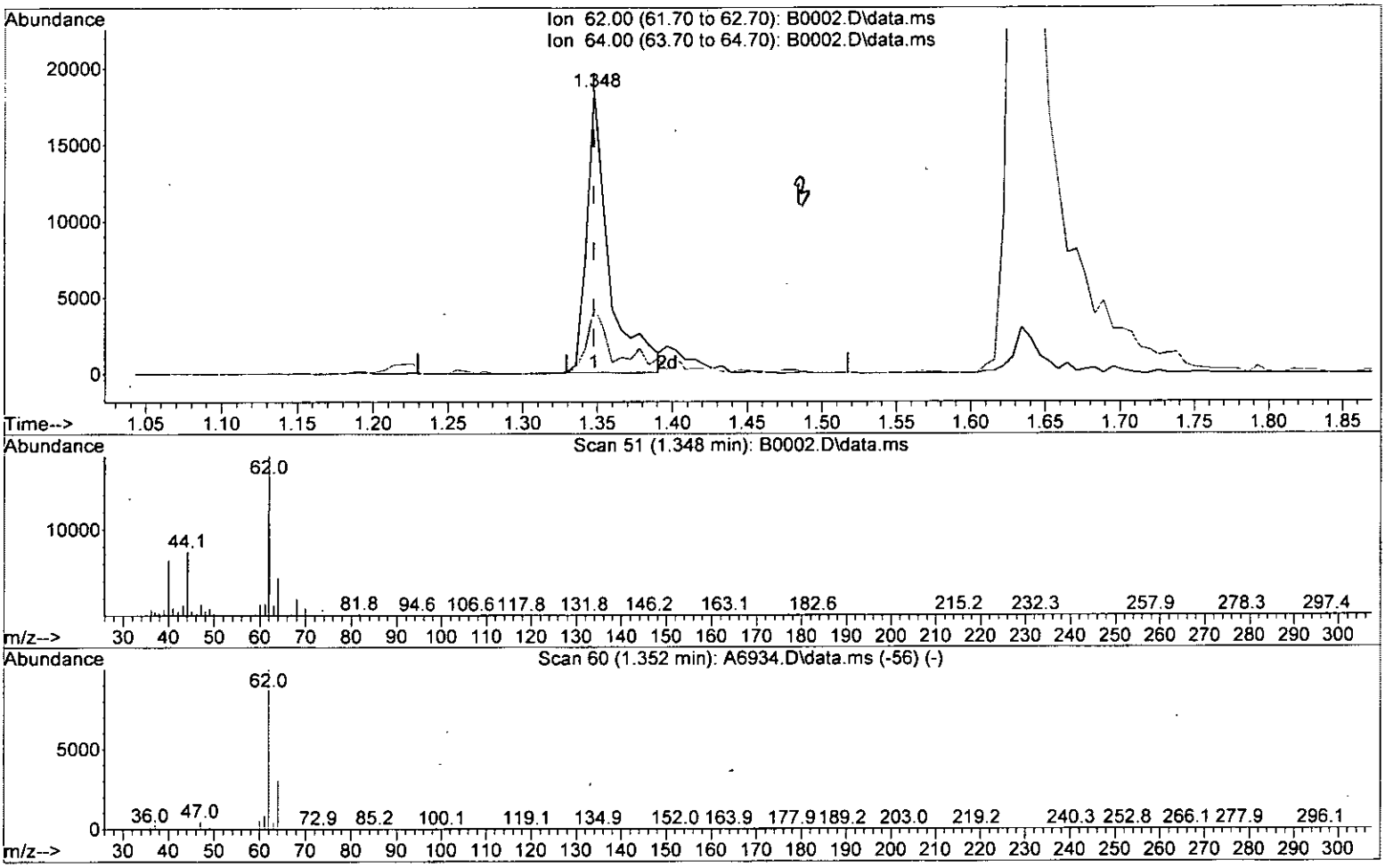
FJ 7/2/15

JL 7/6/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0002.D
Acq On : 29 Jun 2015 2:08 pm
Operator : F. Naegler
Sample : R1504947-004|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 29 14:22:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0002.D\data.ms

(4) Vinyl Chloride (P)

1.348min (+0.000) 1.18 ug/L

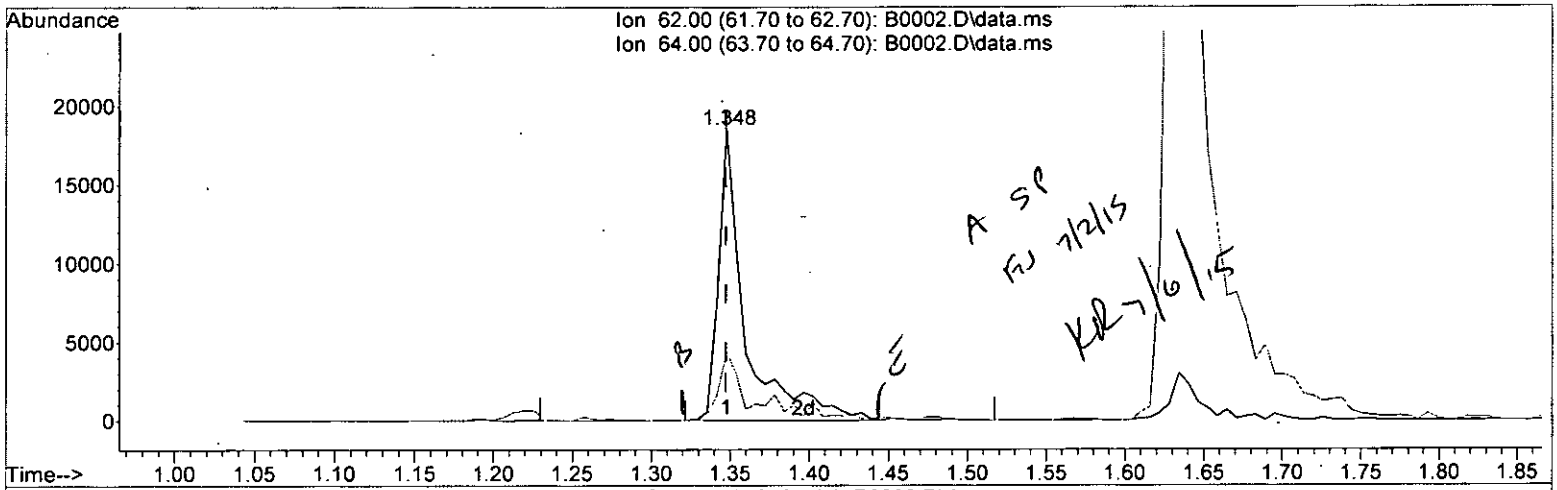
response 19028

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	23.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0002.D
Acq On : 29 Jun 2015 2:08 pm
Operator : F. Naegler
Sample : R1504947-004|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 29 14:22:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0002.D\data.ms

(4) Vinyl Chloride (P)

1.348min (+0.000) 1.35 ug/L m

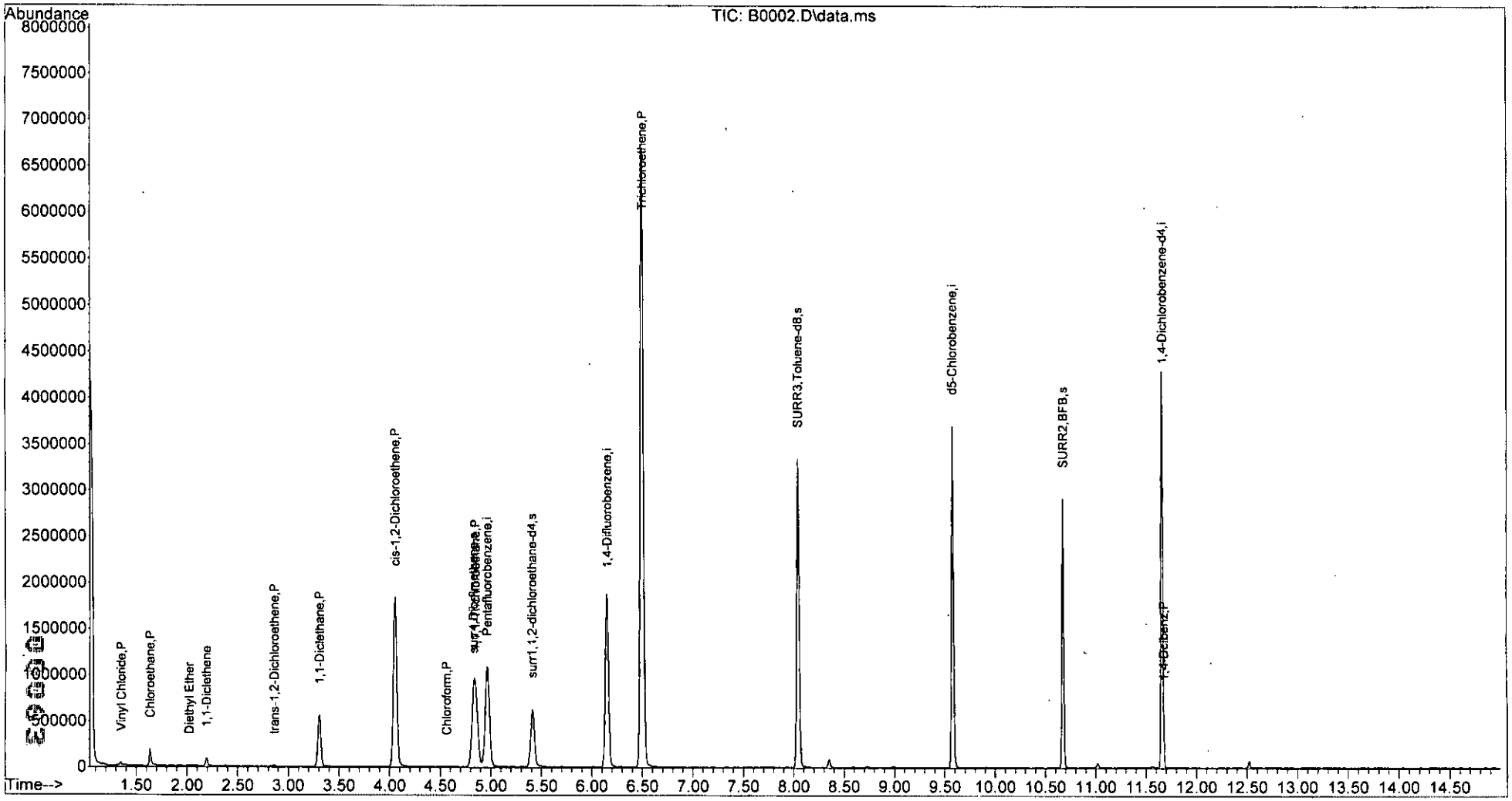
response 21699

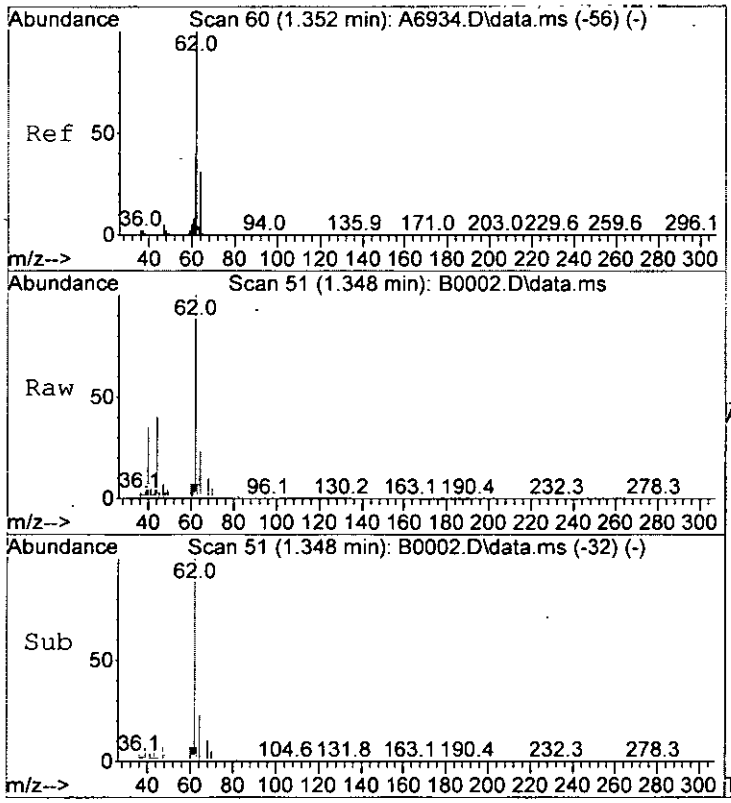
Ion	Exp%	Act%
62.00	100	100
64.00	31.70	23.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0002.D
Acq On : 29 Jun 2015 2:08 pm
Operator : F. Naegler
Sample : R1504947-004|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 02 14:00:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

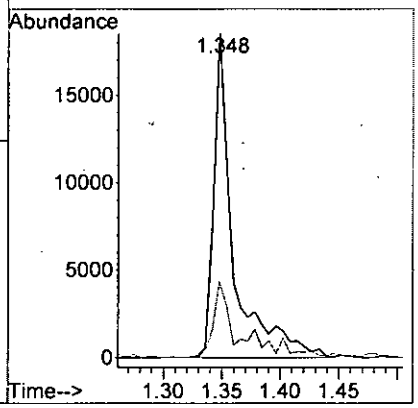


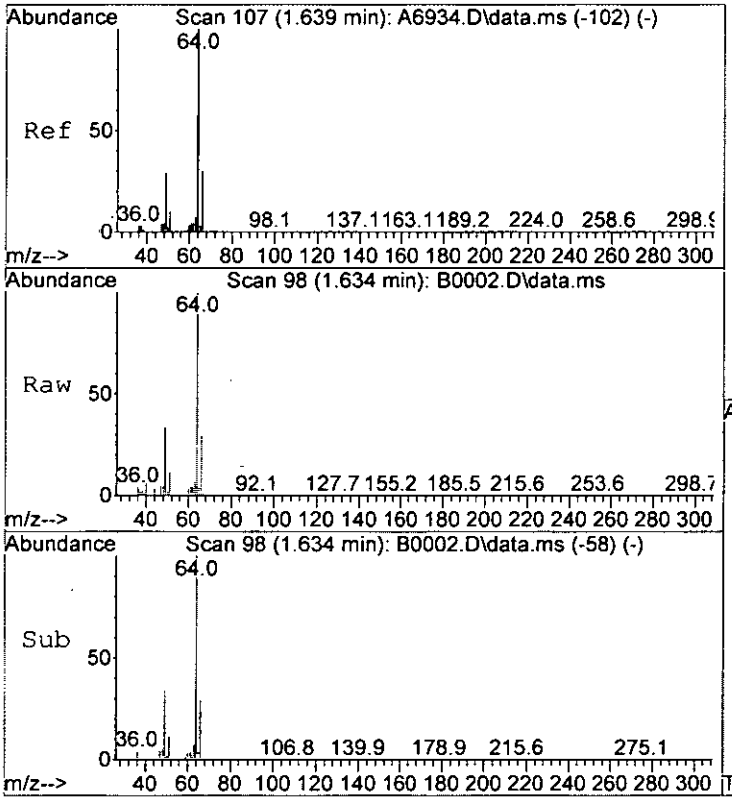


#4
Vinyl Chloride
Concen: 1.35 ug/L m
RT: 1.348 min Scan# 51
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 62 Resp: 21699

Ion	Ratio	Lower	Upper
62	100		
64	23.4	11.7	51.7

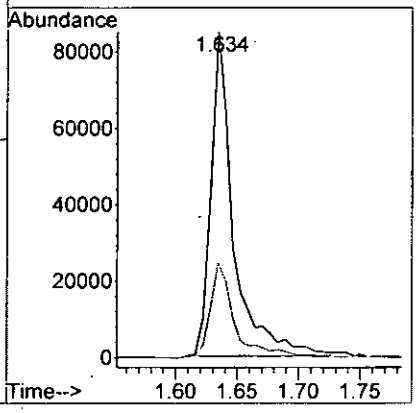


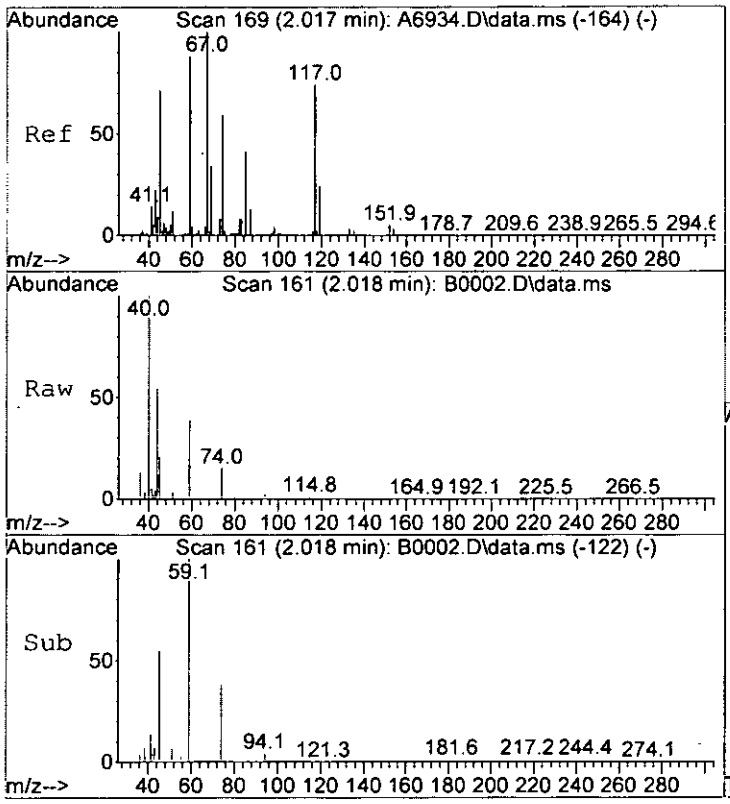


#6
Chloroethane
Concen: 13.85 ug/L
RT: 1.634 min Scan# 98
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 64 Resp: 109415

Ion	Ratio	Lower	Upper
64	100		
66	29.2	13.0	53.0

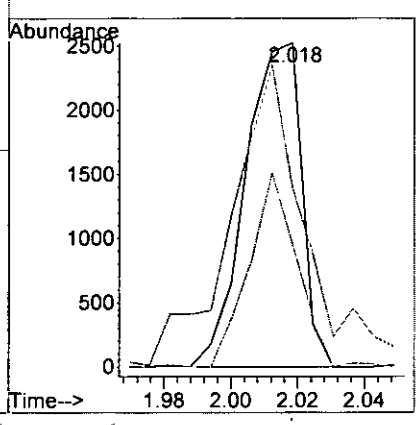


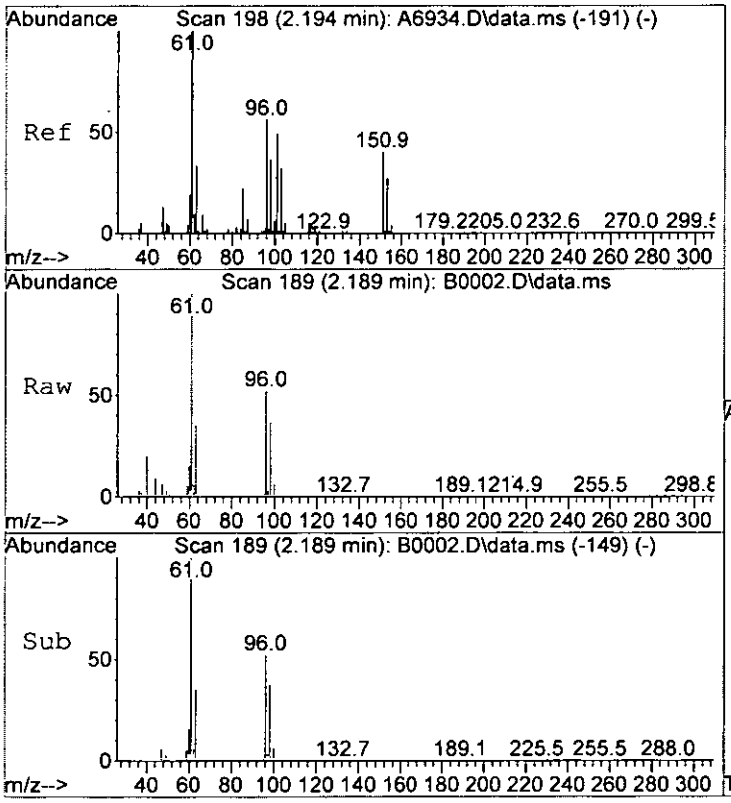


#9
Diethyl Ether
Concen: 0.31 ug/L
RT: 2.018 min Scan# 161
Delta R.T. 0.006 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 59 Resp: 2934

Ion	Ratio	Lower	Upper
59	100		
45	55.3	53.9	93.9
74	38.0	44.7	84.7#

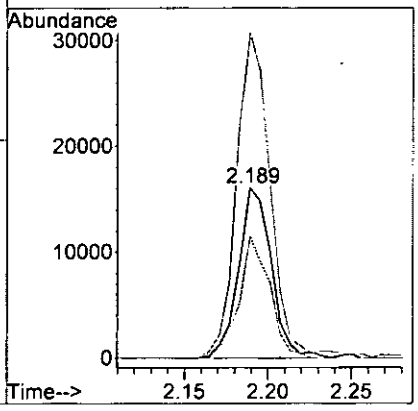


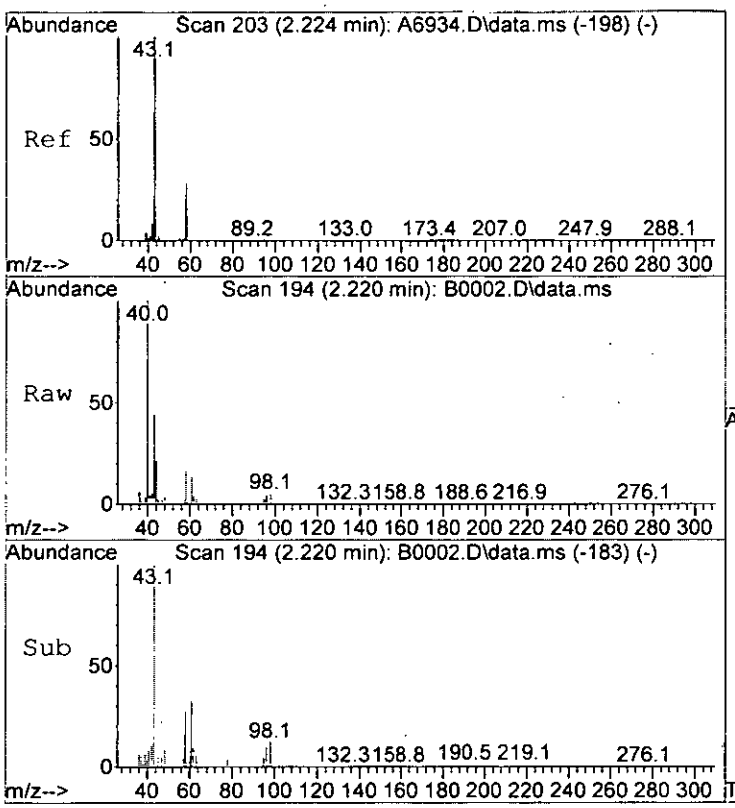


#13
1,1-Dicletheme
Concen: 2.56 ug/L
RT: 2.189 min Scan# 189
Delta R.T. -0.006 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 96 Resp: 21899

Ion	Ratio	Lower	Upper
96	100		
98	71.6	43.2	83.2
61	191.4	155.6	195.6

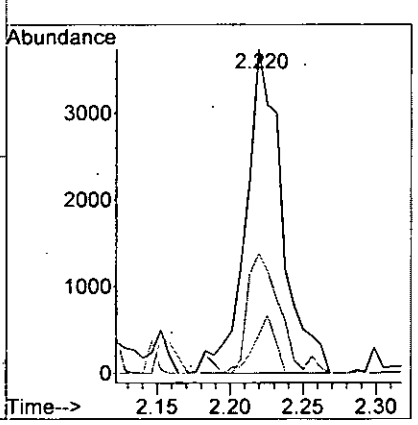


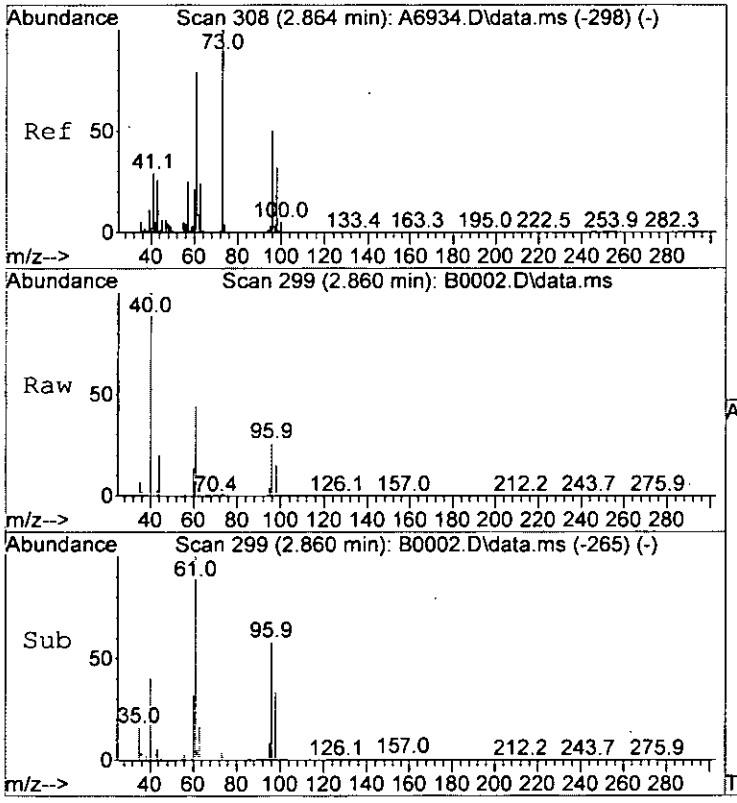


#15
Acetone
Concen: Below Cal
RT: 2.220 min Scan# 194
Delta R.T. -0.005 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 43 Resp: 6506

Ion	Ratio	Lower	Upper
43	100		
58	37.0	4.8	44.8
42	11.8	0.0	28.0

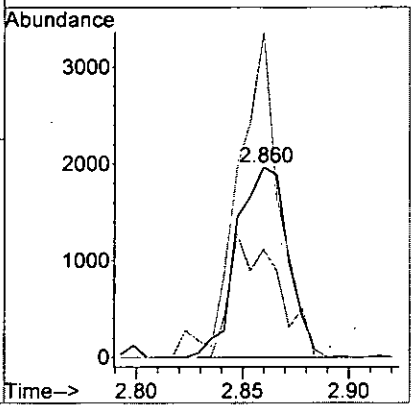


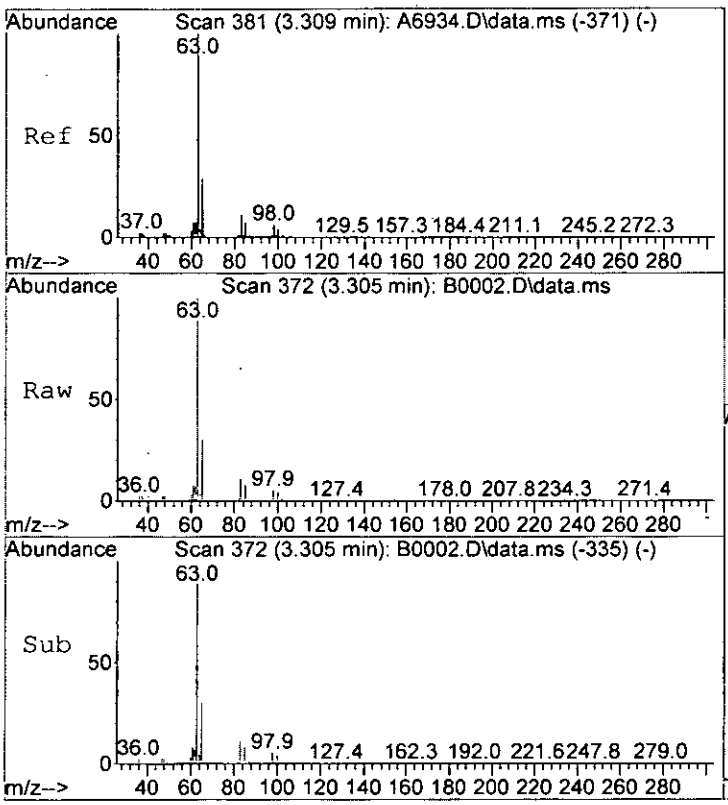


#26
trans-1,2-Dichloroethene
Concen: 0.34 ug/L
RT: 2.860 min Scan# 299
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 96 Resp: 3272

Ion	Ratio	Lower	Upper
96	100		
98	57.4	44.7	84.7
61	171.3	130.9	170.9#

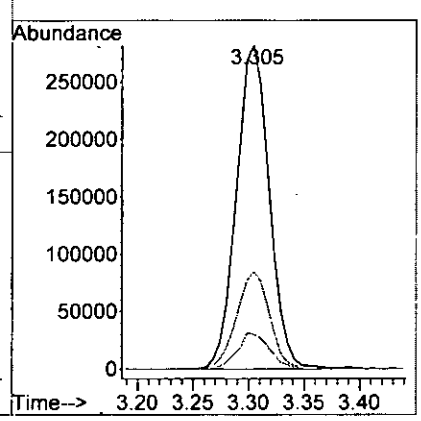


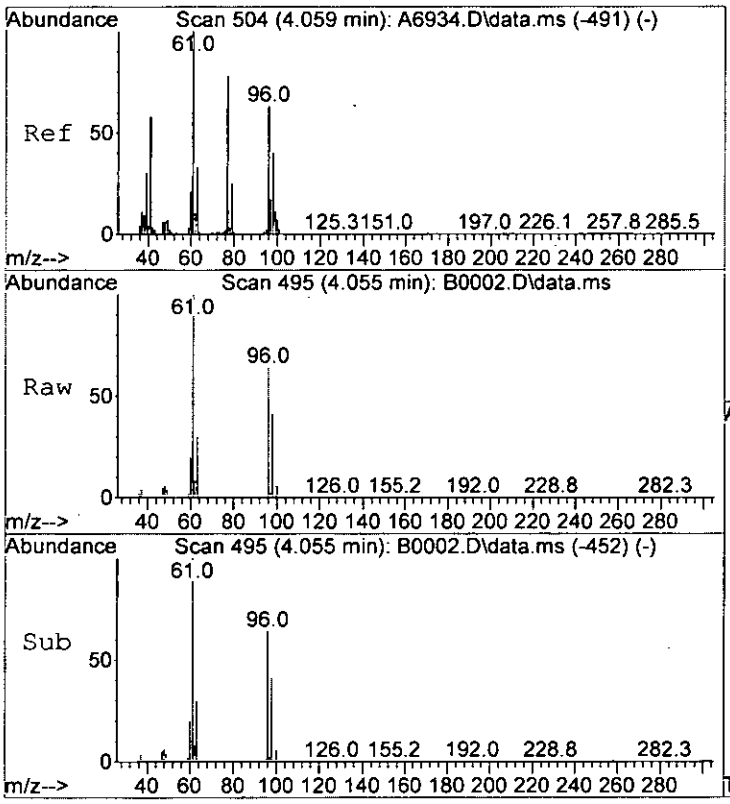


#27
1,1-Diclethane
Concen: 26.89 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 63 Resp: 578760

Ion	Ratio	Lower	Upper
63	100		
65	30.0	11.0	51.0
83	10.7	0.0	33.3

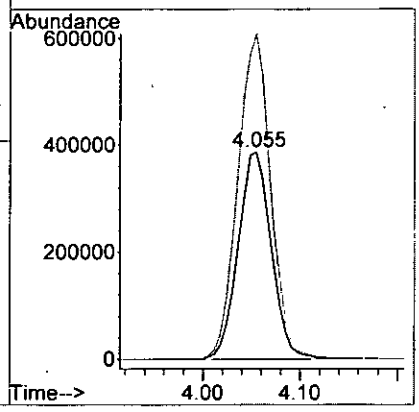


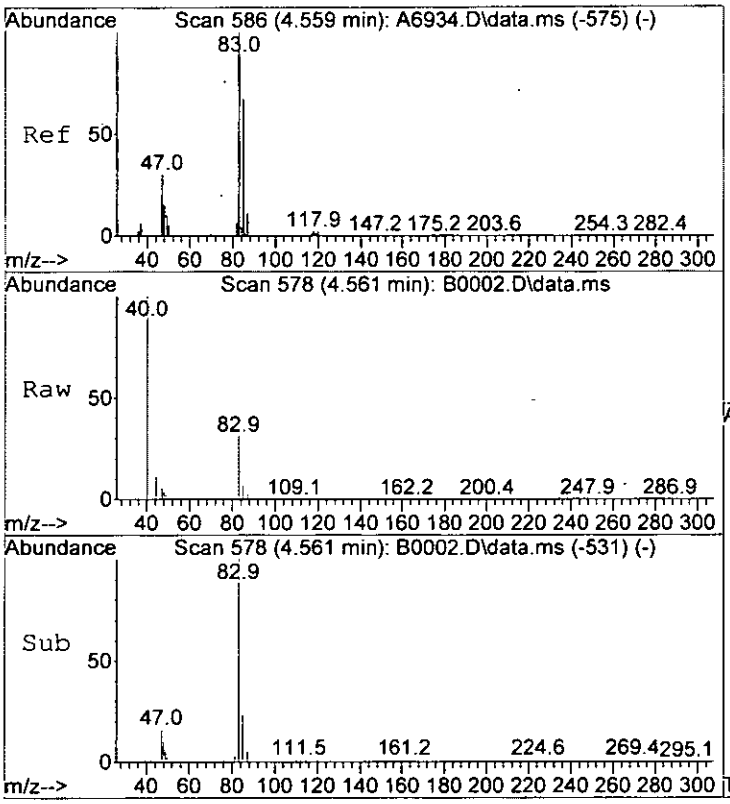


#33
cis-1,2-Dichloroethene
Concen: 79.00 ug/L
RT: 4.055 min Scan# 495
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 96 Resp: 912659

Ion	Ratio	Lower	Upper
96	100		
61	157.0	138.8	178.8

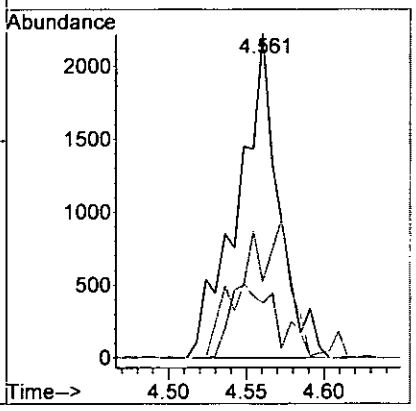


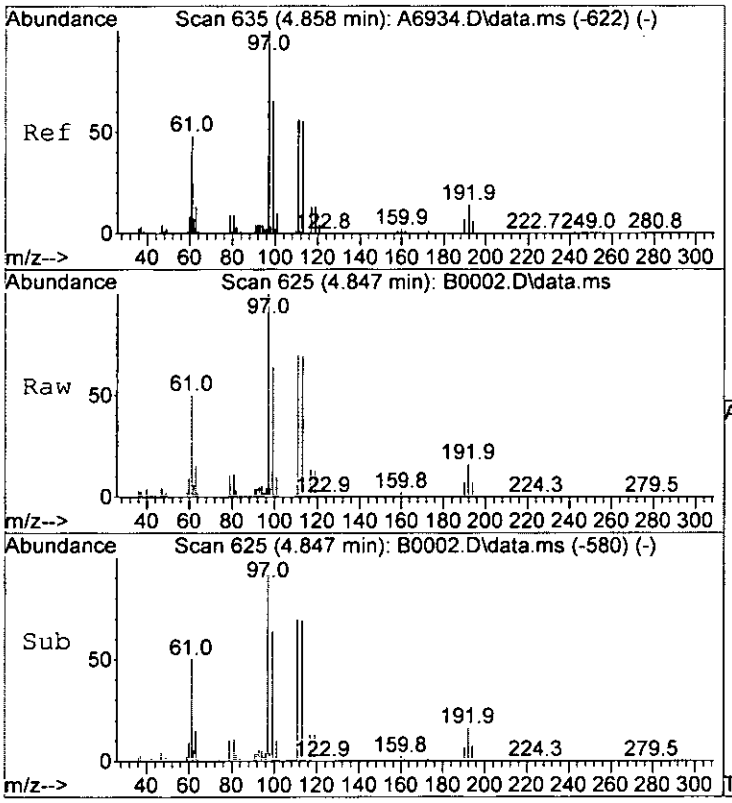


#39
Chloroform
Concen: 0.21 ug/L
RT: 4.561 min Scan# 578
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 83 Resp: 4079

Ion	Ratio	Lower	Upper
83	100		
85	23.5	44.0	84.0#
47	16.8	9.9	49.9

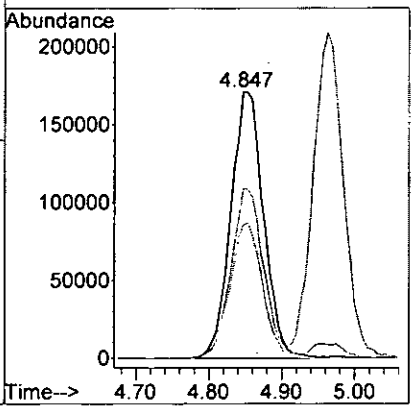


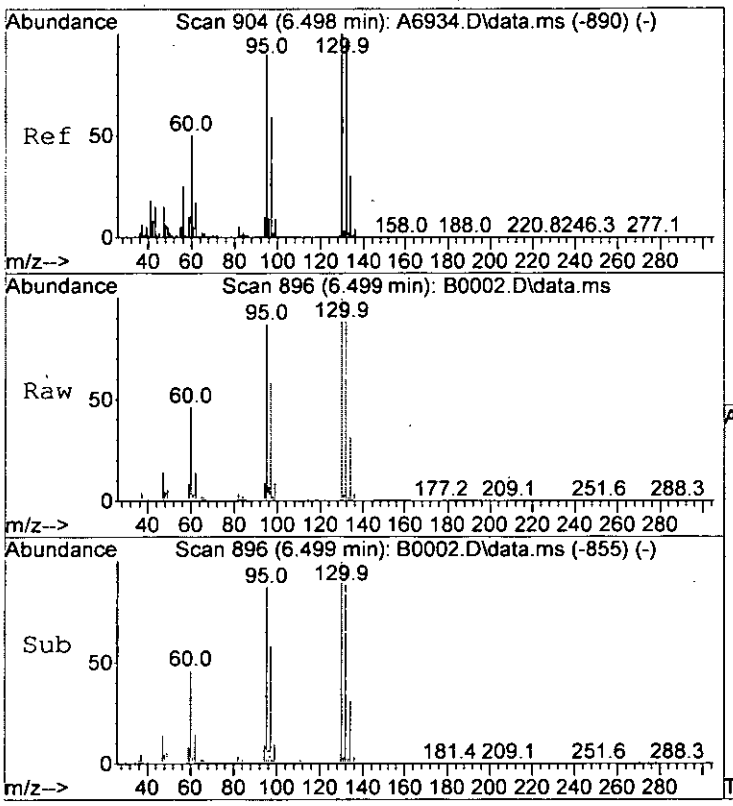


#40
1,1,1-Trichloroethane
Concen: 32.57 ug/L
RT: 4.847 min Scan# 625
Delta R.T. -0.006 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion: 97 Resp: 530415

Ion	Ratio	Lower	Upper
97	100		
99	63.7	40.9	80.9
61	49.9	25.2	65.2

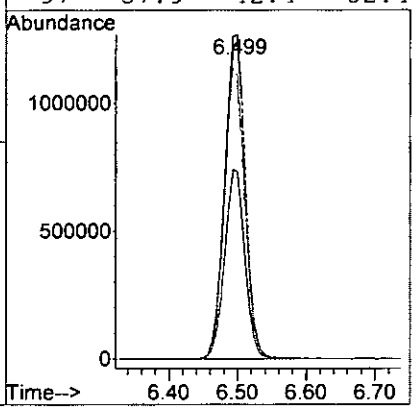


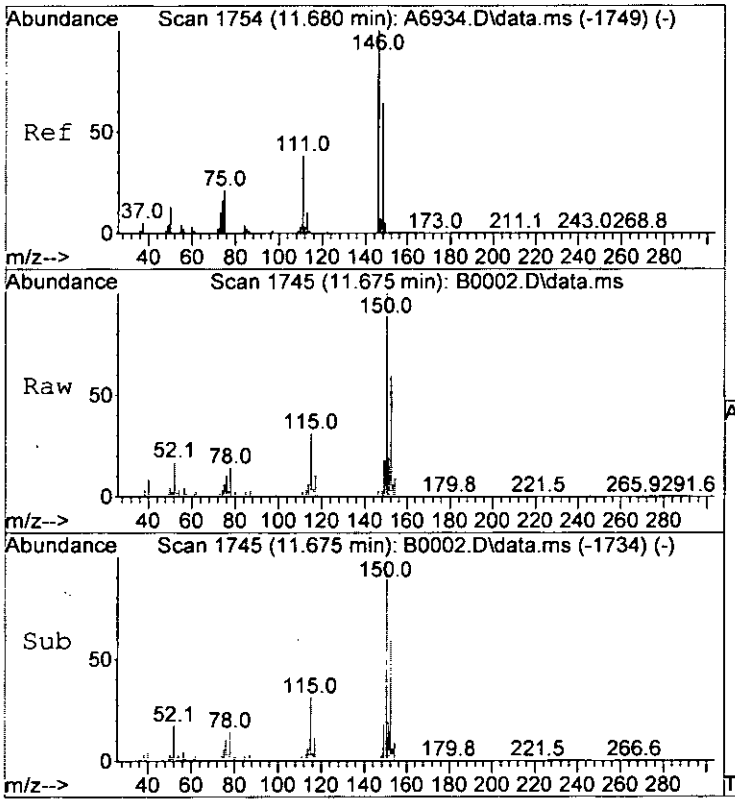


#53
Trichloroethene
Concen: 213.56 ug/L
RT: 6.499 min Scan# 896
Delta R.T. 0.000 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion:130 Resp: 2618960

Ion	Ratio	Lower	Upper
130	100		
132	96.9	76.6	116.6
95	87.4	76.5	116.5
97	57.9	42.4	82.4

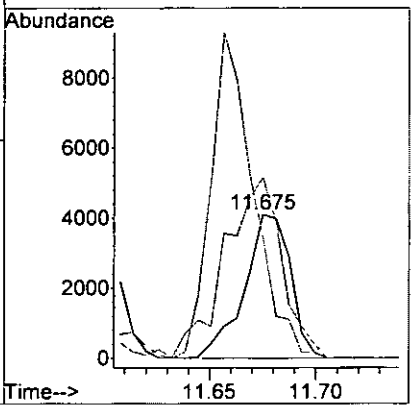




#105
1,4-Dclbenz
Concen: 0.23 ug/L
RT: 11.675 min Scan# 1745
Delta R.T. -0.006 min
Lab File: B0002.D
Acq: 29 Jun 2015 2:08 pm

Tgt Ion:146 Resp: 6114

Ion	Ratio	Lower	Upper
146	100		
148	125.7	44.8	84.8#
111	84.3	19.0	59.0#



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 20:12
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0015.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	
71-55-6	1,1,1-Trichloroethane	**29**	D	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane	**26**	D	10	
75-35-4	1,1-Dichloroethene	10	U	10	
96-18-4	1,2,3-Trichloropropane	10	U	10	
96-12-8	1,2-Dibromo-3-chloropropane	10	U	10	
106-93-4	1,2-Dibromoethane	10	U	10	
95-50-1	1,2-Dichlorobenzene	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
106-46-7	1,4-Dichlorobenzene	10	U	10	
78-93-3	2-Butanone (MEK)	20	U	20	
591-78-6	2-Hexanone	20	U	20	
108-10-1	4-Methyl-2-pentanone (MIBK)	20	U	20	
67-64-1	Acetone	20	U	20	
107-13-1	Acrylonitrile	200	U	200	
71-43-2	Benzene	10	U	10	
74-97-5	Bromochloromethane	10	U	10	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
75-15-0	Carbon Disulfide	20	U	20	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	**12**	D	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
74-95-3	Dibromomethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
100-41-4	Ethylbenzene	10	U	10	
74-88-4	Iodomethane	20	U	20	
100-42-5	Styrene	10	U	10	

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Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1100
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 20:12
Sample Name:	MW-3	**Units:**	µg/L
Lab Code:	R1504947-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0015.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	10	U	10	
108-88-3	Toluene	10	U	10	
79-01-6	Trichloroethene	**170**	D	10	
75-69-4	Trichlorofluoromethane	10	U	10	
108-05-4	Vinyl Acetate	20	U	20	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**72**	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
179601-23-1	m,p-Xylenes	10	U	10	
95-47-6	o-Xylene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	
110-57-6	trans-1,4-Dichloro-2-butene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 20:12	
Dibromofluoromethane	98	89-119	6/29/15 20:12	
Toluene-d8	94	87-121	6/29/15 20:12	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0015.D
Acq On : 29 Jun 2015 8:12 pm
Operator : F. Naegler
Sample : R1504947-004|2.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 23 Sample Multiplier: 1

DL

Quant Time: Jul 05 15:42:33 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1109002	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.146	114	1725110	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1602568	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	856161	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	529279	49.16	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	98.32%		
46) surr1,1,2-dichloroetha...	5.414	65	524862	47.44	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery =	94.88%		
64) SURR3,Toluene-d8	8.042	98	1930425	47.03	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	94.06%		
69) SURR2,BFB	10.675	95	739069	44.31	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	88.62%		
Target Compounds						Qvalue
4) Vinyl Chloride	1.348	62	6396m	0.42	ug/L	
6) Chloroethane	1.634	64	44250	5.87	ug/L	91
13) 1,1-Diclethene	2.189	96	8908	1.09	ug/L #	72
15) Acetone	2.220	43	5546	Below Cal		76
27) 1,1-Diclethane	3.305	63	263777	12.85	ug/L	95
33) cis-1,2-Dichloroethene	4.049	96	395440	35.88	ug/L	91
40) 1,1,1-Trichloroethane	4.853	97	227069	14.62	ug/L	94
53) Trichloroethene	6.493	130	1021107	85.47	ug/L	96

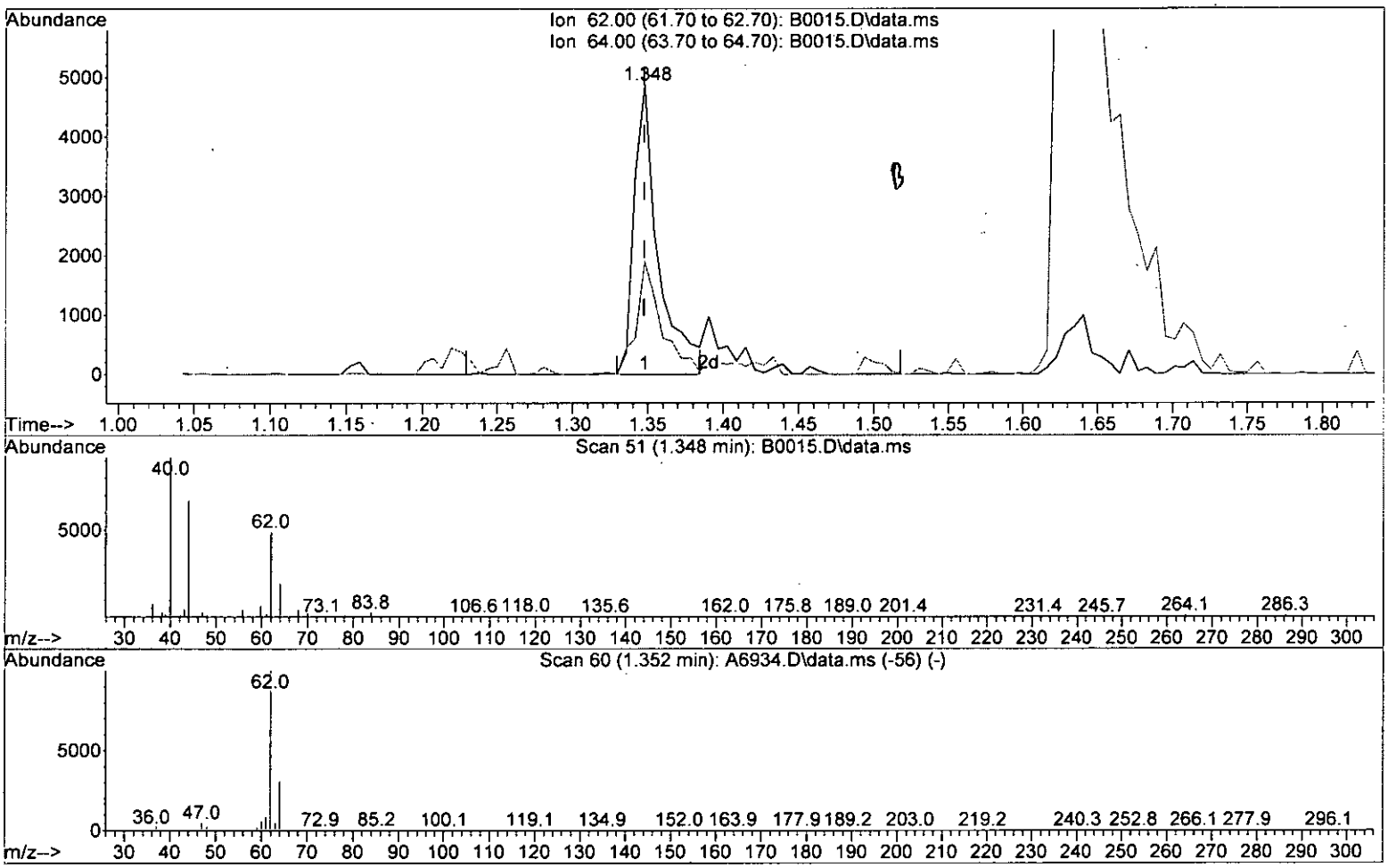
(#) = qualifier out of range (m) = manual integration (+) = signals summed

FV 7/5/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0015.D
Acq On : 29 Jun 2015 8:12 pm
Operator : F. Naegler
Sample : R1504947-004|2.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 29 20:27:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0015.D\data.ms

(4) Vinyl Chloride (P)

1.348min (+0.000) 0.35 ug/L

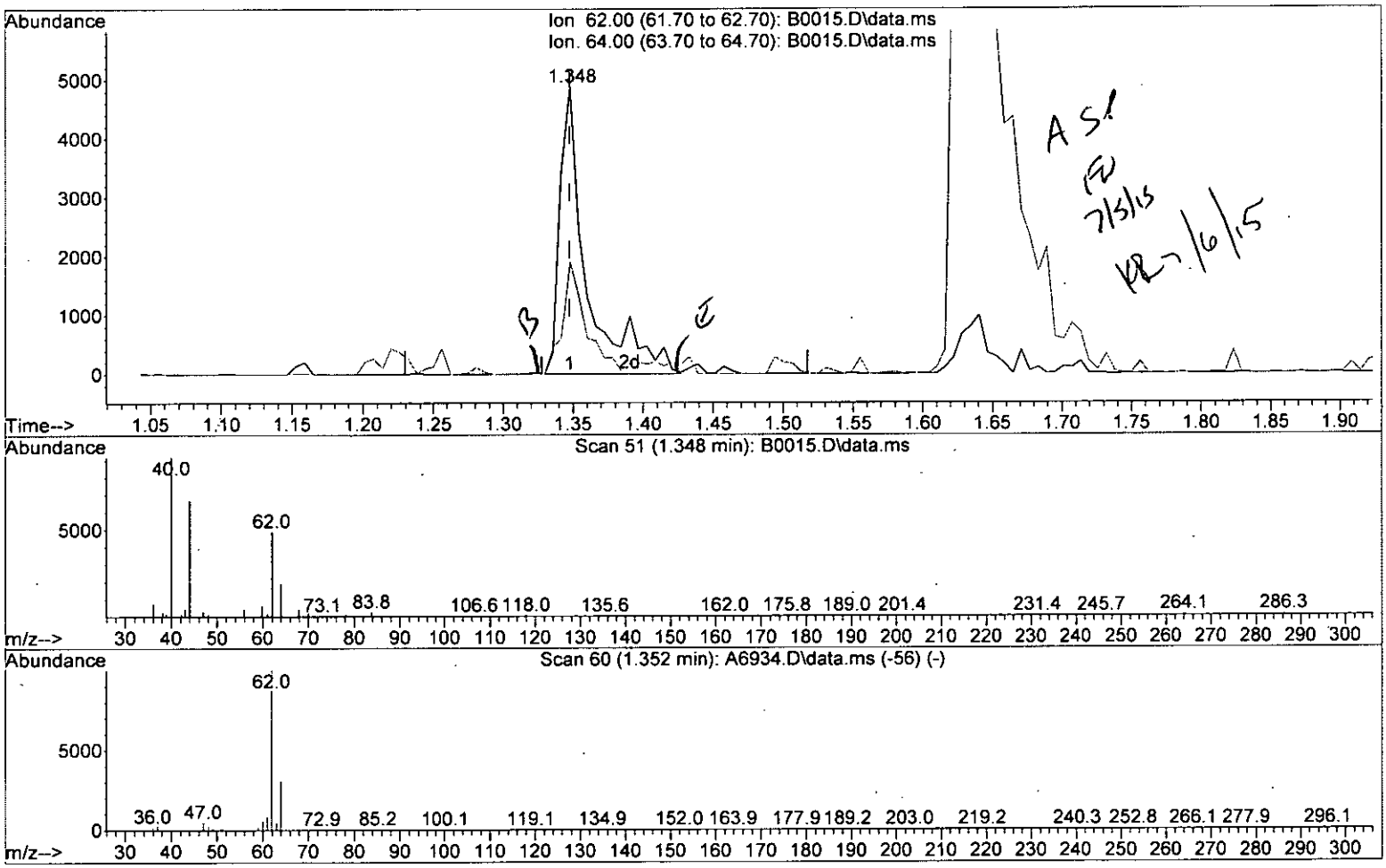
response 5434

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	38.86
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0015.D
Acq On : 29 Jun 2015 8:12 pm
Operator : F. Naegler
Sample : R1504947-004|2.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jun 29 20:27:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0015.D\data.ms

(4) Vinyl Chloride (P)

1.348min (+0.000) 0.42 ug/L m

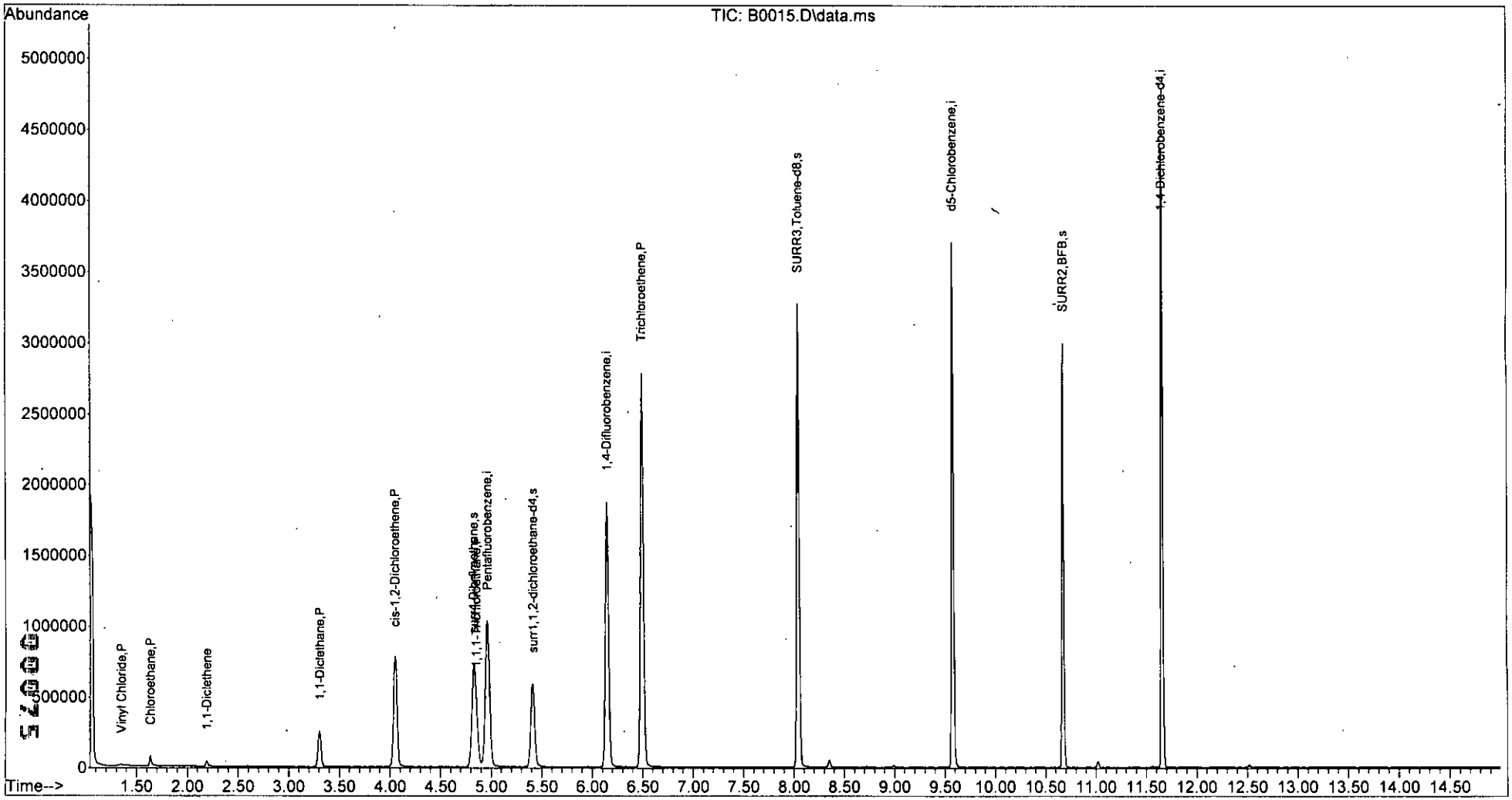
response 6396

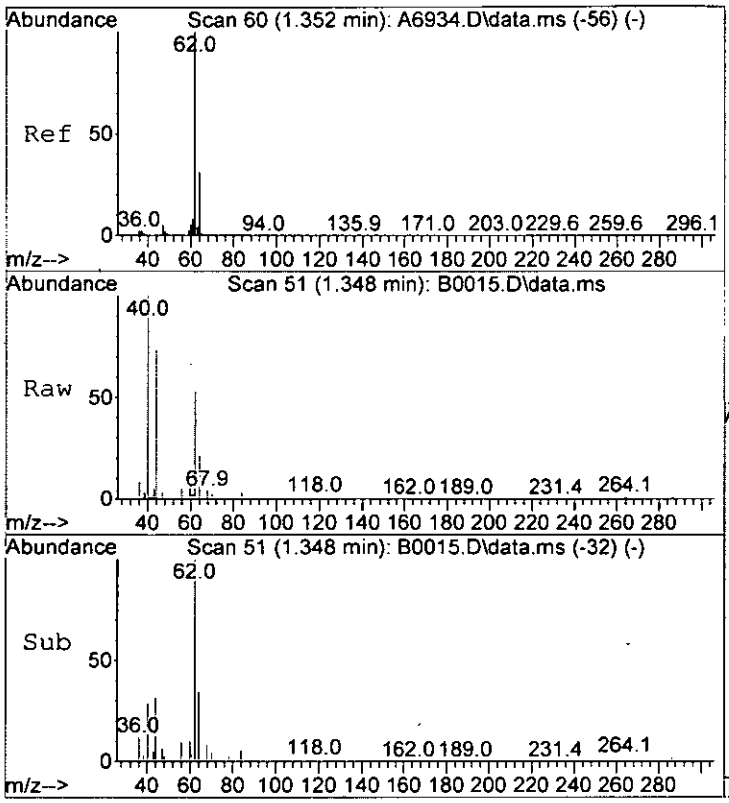
Ion	Exp%	Act%
62.00	100	100
64.00	31.70	38.86
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0015.D
Acq On : 29 Jun 2015 8:12 pm
Operator : F. Naegler
Sample : R1504947-004|2.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 05 15:42:33 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

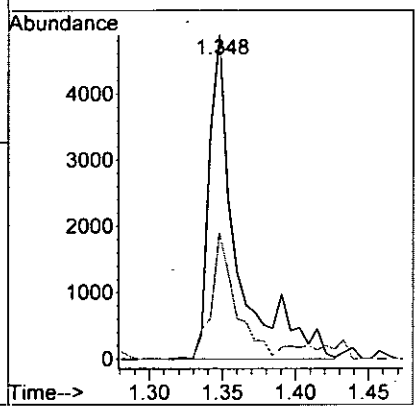


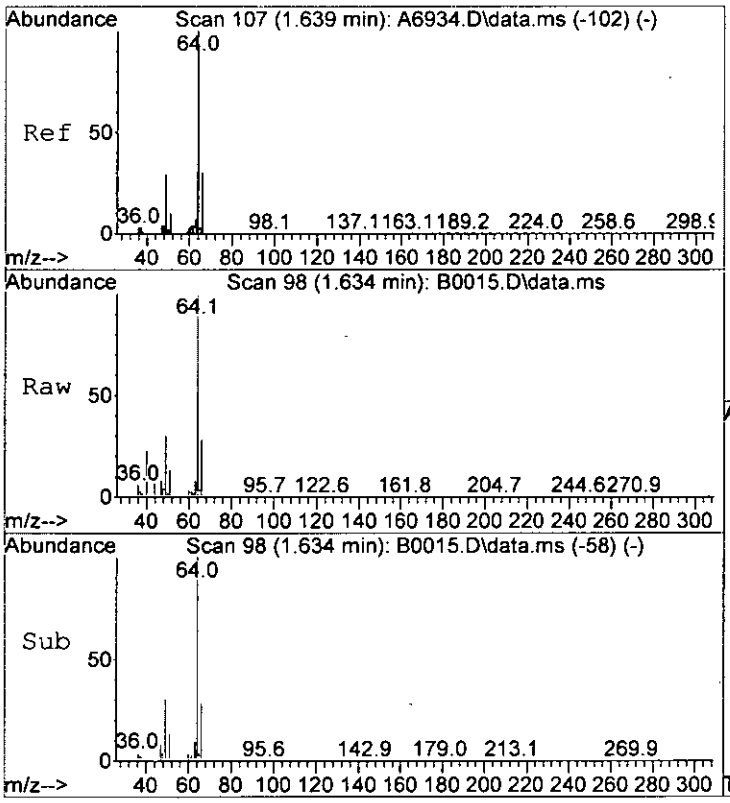


#4
Vinyl Chloride
Concen: 0.42 ug/L m
RT: 1.348 min Scan# 51
Delta R.T. 0.000 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 62 Resp: 6396

Ion	Ratio	Lower	Upper
62	100		
64	38.9	11.7	51.7

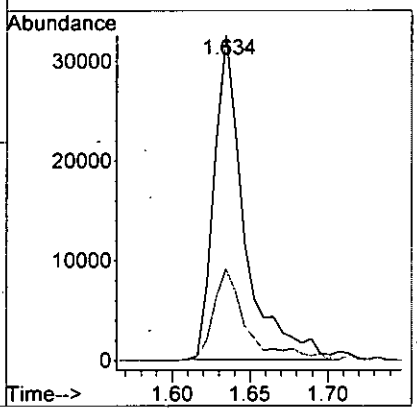


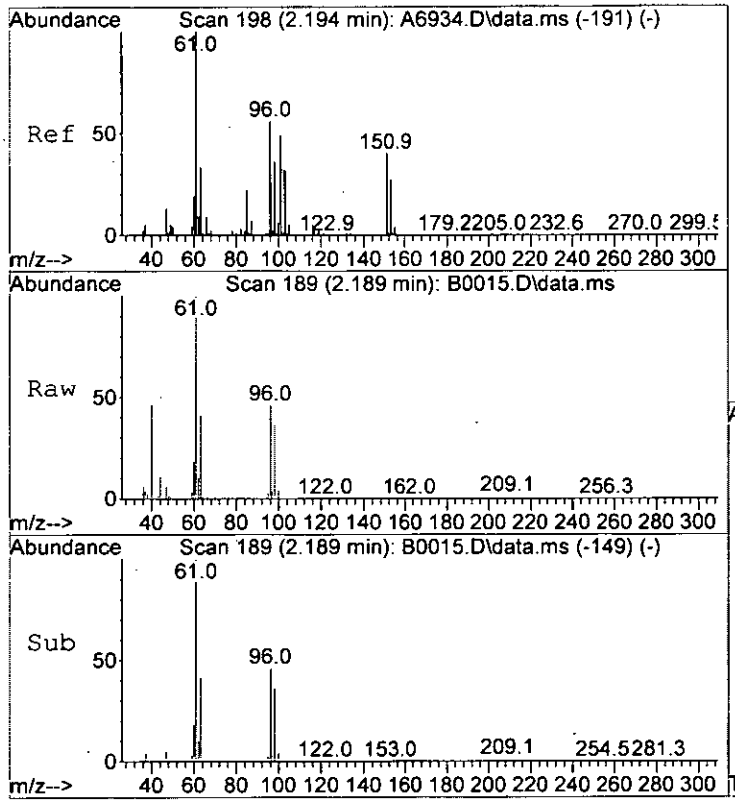


#6
Chloroethane
Concen: 5.87 ug/L
RT: 1.634 min Scan# 98
Delta R.T. 0.000 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 64 Resp: 44250

Ion	Ratio	Lower	Upper
64	100		
66	28.0	13.0	53.0

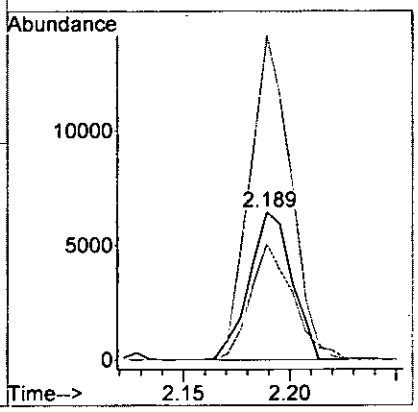


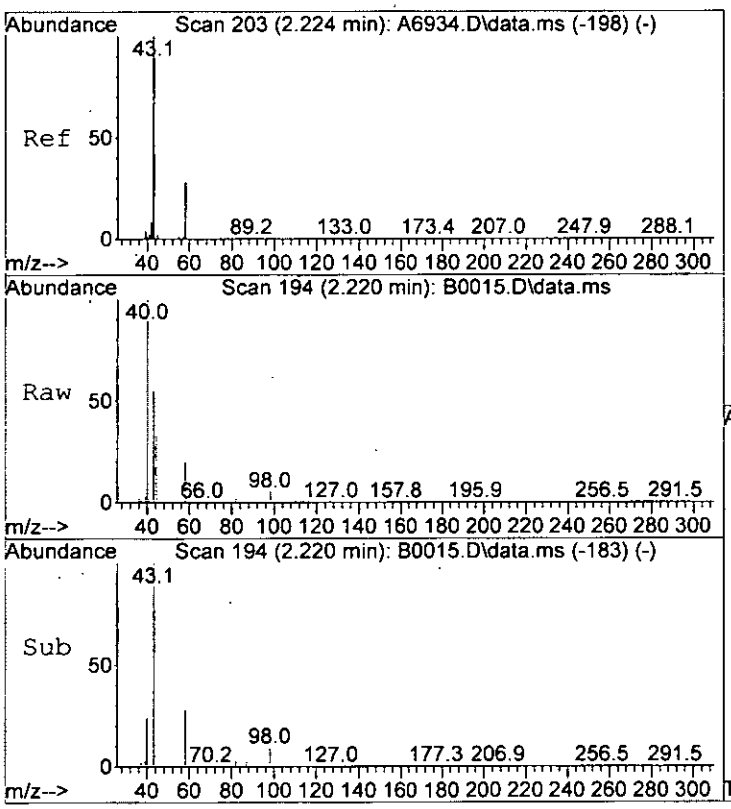


#13
1,1-Diclethene
Concen: 1.09 ug/L
RT: 2.189 min Scan# 189
Delta R.T. -0.006 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 96 Resp: 8908

Ion	Ratio	Lower	Upper
96	100		
98	78.2	43.2	83.2
61	219.5	155.6	195.6#

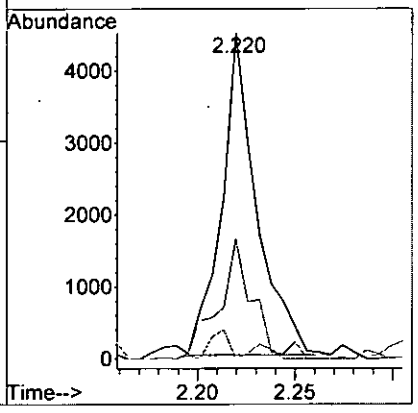


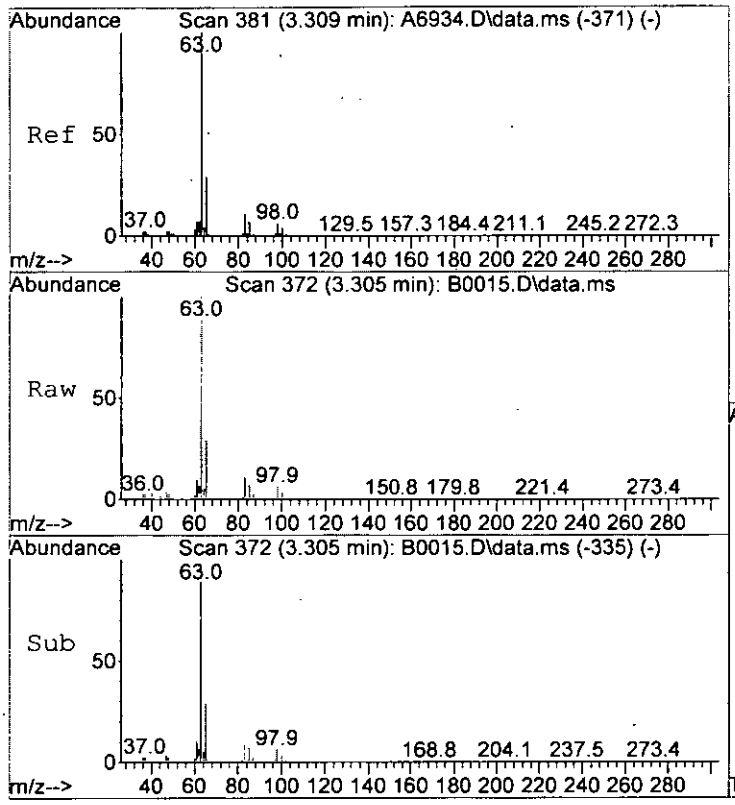


#15
Acetone
Concen: Below Cal
RT: 2.220 min Scan# 194
Delta R.T. -0.005 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 43 Resp: 5546

Ion	Ratio	Lower	Upper
43	100		
58	36.8	4.8	44.8
42	0.0	0.0	28.0

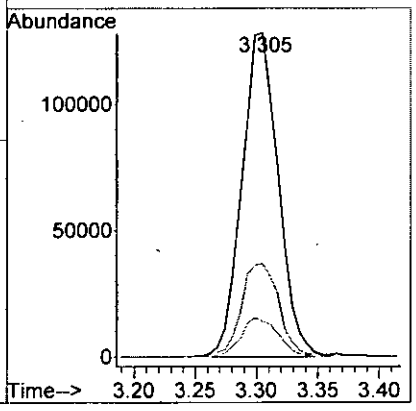


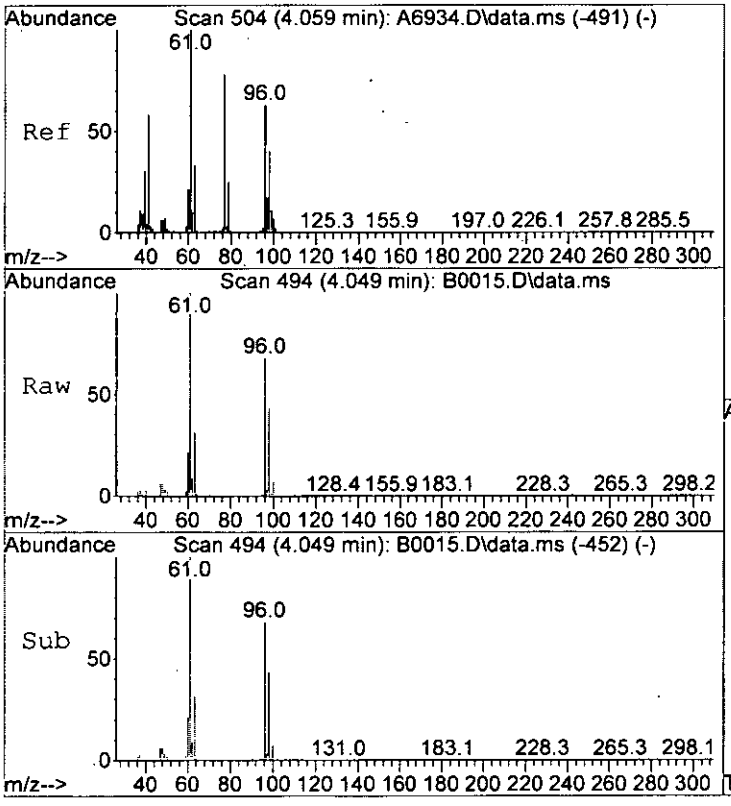


#27
1,1-Diclethane
Concen: 12.85 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 63 Resp: 263777

Ion	Ratio	Lower	Upper
63	100		
65	28.8	11.0	51.0
83	11.0	0.0	33.3

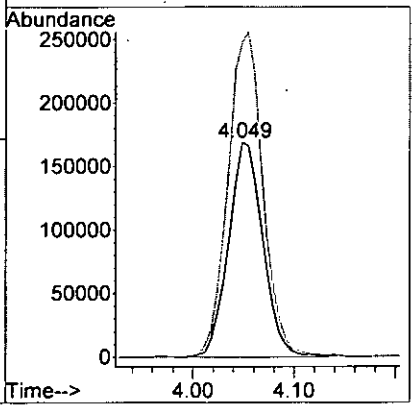


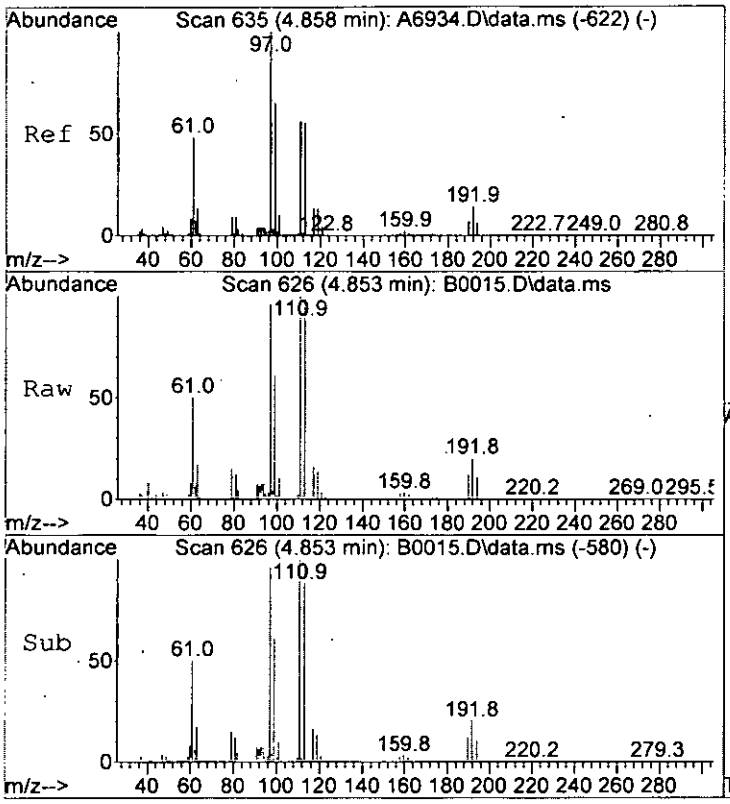


#33
cis-1,2-Dichloroethene
Concen: 35.88 ug/L
RT: 4.049 min Scan# 494
Delta R.T. -0.006 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 96 Resp: 395440

Ion	Ratio	Lower	Upper
96	100		
61	146.8	138.8	178.8

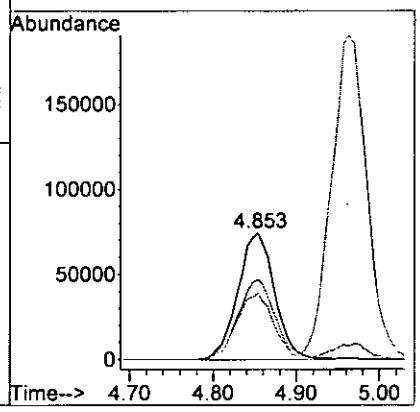


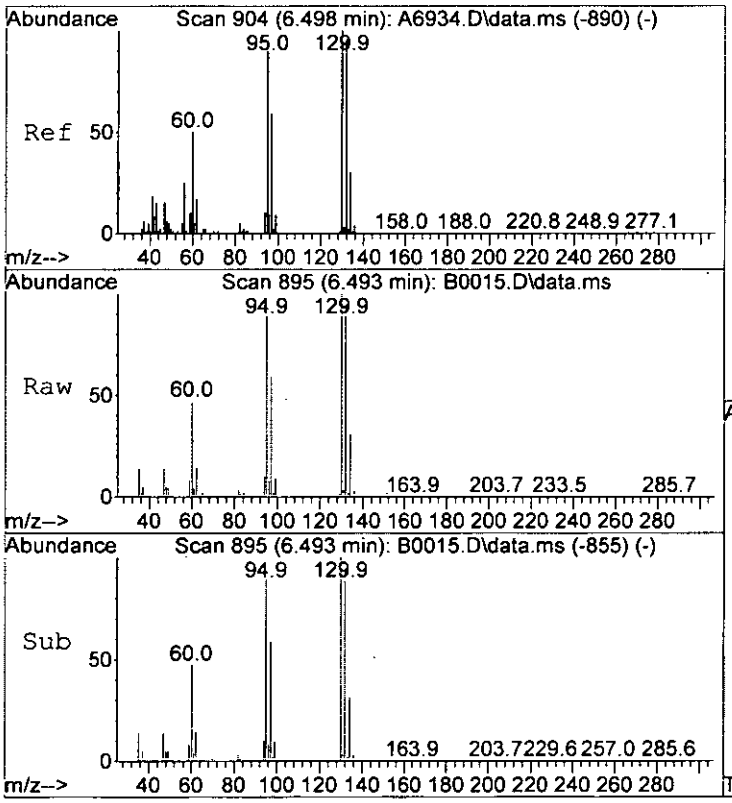


#40
1,1,1-Trichloroethane
Concen: 14.62 ug/L
RT: 4.853 min Scan# 626
Delta R.T. 0.000 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion: 97 Resp: 227069

Ion	Ratio	Lower	Upper
97	100		
99	63.1	40.9	80.9
61	52.2	25.2	65.2

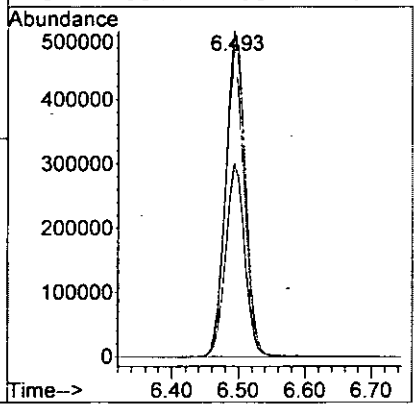




#53
Trichloroethene
Concen: 85.47 ug/L
RT: 6.493 min Scan# 895
Delta R.T. -0.006 min
Lab File: B0015.D
Acq: 29 Jun 2015 8:12 pm

Tgt Ion:130 Resp: 1021107

Ion	Ratio	Lower	Upper
130	100		
132	94.5	76.6	116.6
95	89.8	76.5	116.5
97	59.2	42.4	82.4



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1200
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:36
Sample Name:	MW-8	**Units:**	µg/L
Lab Code:	R1504947-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**10**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**5.6**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1200
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 14:36
Sample Name:	MW-8	**Units:**	µg/L
Lab Code:	R1504947-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**15**		5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**5.4**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	88	85-122	6/29/15 14:36	
Dibromofluoromethane	100	89-119	6/29/15 14:36	
Toluene-d8	90	87-121	6/29/15 14:36	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0003.D
Acq On : 29 Jun 2015 2:36 pm
Operator : F. Naegler
Sample : R1504947-005|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 02 14:11:20 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1114827	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1714102	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1567240	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	863901	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	532436	49.77	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.54%			
46) surr1,1,2-dichloroetha...	5.408	65	515619	46.91	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 93.82%			
64) SURR3,Toluene-d8	8.041	98	1836737	45.04	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 90.08%			
69) SURR2,BFB	10.675	95	727636	43.90	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 87.80%			
Target Compounds						Qvalue
13) 1,1-Diclethene	2.195	96	2899	0.35	ug/L	88
15) Acetone	2.219	43	2347	Below Cal		79
26) trans-1,2-Dichloroethene	2.860	96	1881m	0.20	ug/L	
27) 1,1-Diclethane	3.305	63	116010	5.62	ug/L	98
33) cis-1,2-Dichloroethene	4.054	96	59827	5.40	ug/L	92
40) 1,1,1-Trichloroethane	4.853	97	155863	9.98	ug/L	95
53) Trichloroethene	6.499	130	174679	14.72	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

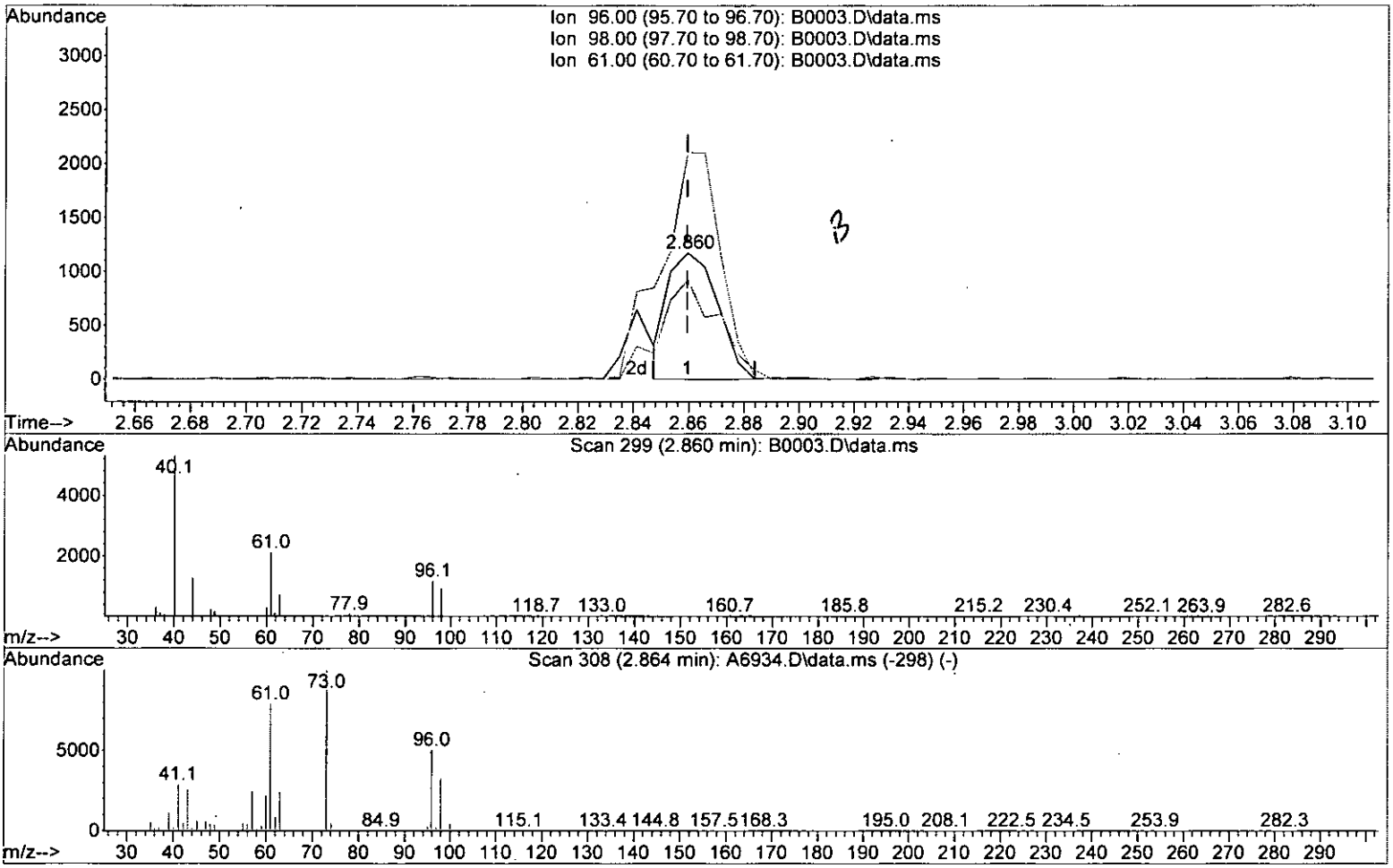
FU 7/2/15

KB 7/6/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0003.D
Acq On : 29 Jun 2015 2:36 pm
Operator : F. Naegler
Sample : R1504947-005|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 29 14:50:29 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0003.D\data.ms

(26) trans-1,2-Dichloroethene (P)

2.860min (+0.000) 0.16 ug/L

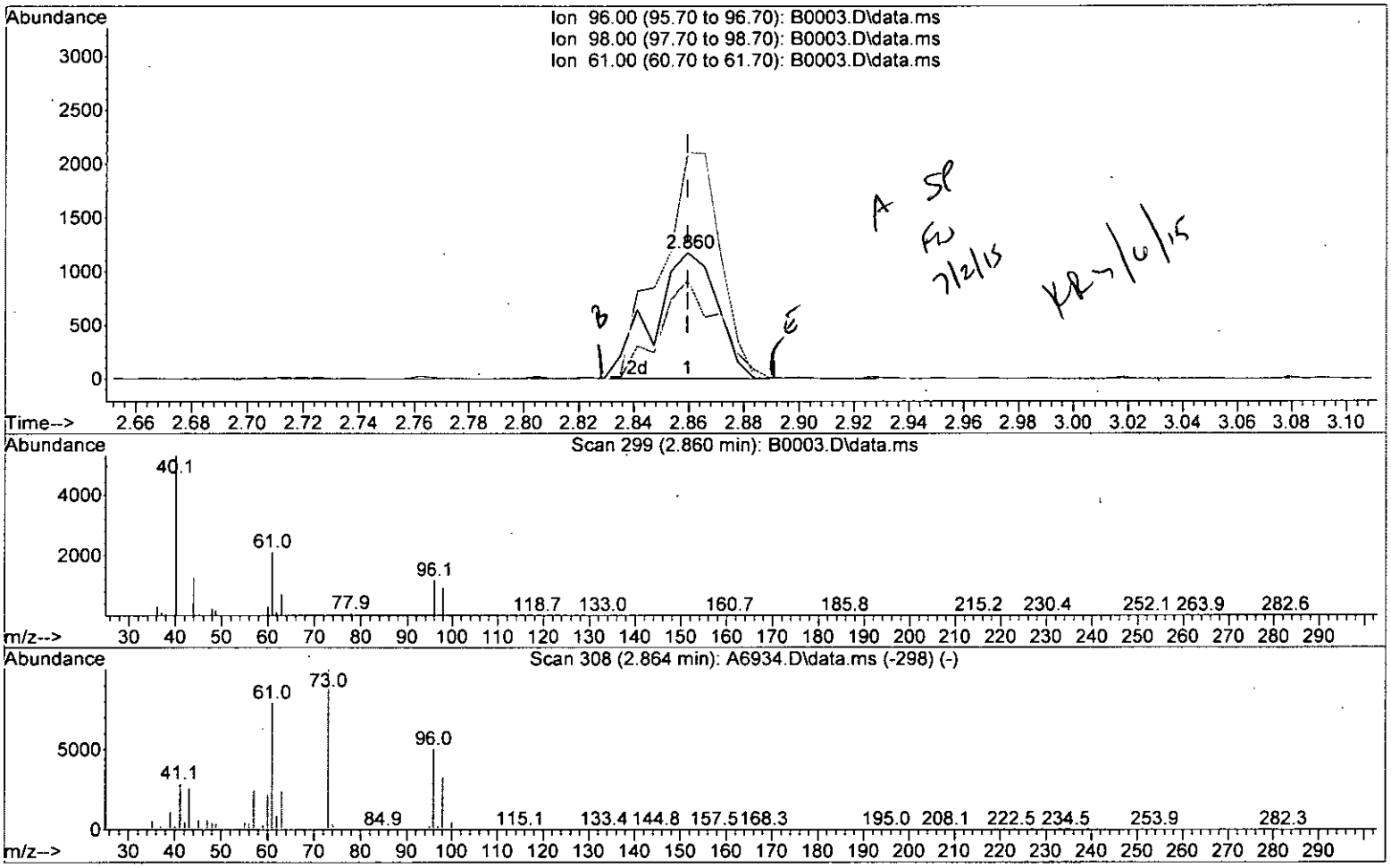
response 1455

Ion	Exp%	Act%
96.00	100	100
98.00	64.70	78.38
61.00	150.90	180.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0003.D
Acq On : 29 Jun 2015 2:36 pm
Operator : F. Naegler
Sample : R1504947-005|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 29 14:50:29 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



A SP
FN
7/2/15
KR 7/6/15

TIC: B0003.D\data.ms

(26) trans-1,2-Dichloroethene (P)

2.860min (+0.000) 0.20 ug/L m

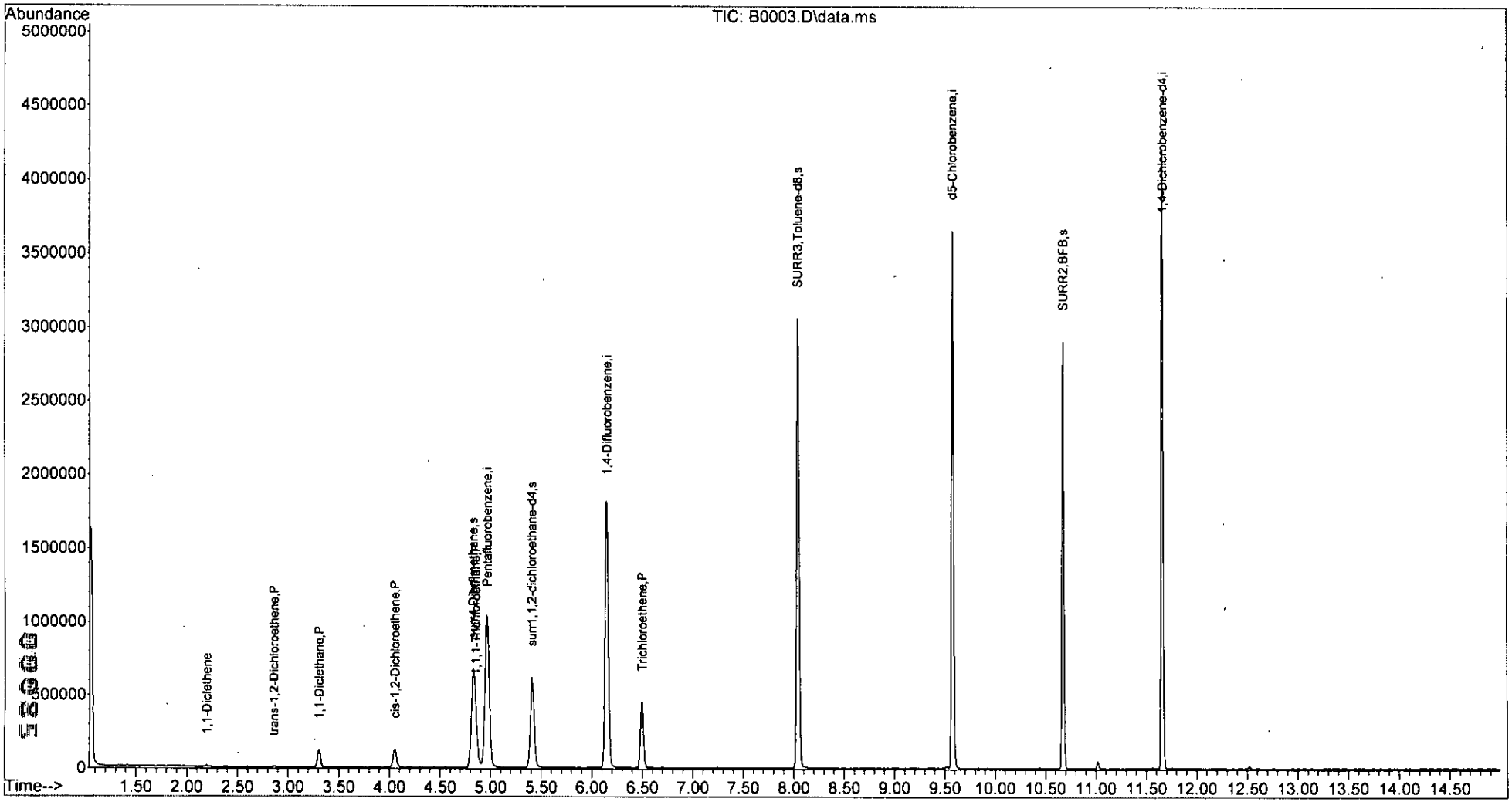
response 1881

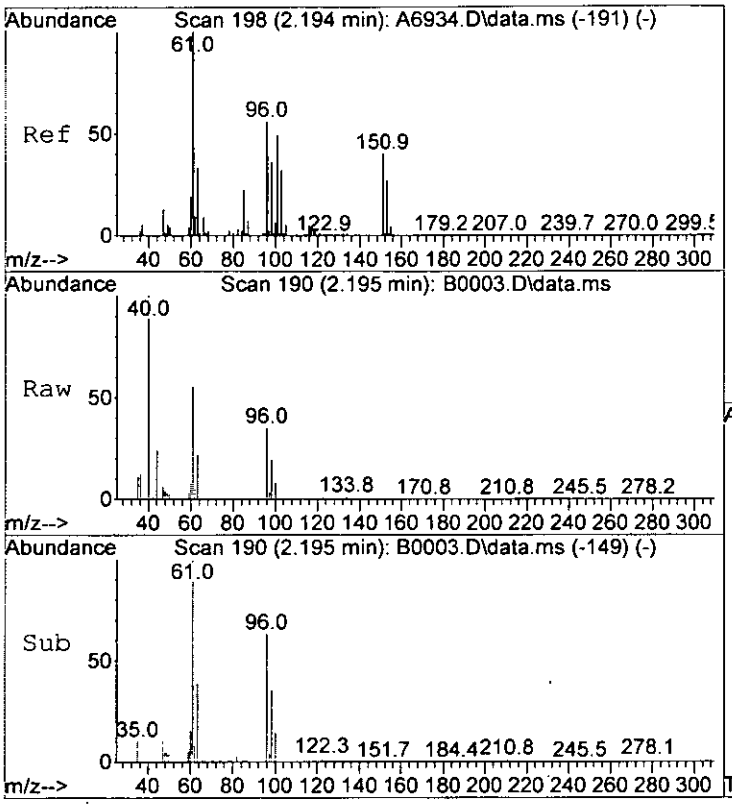
Ion	Exp%	Act%
96.00	100	100
98.00	64.70	78.38
61.00	150.90	180.00#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0003.D
Acq On : 29 Jun 2015 2:36 pm
Operator : F. Naegler
Sample : R1504947-005|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 02 14:11:20 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

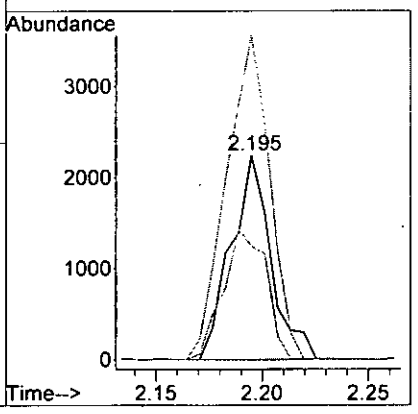


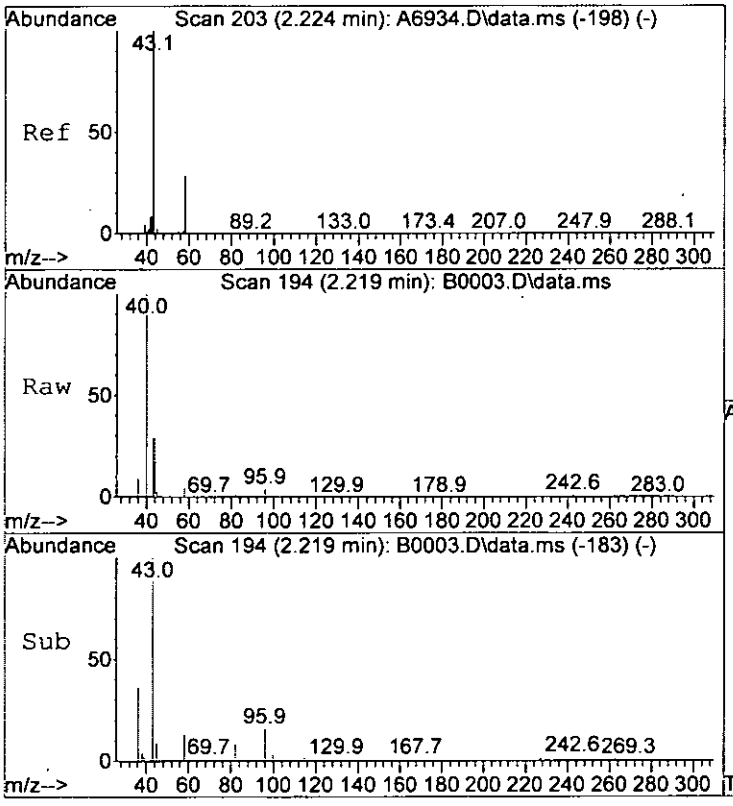


#13
1,1-Diclethene
Concen: 0.35 ug/L
RT: 2.195 min Scan# 190
Delta R.T. 0.000 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion: 96 Resp: 2899

Ion	Ratio	Lower	Upper
96	100		
98	55.4	43.2	83.2
61	158.6	155.6	195.6

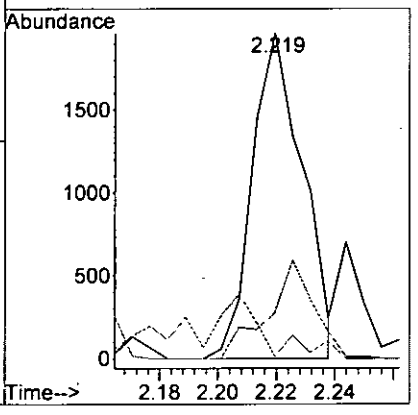


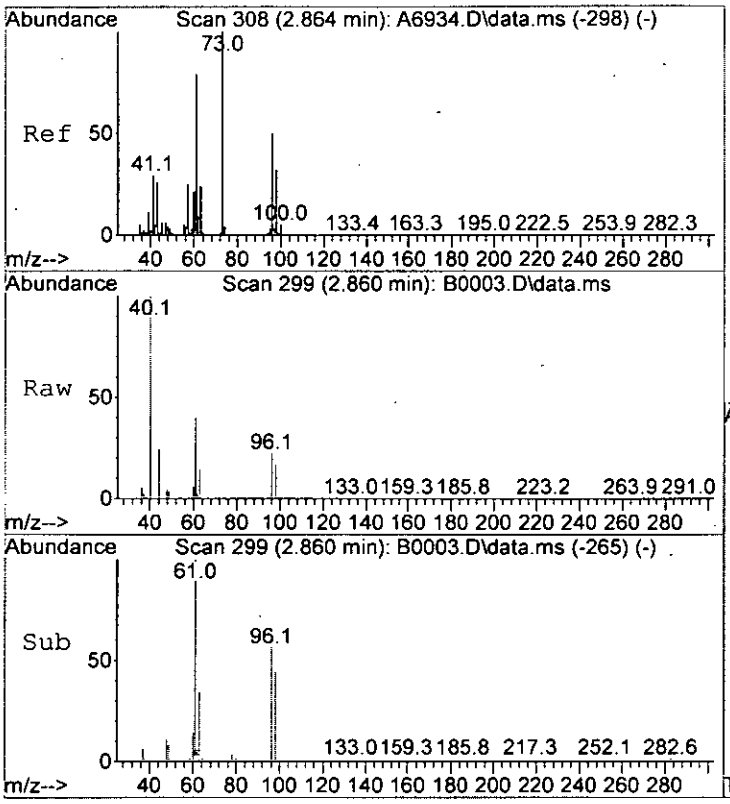


#15
Acetone
Concen: Below Cal
RT: 2.219 min Scan# 194
Delta R.T. -0.006 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion: 43 Resp: 2347

Ion	Ratio	Lower	Upper
43	100		
58	14.2	4.8	44.8
42	0.6	0.0	28.0

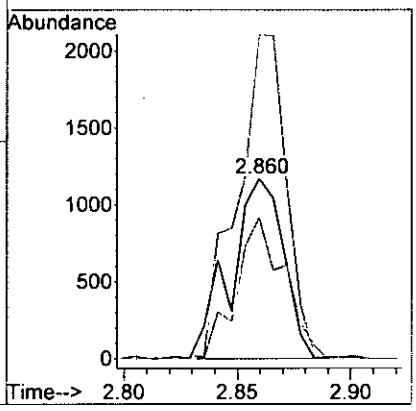


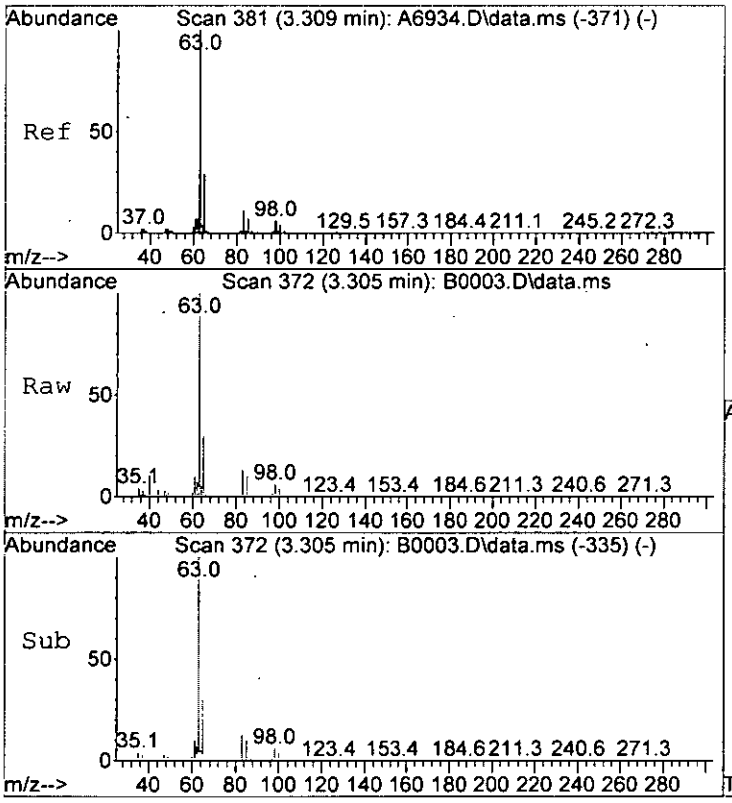


#26
trans-1,2-Dichloroethene
Concen: 0.20 ug/L m
RT: 2.860 min Scan# 299
Delta R.T. 0.000 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion: 96 Resp: 1881

Ion	Ratio	Lower	Upper
96	100		
98	78.4	44.7	84.7
61	180.0	130.9	170.9#

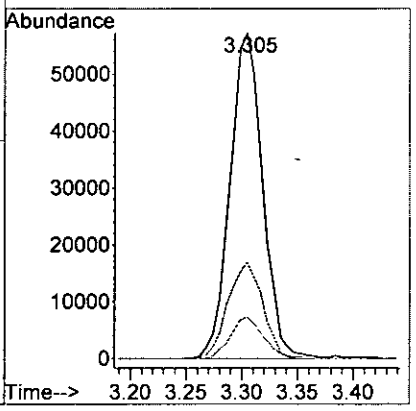


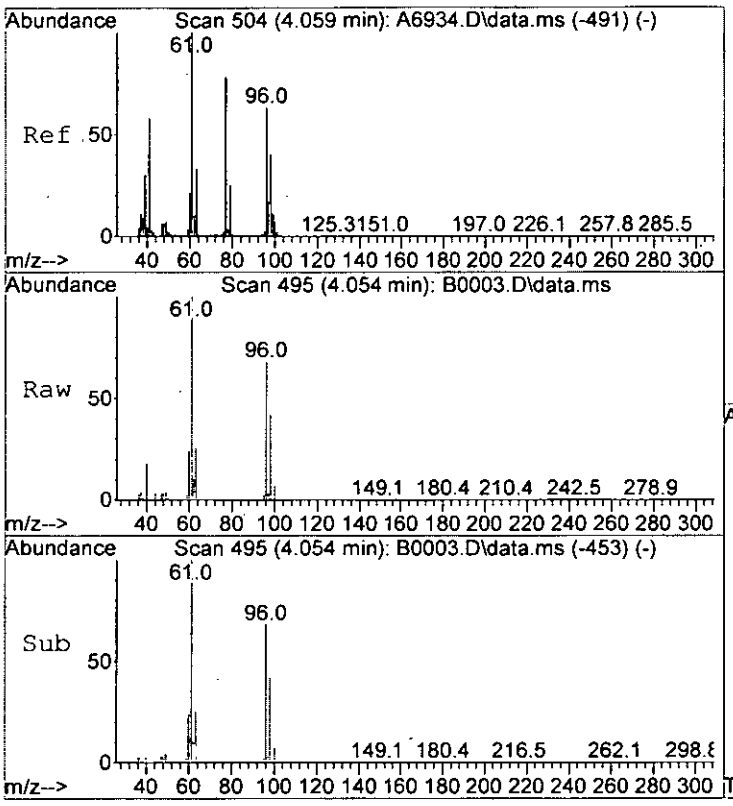


#27
1,1-Diclethane
Concen: 5.62 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion: 63 Resp: 116010

Ion	Ratio	Lower	Upper
63	100		
65	29.5	11.0	51.0
83	12.6	0.0	33.3

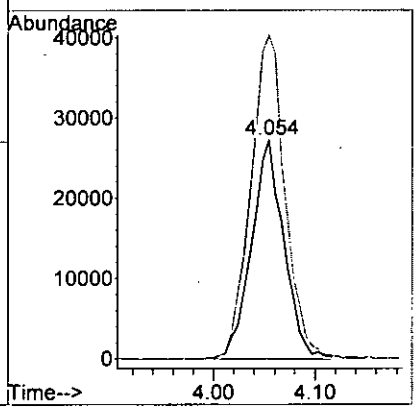


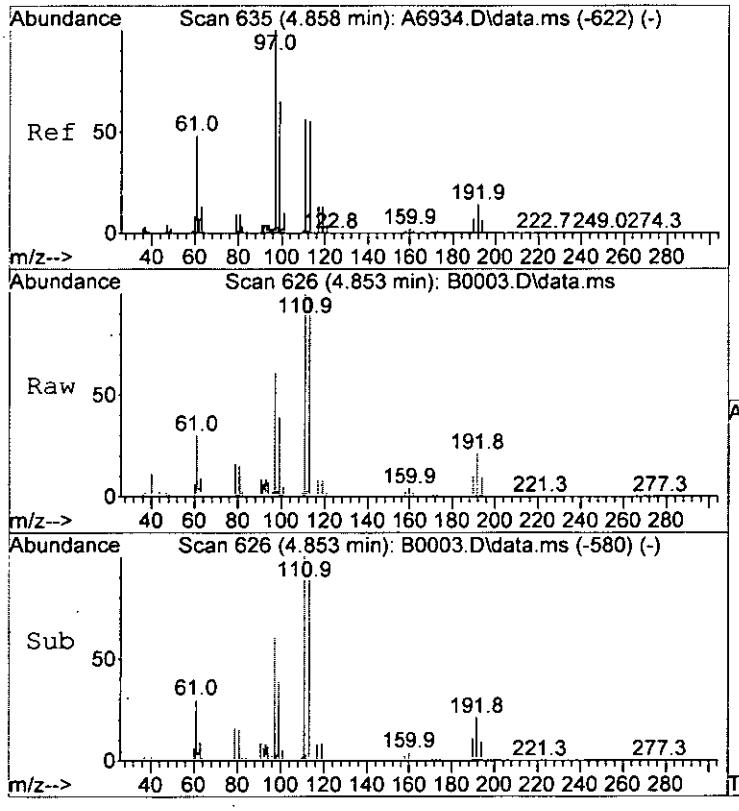


#33
cis-1,2-Dichloroethene
Concen: 5.40 ug/L
RT: 4.054 min Scan# 495
Delta R.T. 0.000 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion: 96 Resp: 59827

Ion	Ratio	Lower	Upper
96	100		
61	147.9	138.8	178.8

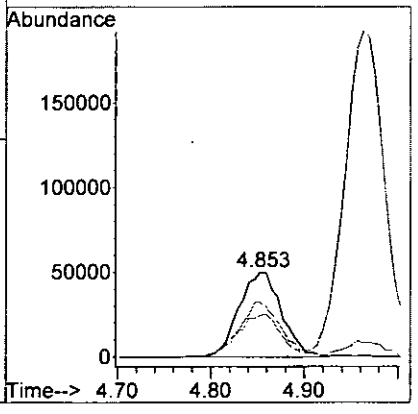


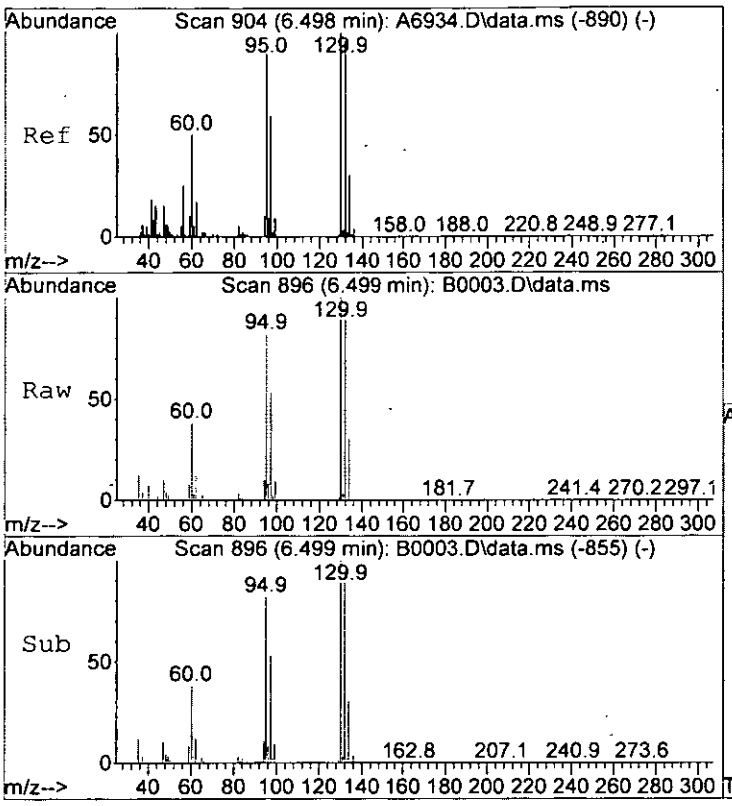


#40
1,1,1-Trichloroethane
Concen: 9.98 ug/L
RT: 4.853 min Scan# 626
Delta R.T. 0.000 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion: 97 Resp: 155863

Ion	Ratio	Lower	Upper
97	100		
99	64.1	40.9	80.9
61	48.7	25.2	65.2

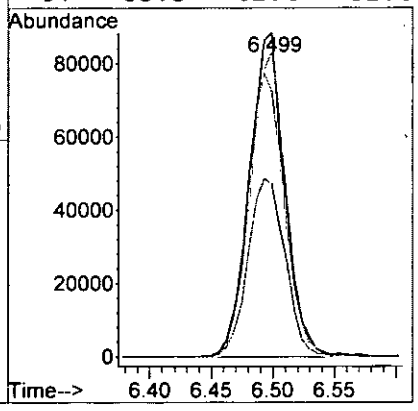




#53
Trichloroethene
Concen: 14.72 ug/L
RT: 6.499 min Scan# 896
Delta R.T. 0.000 min
Lab File: B0003.D
Acq: 29 Jun 2015 2:36 pm

Tgt Ion:130 Resp: 174679

Ion	Ratio	Lower	Upper
130	100		
132	94.0	76.6	116.6
95	81.9	76.5	116.5
97	53.3	42.4	82.4



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1300
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:04
Sample Name:	MW-13	**Units:**	µg/L
Lab Code:	R1504947-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0004.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**11**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**9.3**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1300
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:04
Sample Name:	MW-13	**Units:**	µg/L
Lab Code:	R1504947-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0004.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	**5.4**		5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**9.9**		5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**7.4**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 15:04	
Dibromofluoromethane	98	89-119	6/29/15 15:04	
Toluene-d8	95	87-121	6/29/15 15:04	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0004.D
Acq On : 29 Jun 2015 3:04 pm
Operator : F. Naegler
Sample : R1504947-006|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 02 14:30:29 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1119307	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.151	114	1709733	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1568344	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	861853	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	523375	49.05	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 98.10%			
46) surr1,1,2-dichloroetha...	5.414	65	528191	48.17	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 96.34%			
64) SURR3,Toluene-d8	8.041	98	1931535	47.48	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 94.96%			
69) SURR2,BFB	10.675	95	734986	44.46	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 88.92%			
Target Compounds						Qvalue
6) Chloroethane	1.634	64	1723	0.23	ug/L	98
13) 1,1-Diclethene	2.195	96	5823	0.71	ug/L #	79
15) Acetone	2.219	43	2094	Below Cal		76
27) 1,1-Diclethane	3.304	63	191624	9.25	ug/L	94
33) cis-1,2-Dichloroethene	4.054	96	82272	7.40	ug/L	99
40) 1,1,1-Trichloroethane	4.853	97	165225	10.54	ug/L	96
53) Trichloroethene	6.499	130	116654	9.85	ug/L	96
71) Tetrachloroethene	8.730	164	50521	5.36	ug/L	94

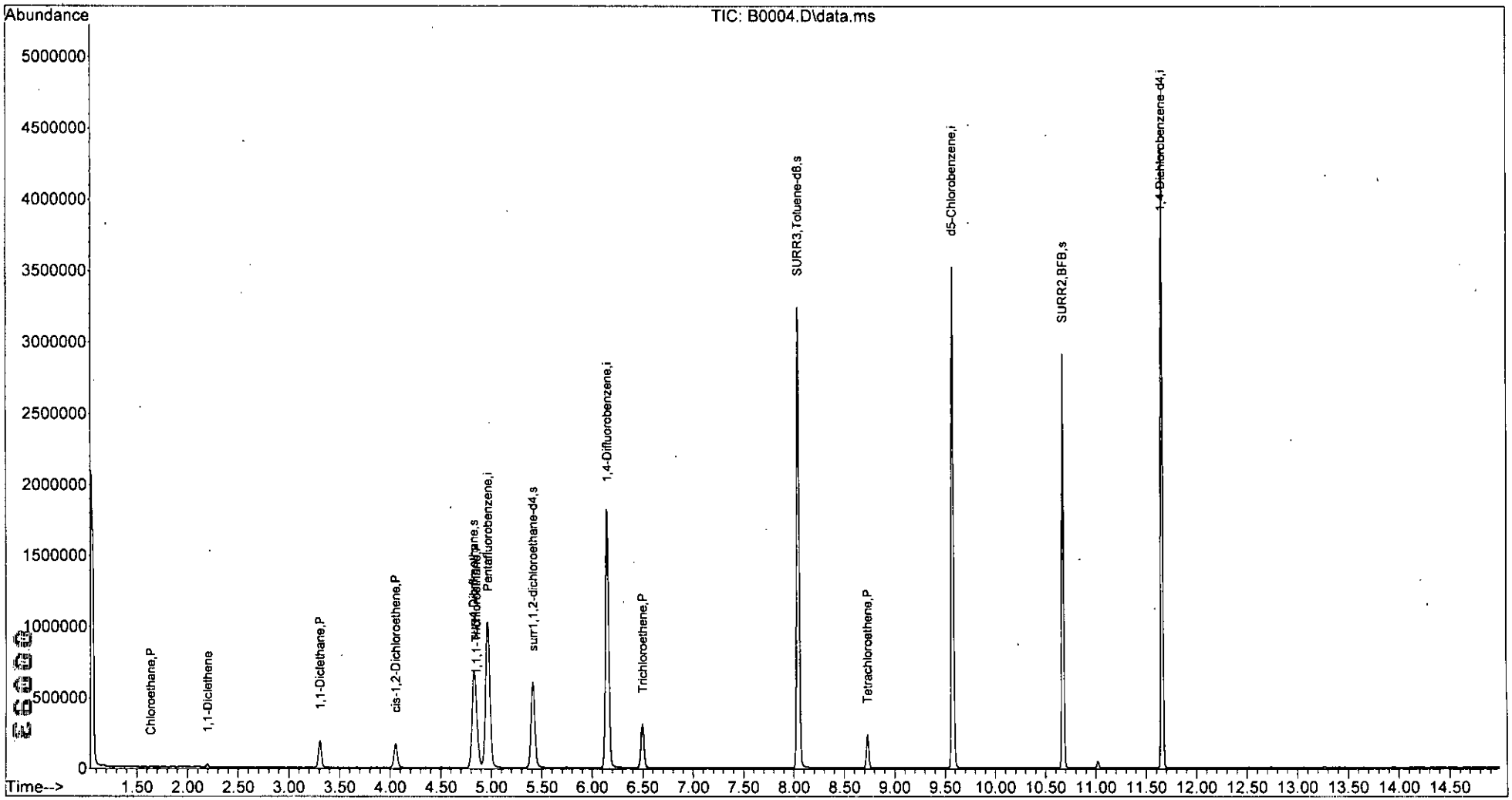
(#) = qualifier out of range (m) = manual integration (+) = signals summed

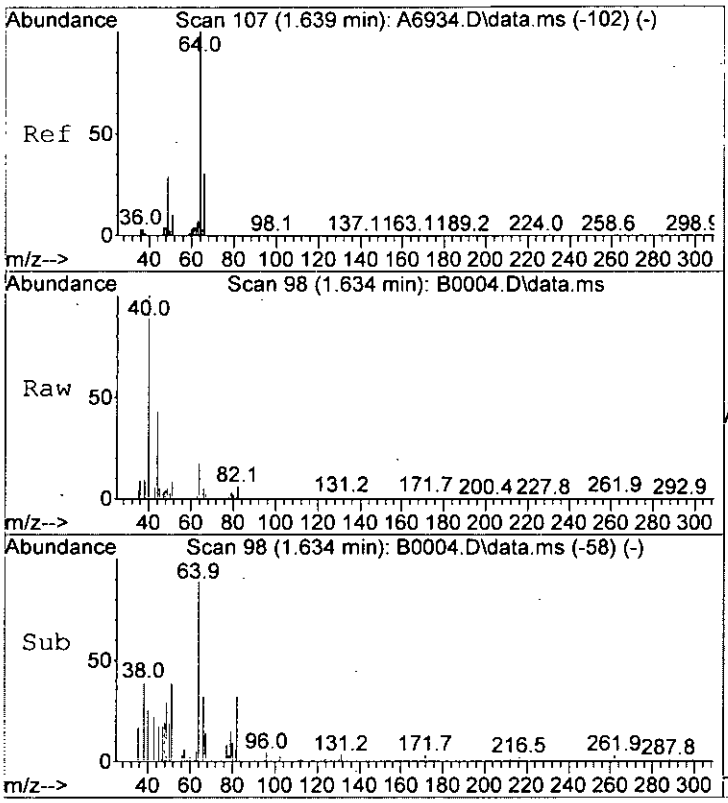
FV 7/2/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0004.D
Acq On : 29 Jun 2015 3:04 pm
Operator : F. Naegler
Sample : R1504947-006|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 02 14:30:29 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

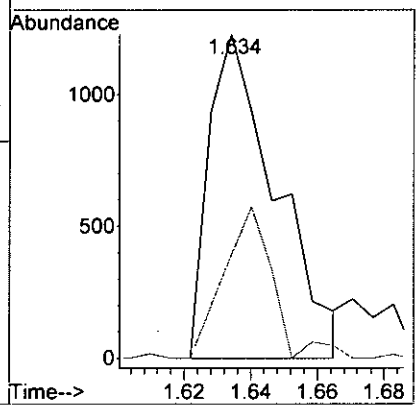


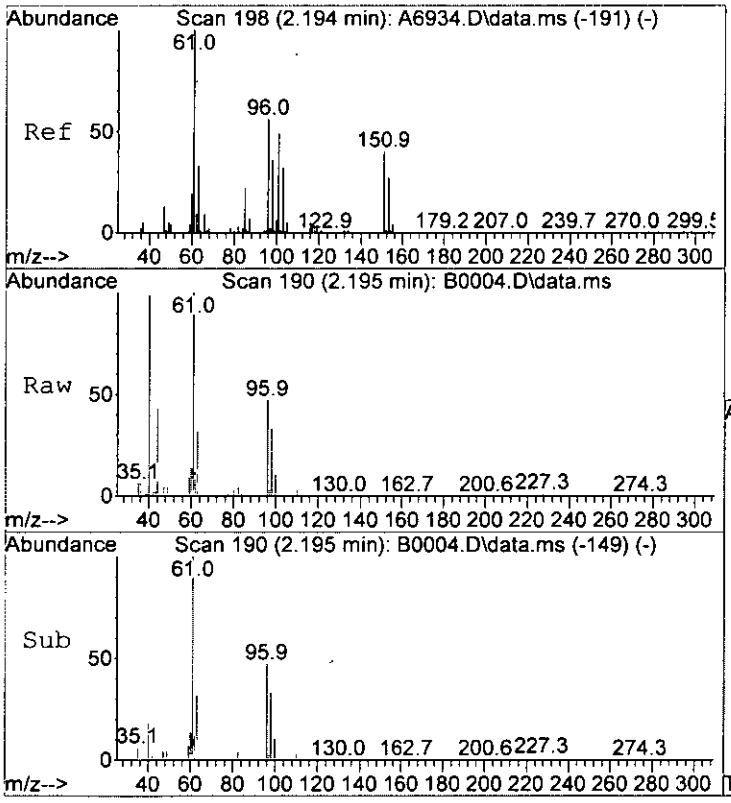


#6
Chloroethane
Concen: 0.23 ug/L
RT: 1.634 min Scan# 98
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion: 64 Resp: 1723

Ion	Ratio	Lower	Upper
64	100		
66	31.8	13.0	53.0

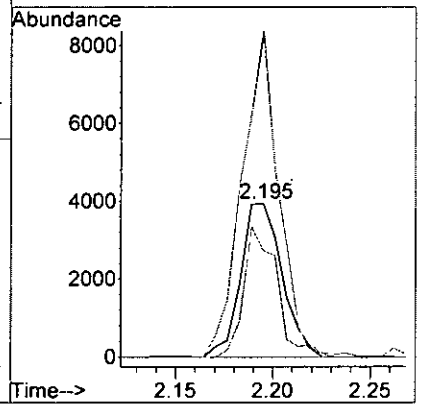


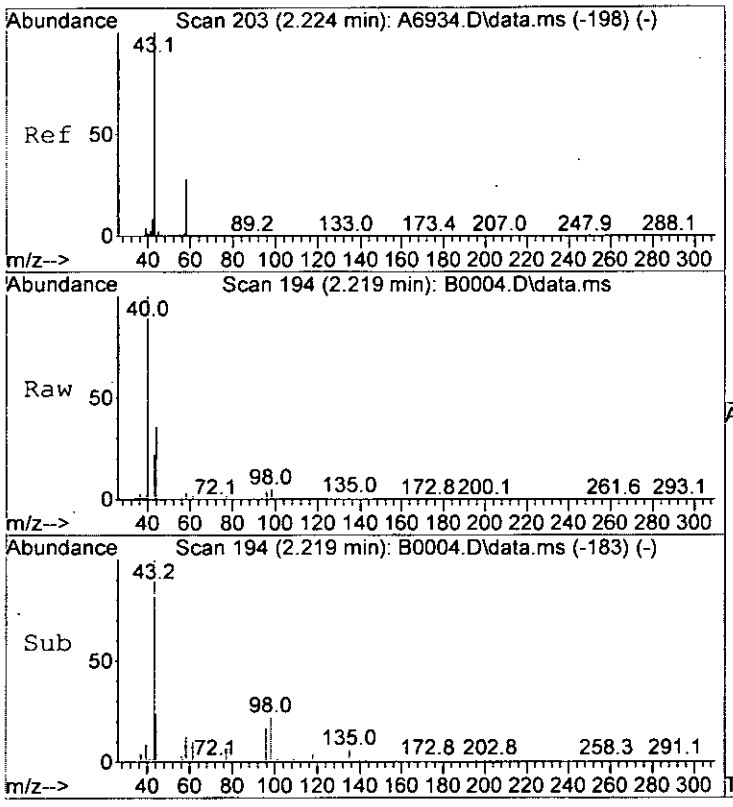


#13
1,1-Diclethene
Concen: 0.71 ug/L
RT: 2.195 min Scan# 190
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion: 96 Resp: 5823

Ion	Ratio	Lower	Upper
96	100		
98	69.1	43.2	83.2
61	212.2	155.6	195.6#

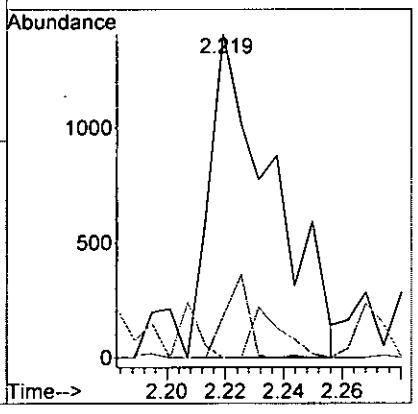


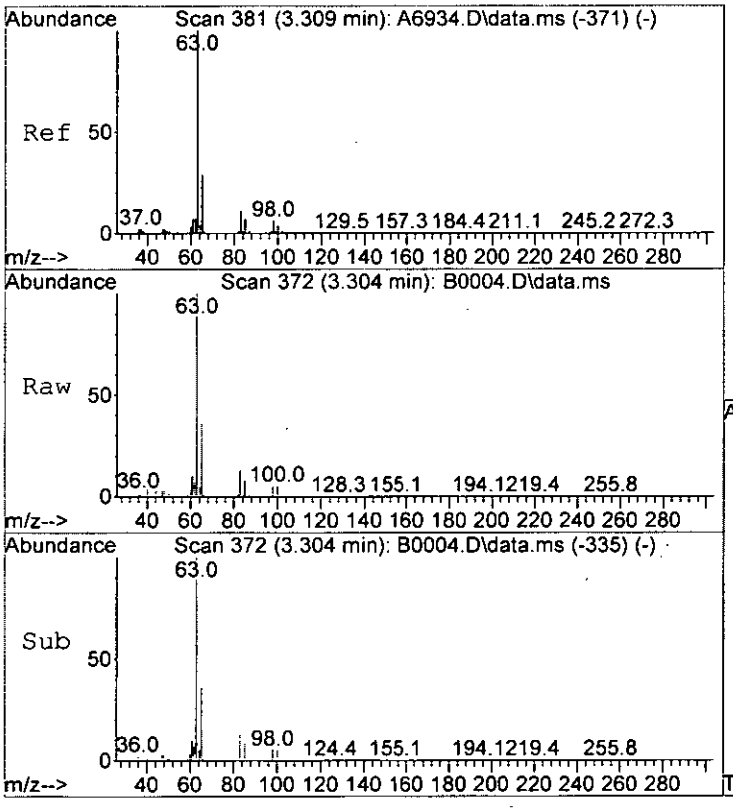


#15
Acetone
Concen: Below Cal
RT: 2.219 min Scan# 194
Delta R.T. -0.006 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion: 43 Resp: 2094

Ion	Ratio	Lower	Upper
43	100		
58	12.7	4.8	44.8
42	0.0	0.0	28.0

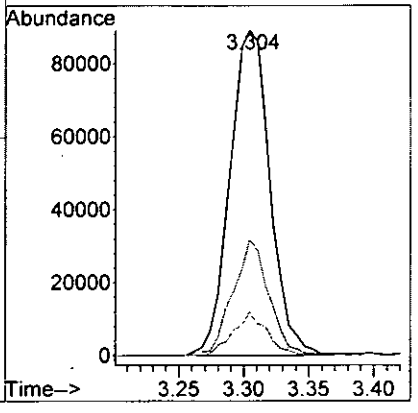


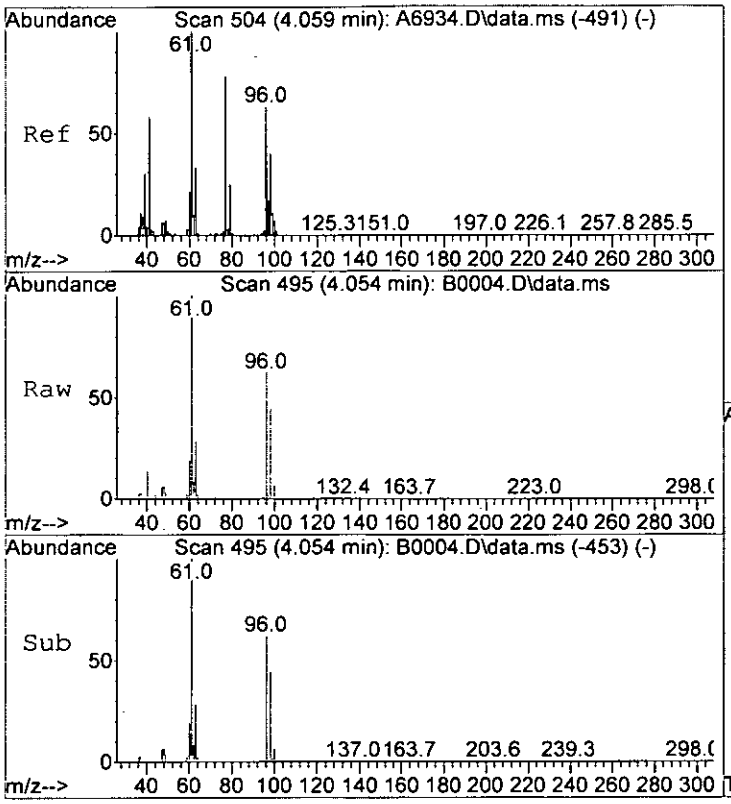


#27
1,1-Diclethane
Concen: 9.25 ug/L
RT: 3.304 min Scan# 372
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion: 63 Resp: 191624

Ion	Ratio	Lower	Upper
63	100		
65	35.5	11.0	51.0
83	13.4	0.0	33.3

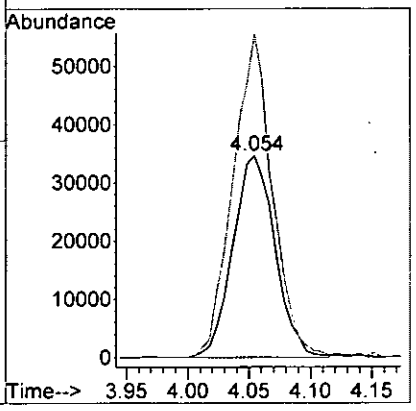


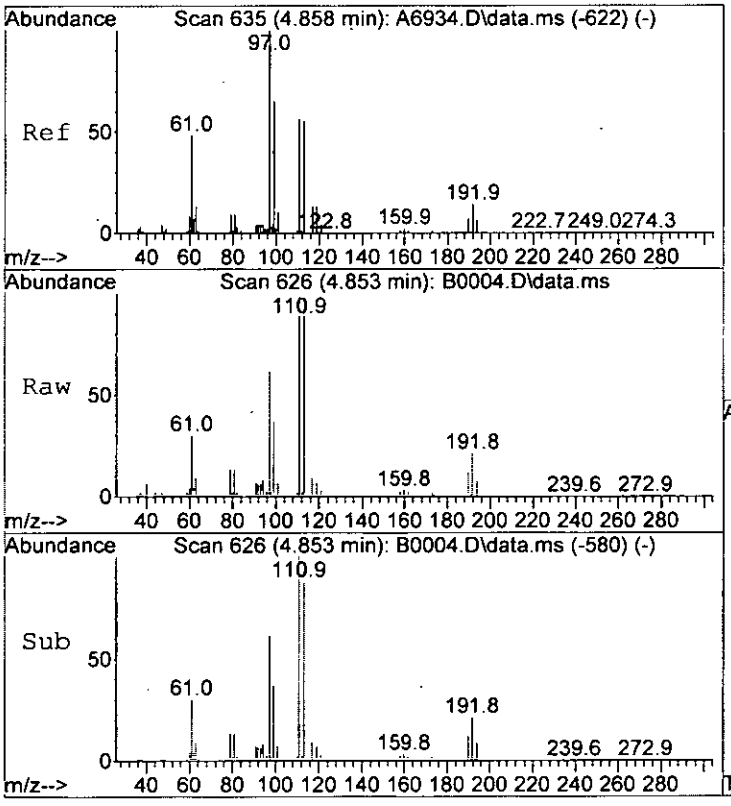


#33
cis-1,2-Dichloroethene
Concen: 7.40 ug/L
RT: 4.054 min Scan# 495
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion: 96 Resp: 82272

Ion	Ratio	Lower	Upper
96	100		
61	160.7	138.8	178.8

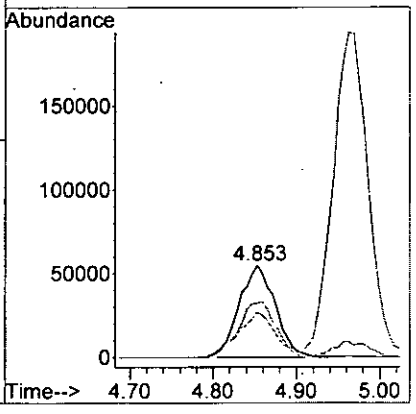


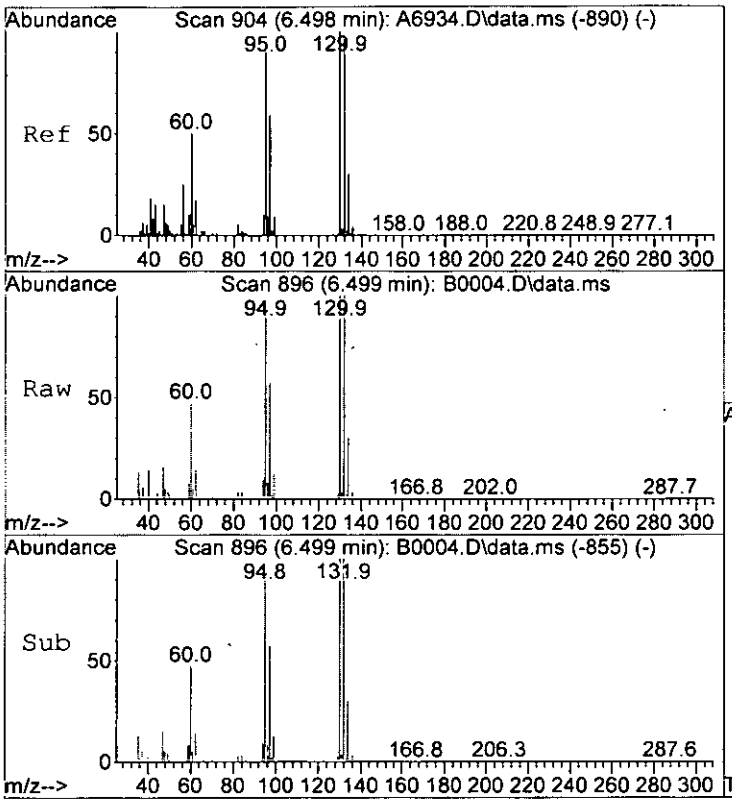


#40
1,1,1-Trichloroethane
Concen: 10.54 ug/L
RT: 4.853 min Scan# 626
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion: 97 Resp: 165225

Ion	Ratio	Lower	Upper
97	100		
99	58.7	40.9	80.9
61	48.8	25.2	65.2

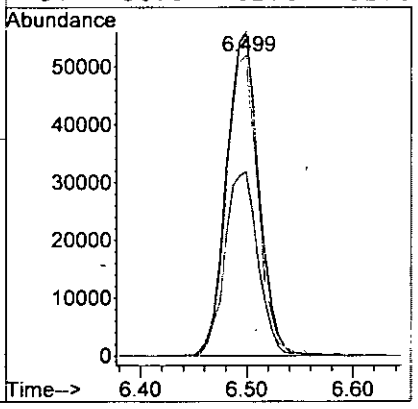


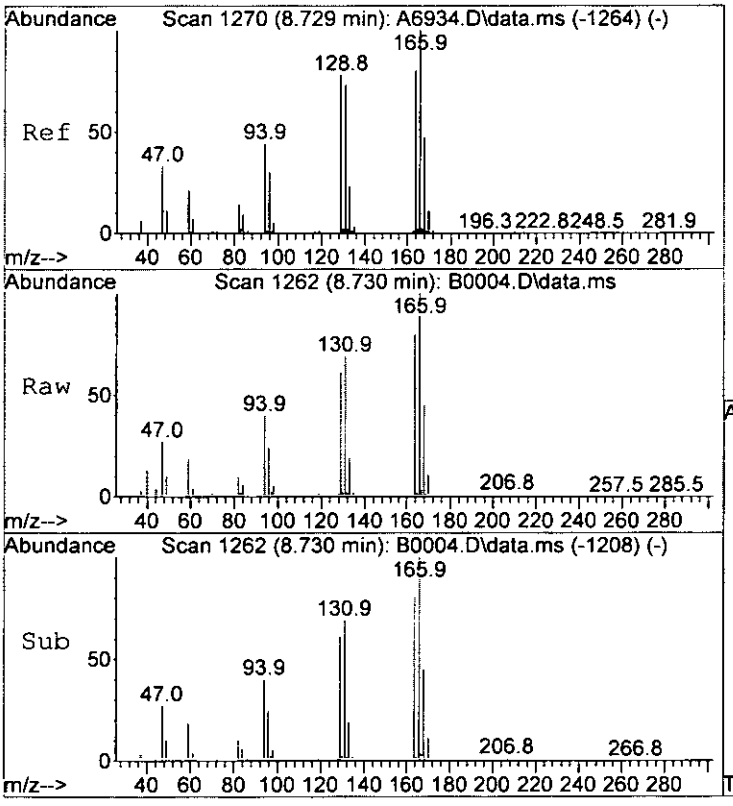


#53
Trichloroethene
Concen: 9.85 ug/L
RT: 6.499 min Scan# 896
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion:130 Resp: 116654

Ion	Ratio	Lower	Upper
130	100		
132	99.8	76.6	116.6
95	92.9	76.5	116.5
97	56.8	42.4	82.4

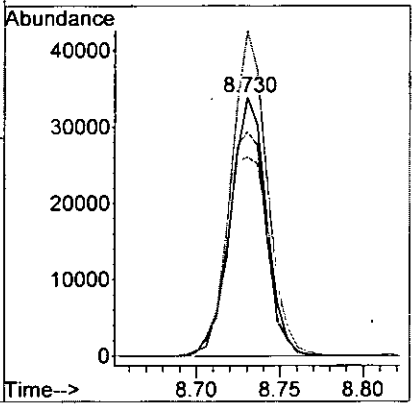




#71
Tetrachloroethene
Concen: 5.36 ug/L
RT: 8.730 min Scan# 1262
Delta R.T. -0.000 min
Lab File: B0004.D
Acq: 29 Jun 2015 3:04 pm

Tgt Ion:164 Resp: 50521

Ion	Ratio	Lower	Upper
164	100		
166	125.8	105.5	145.5
129	76.8	73.7	113.7
131	86.8	66.9	106.9



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1305
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:32
Sample Name:	MW-11	**Units:**	µg/L
Lab Code:	R1504947-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**11**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**39**		5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1305
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 15:32
Sample Name:	MW-11	**Units:**	µg/L
Lab Code:	R1504947-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**8.1**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 15:32	
Dibromofluoromethane	99	89-119	6/29/15 15:32	
Toluene-d8	95	87-121	6/29/15 15:32	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0005.D
Acq On : 29 Jun 2015 3:32 pm
Operator : F. Naegler
Sample : R1504947-007|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 02 14:33:45 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1118635	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.146	114	1724132	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1547322	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	869368	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	533593	49.59	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.18%			
46) surr1,1,2-dichloroetha...	5.408	65	523425	47.34	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 94.68%			
64) SURR3,Toluene-d8	8.042	98	1948878	47.51	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.02%			
69) SURR2,BFB	10.675	95	747467	44.84	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.68%			
Target Compounds						Qvalue
4) Vinyl Chloride	1.354	62	6564m	0.42	ug/L	
6) Chloroethane	1.634	64	13692	1.80	ug/L	89
13) 1,1-Diclethene	2.195	96	22007	2.67	ug/L	96
15) Acetone	2.226	43	9194	Below Cal		93
27) 1,1-Diclethane	3.305	63	817271	39.46	ug/L	98
33) cis-1,2-Dichloroethene	4.055	96	90056	8.10	ug/L	86
40) 1,1,1-Trichloroethane	4.847	97	168726	10.77	ug/L	94
53) Trichloroethene	6.493	130	43856	3.67	ug/L	83
71) Tetrachloroethene	8.730	164	11301	1.22	ug/L #	85

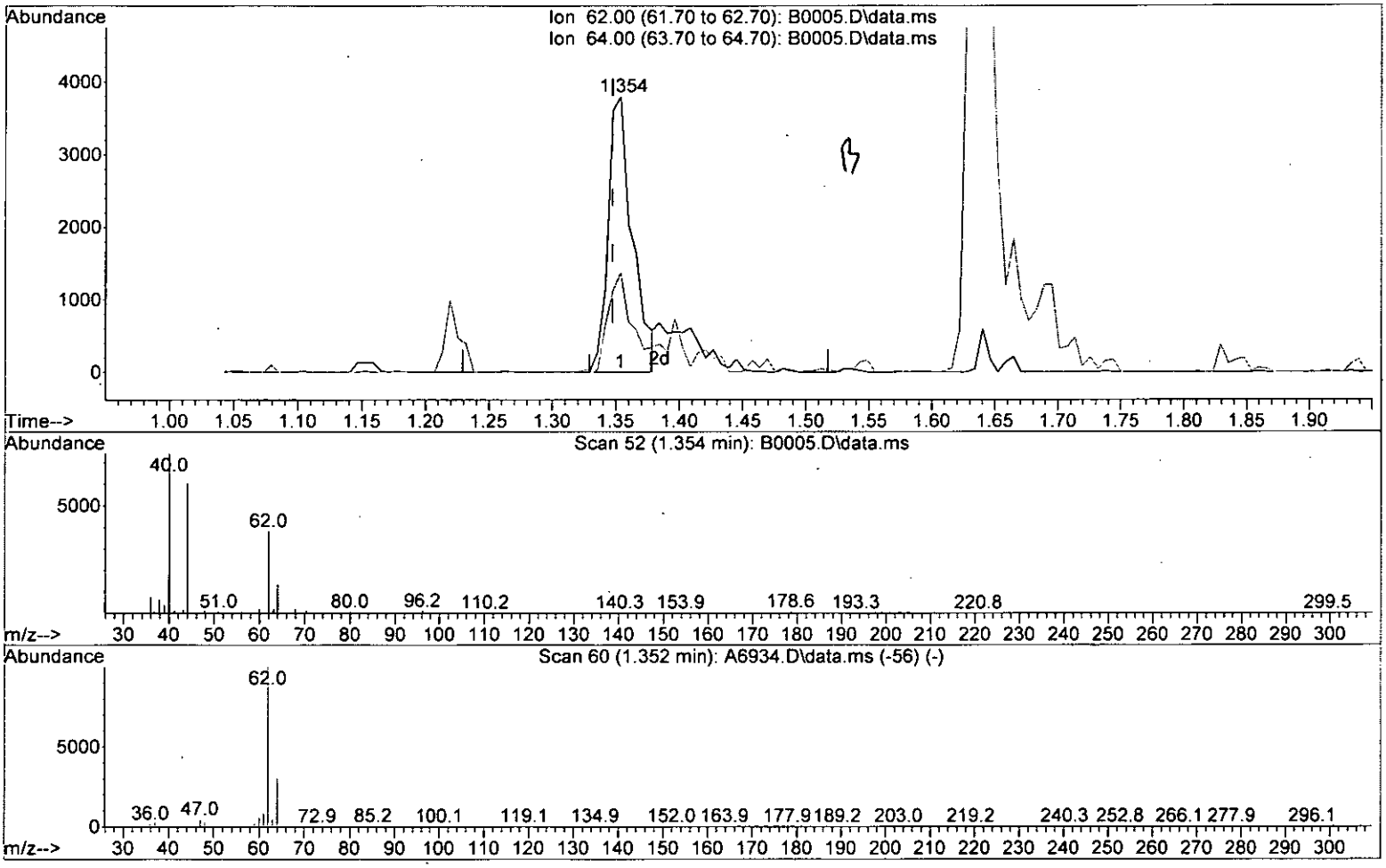
(#) = qualifier out of range (m) = manual integration (+) = signals summed

FJ 7/2/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0005.D
Acq On : 29 Jun 2015 3:32 pm
Operator : F. Naegler
Sample : R1504947-007|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 29 15:46:40 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0005.D\data.ms

(4) Vinyl Chloride (P)

1.354min (+0.006) 0.32 ug/L

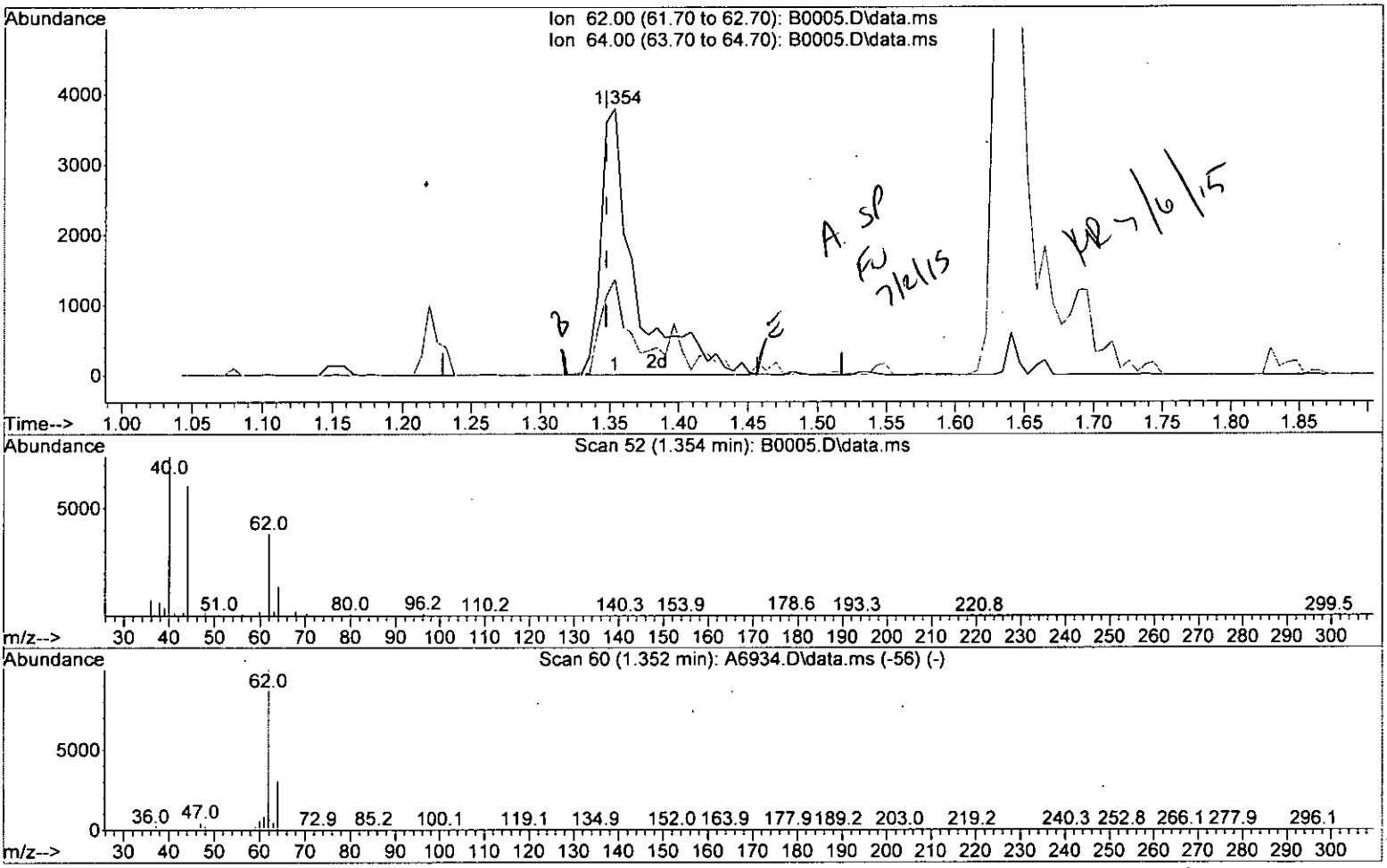
response 5024

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	35.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0005.D
Acq On : 29 Jun 2015 3:32 pm
Operator : F. Naegler
Sample : R1504947-007|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 29 15:46:40 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0005.D\data.ms

(4) Vinyl Chloride (P)

1.354min (+0.006) 0.42 ug/L m

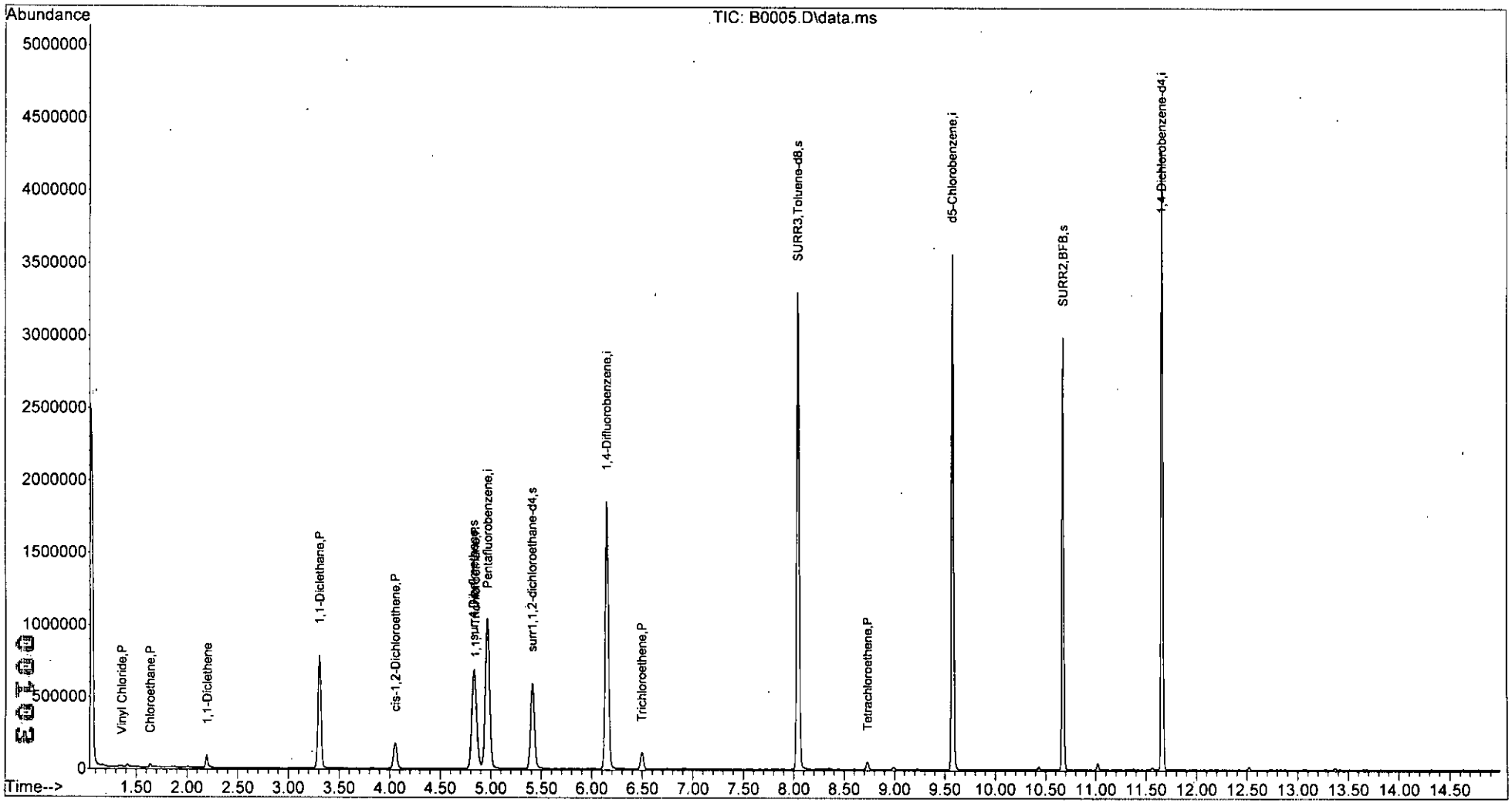
response 6564

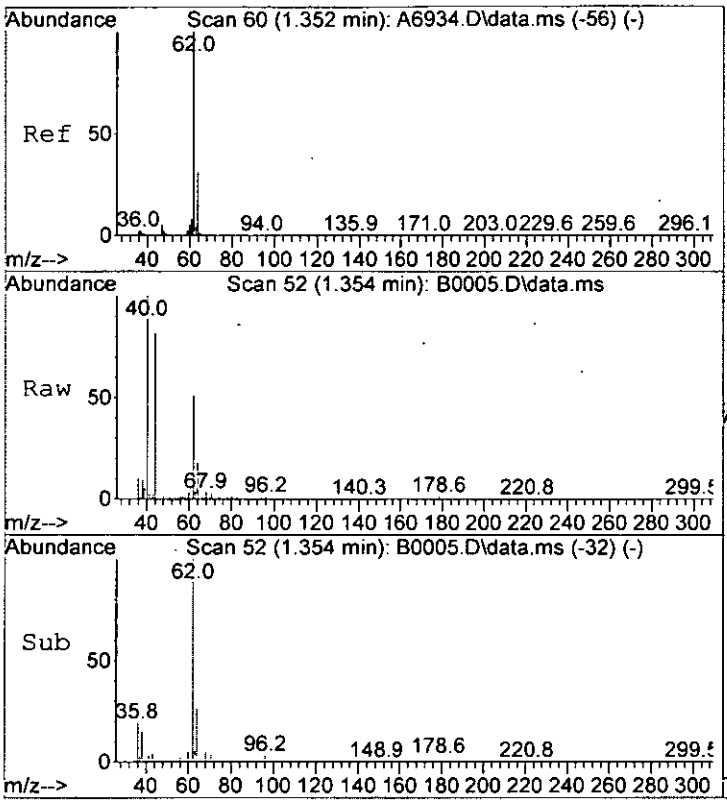
Ion	Exp%	Act%
62.00	100	100
64.00	31.70	35.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0005.D
Acq On : 29 Jun 2015 3:32 pm
Operator : F. Naegler
Sample : R1504947-007|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 02 14:33:45 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

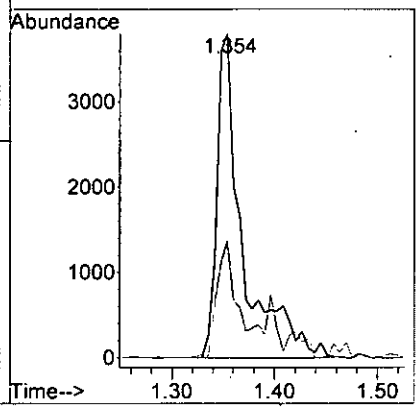


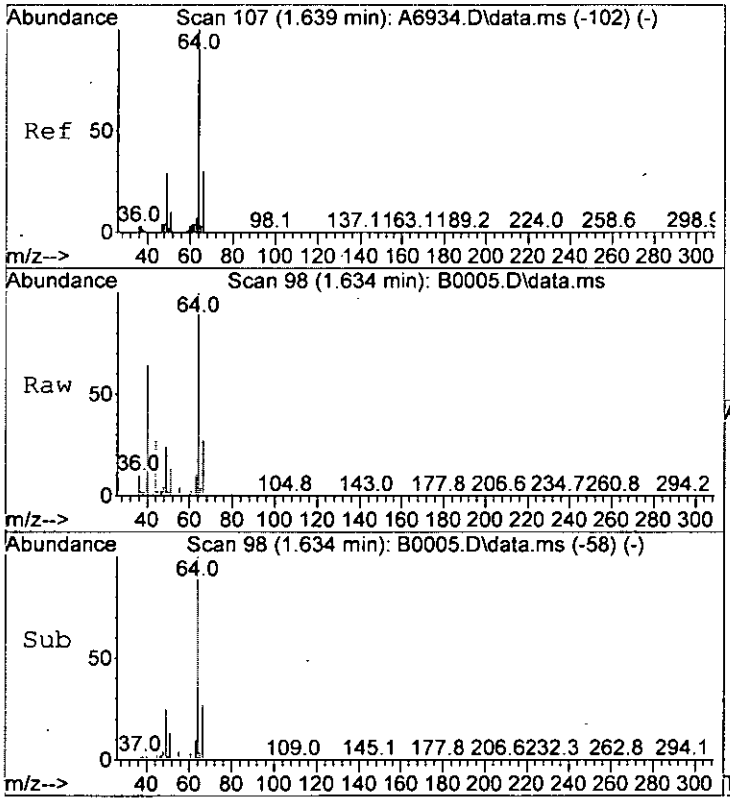


#4
Vinyl Chloride
Concen: 0.42 ug/L m
RT: 1.354 min Scan# 52
Delta R.T. 0.006 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 62 Resp: 6564

Ion	Ratio	Lower	Upper
62	100		
64	36.0	11.7	51.7

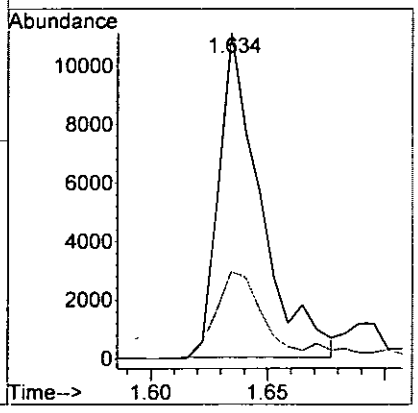


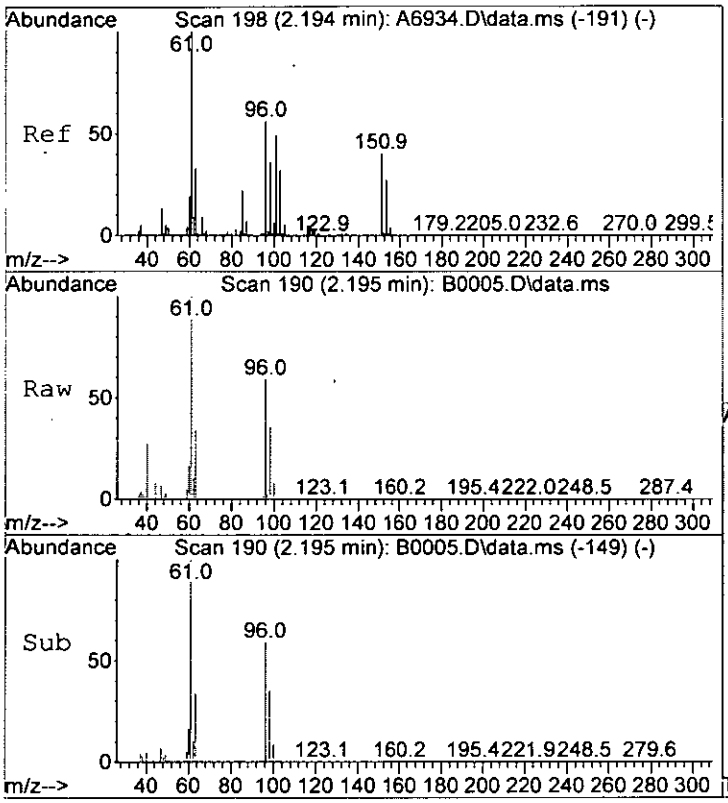


#6
Chloroethane
Concen: 1.80 ug/L
RT: 1.634 min Scan# 98
Delta R.T. 0.000 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 64 Resp: 13692

Ion	Ratio	Lower	Upper
64	100		
66	26.7	13.0	53.0

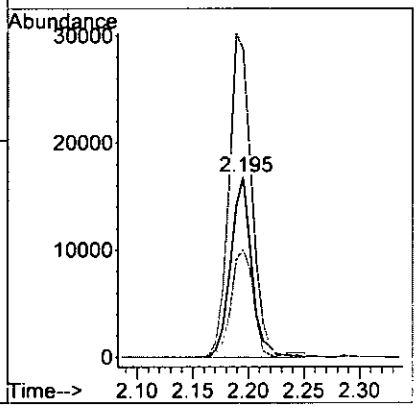


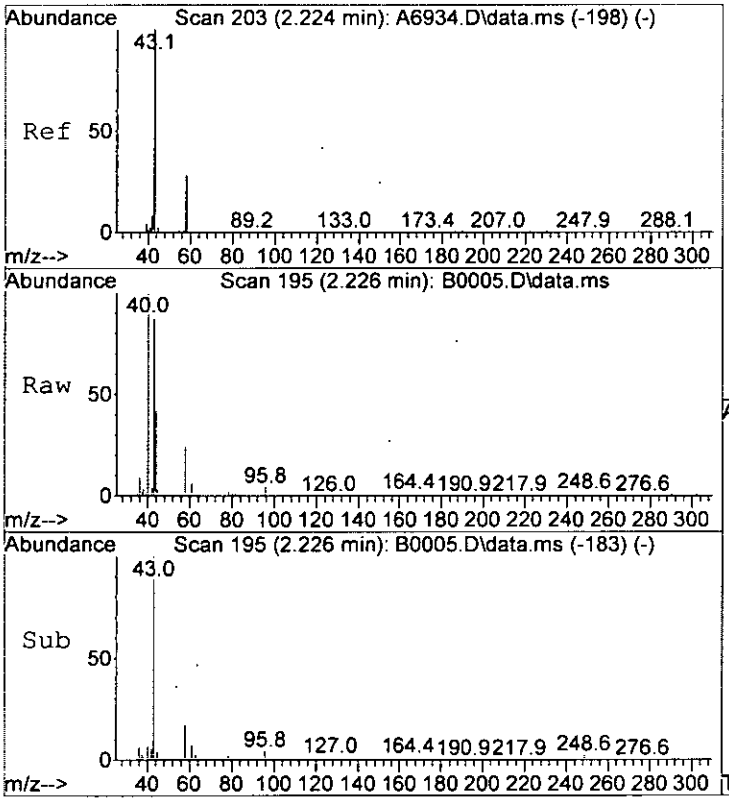


#13
1,1-Diclethene
Concen: 2.67 ug/L
RT: 2.195 min Scan# 190
Delta R.T. 0.000 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 96 Resp: 22007

Ion	Ratio	Lower	Upper
96	100		
98	59.9	43.2	83.2
61	170.6	155.6	195.6

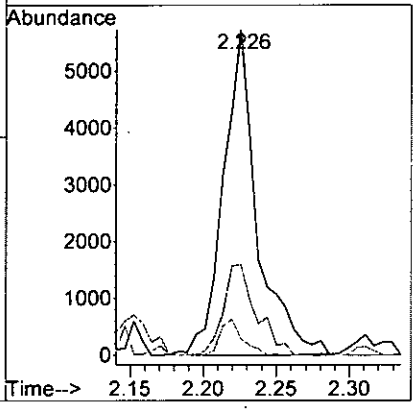


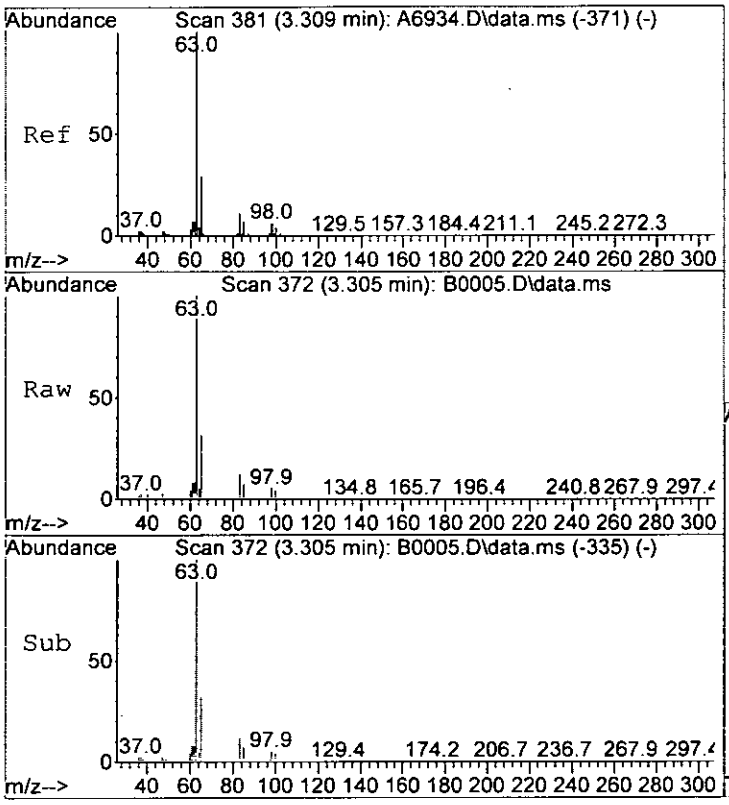


#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 43 Resp: 9194

Ion	Ratio	Lower	Upper
43	100		
58	27.8	4.8	44.8
42	5.1	0.0	28.0

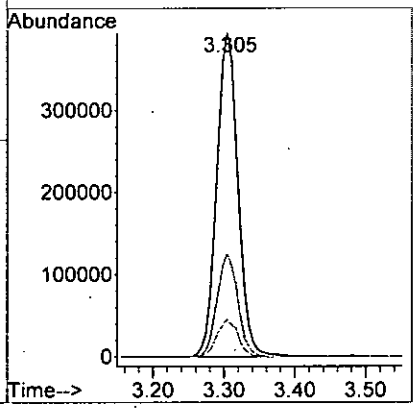


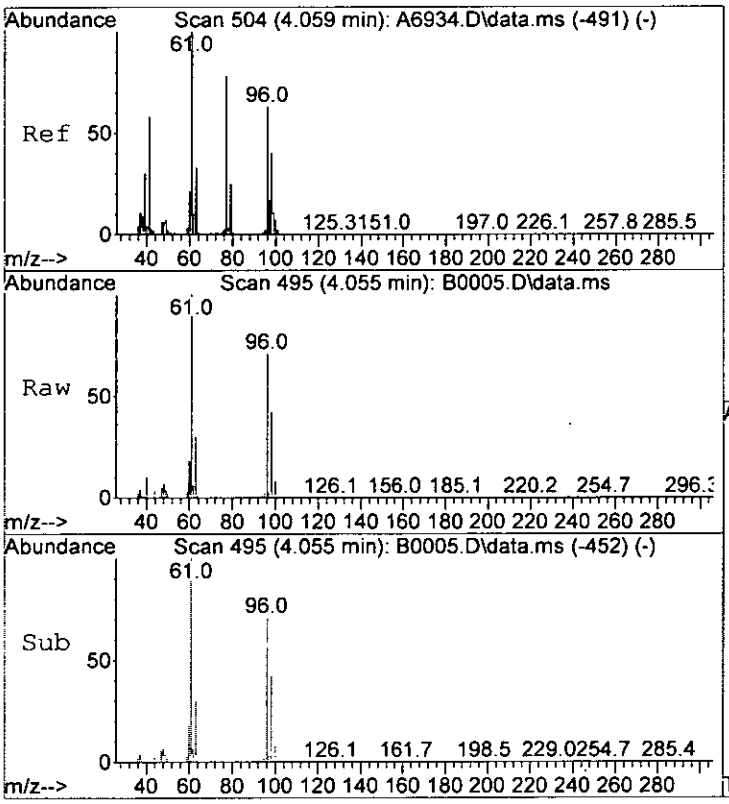


#27
1,1-Diclethane
Concen: 39.46 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 63 Resp: 817271

Ion	Ratio	Lower	Upper
63	100		
65	31.8	11.0	51.0
83	11.6	0.0	33.3

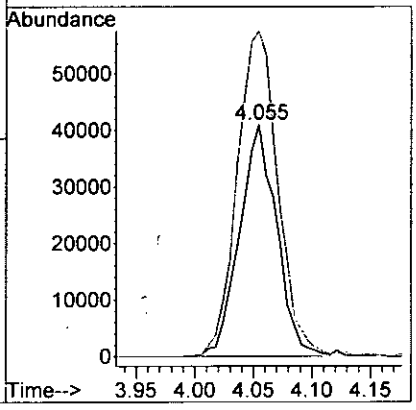


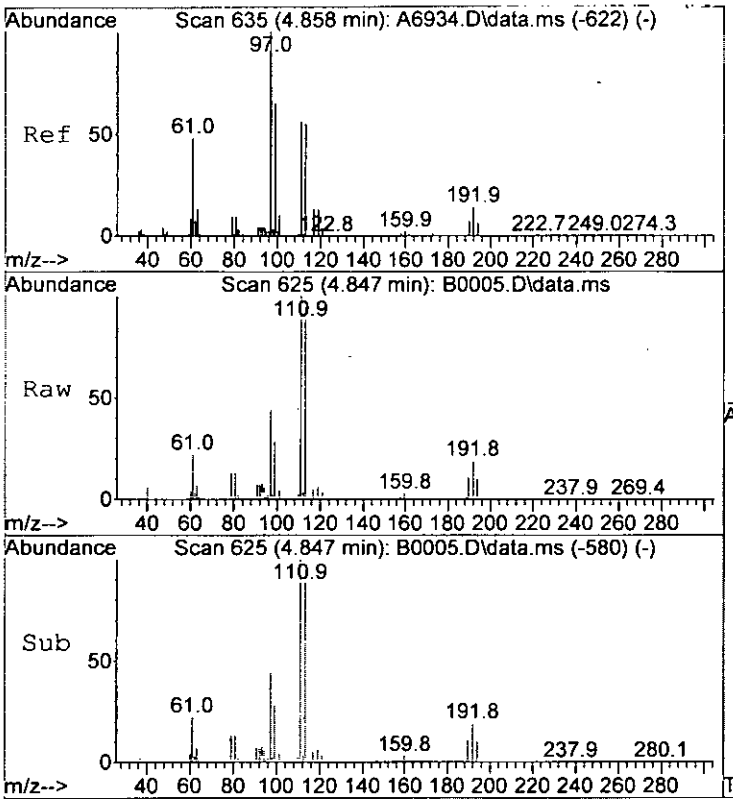


#33
cis-1,2-Dichloroethene
Concen: 8.10 ug/L
RT: 4.055 min Scan# 495
Delta R.T. 0.000 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 96 Resp: 90056

Ion	Ratio	Lower	Upper
96	100		
61	140.3	138.8	178.8

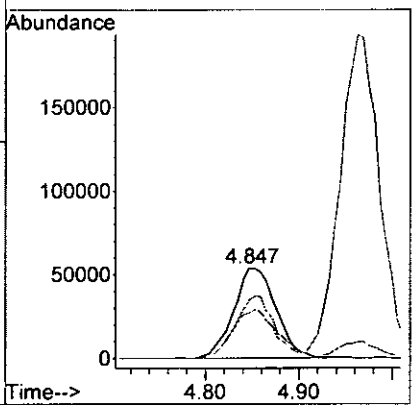


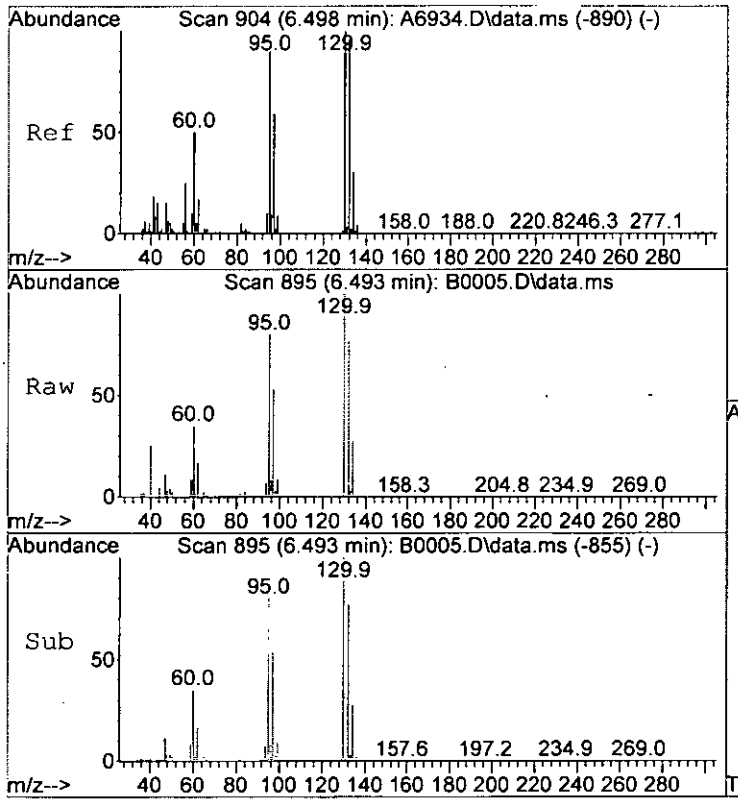


#40
1,1,1-Trichloroethane
Concen: 10.77 ug/L
RT: 4.847 min Scan# 625
Delta R.T. -0.006 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion: 97 Resp: 168726

Ion	Ratio	Lower	Upper
97	100		
99	64.5	40.9	80.9
61	49.9	25.2	65.2

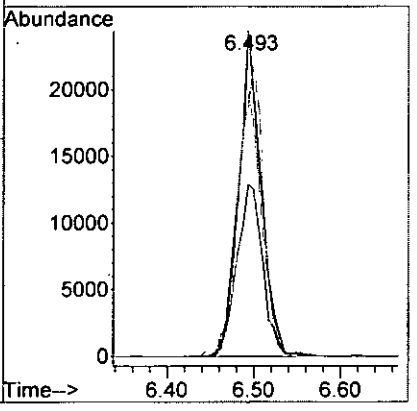


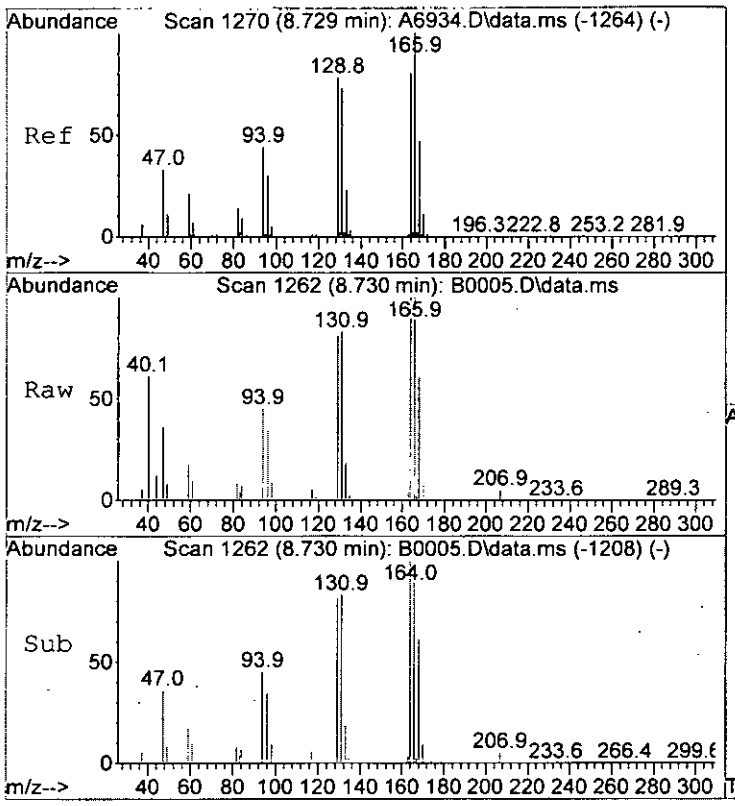


#53
Trichloroethene
Concen: 3.67 ug/L
RT: 6.493 min Scan# 895
Delta R.T. -0.006 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion:130 Resp: 43856

Ion	Ratio	Lower	Upper
130	100		
132	77.0	76.6	116.6
95	80.5	76.5	116.5
97	52.8	42.4	82.4

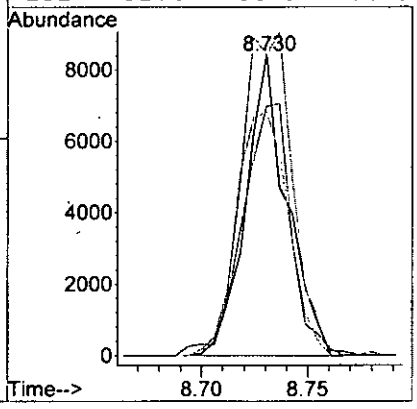




#71
Tetrachloroethene
Concen: 1.22 ug/L
RT: 8.730 min Scan# 1262
Delta R.T. 0.000 min
Lab File: B0005.D
Acq: 29 Jun 2015 3:32 pm

Tgt Ion:164 Resp: 11301

Ion	Ratio	Lower	Upper
164	100		
166	99.9	105.5	145.5#
129	80.9	73.7	113.7
131	82.6	66.9	106.9



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1400
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:00
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1504947-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0006.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	**32**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	**68**		5.0	
75-35-4	1,1-Dichloroethene	**7.7**		5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	**12**		5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1400
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:00
Sample Name:	MW-4	**Units:**	µg/L
Lab Code:	R1504947-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0006.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**21**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 16:00	
Dibromofluoromethane	100	89-119	6/29/15 16:00	
Toluene-d8	95	87-121	6/29/15 16:00	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0006.D
Acq On : 29 Jun 2015 4:00 pm
Operator : F. Naegler
Sample : R1504947-008|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 02 14:35:54 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1119792	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.146	114	1706465	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1561466	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	869147	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	529914	49.76	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery =	99.52%		
46) surr1,1,2-dichloroetha...	5.408	65	515393	47.10	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery =	94.20%		
64) SURR3,Toluene-d8	8.042	98	1921221	47.32	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery =	94.64%		
69) SURR2,BFB	10.675	95	738851	44.78	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery =	89.56%		
Target Compounds						Qvalue
4) Vinyl Chloride	1.348	62	32858	2.12	ug/L	99
6) Chloroethane	1.634	64	88537	11.63	ug/L	99
13) 1,1-Diclethene	2.195	96	63703	7.72	ug/L	99
15) Acetone	2.213	43	3559	Below Cal		90
22) Methylene Chloride	2.585	84	2524m	0.25	ug/L	
27) 1,1-Diclethane	3.305	63	1408229	67.93	ug/L	97
33) cis-1,2-Dichloroethene	4.055	96	232666	20.91	ug/L #	82
40) 1,1,1-Trichloroethane	4.853	97	509358	32.47	ug/L	92
48) 1,2-Dichloroethane	5.524	62	3498m	0.24	ug/L	
53) Trichloroethene	6.499	130	57080	4.83	ug/L	90
71) Tetrachloroethene	8.730	164	5470	0.58	ug/L	92

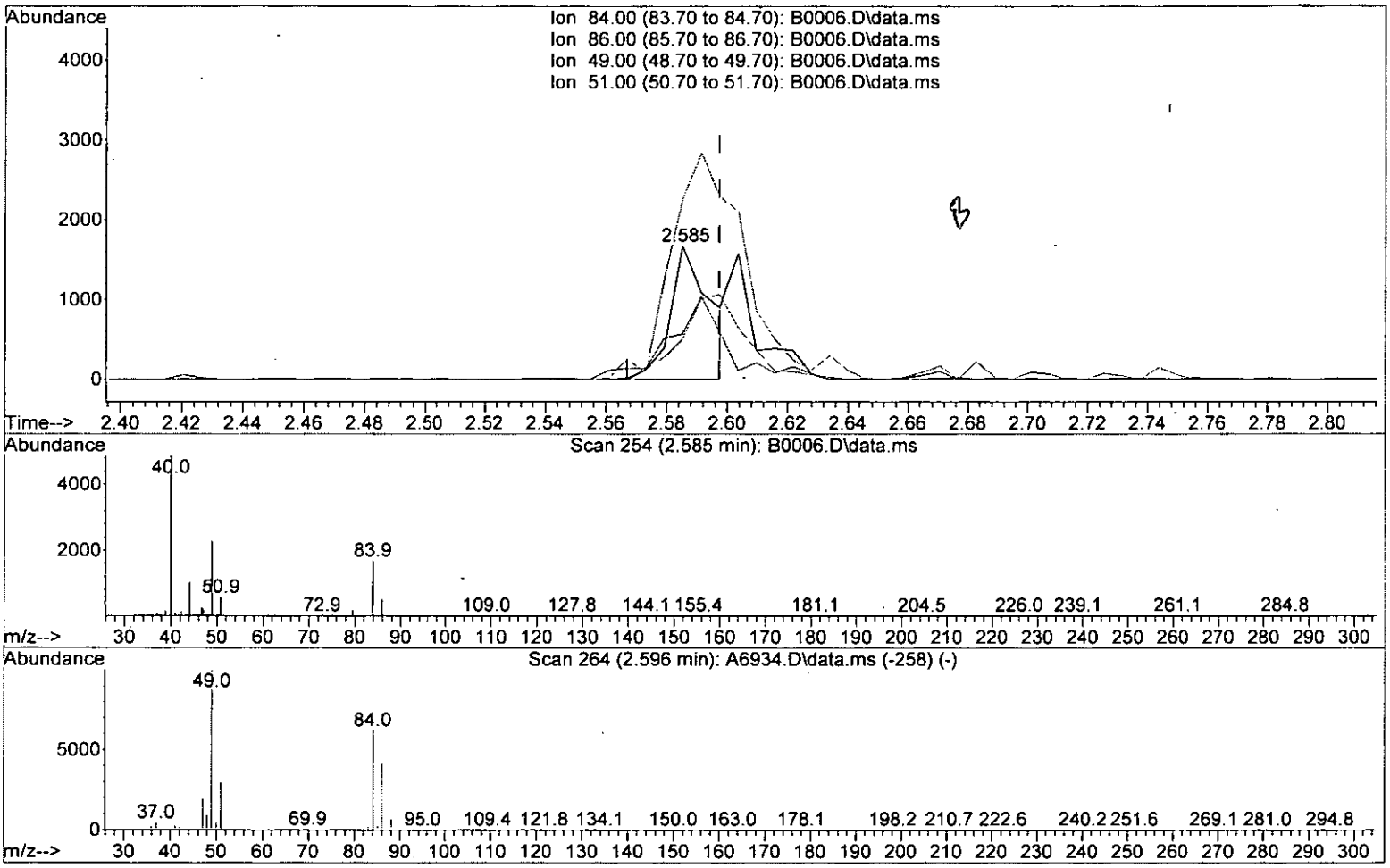
(#) = qualifier out of range (m) = manual integration (+) = signals summed

FD 7/2/15

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0006.D
Acq On : 29 Jun 2015 4:00 pm
Operator : F. Naegler
Sample : R1504947-008|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 29 16:14:37 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0006.D\data.ms

(22) Methylene Chloride (P)

2.585min (-0.012) 0.15 ug/L

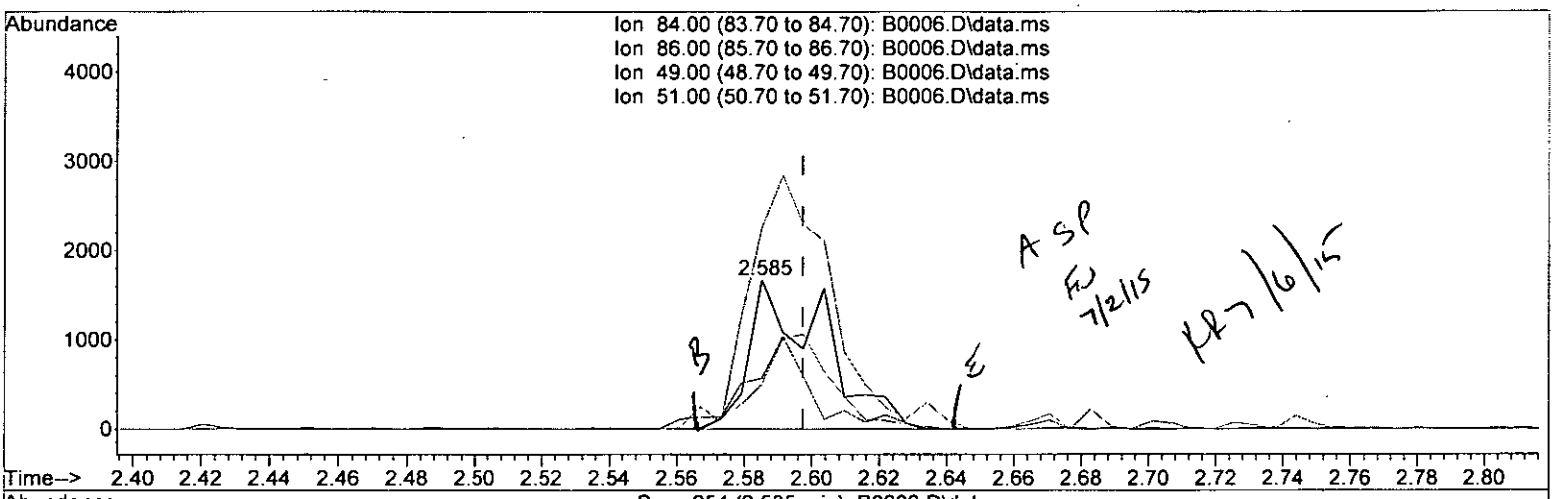
response 1521

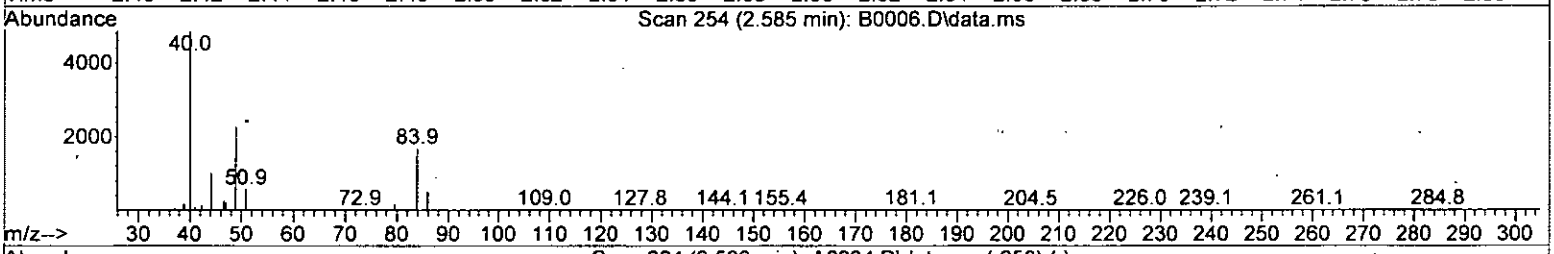
Ion	Exp%	Act%
84.00	100	100
86.00	65.50	30.18#
49.00	145.60	135.33
51.00	42.90	33.95

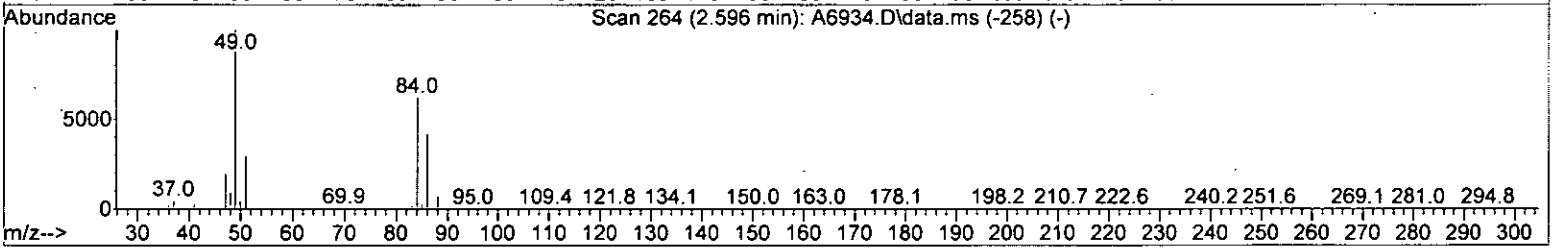
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0006.D
Acq On : 29 Jun 2015 4:00 pm
Operator : F. Naegler
Sample : R1504947-008|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 29 16:14:37 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: B0006.D\data.ms

(22) Methylene Chloride (P)

2.585min (-0.012) 0.25 ug/L m

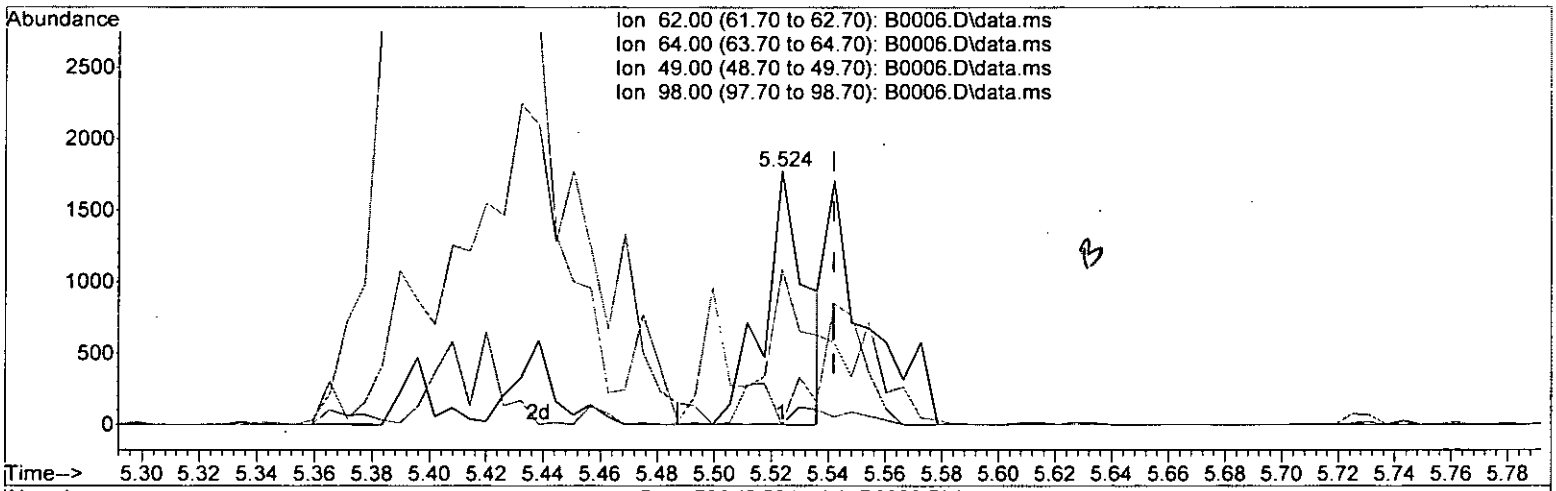
response 2524

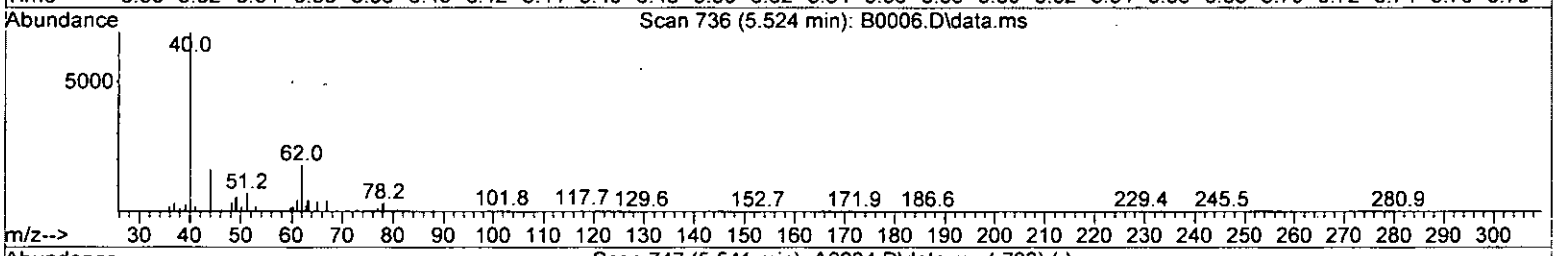
Ion	Exp%	Act%
84.00	100	100
86.00	65.50	30.18#
49.00	145.60	135.33
51.00	42.90	33.95

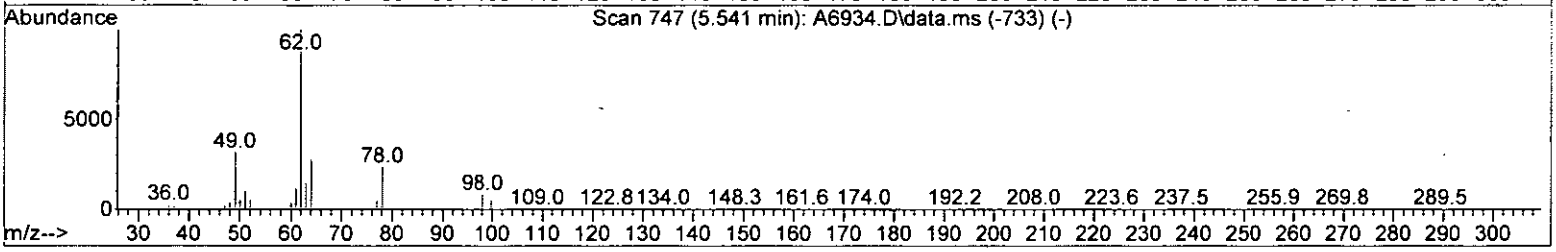
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0006.D
Acq On : 29 Jun 2015 4:00 pm
Operator : F. Naegler
Sample : R1504947-008|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 29 16:14:37 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: B0006.D\data.ms

(48) 1,2-Dichloroethane (P)

5.524min (-0.018) 0.12 ug/L

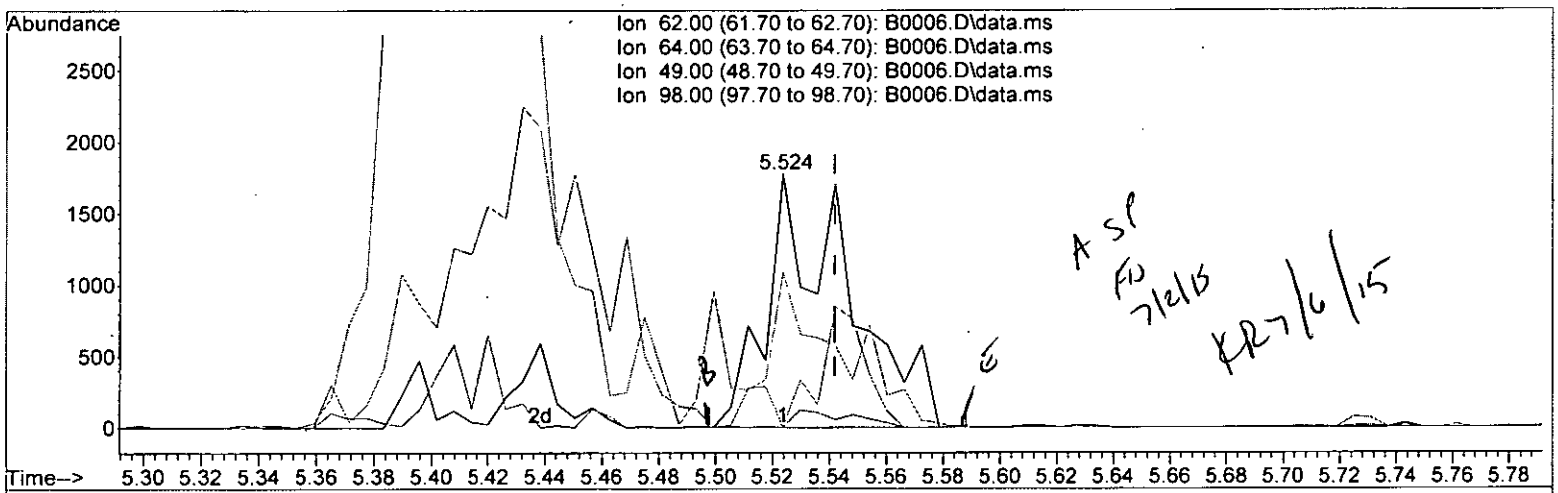
response 1836

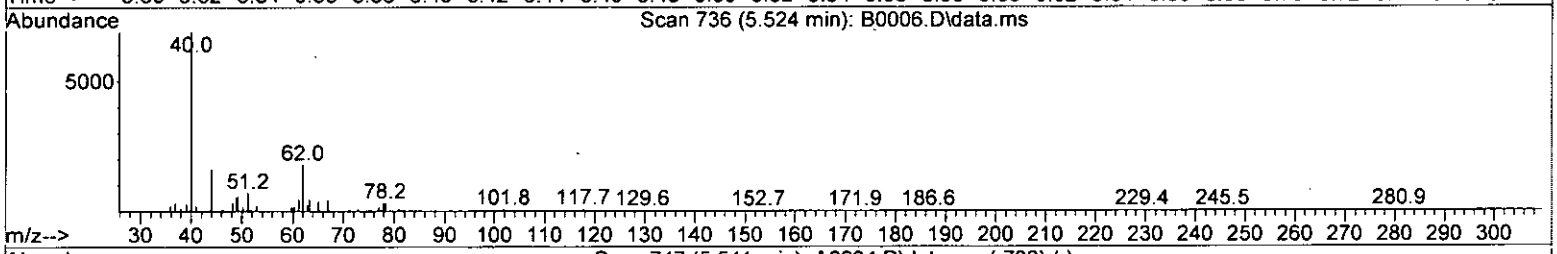
Ion	Exp%	Act%
62.00	100	100
64.00	30.70	0.00#
49.00	29.80	61.25#
98.00	7.00	0.00

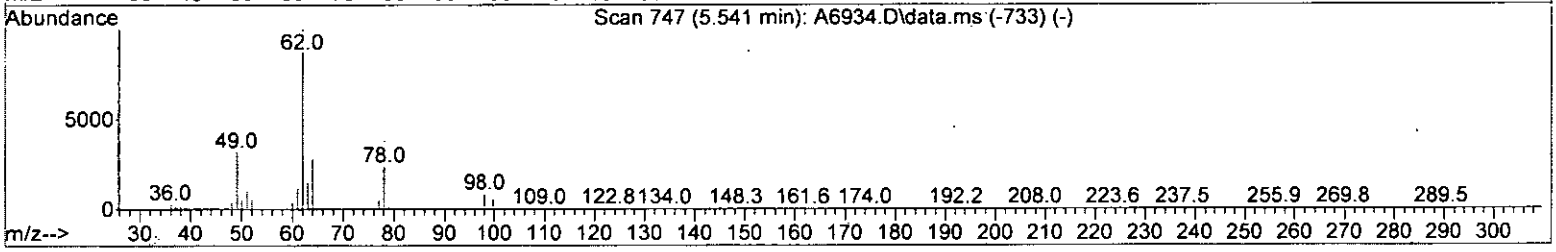
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0006.D
Acq On : 29 Jun 2015 4:00 pm
Operator : F. Naegler
Sample : R1504947-008|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 29 16:14:37 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: B0006.D\data.ms

(48) 1,2-Dichloroethane (P)

5.524min (-0.018) 0.24 ug/L m

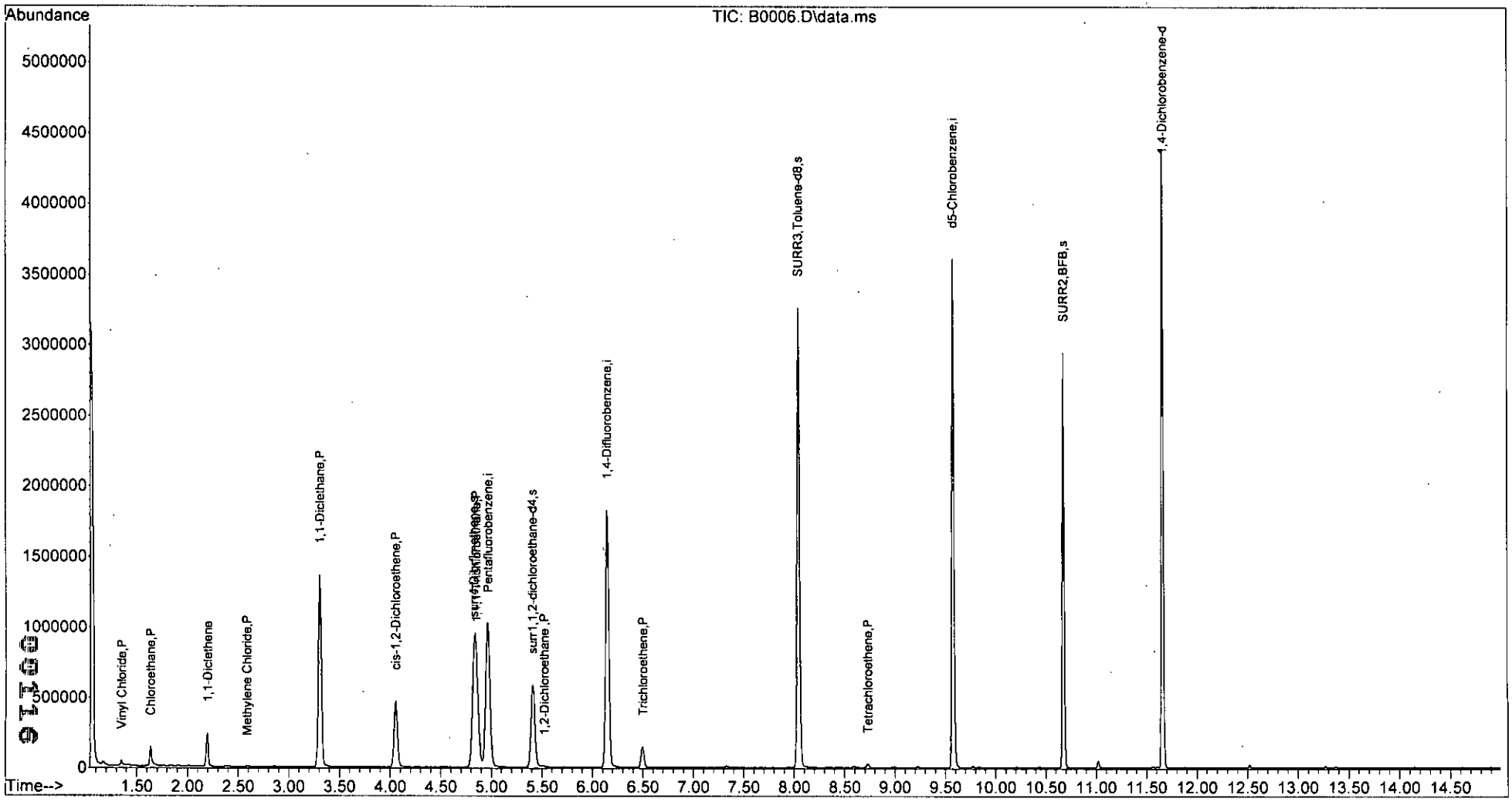
response 3498

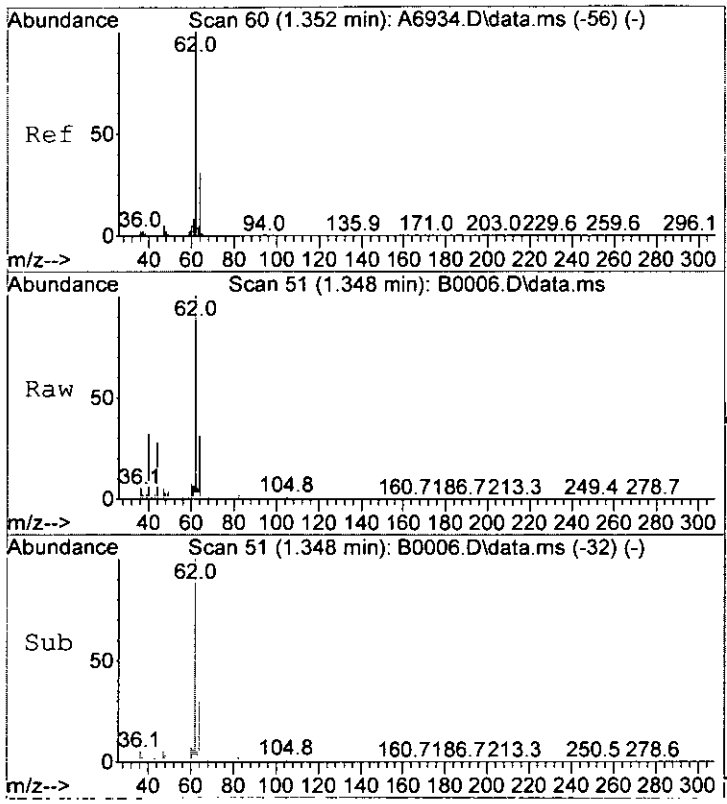
Ion	Exp%	Act%
62.00	100	100
64.00	30.70	0.00#
49.00	29.80	31.64
98.00	7.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0006.D
Acq On : 29 Jun 2015 4:00 pm
Operator : F. Naegler
Sample : R1504947-008|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 02 14:35:54 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

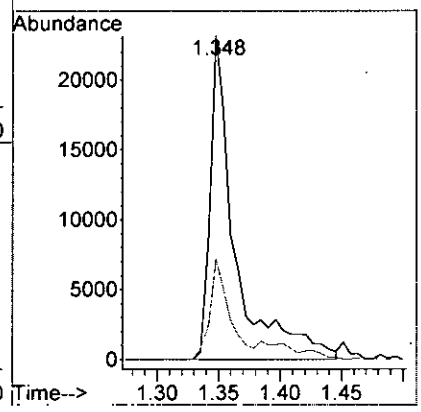


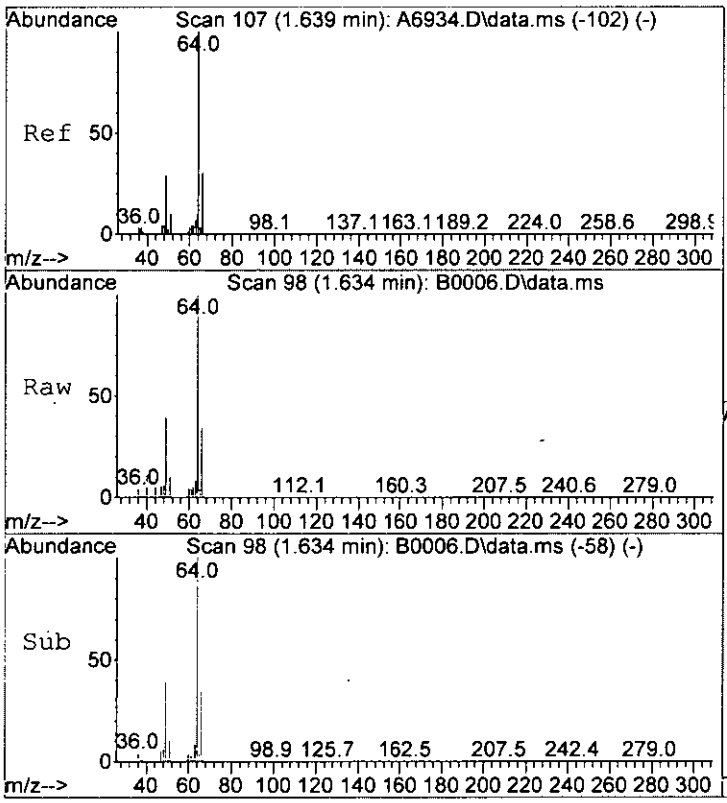


#4
Vinyl Chloride
Concen: 2.12 ug/L
RT: 1.348 min Scan# 51
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 62 Resp: 32858

Ion	Ratio	Lower	Upper
62	100		
64	30.9	11.7	51.7

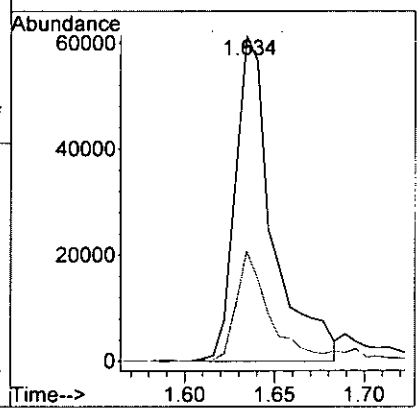


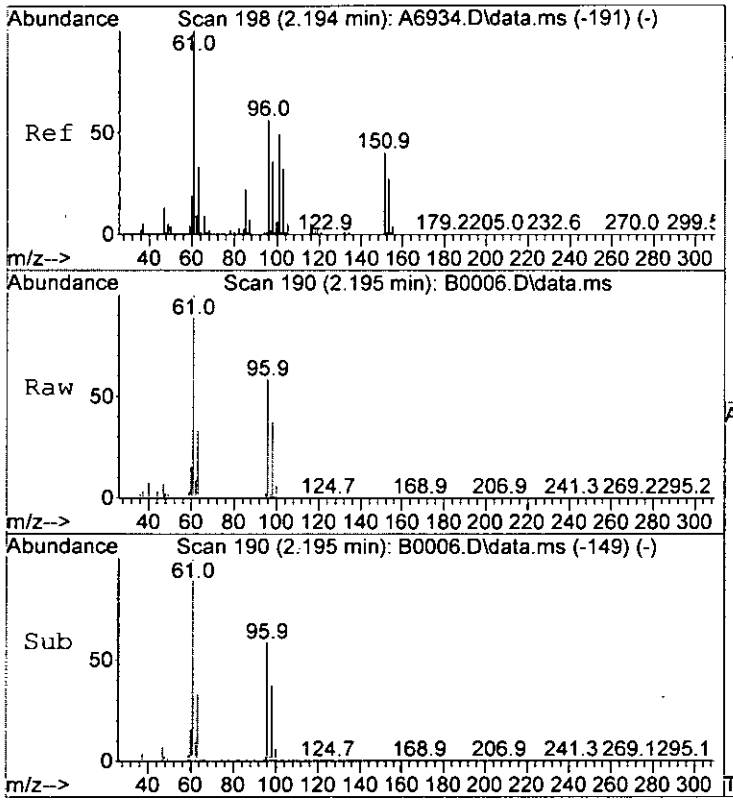


#6
Chloroethane
Concen: 11.63 ug/L
RT: 1.634 min Scan# 98
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 64 Resp: 88537

Ion	Ratio	Lower	Upper
64	100		
66	33.8	13.0	53.0

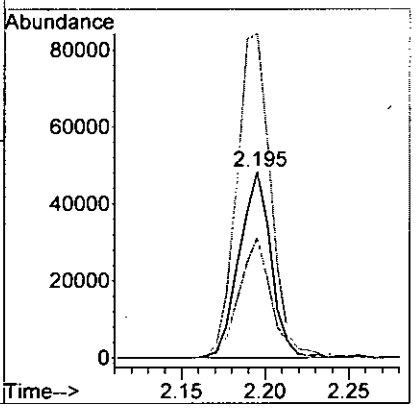


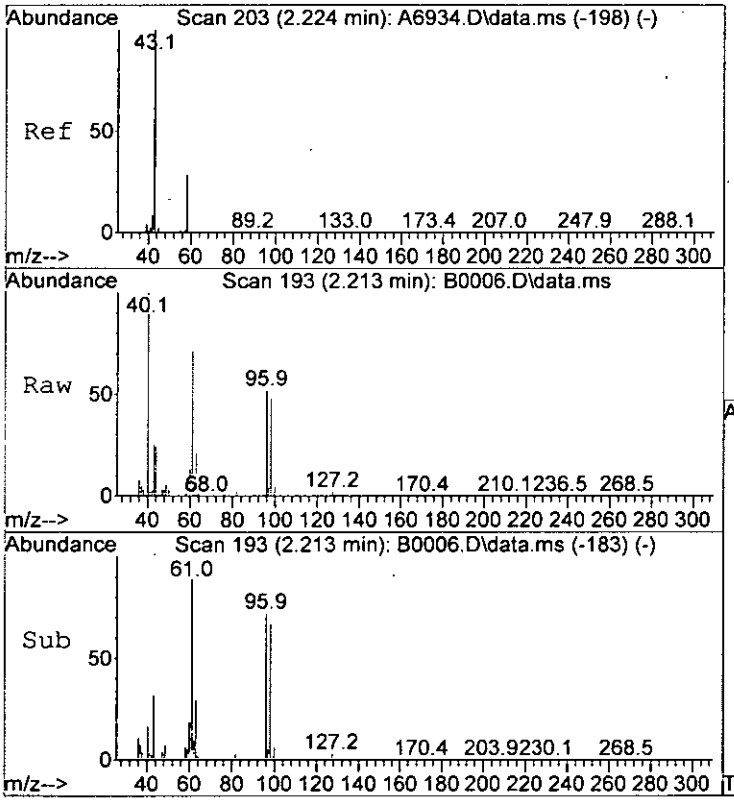


#13
1,1-Diclethene
Concen: 7.72 ug/L
RT: 2.195 min Scan# 190
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 96 Resp: 63703

Ion	Ratio	Lower	Upper
96	100		
98	64.2	43.2	83.2
61	173.8	155.6	195.6

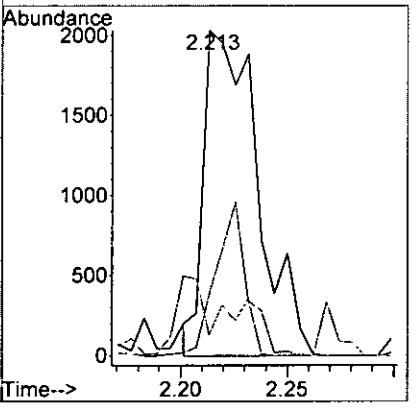


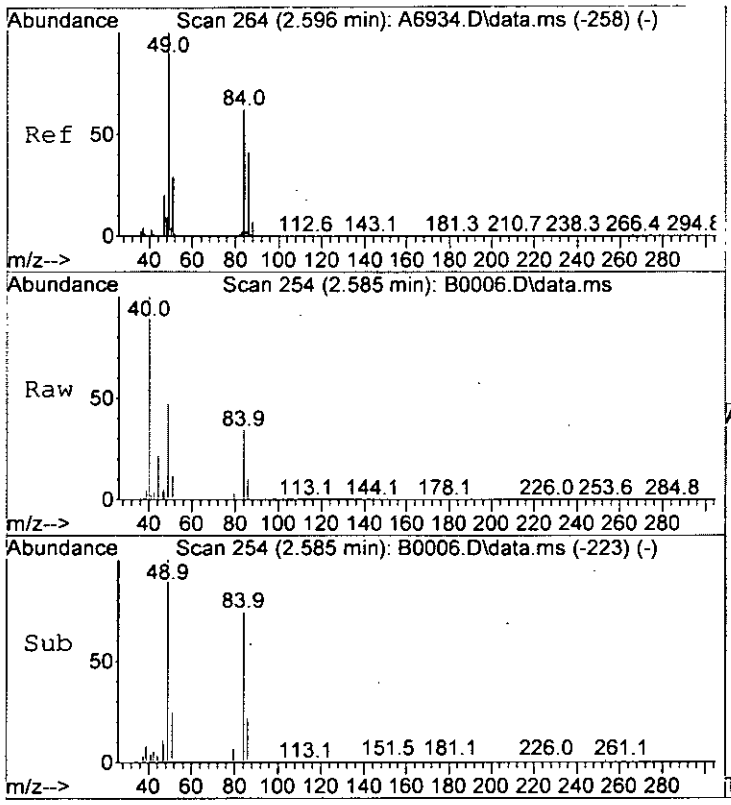


#15
Acetone
Concen: Below Cal
RT: 2.213 min Scan# 193
Delta R.T. -0.012 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 43 Resp: 3559

Ion	Ratio	Lower	Upper
43	100		
58	18.9	4.8	44.8
42	6.4	0.0	28.0

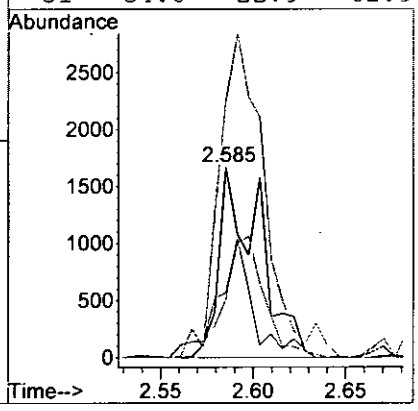


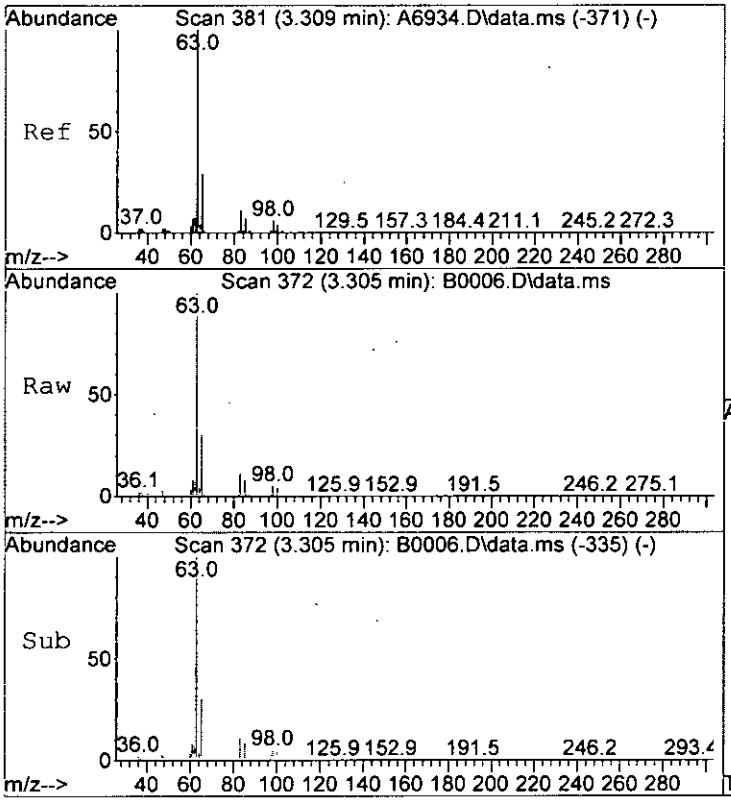


#22
Methylene Chloride
Concen: 0.25 ug/L m
RT: 2.585 min Scan# 254
Delta R.T. -0.012 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 84 Resp: 2524

Ion	Ratio	Lower	Upper
84	100		
86	30.2	45.5	85.5#
49	135.3	125.6	165.6
51	34.0	22.9	62.9

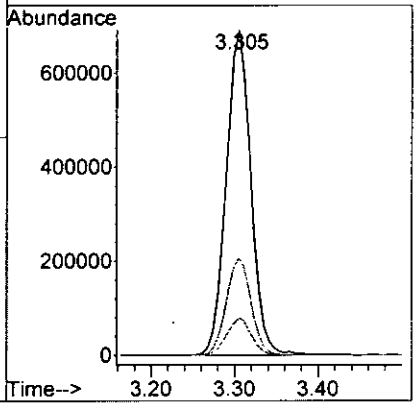


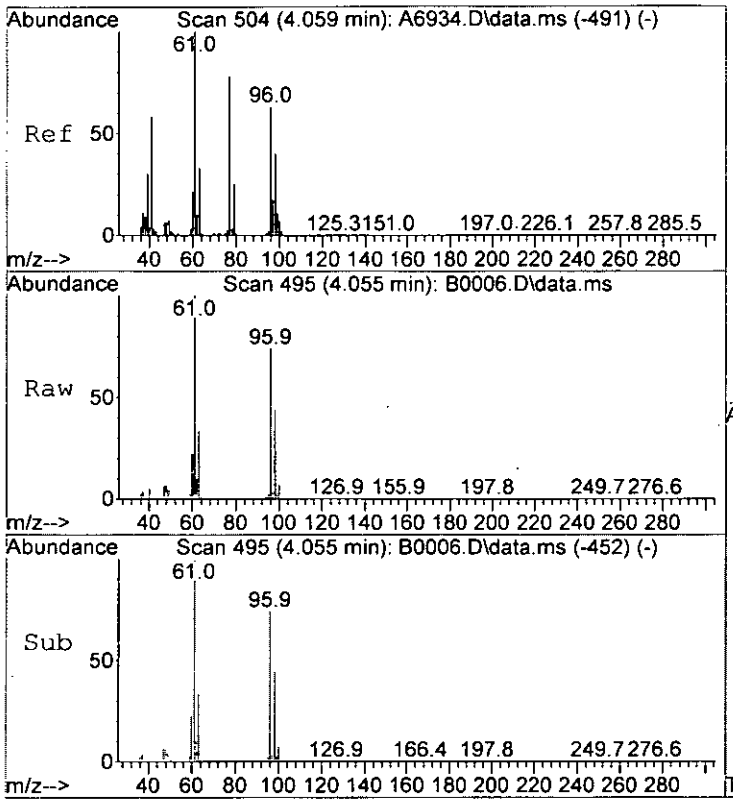


#27
1,1-Diclethane
Concen: 67.93 ug/L
RT: 3.305 min Scan# 372
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 63 Resp: 1408229

Ion	Ratio	Lower	Upper
63	100		
65	29.8	11.0	51.0
83	11.5	0.0	33.3

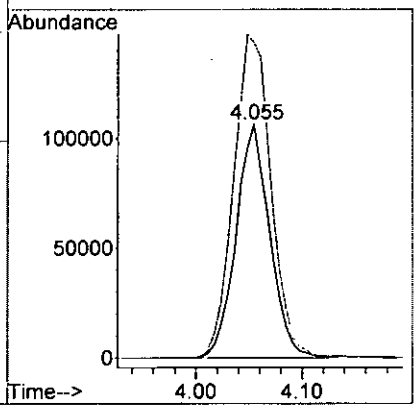


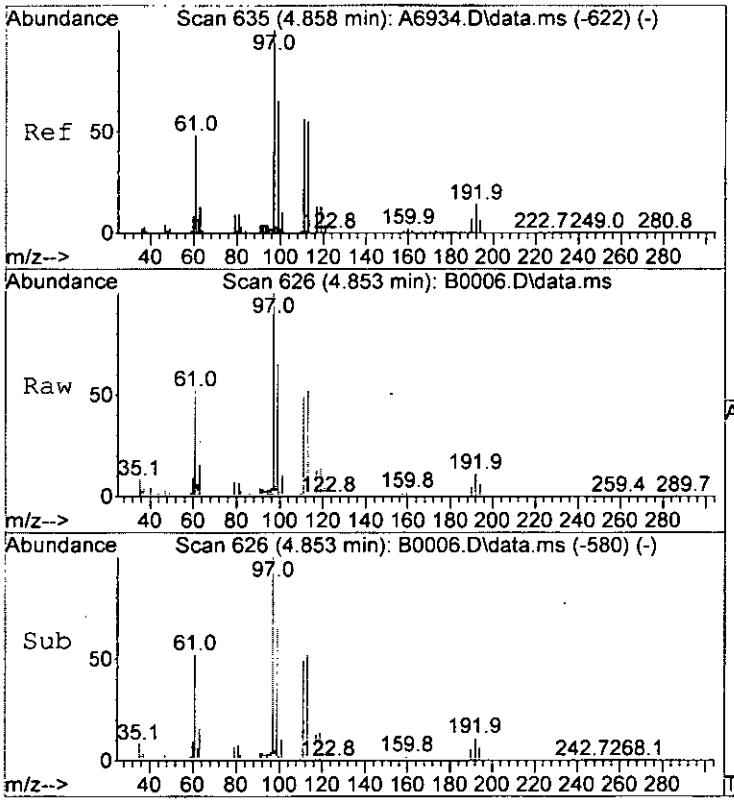


#33
cis-1,2-Dichloroethene
Concen: 20.91 ug/L
RT: 4.055 min Scan# 495
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 96 Resp: 232666

Ion	Ratio	Lower	Upper
96	100		
61	134.9	138.8	178.8#

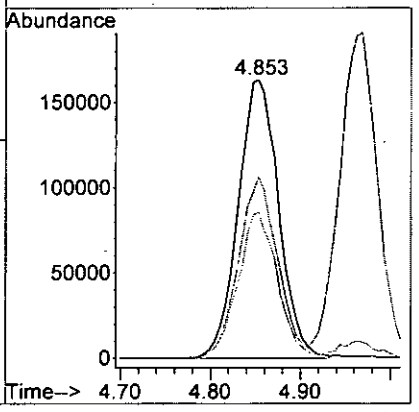


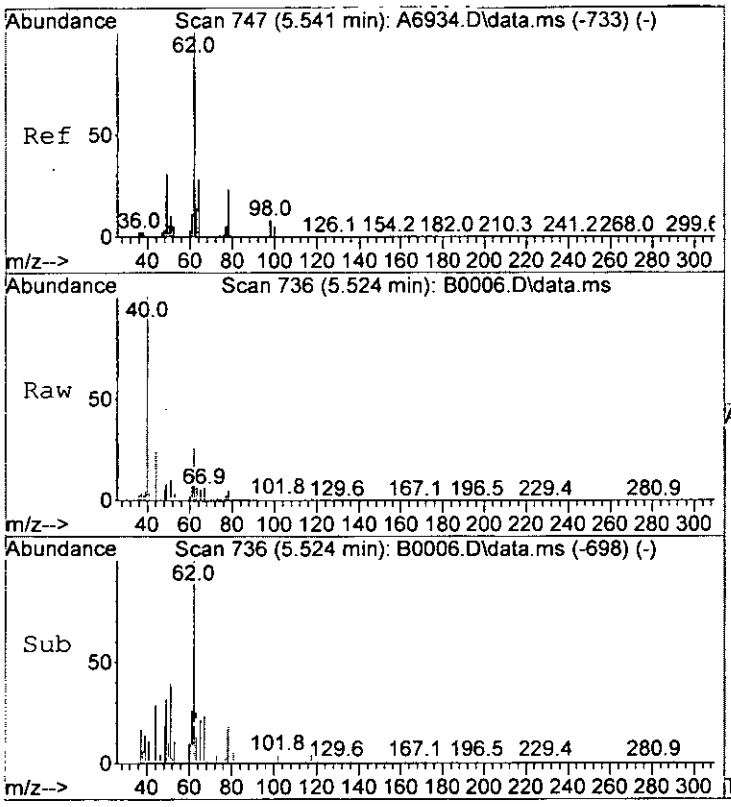


#40
1,1,1-Trichloroethane
Concen: 32.47 ug/L
RT: 4.853 min Scan# 626
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 97 Resp: 509358

Ion	Ratio	Lower	Upper
97	100		
99	65.1	40.9	80.9
61	52.4	25.2	65.2

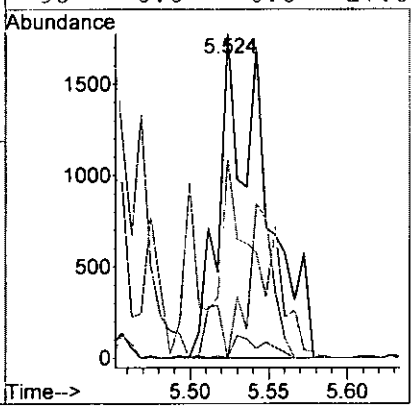


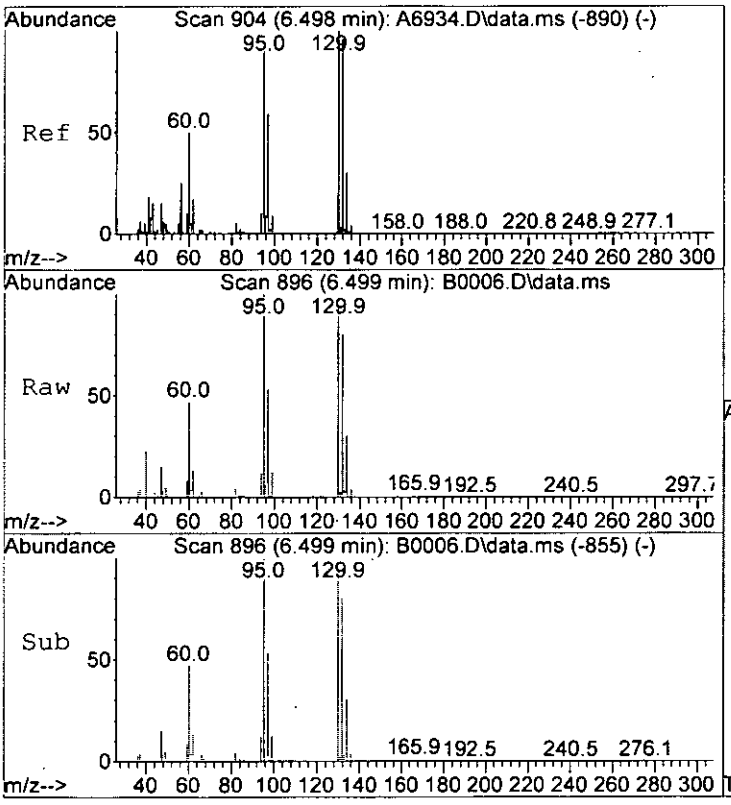


#48
1,2-Dichloroethane
Concen: 0.24 ug/L m
RT: 5.524 min Scan# 736
Delta R.T. -0.018 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion: 62 Resp: 3498

Ion	Ratio	Lower	Upper
62	100		
64	0.0	10.7	50.7#
49	31.6	9.8	49.8
98	0.0	0.0	27.0

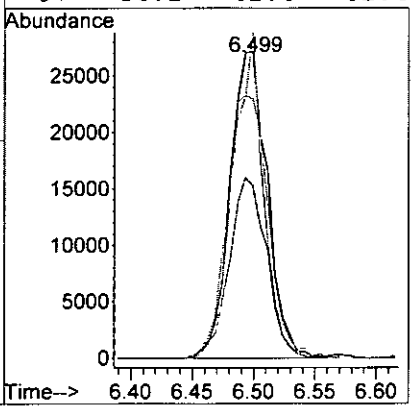


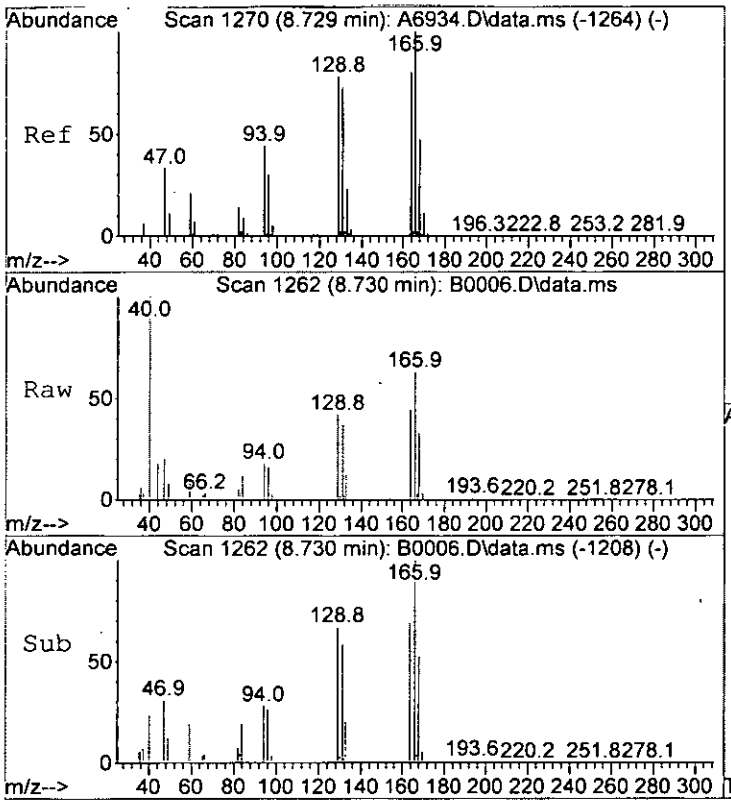


#53
Trichloroethene
Concen: 4.83 ug/L
RT: 6.499 min Scan# 896
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion:130 Resp: 57080

Ion	Ratio	Lower	Upper
130	100		
132	84.6	76.6	116.6
95	106.3	76.5	116.5
97	56.2	42.4	82.4

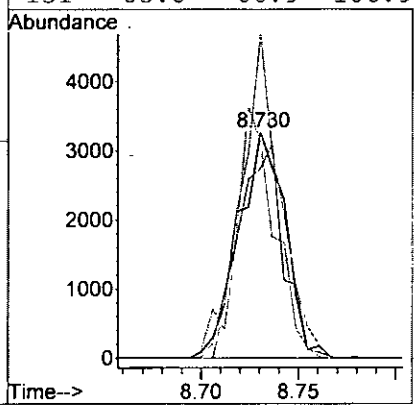




#71
Tetrachloroethene
Concen: 0.58 ug/L
RT: 8.730 min Scan# 1262
Delta R.T. 0.000 min
Lab File: B0006.D
Acq: 29 Jun 2015 4:00 pm

Tgt Ion:164 Resp: 5470

Ion	Ratio	Lower	Upper
164	100		
166	143.4	105.5	145.5
129	96.2	73.7	113.7
131	83.8	66.9	106.9



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1151
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:28
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1504947-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0007.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1151
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:28
Sample Name:	MW-7	**Units:**	µg/L
Lab Code:	R1504947-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0007.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	**7.1**		5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 16:28	
Dibromofluoromethane	98	89-119	6/29/15 16:28	
Toluene-d8	93	87-121	6/29/15 16:28	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0007.D
Acq On : 29 Jun 2015 4:28 pm
Operator : F. Naegler
Sample : R1504947-009|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 02 14:37:16 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1095805	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1714017	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1547531	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	867885	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	523153	48.91	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.82%			
46) surr1,1,2-dichloroetha...	5.408	65	525615	47.82	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 95.64%			
64) SURR3,Toluene-d8	8.042	98	1896793	46.51	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 93.02%			
69) SURR2,BFB	10.675	95	736478	44.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 88.88%			
Target Compounds						Qvalue
13) 1,1-Diclethene	2.189	96	4992	0.62	ug/L	91
15) Acetone	2.226	43	2381	Below Cal		91
27) 1,1-Diclethane	3.311	63	28102	1.39	ug/L	87
33) cis-1,2-Dichloroethene	4.055	96	32053	2.94	ug/L	88
40) 1,1,1-Trichloroethane	4.853	97	76645	4.99	ug/L	88
53) Trichloroethene	6.499	130	84193	7.09	ug/L	95

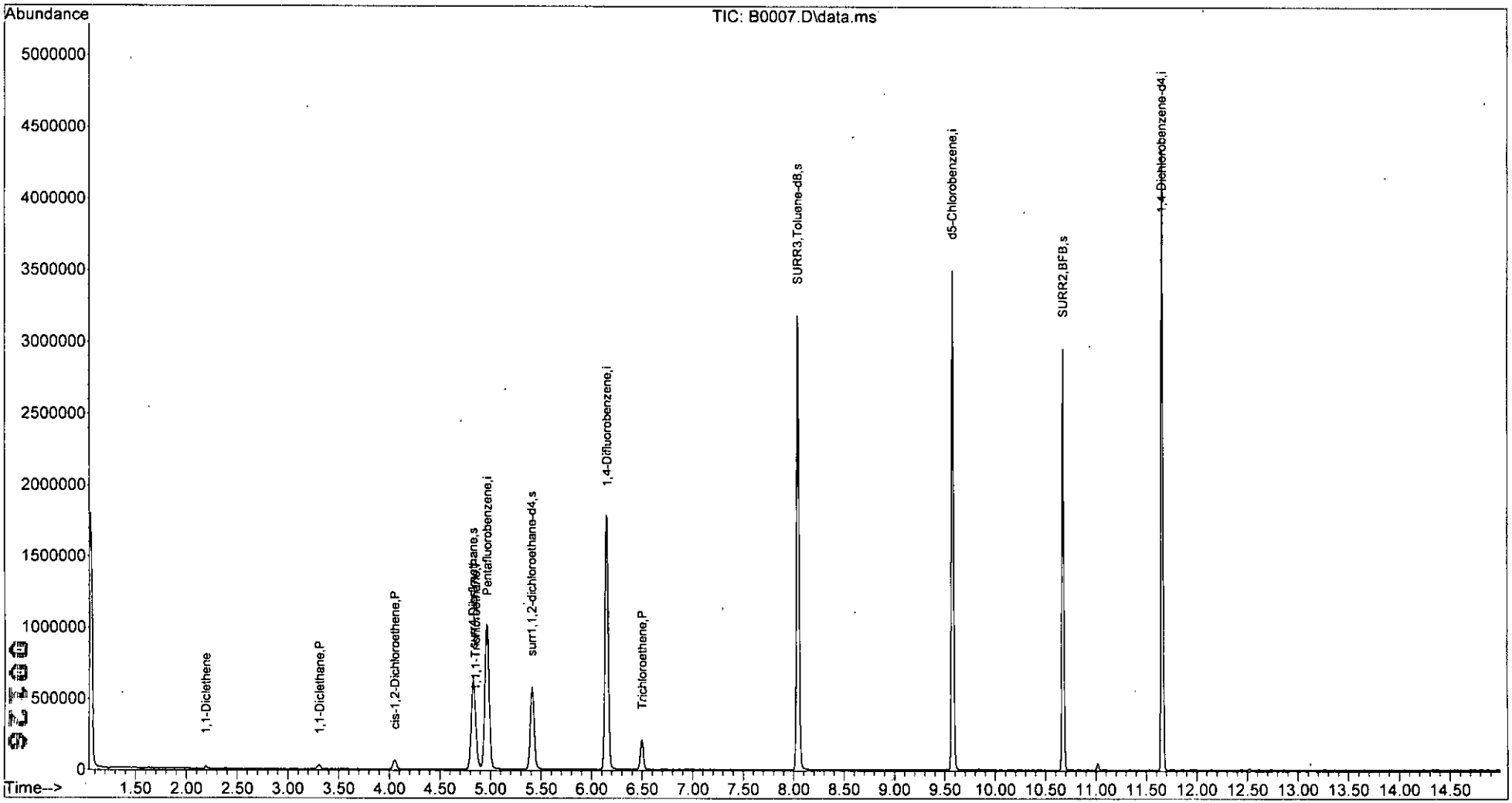
(#) = qualifier out of range (m) = manual integration (+) = signals summed

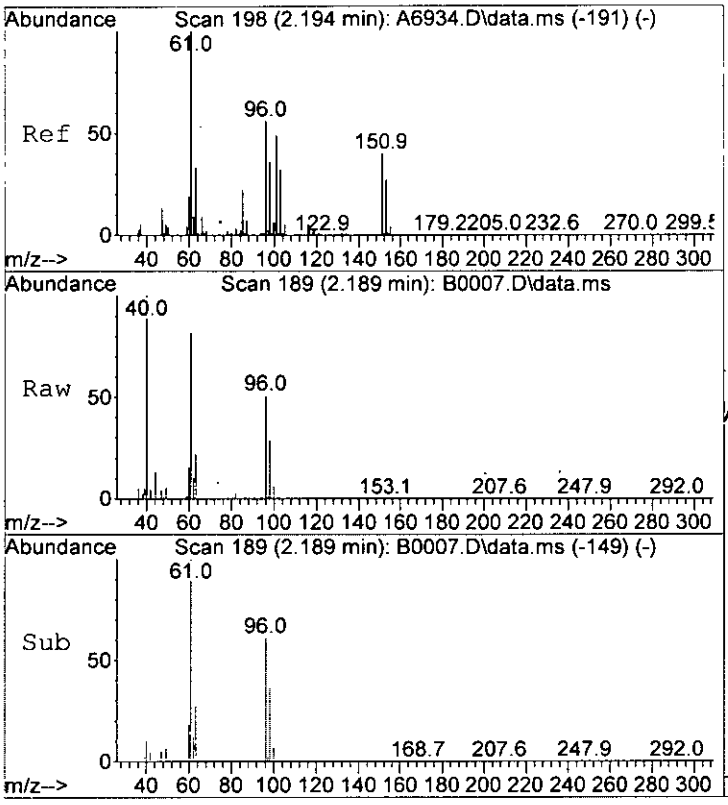
FW 7/2/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0007.D
Acq On : 29 Jun 2015 4:28 pm
Operator : F. Naegler
Sample : R1504947-009|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 02 14:37:16 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

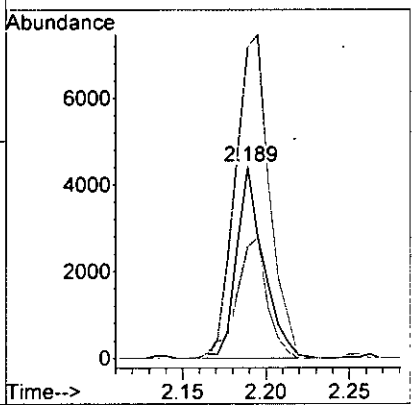


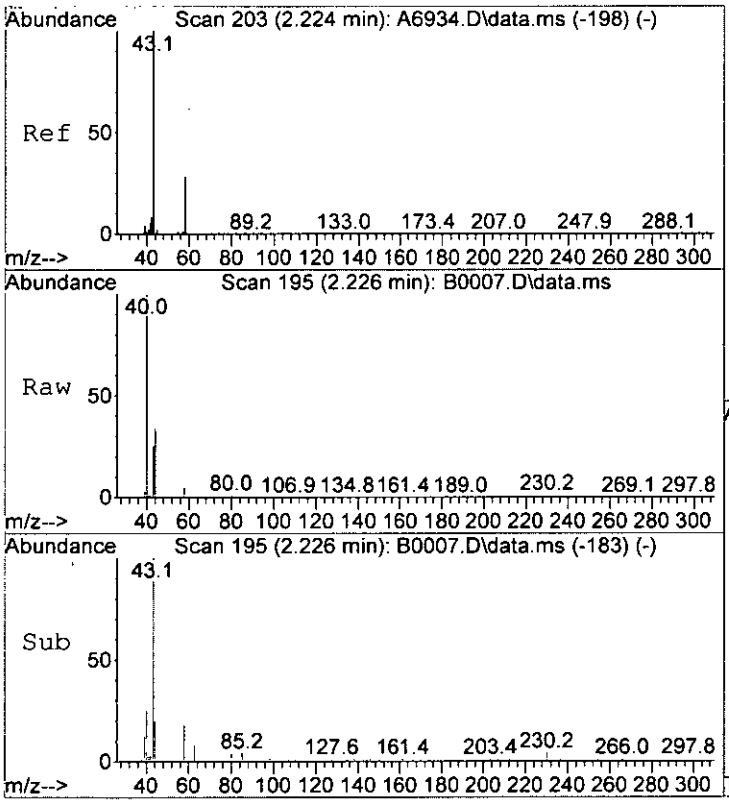


#13
1,1-Diclethene
Concen: 0.62 ug/L
RT: 2.189 min Scan# 189
Delta R.T. -0.006 min
Lab File: B0007.D
Acq: 29 Jun 2015 4:28 pm

Tgt Ion: 96 Resp: 4992

Ion	Ratio	Lower	Upper
96	100		
98	58.0	43.2	83.2
61	162.4	155.6	195.6

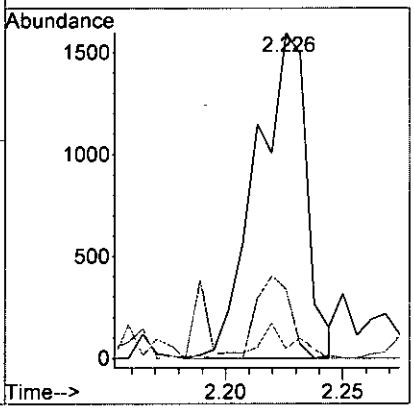


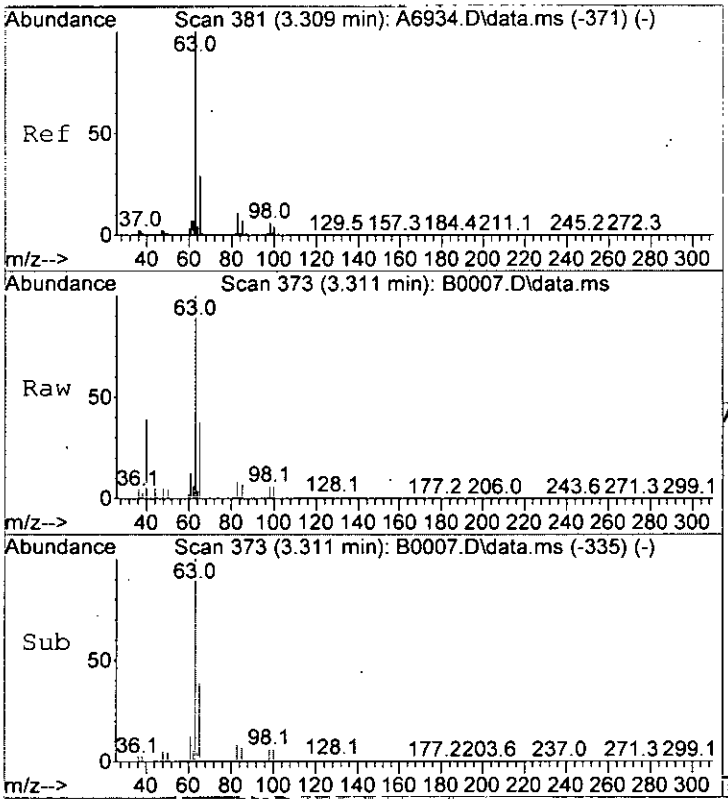


#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: B0007.D
Acq: 29 Jun 2015 4:28 pm

Tgt Ion: 43 Resp: 2381

Ion	Ratio	Lower	Upper
43	100		
58	21.2	4.8	44.8
42	2.9	0.0	28.0

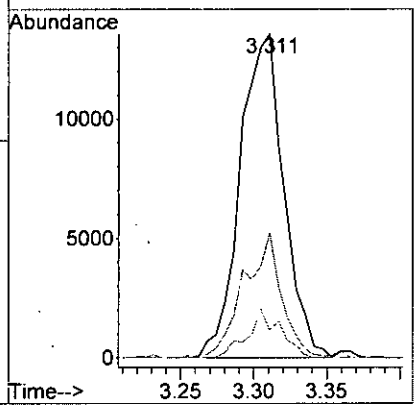


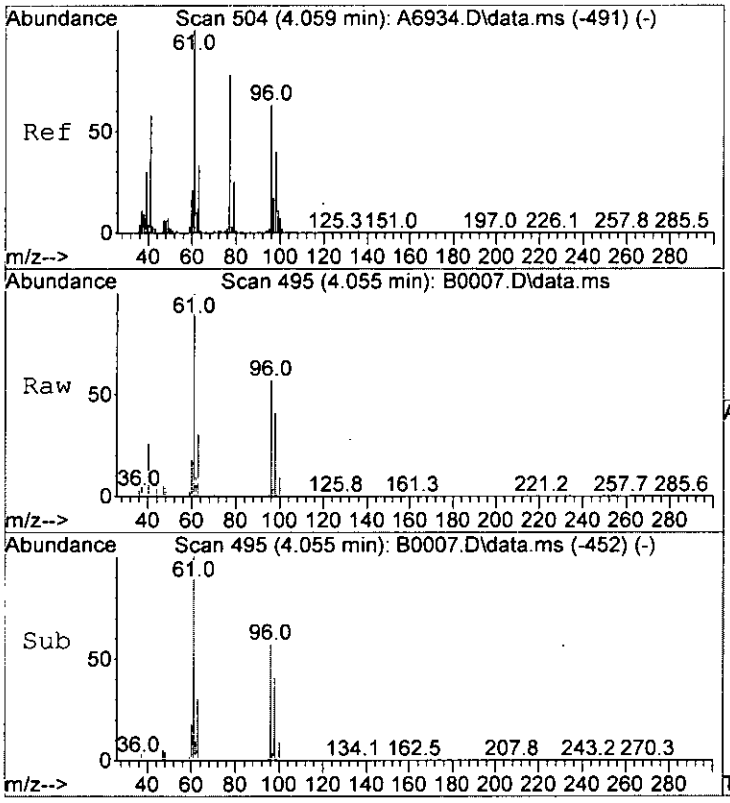


#27
1,1-Diclethane
Concen: 1.39 ug/L
RT: 3.311 min Scan# 373
Delta R.T. 0.006 min
Lab File: B0007.D
Acq: 29 Jun 2015 4:28 pm

Tgt Ion: 63 Resp: 28102

Ion	Ratio	Lower	Upper
63	100		
65	38.4	11.0	51.0
83	8.3	0.0	33.3

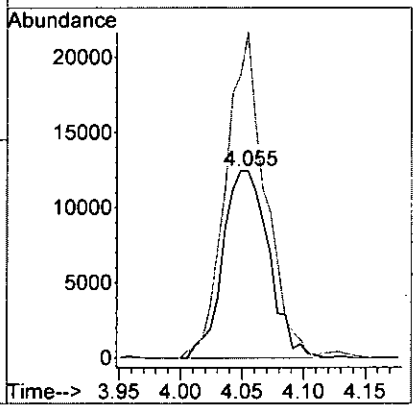


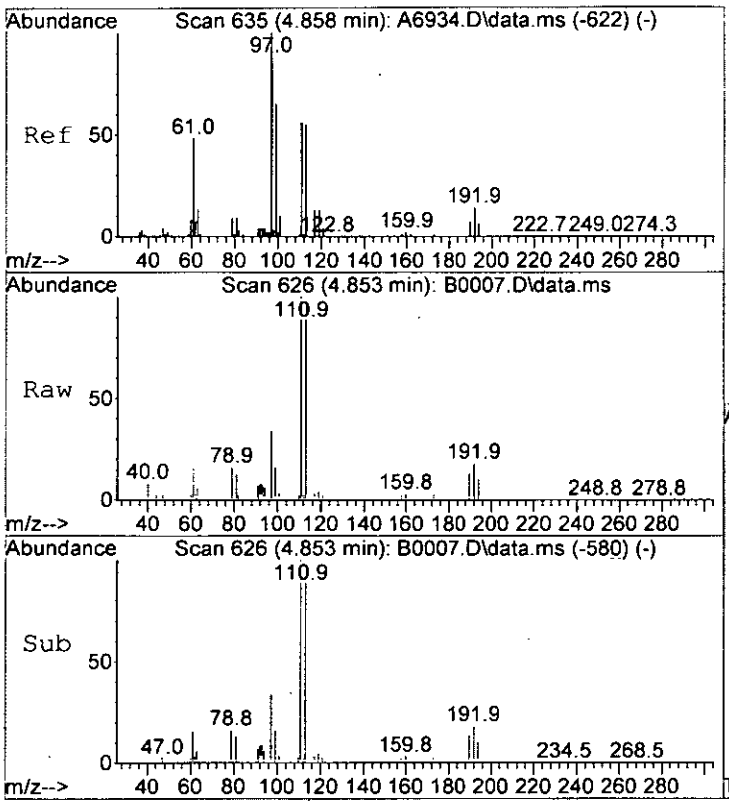


#33
cis-1,2-Dichloroethene
Concen: 2.94 ug/L
RT: 4.055 min Scan# 495
Delta R.T. 0.000 min
Lab File: B0007.D
Acq: 29 Jun 2015 4:28 pm

Tgt Ion: 96 Resp: 32053

Ion	Ratio	Lower	Upper
96	100		
61	174.1	138.8	178.8

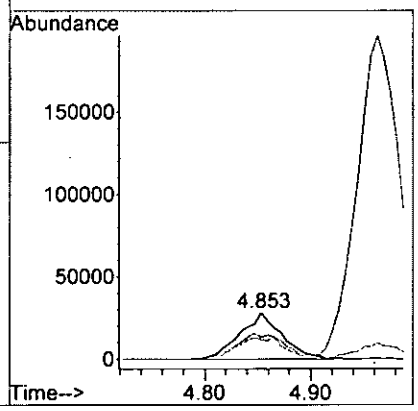


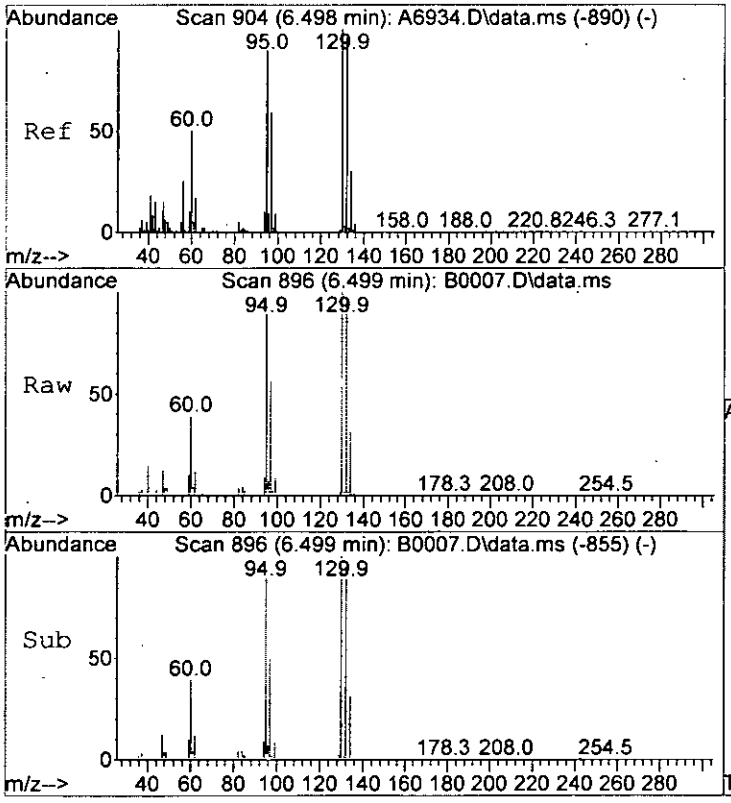


#40
1,1,1-Trichloroethane
Concen: 4.99 ug/L
RT: 4.853 min Scan# 626
Delta R.T. 0.000 min
Lab File: B0007.D
Acq: 29 Jun 2015 4:28 pm

Tgt Ion: 97 Resp: 76645

Ion	Ratio	Lower	Upper
97	100		
99	47.0	40.9	80.9
61	42.4	25.2	65.2

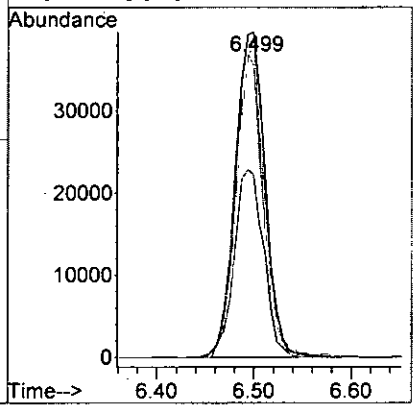




#53
Trichloroethene
Concen: 7.09 ug/L
RT: 6.499 min Scan# 896
Delta R.T. 0.000 min
Lab File: B0007.D
Acq: 29 Jun 2015 4:28 pm

Tgt Ion:130 Resp: 84193

Ion	Ratio	Lower	Upper
130	100		
132	98.2	76.6	116.6
95	89.8	76.5	116.5
97	56.3	42.4	82.4



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:56
Sample Name:	MW-15	**Units:**	µg/L
Lab Code:	R1504947-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 16:56
Sample Name:	MW-15	**Units:**	µg/L
Lab Code:	R1504947-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 16:56	
Dibromofluoromethane	99	89-119	6/29/15 16:56	
Toluene-d8	97	87-121	6/29/15 16:56	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0008.D
Acq On : 29 Jun 2015 4:56 pm
Operator : F. Naegler
Sample : R1504947-010|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 02 14:41:07 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1098258	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1695988	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1562274	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	870331	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	524470	49.55	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.10%			
46) surr1,1,2-dichloroetha...	5.414	65	519304	47.75	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 95.50%			
64) SURR3,Toluene-d8	8.041	98	1960133	48.58	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 97.16%			
69) SURR2,BFB	10.675	95	725841	44.26	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 88.52%			
Target Compounds						Qvalue
15) Acetone	2.219	43	3481	Below Cal		94
103) p-Isopropyltoluene	11.644	119	56606	1.40	ug/L	92

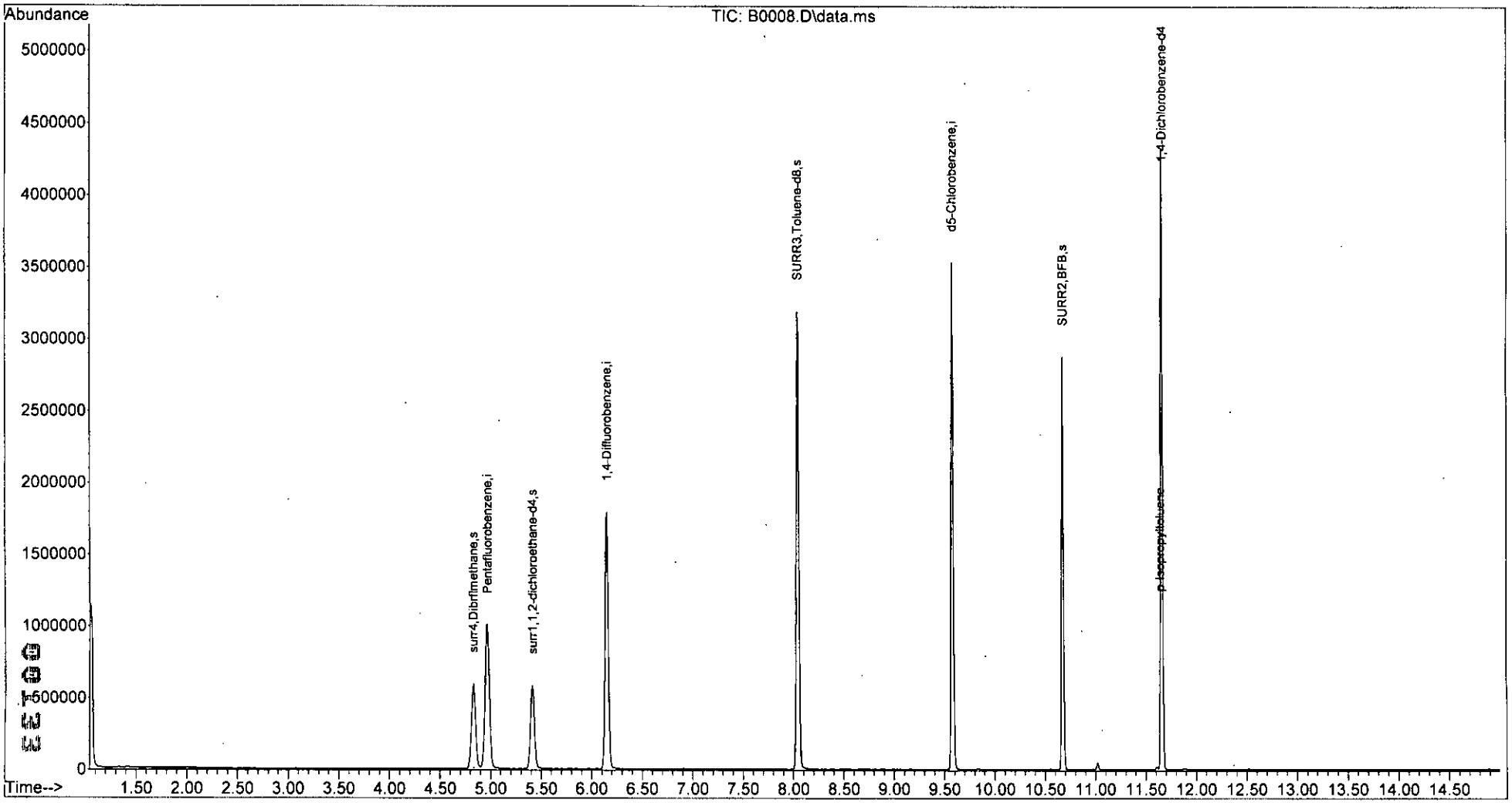
(#) = qualifier out of range (m) = manual integration (+) = signals summed

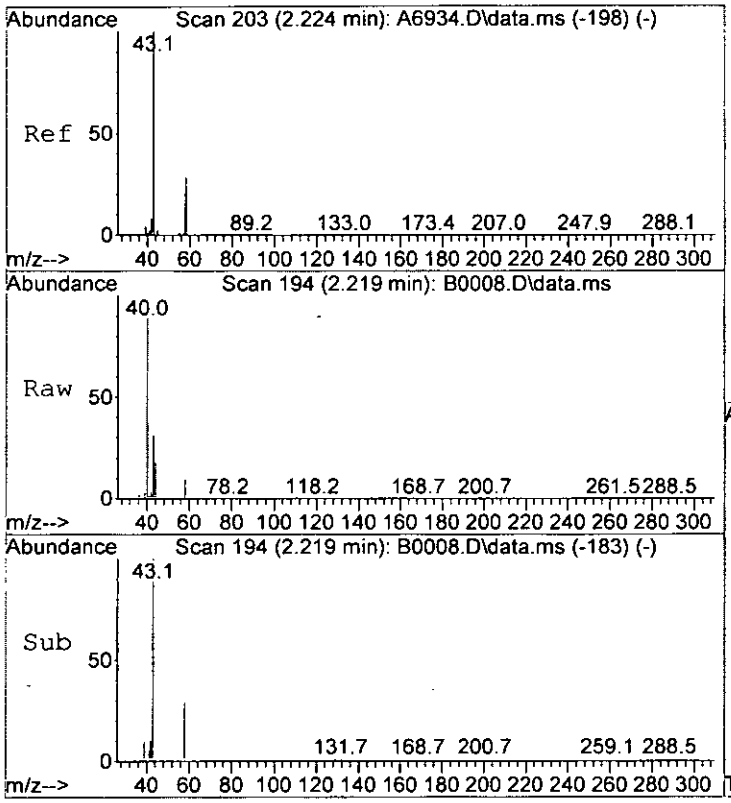
FJ 7/2/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0008.D
Acq On : 29 Jun 2015 4:56 pm
Operator : F. Naegler
Sample : R1504947-010|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 02 14:41:07 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

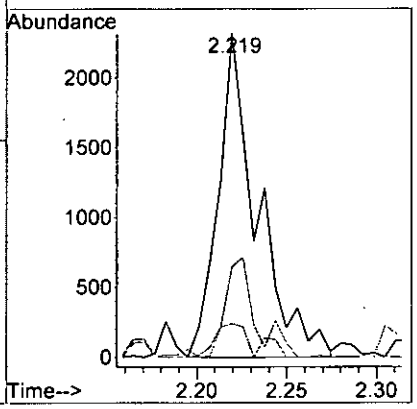


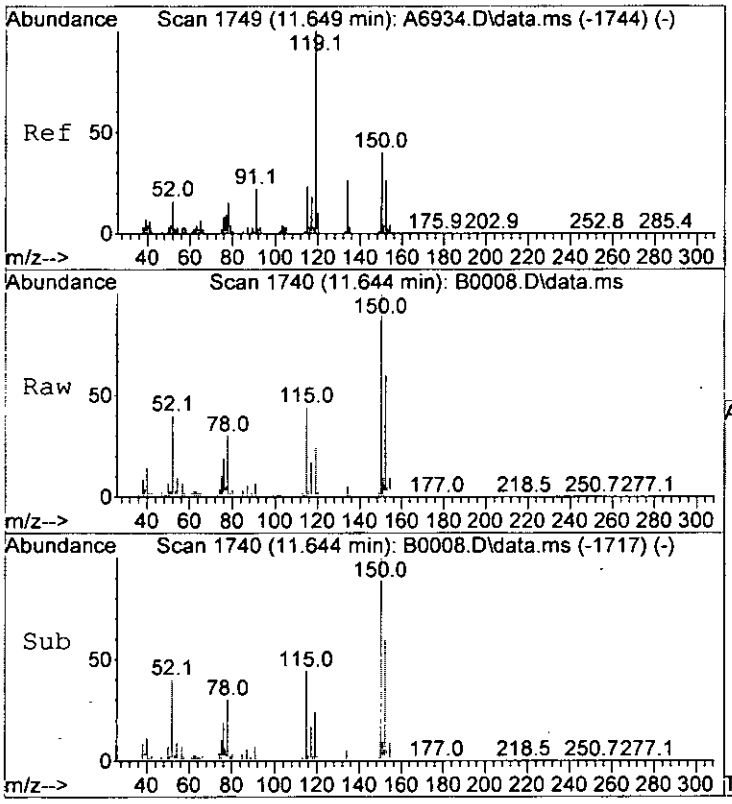


#15
Acetone
Concen: Below Cal
RT: 2.219 min Scan# 194
Delta R.T. -0.006 min
Lab File: B0008.D
Acq: 29 Jun 2015 4:56 pm

Tgt Ion: 43 Resp: 3481

Ion	Ratio	Lower	Upper
43	100		
58	27.9	4.8	44.8
42	10.3	0.0	28.0

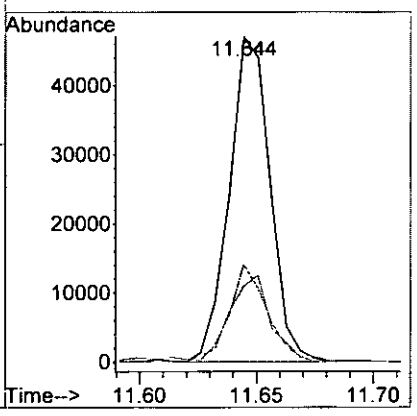




#103
p-Isopropyltoluene
Concen: 1.40 ug/L
RT: 11.644 min Scan# 1740
Delta R.T. -0.006 min
Lab File: B0008.D
Acq: 29 Jun 2015 4:56 pm

Tgt Ion:119 Resp: 56606

Ion	Ratio	Lower	Upper
119	100		
134	23.1	5.9	45.9
91	29.9	4.2	44.2



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/30/15 14:20
Sample Name:	MW-1D	**Units:**	µg/L
Lab Code:	R1504947-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1530
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/30/15 14:20
Sample Name:	MW-1D	**Units:**	µg/L
Lab Code:	R1504947-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/30/15 14:20	
Dibromofluoromethane	98	89-119	6/30/15 14:20	
Toluene-d8	87	87-121	6/30/15 14:20	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0008.D
Acq On : 30 Jun 2015 2:20 pm
Operator : F. Naegler
Sample : R1504947-011|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 05 16:29:32 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1056975	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.145	114	1611528	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1486781	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	825481	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	492555	48.98	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.96%			
46) surr1,1,2-dichloroetha...	5.408	65	492046	47.61	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 95.22%			
64) SURR3,Toluene-d8	8.041	98	1665921	43.45	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 86.90%#			
69) SURR2,BFB	10.675	95	689742	44.27	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 88.54%			
Target Compounds						Qvalue
15) Acetone	2.219	43	6250	Below Cal		87

OK ; rounds ↑ ✓

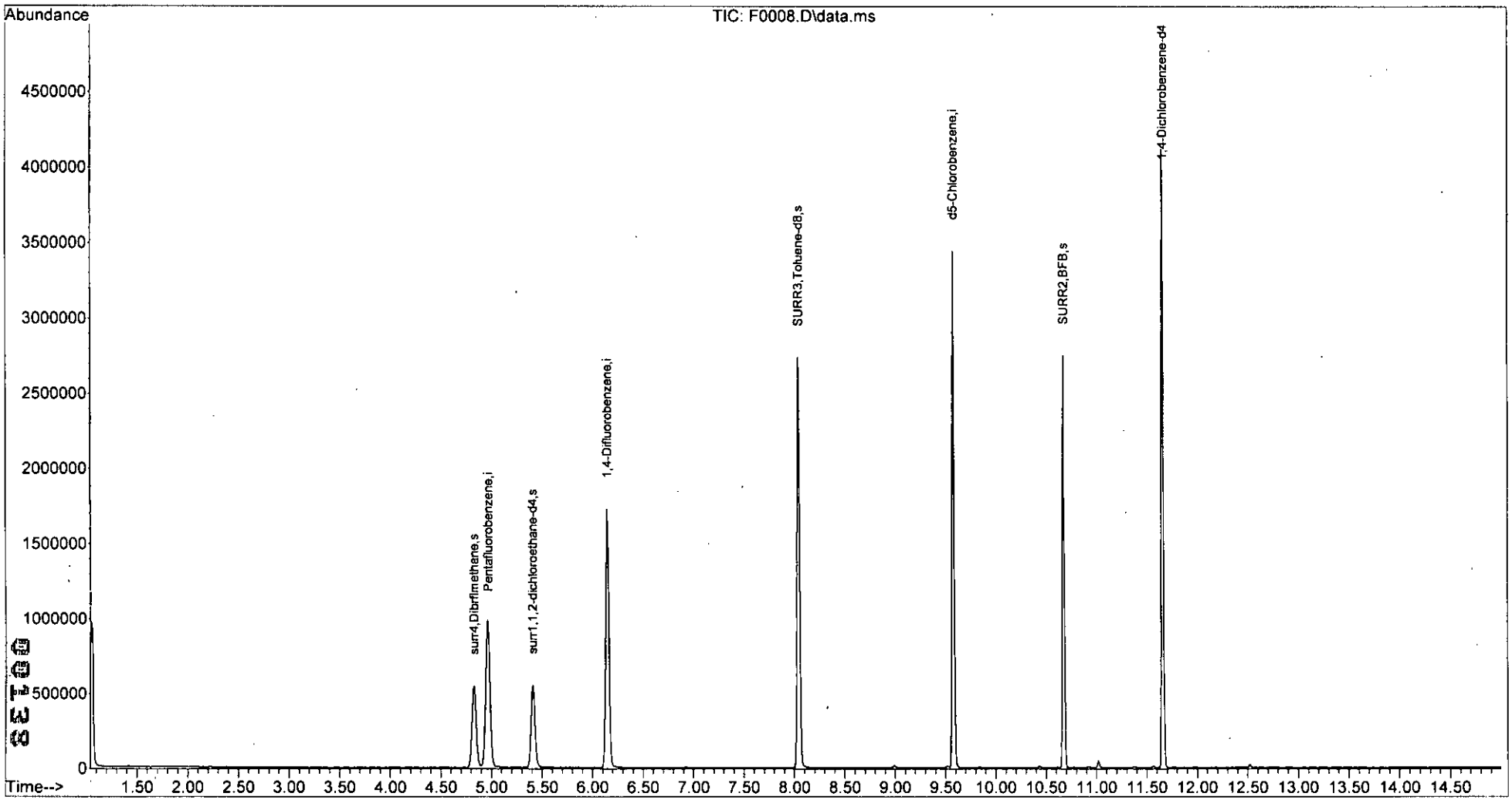
(#) = qualifier out of range (m) = manual integration (+) = signals summed

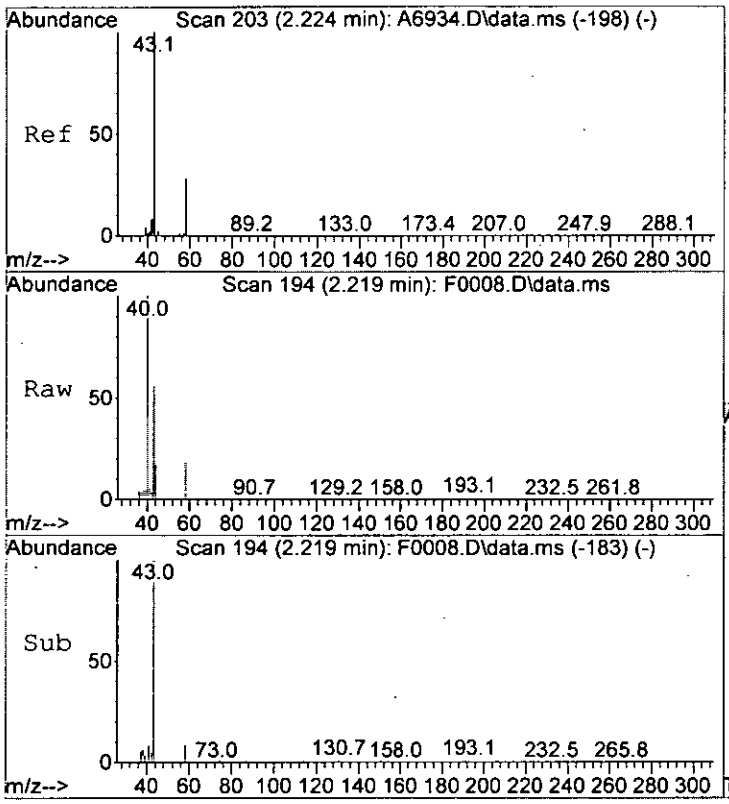
FW 7/5/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0008.D
Acq On : 30 Jun 2015 2:20 pm
Operator : F. Naegler
Sample : R1504947-011|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 05 16:29:32 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

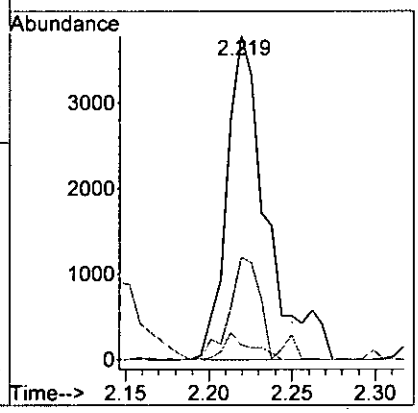




#15
Acetone
Concen: Below Cal
RT: 2.219 min Scan# 194
Delta R.T. -0.006 min
Lab File: F0008.D
Acq: 30 Jun 2015 2:20 pm

Tgt Ion: 43 Resp: 6250

Ion	Ratio	Lower	Upper
43	100		
58	31.6	4.8	44.8
42	4.6	0.0	28.0



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1320
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 17:52
Sample Name:	SW-01	**Units:**	µg/L
Lab Code:	R1504947-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0010.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1320
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 17:52
Sample Name:	SW-01	**Units:**	µg/L
Lab Code:	R1504947-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0010.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 17:52	
Dibromofluoromethane	98	89-119	6/29/15 17:52	
Toluene-d8	96	87-121	6/29/15 17:52	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0010.D
Acq On : 29 Jun 2015 5:52 pm
Operator : F. Naegler
Sample : R1504947-012|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 05 15:34:53 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1097412	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1699662	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1547537	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	860202	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	518602	48.89	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.78%			
46) surr1,1,2-dichloroetha...	5.408	65	516596	47.40	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 94.80%			
64) SURR3,Toluene-d8	8.041	98	1931120	47.76	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.52%			
69) SURR2,BFB	10.675	95	734625	44.70	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.40%			
Target Compounds						Qvalue
15) Acetone	2.219	43	6467	Below Cal		94

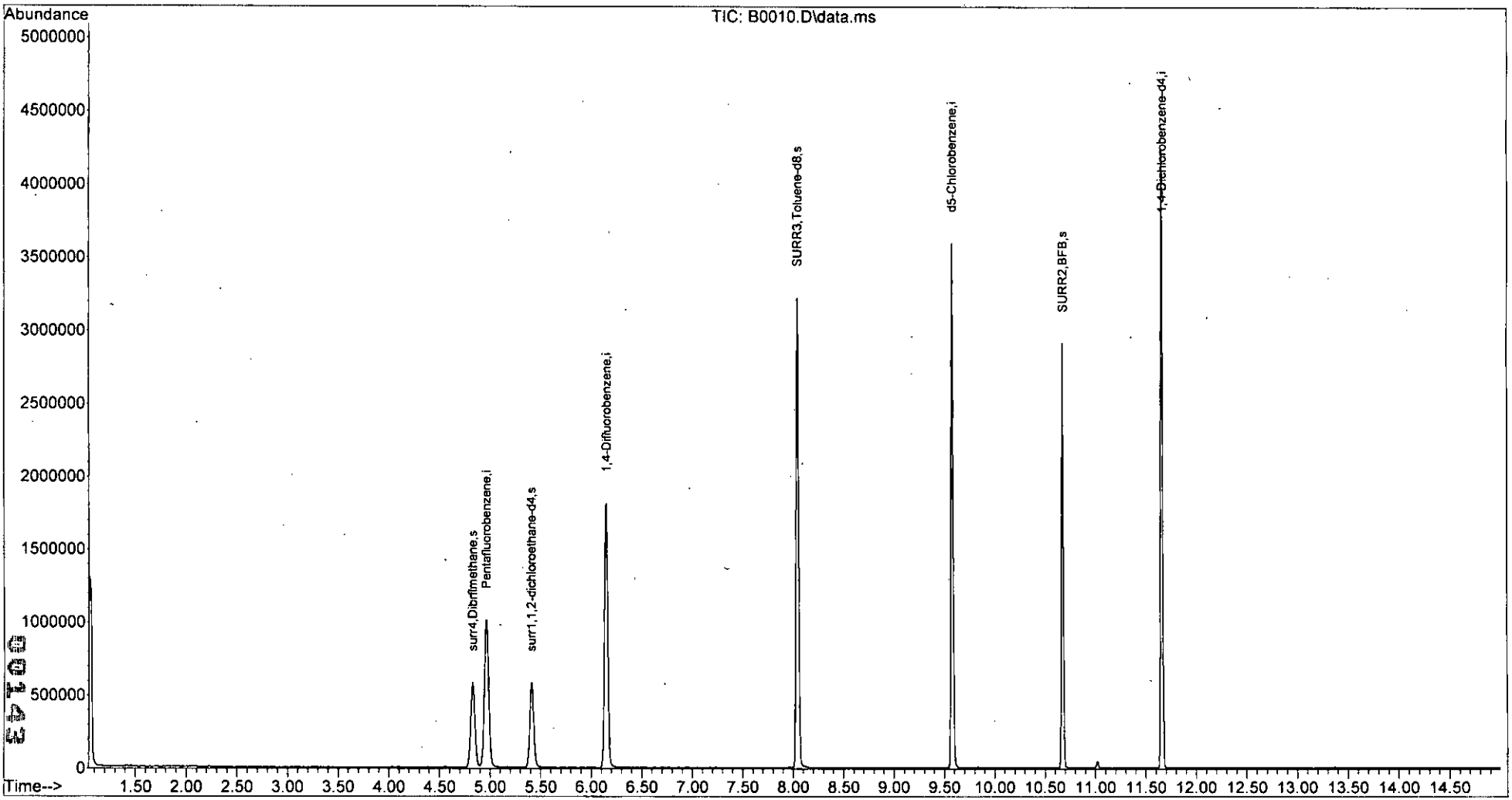
(#) = qualifier out of range (m) = manual integration (+) = signals summed

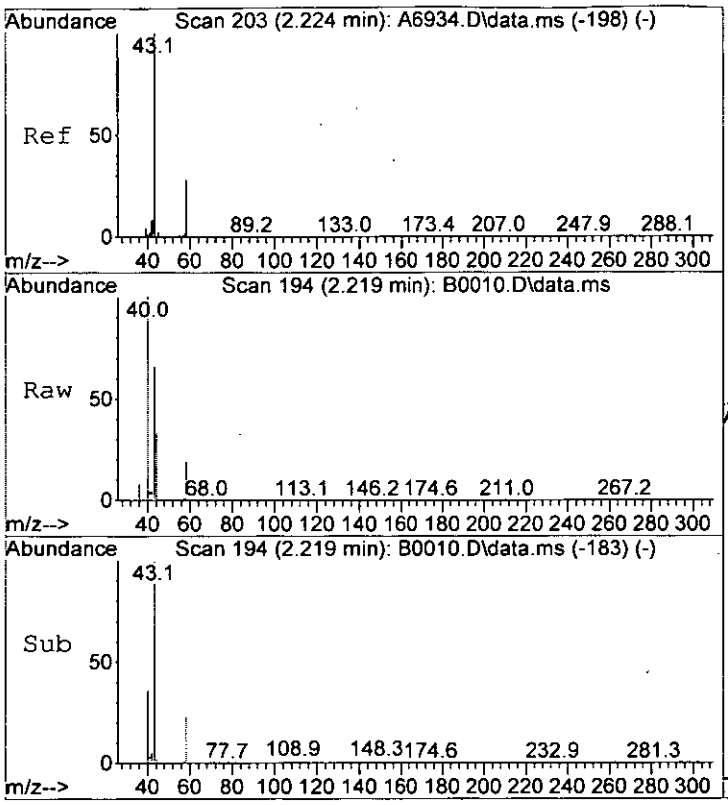
FW 7/5/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0010.D
Acq On : 29 Jun 2015 5:52 pm
Operator : F. Naegler
Sample : R1504947-012|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 05 15:34:53 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

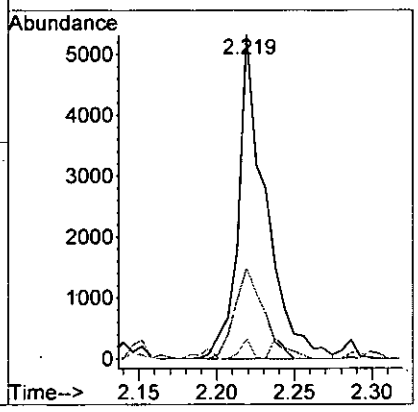




#15
Acetone
Concen: Below Cal
RT: 2.219 min Scan# 194
Delta R.T. -0.006 min
Lab File: B0010.D
Acq: 29 Jun 2015 5:52 pm

Tgt Ion: 43 Resp: 6467

Ion	Ratio	Lower	Upper
43	100		
58	28.1	4.8	44.8
42	6.1	0.0	28.0



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1600
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:20
Sample Name:	SW-04	**Units:**	µg/L
Lab Code:	R1504947-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0011.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1600
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:20
Sample Name:	SW-04	**Units:**	µg/L
Lab Code:	R1504947-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0011.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	89	85-122	6/29/15 18:20	
Dibromofluoromethane	100	89-119	6/29/15 18:20	
Toluene-d8	95	87-121	6/29/15 18:20	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0011.D
Acq On : 29 Jun 2015 6:20 pm
Operator : F. Naegler
Sample : R1504947-013|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 05 15:36:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1119150	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1724686	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1576399	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	860135	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	535955	49.80	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.60%			
46) surr1,1,2-dichloroetha...	5.408	65	531037	48.01	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 96.02%			
64) SURR3,Toluene-d8	8.042	98	1957281	47.70	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.40%			
69) SURR2,BFB	10.675	95	742322	44.52	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.04%			
Target Compounds						Qvalue
15) Acetone	2.220	43	4963	Below Cal		84

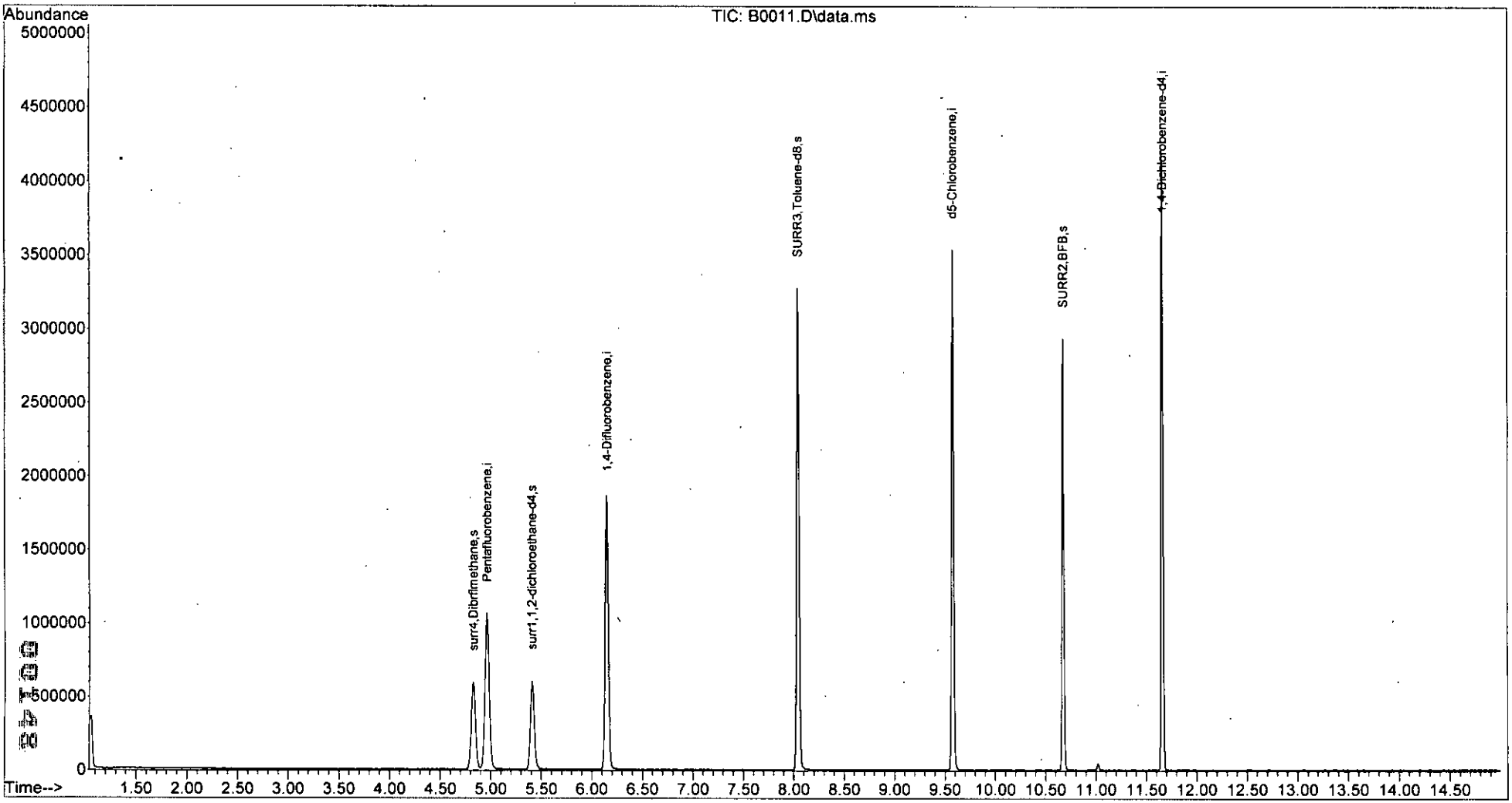
(#) = qualifier out of range (m) = manual integration (+) = signals summed

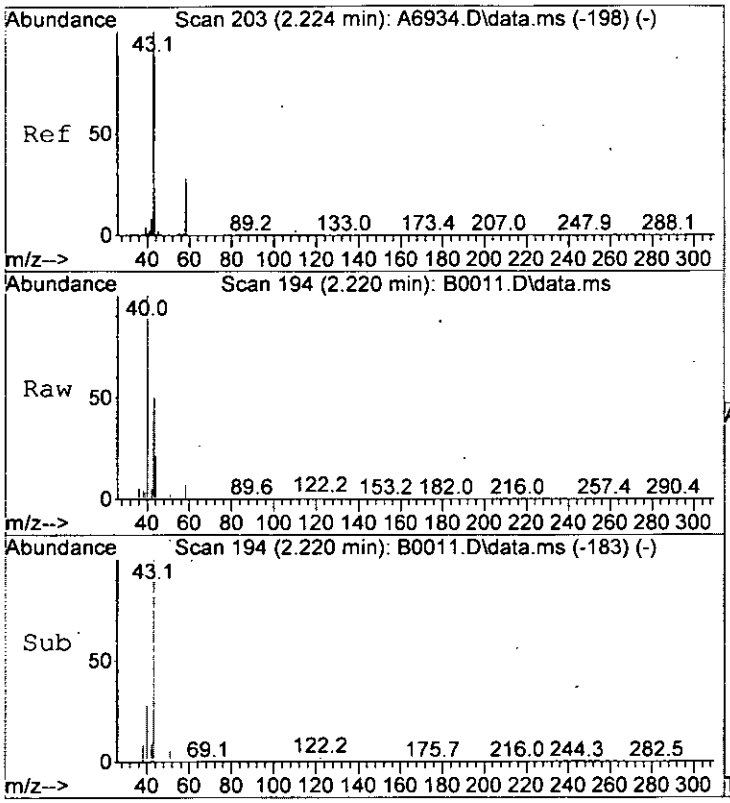
FJ 7/5/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0011.D
Acq On : 29 Jun 2015 6:20 pm
Operator : F. Naegler
Sample : R1504947-013|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 05 15:36:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

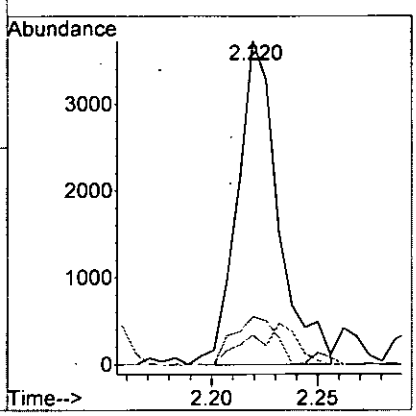




#15
Acetone
Concen: Below Cal
RT: 2.220 min Scan# 194
Delta R.T. -0.006 min
Lab File: B0011.D
Acq: 29 Jun 2015 6:20 pm

Tgt Ion: 43 Resp: 4963

Ion	Ratio	Lower	Upper
43	100		
58	14.7	4.8	44.8
42	9.1	0.0	28.0



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1615
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:48
Sample Name:	SW-03	**Units:**	µg/L
Lab Code:	R1504947-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0012.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1615
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 18:48
Sample Name:	SW-03	**Units:**	µg/L
Lab Code:	R1504947-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0012.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	88	85-122	6/29/15 18:48	
Dibromofluoromethane	100	89-119	6/29/15 18:48	
Toluene-d8	96	87-121	6/29/15 18:48	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0012.D
Acq On : 29 Jun 2015 6:48 pm
Operator : F. Naegler
Sample : R1504947-014|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 05 15:37:55 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1100929	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.146	114	1707114	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1530948	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	863882	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	534780	50.20	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 100.40%			
46) surr1,1,2-dichloroetha...	5.414	65	525233	47.98	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 95.96%			
64) SURR3,Toluene-d8	8.042	98	1946528	47.93	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.86%			
69) SURR2,BFB	10.675	95	729615	44.20	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 88.40%			
Target Compounds						Qvalue
15) Acetone	2.226	43	5043	Below Cal		89

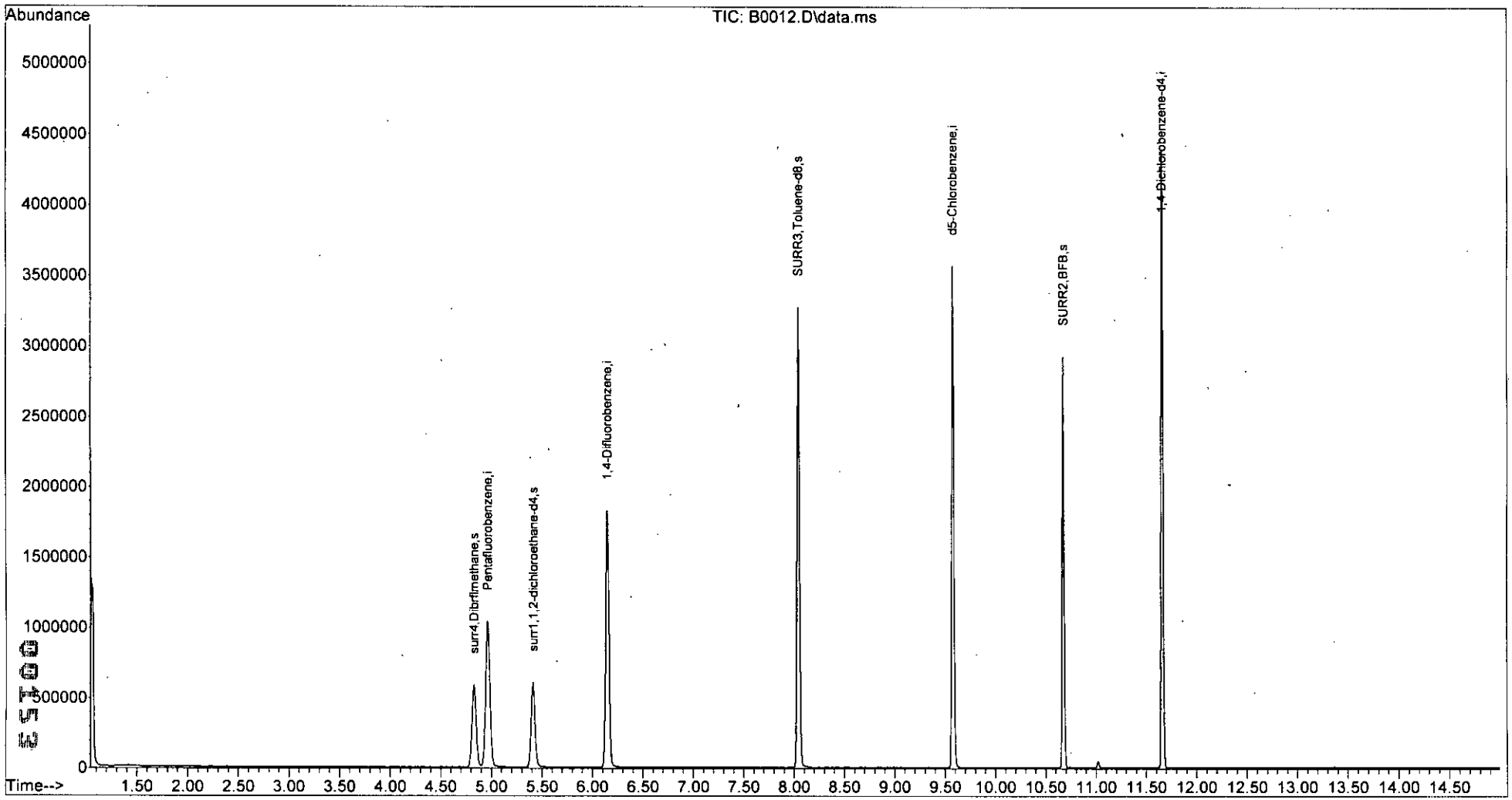
(#) = qualifier out of range (m) = manual integration (+) = signals summed

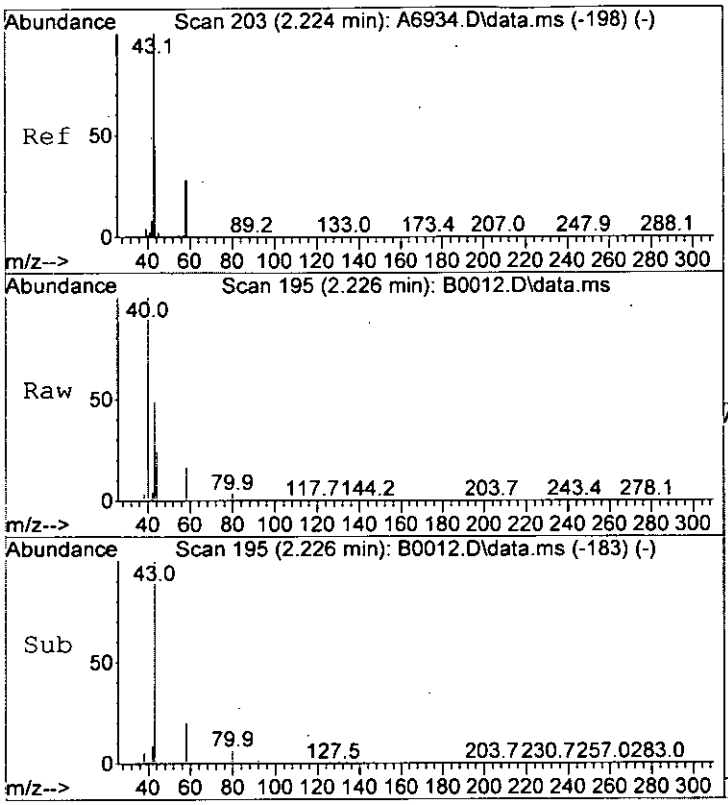
FW 7/5/13

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0012.D
Acq On : 29 Jun 2015 6:48 pm
Operator : F. Naegler
Sample : R1504947-014|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 05 15:37:55 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

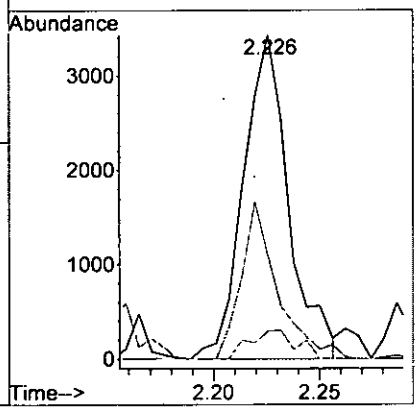




#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: B0012.D
Acq: 29 Jun 2015 6:48 pm

Tgt Ion: 43 Resp: 5043

Ion	Ratio	Lower	Upper
43	100		
58	31.6	4.8	44.8
42	8.5	0.0	28.0



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1630
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:16
Sample Name:	DW	**Units:**	µg/L
Lab Code:	R1504947-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0013.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1630
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:16
Sample Name:	DW	**Units:**	µg/L
Lab Code:	R1504947-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0013.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	91	85-122	6/29/15 19:16	
Dibromofluoromethane	100	89-119	6/29/15 19:16	
Toluene-d8	92	87-121	6/29/15 19:16	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0013.D
Acq On : 29 Jun 2015 7:16 pm
Operator : F. Naegler
Sample : R1504947-015|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 05 15:38:36 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1105360	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.146	114	1723134	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1593323	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	872042	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	538123	50.04	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 100.08%			
46) surr1,1,2-dichloroetha...	5.408	65	539534	48.83	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 97.66%			
64) SURR3,Toluene-d8	8.042	98	1888099	46.06	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 92.12%			
69) SURR2,BFB	10.675	95	761636	45.71	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 91.42%			
Target Compounds						Qvalue
15) Acetone	2.220	43	3397	Below Cal		77

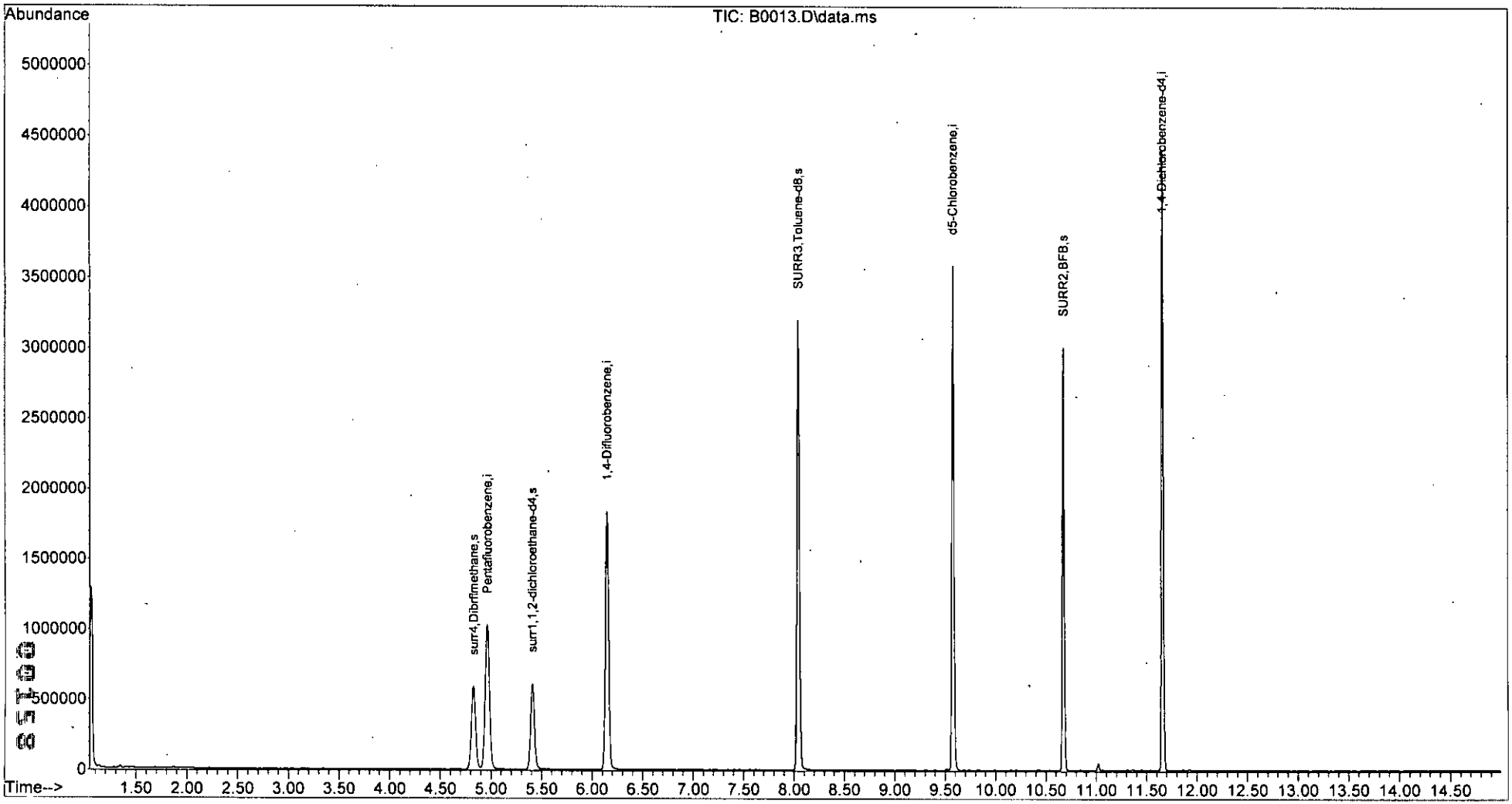
(#) = qualifier out of range (m) = manual integration (+) = signals summed

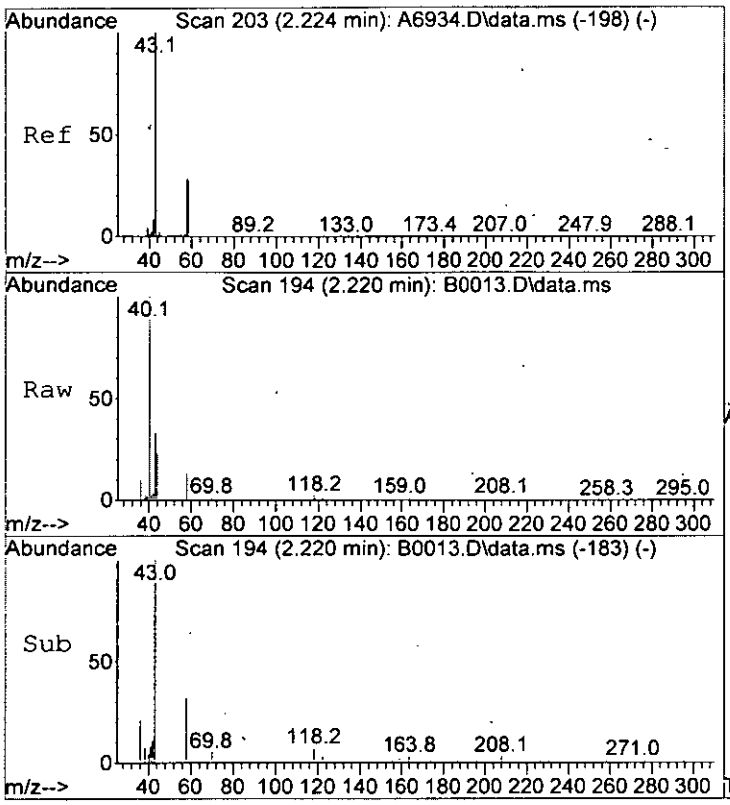
FW 7/5/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0013.D
Acq On : 29 Jun 2015 7:16 pm
Operator : F. Naegler
Sample : R1504947-015|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 05 15:38:36 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

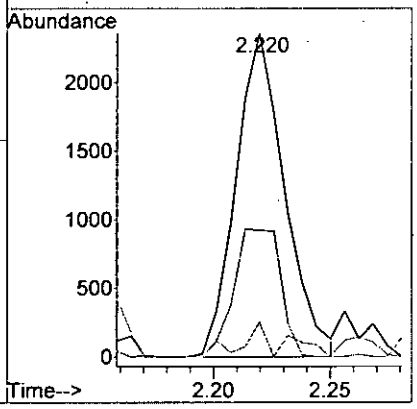




#15
Acetone
Concen: Below Cal
RT: 2.220 min Scan# 194
Delta R.T. -0.005 min
Lab File: B0013.D
Acq: 29 Jun 2015 7:16 pm

Tgt Ion: 43 Resp: 3397

Ion	Ratio	Lower	Upper
43	100		
58	39.0	4.8	44.8
42	10.7	0.0	28.0



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:44
Sample Name:	Blind Dupe	**Units:**	µg/L
Lab Code:	R1504947-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0014.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 19:44
Sample Name:	Blind Dupe	**Units:**	µg/L
Lab Code:	R1504947-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0014.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	91	85-122	6/29/15 19:44	
Dibromofluoromethane	99	89-119	6/29/15 19:44	
Toluene-d8	94	87-121	6/29/15 19:44	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0014.D
Acq On : 29 Jun 2015 7:44 pm
Operator : F. Naegler
Sample : R1504947-016|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 05 15:40:20 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1094066	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.145	114	1688111	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1538093	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	870581	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	523087	49.65	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.30%			
46) surr1,1,2-dichloroetha...	5.408	65	522602	48.27	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 96.54%			
64) SURR3,Toluene-d8	8.041	98	1895605	47.20	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 94.40%			
69) SURR2,BFB	10.675	95	745610	45.68	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 91.36%			
Target Compounds						Qvalue
15) Acetone	2.226	43	5541	Below Cal		83
103) p-Isopropyltoluene	11.651	119	113026	2.79	ug/L	97

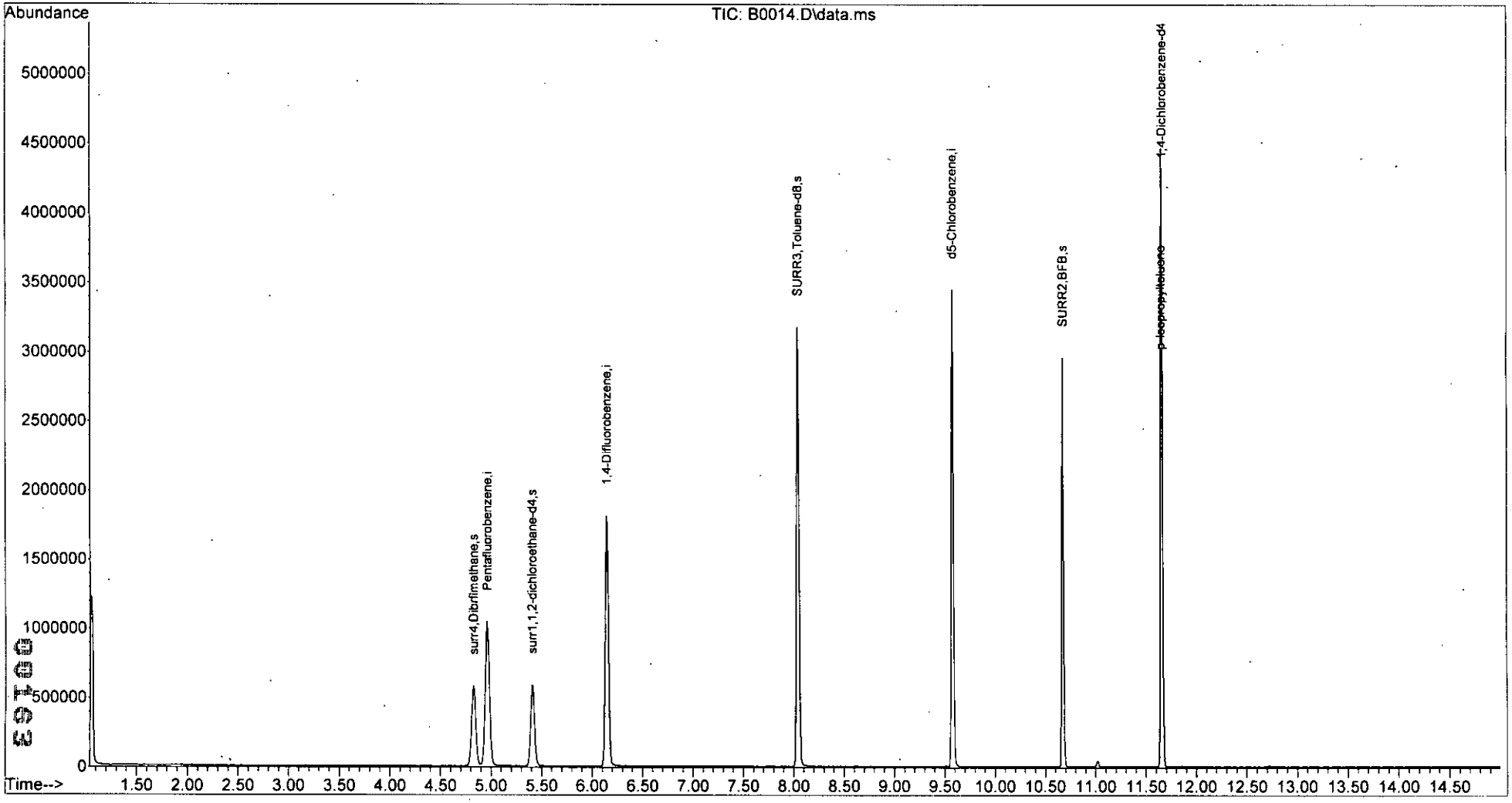
(#) = qualifier out of range (m) = manual integration (+) = signals summed

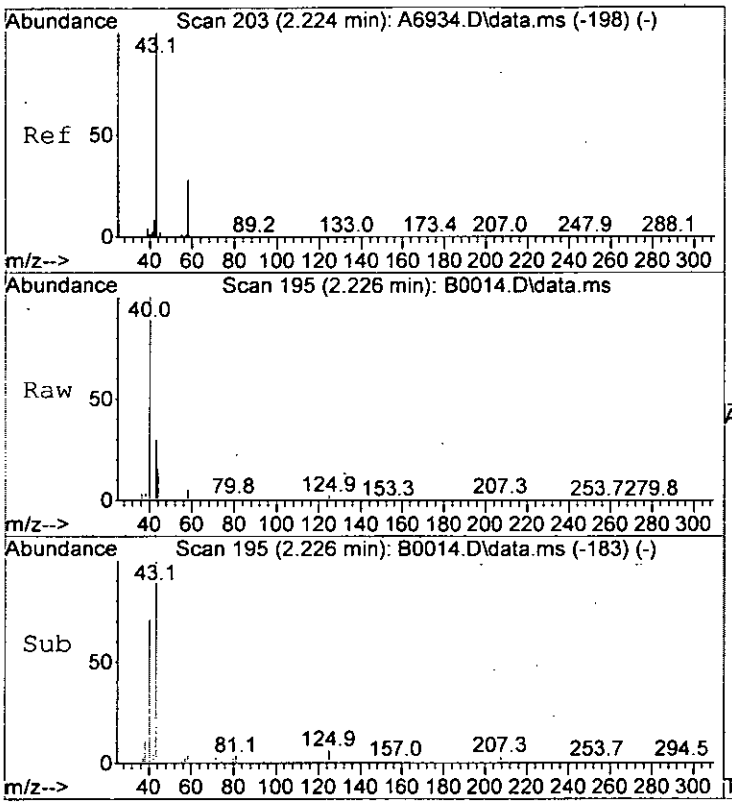
FV 7/5/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0014.D
Acq On : 29 Jun 2015 7:44 pm
Operator : F. Naegler
Sample : R1504947-016|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 05 15:40:20 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

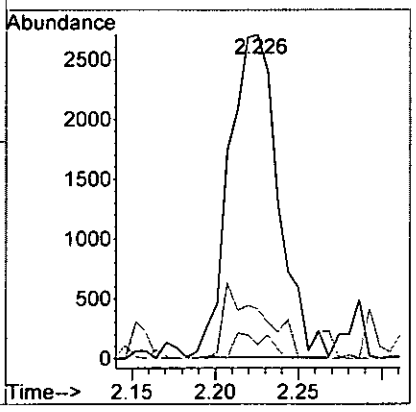


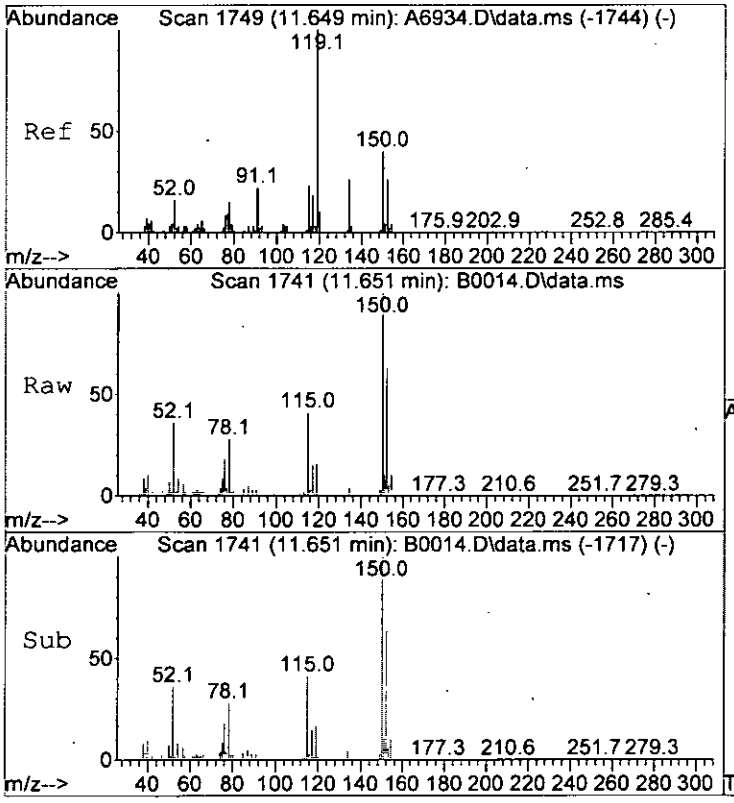


#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: B0014.D
Acq: 29 Jun 2015 7:44 pm

Tgt Ion: 43 Resp: 5541

Ion	Ratio	Lower	Upper
43	100		
58	15.3	4.8	44.8
42	4.1	0.0	28.0

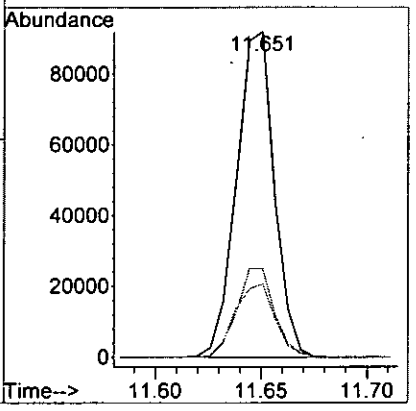




#103
p-Isopropyltoluene
Concen: 2.79 ug/L
RT: 11.651 min Scan# 1741
Delta R.T. 0.000 min
Lab File: B0014.D
Acq: 29 Jun 2015 7:44 pm

Tgt Ion:119 Resp: 113026

Ion	Ratio	Lower	Upper
119	100		
134	27.2	5.9	45.9
91	22.4	4.2	44.2



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:16
Sample Name:	Trip Blank	**Units:**	µg/L
Lab Code:	R1504947-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9998.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 12:16
Sample Name:	Trip Blank	**Units:**	µg/L
Lab Code:	R1504947-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9998.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 12:16	
Dibromofluoromethane	98	89-119	6/29/15 12:16	
Toluene-d8	96	87-121	6/29/15 12:16	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9998.D
Acq On : 29 Jun 2015 12:16 pm
Operator : F. Naegler
Sample : R1504947-017|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 13:36:59 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1106673	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1692873	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1551348	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	862211	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.835	113	519270	49.15	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 98.30%			
46) surr1,1,2-dichloroetha...	5.414	65	502641	46.30	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 92.60%			
64) SURR3,Toluene-d8	8.041	98	1939038	48.14	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 96.28%			
69) SURR2,BFB	10.675	95	739772	45.20	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 90.40%			
Target Compounds						Qvalue
15) Acetone	2.226	43	1396	Below Cal	#	41
88) Cyclohexanone	10.608	55	420	0.84	ug/L	79

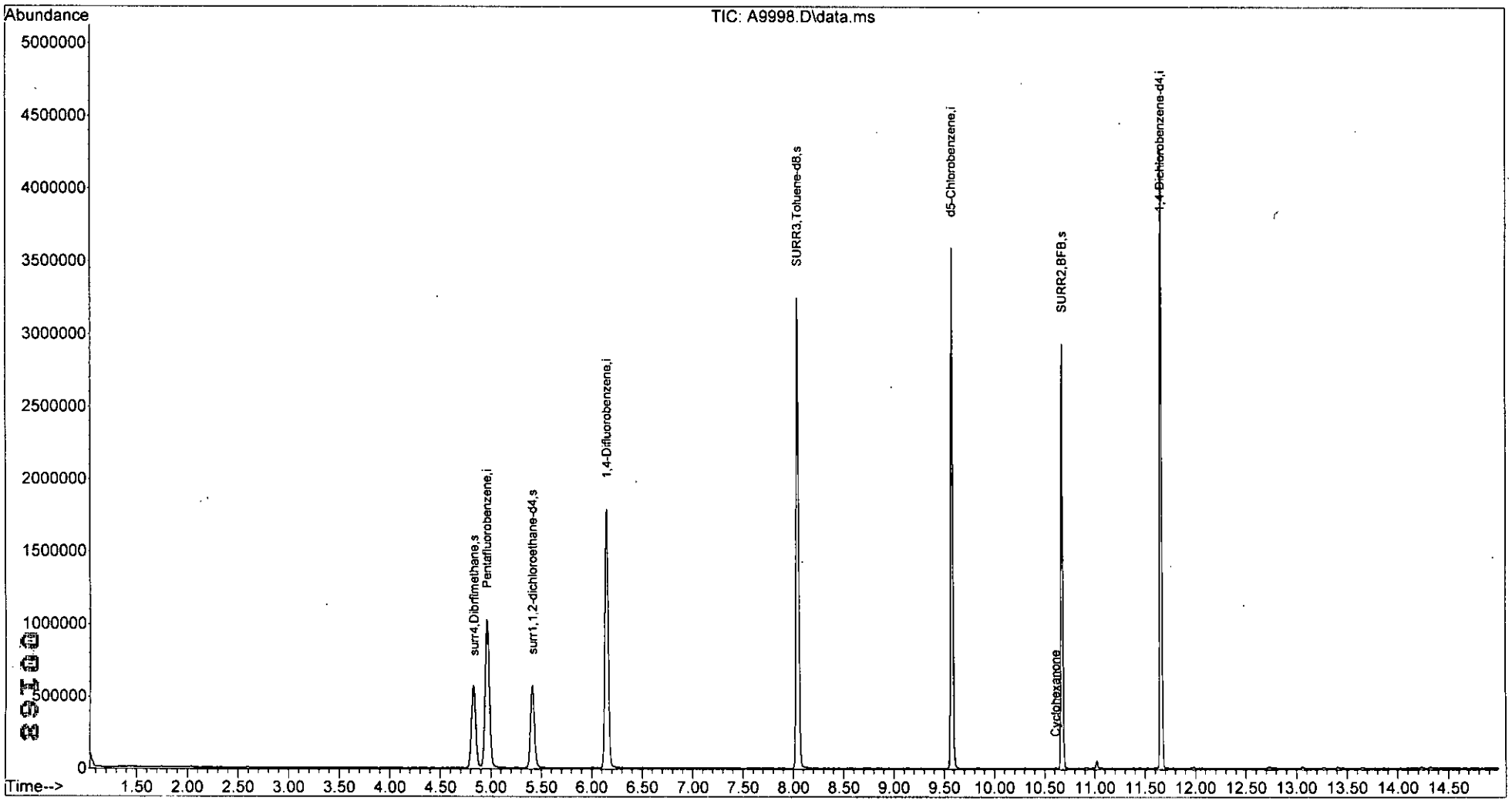
(#) = qualifier out of range (m) = manual integration (+) = signals summed

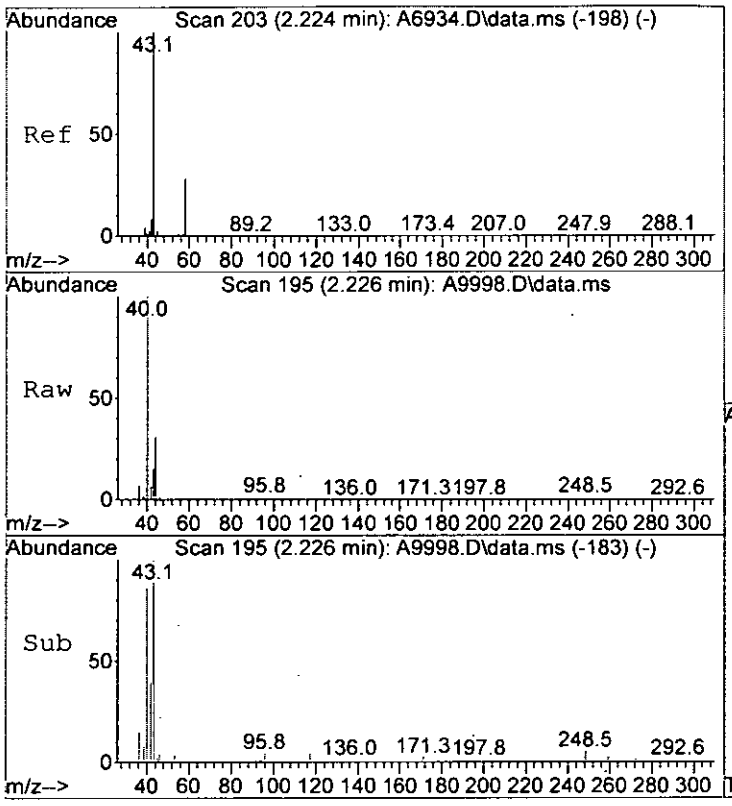
FU 7/2/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9998.D
Acq On : 29 Jun 2015 12:16 pm
Operator : F. Naegler
Sample : R1504947-017|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 13:36:59 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

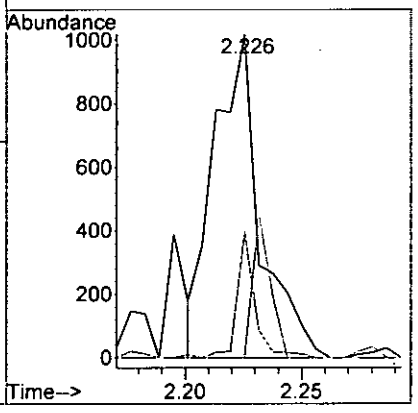


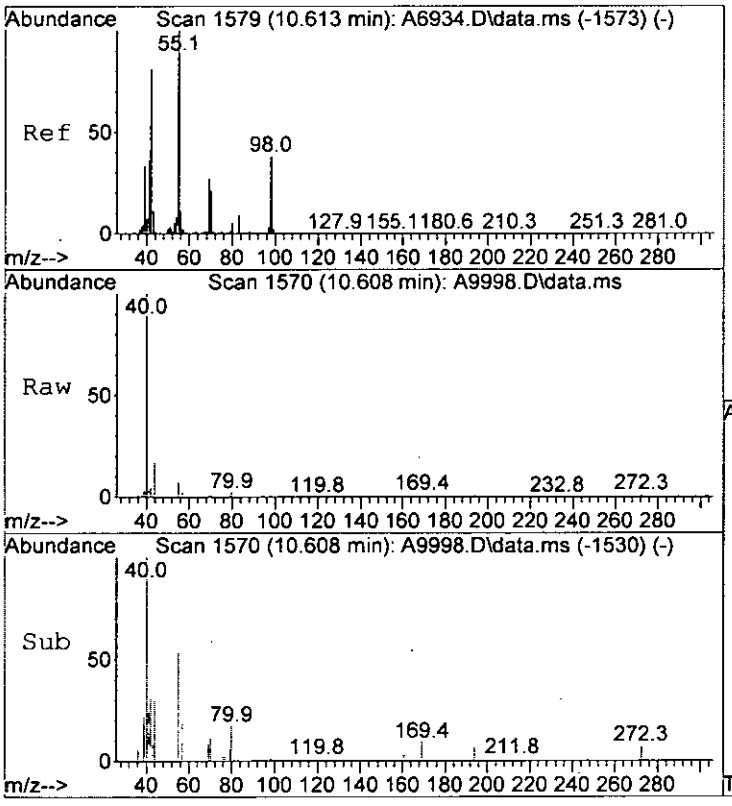


#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: A9998.D
Acq: 29 Jun 2015 12:16 pm

Tgt Ion: 43 Resp: 1396

Ion	Ratio	Lower	Upper
43	100		
58	0.0	4.8	44.8#
42	38.7	0.0	28.0#

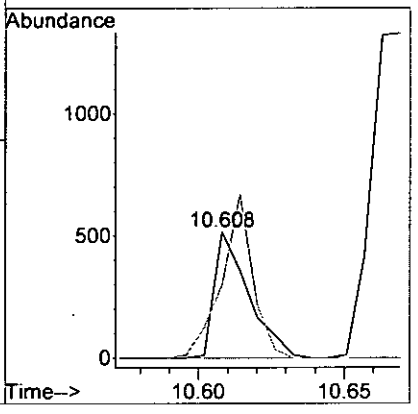




#88
Cyclohexanone
Concen: 0.84 ug/L
RT: 10.608 min Scan# 1570
Delta R.T. -0.006 min
Lab File: A9998.D
Acq: 29 Jun 2015 12:16 pm

Tgt Ion: 55 Resp: 420

Ion	Ratio	Lower	Upper
55	100		
42	57.7	55.2	95.2



ALS Environmental

VOLATILE ORGANICS STANDARDS DATA

ALS Environmental - Rochester, NY
1565 Jefferson Rd, Bldg. 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Initial Calibration - Summary Report

Calibration ID: RC1500051 5/6/15 **Instrument ID:** R-MS-10
Column Name: 1

Analyte	Type	Curve Fit	Weighting	Min RF	Mean RF	Criteria	Result
1,1,1,2-Tetrachloroethane	T	Average RF			0.3366	<=20	16.9
1,1,1-Trichloroethane (TCA)	T	Average RF		0.100	0.7004	<=20	9.2
1,1,2,2-Tetrachloroethane	T	Average RF		0.300	0.5106	<=20	10.0
1,1,2-Trichloroethane	T	Average RF		0.100	0.2413	<=20	7.1
1,1,2-Trichlorotrifluoroethane	T	Average RF		0.100	0.3854	<=20	6.2
1,1-Dichloroethane (1,1-DCA)	T	Average RF		0.200	0.9257	<=20	4.3
1,1-Dichloroethene (1,1-DCE)	T	Average RF		0.100	0.3684	<=20	8.3
1,1-Dichloropropene	T	Average RF			0.4042	<=20	8.2
1,2,3-Trichlorobenzene	T	Average RF			0.7069	<=20	7.9
1,2,3-Trichloropropane	T	Average RF			0.1503	<=20	4.5
1,2,4-Trichlorobenzene	T	Average RF		0.200	0.8584	<=20	6.3
1,2,4-Trimethylbenzene	T	Average RF			2.266	<=20	7.4
1,2-Dibromo-3-chloropropane (DBCP)	T	Average RF		0.050	0.09343	<=20	9.5
1,2-Dibromoethane	T	Average RF		0.100	0.2435	<=20	9.9
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123	T	Average RF			0.5071	<=20	8.3
1,2-Dichlorobenzene	T	Average RF		0.400	1.362	<=20	4.1
1,2-Dichloroethane	T	Average RF		0.100	0.4326	<=20	6.4
1,2-Dichloropropane	T	Average RF		0.100	0.3694	<=20	7.1
1,3,5-Trichlorobenzene	T	Average RF			0.9978	<=20	6.1
1,3,5-Trimethylbenzene	T	Average RF			2.219	<=20	8.3
1,3-Dichlorobenzene	T	Average RF		0.600	1.474	<=20	4.6
1,3-Dichloropropane	T	Average RF			0.4369	<=20	7.3
1,4-Dichlorobenzene	T	Average RF		0.500	1.545	<=20	4.0
1,4-Dioxane	T	Average RF			0.001843	<=20	9.9
1-Butanol	T	Quadratic	1/X2		0.005814	>=0.99	0.9951
1-Chloro-4-(trifluoromethyl)benzene	T	Average RF			0.4816	<=20	14.4
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123	T	Average RF			0.5610	<=20	10.5
2,2-Dichloropropane	T	Average RF			0.5982	<=20	9.2
2,3,6-Trichlorotoluene	T	Average RF			0.4556	<=20	11.7
2,4,5-Trichlorotoluene	T	Average RF			0.5213	<=20	15.2
2,4-, 2,5-, and 2,6-Dichlorotoluene Coelution	T	Average RF			1.168	<=20	8.2
2,4-Dichlorobenzotrifluoride	T	Average RF			0.6183	<=20	10.1
2,5-Dichlorobenzotrifluoride	T	Average RF			0.7008	<=20	7.7
2-Butanone (MEK)	T	Average RF		0.05	0.2352	<=20	11.3
2-Chloro-1,3-butadiene	T	Average RF			1.077	<=20	11.4
2-Chlorobenzotrifluoride	T	Average RF			0.5181	<=20	14.9
2-Chloroethyl Vinyl Ether	T	Average RF			0.1728	<=20	12.9
2-Chlorotoluene	T	Average RF			1.863	<=20	6.5
2-Hexanone	T	Average RF		0.05	0.2256	<=20	14.0
2-Methyl-1-propanol	T	Average RF			0.01300	<=20	17.3
2-Methyl-2-propanol	T	Average RF			0.03358	<=20	11.9
2-Nitropropane	T	Average RF			0.04263	<=20	16.0
2-Propanol	T	Average RF			0.02621	<=20	14.0
3,4- and 2,3-Dichlorotoluene Coelution	T	Average RF			1.248	<=20	6.6
3,4-Dichlorobenzotrifluoride	T	Average RF			0.6591	<=20	10.2
3-Chloro-1-propene	T	Average RF			0.2397	<=20	6.5
3-Chlorobenzotrifluoride	T	Average RF			0.5472	<=20	12.0
3-Chlorotoluene	T	Average RF			1.967	<=20	4.4
4-Chlorotoluene	T	Average RF			2.220	<=20	5.6
4-Isopropyltoluene	T	Average RF			2.330	<=20	7.5
4-Methyl-2-pentanone	T	Average RF		0.05	0.3164	<=20	12.9
Acetone	T	Quadratic	1/X	0.05	0.1691	>=0.99	0.9909

00171

Initial Calibration - Summary Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Column Name:	1

Analyte	Type	Curve Fit	Weighting	Min RF	Mean RF	Criteria	Result
Acetonitrile	T	Average RF			0.02305	<=20	12.2
Acrolein	T	Average RF			0.07561	<=20	11.1
Acrylonitrile	T	Average RF			0.1616	<=20	8.7
Benzene	T	Average RF		0.500	1.253	<=20	7.3
Bromobenzene	T	Average RF			0.7243	<=20	4.6
Bromochloromethane	T	Average RF			0.3056	<=20	4.4
Bromodichloromethane	T	Average RF		0.200	0.3893	<=20	10.1
Bromoform	T	Average RF		0.100	0.1624	<=20	18.4
Bromomethane	T	Average RF		0.100	0.2864	<=20	7.4
Carbon Disulfide	T	Average RF		0.100	1.323	<=20	10.0
Carbon Tetrachloride	T	Average RF		0.05	0.1235	<=20	13.9
Chlorobenzene	T	Average RF		0.500	0.9831	<=20	6.3
Chloroethane	T	Average RF		0.100	0.3399	<=20	6.4
Chloroform	T	Average RF		0.200	0.8234	<=20	5.6
Chloromethane	T	Average RF		0.100	0.9504	<=20	9.7
Cyclohexane	T	Average RF		0.100	0.4754	<=20	11.5
Cyclohexanone	T	Average RF			0.01611	<=20	16.2
Dibromochloromethane	T	Average RF		0.100	0.2981	<=20	16.9
Dibromomethane	T	Average RF			0.1625	<=20	6.5
Dichlorodifluoromethane (CFC 12)	T	Average RF		0.100	0.5192	<=20	16.1
Dichlorofluoromethane (CFC 21)	T	Average RF			0.8305	<=20	13.8
Dichloromethane	T	Average RF		0.100	0.4520	<=20	6.5
Diethyl Ether	T	Average RF			0.4025	<=20	10.9
Diisopropyl Ether	T	Average RF			2.538	<=20	6.9
Ethyl Methacrylate	T	Average RF			0.2898	<=20	18.6
Ethyl tert-Butyl Ether	T	Average RF			1.733	<=20	9.0
Ethylbenzene	T	Average RF		0.100	0.5157	<=20	11.1
Hexachlorobutadiene	T	Average RF			0.3554	<=20	6.7
Iodomethane	T	Average RF			0.5455	<=20	11.7
Isopropylbenzene (Cumene)	T	Average RF		0.100	1.512	<=20	9.5
Methacrylonitrile	T	Average RF			0.1379	<=20	5.9
Methyl Acetate	T	Average RF		0.100	0.3642	<=20	6.6
Methyl Methacrylate	T	Average RF			0.1455	<=20	13.1
Methyl tert-Butyl Ether	T	Average RF		0.100	1.053	<=20	5.3
Methylcyclohexane	T	Average RF		0.100	0.5121	<=20	13.5
Naphthalene	T	Average RF			1.609	<=20	8.9
Propionitrile	T	Average RF			0.05838	<=20	10.3
Styrene	T	Average RF		0.300	1.042	<=20	13.2
Tetrachloroethene (PCE)	T	Average RF		0.200	0.3005	<=20	7.9
Tetrahydrofuran (THF)	T	Average RF			0.1454	<=20	9.8
Toluene	T	Average RF		0.400	1.353	<=20	5.2
Trichloroethene (TCE)	T	Average RF		0.200	0.3463	<=20	8.4
Trichlorofluoromethane (CFC 11)	T	Average RF		0.100	0.6683	<=20	4.7
Vinyl Acetate	T	Average RF			0.07465	<=20	19.8
Vinyl Chloride	T	Average RF		0.100	0.6923	<=20	7.4
cis-1,2-Dichloroethene	T	Average RF		0.100	0.4970	<=20	6.1
cis-1,3-Dichloropropene	T	Average RF		0.200	0.4412	<=20	15.1
m,p-Xylenes	T	Average RF		0.100	0.6204	<=20	9.1
n-Butyl Acetate	T	Average RF			0.5418	<=20	19.9
n-Butylbenzene	T	Average RF			2.058	<=20	7.4
n-Heptane	T	Average RF			0.5448	<=20	9.0
n-Propylbenzene	T	Average RF			2.971	<=20	7.3

Initial Calibration - Summary Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Column Name: 1

Analyte	Type	Curve Fit	Weighting	Min RF	Mean RF	Criteria	Result
o-Xylene	T	Average RF		0.300	0.6155	<=20	10.7
sec-Butylbenzene	T	Average RF			2.615	<=20	7.9
tert-Amyl Methyl Ether	T	Average RF			0.7222	<=20	13.8
tert-Butylbenzene	T	Average RF			1.926	<=20	7.2
trans-1,2-Dichloroethene	T	Average RF		0.100	0.4146	<=20	5.3
trans-1,3-Dichloropropene	T	Average RF		0.100	0.3677	<=20	17.3
trans-1,4-Dichloro-2-butene	T	Average RF			0.1091	<=20	13.1
1,2-Dichloroethane-d4	S	Average RF			0.3206	<=20	3.8
4-Bromofluorobenzene	S	Average RF			0.4834	<=20	4.8
Dibromofluoromethane	S	Average RF			0.3120	<=20	4.6
Toluene-d8	S	Average RF			1.190	<=20	3.8

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC1500051-01	0.5 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8252.D	5/6/15 16:31
02	RC1500051-02	1.0 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8253.D	5/6/15 17:01
03	RC1500051-03	2.0 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8254.D	5/6/15 17:31
04	RC1500051-04	5.0 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8255.D	5/6/15 18:01
05	RC1500051-05	20 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8256.D	5/6/15 18:31
06	RC1500051-06	50 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8257.D	5/6/15 19:00
07	RC1500051-07	100 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8258.D	5/6/15 19:30
08	RC1500051-08	150 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8259.D	5/6/15 20:01
09	RC1500051-09	200 PPB STD	I:\ACQUDATA\msvoa10\data\050615\A8260.D	5/6/15 20:31

Analyte — **Curve Fit** — **Weighting**

1,1,1,2-Tetrachloroethane — Average RF — RSD = 16.9 — Average RF = 0.3366

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2643	02	1.000	0.2981	03	2.000	0.3086	04	5.000	0.2981
05	20.000	0.3021	06	50.000	0.3423	07	100.000	0.3838	08	150.000	0.3962
09	200.000	0.4359									

1,1,1-Trichloroethane (TCA) — Average RF — RSD = 9.2 — Average RF = 0.7004

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.6459	02	1.000	0.6542	03	2.000	0.6644	04	5.000	0.6607
05	20.000	0.6442	06	50.000	0.6953	07	100.000	0.7489	08	150.000	0.7674
09	200.000	0.8231									

1,1,2,2-Tetrachloroethane — Average RF — RSD = 10.0 — Average RF = 0.5106

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4084	02	1.000	0.4653	03	2.000	0.4981	04	5.000	0.5098
05	20.000	0.5135	06	50.000	0.5205	07	100.000	0.5486	08	150.000	0.5471
09	200.000	0.5844									

1,1,2-Trichloroethane — Average RF — RSD = 7.1 — Average RF = 0.2413

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2170	02	1.000	0.2269	03	2.000	0.2349	04	5.000	0.2468
05	20.000	0.2310	06	50.000	0.2348	07	100.000	0.2504	08	150.000	0.2565
09	200.000	0.2729									

1,1,2-Trichlorotrifluoroethane — Average RF — RSD = 6.2 — Average RF = 0.3854

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3567	02	1.000	0.3693	03	2.000	0.4011	04	5.000	0.3763
05	20.000	0.3624	06	50.000	0.3742	07	100.000	0.3916	08	150.000	0.4052
09	200.000	0.4316									

1,1-Dichloroethane (1,1-DCA) — Average RF — RSD = 4.3 — Average RF = 0.9257

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.8894	02	1.000	0.9332	03	2.000	0.9185	04	5.000	0.8906
05	20.000	0.8728	06	50.000	0.9254	07	100.000	0.9709	08	150.000	0.9316
09	200.000	0.9988									

1,1-Dichloroethene (1,1-DCE) — Average RF — RSD = 8.3 — Average RF = 0.3684

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3518	02	1.000	0.3195	03	2.000	0.3664	04	5.000	0.3642
05	20.000	0.3506	06	50.000	0.3594	07	100.000	0.3794	08	150.000	0.3977
09	200.000	0.4266									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

1,1-Dichloropropene Average RF RSD = 8.2 Average RF = 0.4042

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3667	02	1.000	0.3906	03	2.000	0.3913	04	5.000	0.3999
05	20.000	0.3657	06	50.000	0.3964	07	100.000	0.4224	08	150.000	0.4355
09	200.000	0.4691									

1,2,3-Trichlorobenzene Average RF RSD = 7.9 Average RF = 0.7069

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.6185	02	1.000	0.6318	03	2.000	0.7321	04	5.000	0.7089
05	20.000	0.6684	06	50.000	0.7316	07	100.000	0.7737	08	150.000	0.7324
09	200.000	0.7648									

1,2,3-Trichloropropane Average RF RSD = 4.5 Average RF = 0.1503

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1608	02	1.000	0.1466	03	2.000	0.1544	04	5.000	0.1552
05	20.000	0.1433	06	50.000	0.1404	07	100.000	0.1474	08	150.000	0.1480
09	200.000	0.1567									

1,2,4-Trichlorobenzene Average RF RSD = 6.3 Average RF = 0.8584

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.7664	02	1.000	0.8728	03	2.000	0.8140	04	5.000	0.8311
05	20.000	0.8189	06	50.000	0.8845	07	100.000	0.9238	08	150.000	0.8891
09	200.000	0.9254									

1,2,4-Trimethylbenzene Average RF RSD = 7.4 Average RF = 2.266

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.910	02	1.000	2.167	03	2.000	2.222	04	5.000	2.348
05	20.000	2.259	06	50.000	2.418	07	100.000	2.483	08	150.000	2.349
09	200.000	2.236									

1,2-Dibromo-3-chloropropane (DBCP) Average RF RSD = 9.5 Average RF = 0.09343

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.08199	02	1.000	0.1011	03	2.000	0.09101	04	5.000	0.08448
05	20.000	0.08620	06	50.000	0.08870	07	100.000	0.1007	08	150.000	0.09980
09	200.000	0.1069									

1,2-Dibromoethane Average RF RSD = 9.9 Average RF = 0.2435

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2147	02	1.000	0.2149	03	2.000	0.2362	04	5.000	0.2313
05	20.000	0.2358	06	50.000	0.2416	07	100.000	0.2666	08	150.000	0.2648
09	200.000	0.2854									

1,2-Dichloro-1,1,2-trifluoroethane (CFC Average RF RSD = 8.3 Average RF = 0.5071

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4309	02	1.000	0.5179	03	2.000	0.4794	04	5.000	0.5050
05	20.000	0.4666	06	50.000	0.5228	07	100.000	0.5363	08	150.000	0.5679
09	200.000	0.5368									

1,2-Dichlorobenzene Average RF RSD = 4.1 Average RF = 1.362

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.269	02	1.000	1.299	03	2.000	1.386	04	5.000	1.361
05	20.000	1.322	06	50.000	1.369	07	100.000	1.438	08	150.000	1.397
09	200.000	1.422									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

1,2-Dichloroethane Average RF RSD = 6.4 Average RF = 0.4326

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3934	02	1.000	0.4049	03	2.000	0.4369	04	5.000	0.4343
05	20.000	0.4068	06	50.000	0.4321	07	100.000	0.4521	08	150.000	0.4525
09	200.000	0.4804									

1,2-Dichloroethane-d4 Average RF RSD = 3.8 Average RF = 0.3206

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
06	50.000	0.3101	04	60.000	0.3205	05	70.000	0.3126	07	100.000	0.3147
08	125.000	0.3225	09	150.000	0.3434						

1,2-Dichloropropane Average RF RSD = 7.1 Average RF = 0.3694

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3484	02	1.000	0.3665	03	2.000	0.3655	04	5.000	0.3492
05	20.000	0.3415	06	50.000	0.3568	07	100.000	0.3815	08	150.000	0.3910
09	200.000	0.4244									

1,3,5-Trichlorobenzene Average RF RSD = 6.1 Average RF = 0.9978

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.9694	02	1.000	0.9435	03	2.000	0.9572	04	5.000	0.9827
05	20.000	0.9179	06	50.000	1.039	07	100.000	1.027	08	150.000	1.025
09	200.000	1.119									

1,3,5-Trimethylbenzene Average RF RSD = 8.3 Average RF = 2.219

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.859	02	1.000	2.043	03	2.000	2.211	04	5.000	2.263
05	20.000	2.178	06	50.000	2.384	07	100.000	2.473	08	150.000	2.334
09	200.000	2.222									

1,3-Dichlorobenzene Average RF RSD = 4.6 Average RF = 1.474

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.519	02	1.000	1.381	03	2.000	1.383	04	5.000	1.481
05	20.000	1.405	06	50.000	1.486	07	100.000	1.545	08	150.000	1.512
09	200.000	1.556									

1,3-Dichloropropane Average RF RSD = 7.3 Average RF = 0.4369

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4169	02	1.000	0.4056	03	2.000	0.4430	04	5.000	0.4064
05	20.000	0.4076	06	50.000	0.4274	07	100.000	0.4662	08	150.000	0.4667
09	200.000	0.4922									

1,4-Dichlorobenzene Average RF RSD = 4.0 Average RF = 1.545

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.571	02	1.000	1.446	03	2.000	1.628	04	5.000	1.539
05	20.000	1.459	06	50.000	1.520	07	100.000	1.602	08	150.000	1.564
09	200.000	1.579									

1,4-Dioxane Average RF RSD = 9.9 Average RF = 0.001843

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	20.000	0.001640	03	40.000	0.001888	04	100.000	0.001717	05	400.000	0.001696
06	1000.000	0.001677	07	2000.000	0.002050	08	3000.000	0.002000	09	4000.000	0.002078

1-Butanol Quadratic 1/X2 COD = 0.9951 $Y = 1.783E\text{-}5\ X^2 + 0.004874\ X + -0.001061$

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	50.000	0.003746	03	100.000	0.004733	04	250.000	0.004339	05	1000.000	0.004843
06	2500.000	0.005876	07	5000.000	0.007252	08	7500.000	0.007694	09	10000.000	0.008028

00176

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte **Curve Fit** **Weighting**

1-Chloro-4-(trifluoromethyl)benzene Average RF RSD = 14.4 Average RF = 0.4816

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3854	02	1.000	0.4227	03	2.000	0.4888	04	5.000	0.4516
05	20.000	0.4287	06	50.000	0.4922	07	100.000	0.5137	08	150.000	0.5355
09	200.000	0.6160									

2,2-Dichloro-1,1,1-trifluoroethane (CFC Average RF RSD = 10.5 Average RF = 0.5610

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4886	02	1.000	0.5085	03	2.000	0.5506	04	5.000	0.5524
05	20.000	0.5129	06	50.000	0.5581	07	100.000	0.5785	08	150.000	0.6261
09	200.000	0.6734									

2,2-Dichloropropane Average RF RSD = 9.2 Average RF = 0.5982

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5006	02	1.000	0.5922	03	2.000	0.5930	04	5.000	0.5855
05	20.000	0.5477	06	50.000	0.5915	07	100.000	0.6363	08	150.000	0.6503
09	200.000	0.6864									

2,3,6-Trichlorotoluene Average RF RSD = 11.7 Average RF = 0.4556

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3904	02	1.000	0.3872	03	2.000	0.4599	04	5.000	0.4231
05	20.000	0.4204	06	50.000	0.4810	07	100.000	0.5000	08	150.000	0.4980
09	200.000	0.5403									

2,4,5-Trichlorotoluene Average RF RSD = 15.2 Average RF = 0.5213

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3882	02	1.000	0.4801	03	2.000	0.4746	04	5.000	0.4811
05	20.000	0.4785	06	50.000	0.5777	07	100.000	0.5893	08	150.000	0.5859
09	200.000	0.6364									

2,4-, 2,5-, and 2,6-Dichlorotoluene Coelu Average RF RSD = 8.2 Average RF = 1.168

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.500	0.9878	02	3.000	1.081	03	6.000	1.143	04	15.000	1.182
05	60.000	1.146	06	150.000	1.300	07	300.000	1.276	08	450.000	1.214
09	600.000	1.183									

2,4-Dichlorobenzotrifluoride Average RF RSD = 10.1 Average RF = 0.6183

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5580	02	1.000	0.6406	03	2.000	0.5801	04	5.000	0.5901
05	20.000	0.5374	06	50.000	0.6311	07	100.000	0.6300	08	150.000	0.6470
09	200.000	0.7503									

2,5-Dichlorobenzotrifluoride Average RF RSD = 7.7 Average RF = 0.7008

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.6825	02	1.000	0.6937	03	2.000	0.6919	04	5.000	0.6481
05	20.000	0.6183	06	50.000	0.7111	07	100.000	0.7204	08	150.000	0.7341
09	200.000	0.8075									

2-Butanone (MEK) Average RF RSD = 11.3 Average RF = 0.2352

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2851	02	1.000	0.1935	03	2.000	0.2441	04	5.000	0.2270
05	20.000	0.2091	06	50.000	0.2272	07	100.000	0.2345	08	150.000	0.2397
09	200.000	0.2570									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

2-Chloro-1,3-butadiene Average RF RSD = 11.4 Average RF = 1.077

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.046	02	1.000	0.9692	03	2.000	1.062	04	5.000	1.084
05	20.000	0.8418	06	50.000	1.113	07	100.000	1.119	08	150.000	1.186
09	200.000	1.269									

2-Chlorobenzotrifluoride Average RF RSD = 14.9 Average RF = 0.5181

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4248	02	1.000	0.4540	03	2.000	0.4807	04	5.000	0.4910
05	20.000	0.4589	06	50.000	0.5440	07	100.000	0.5531	08	150.000	0.5865
09	200.000	0.6694									

2-Chloroethyl Vinyl Ether Average RF RSD = 12.9 Average RF = 0.1728

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1615	02	1.000	0.1586	03	2.000	0.1580	04	5.000	0.1644
05	20.000	0.1416	06	50.000	0.1755	07	100.000	0.1848	08	150.000	0.1979
09	200.000	0.2125									

2-Chlorotoluene Average RF RSD = 6.5 Average RF = 1.863

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.599	02	1.000	1.766	03	2.000	1.910	04	5.000	1.890
05	20.000	1.806	06	50.000	1.904	07	100.000	1.980	08	150.000	1.959
09	200.000	1.949									

2-Hexanone Average RF RSD = 14.0 Average RF = 0.2256

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2157	02	1.000	0.1849	03	2.000	0.2185	04	5.000	0.1999
05	20.000	0.1942	06	50.000	0.2274	07	100.000	0.2525	08	150.000	0.2593
09	200.000	0.2775									

2-Methyl-1-propanol Average RF RSD = 17.3 Average RF = 0.01300

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	40.000	0.01126	04	100.000	0.01091	05	400.000	0.01095	06	1000.000	0.01188
07	2000.000	0.01465	08	3000.000	0.01515	09	4000.000	0.01617			

2-Methyl-2-propanol Average RF RSD = 11.9 Average RF = 0.03358

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	10.000	0.02798	02	20.000	0.02881	03	40.000	0.03507	04	100.000	0.03207
05	400.000	0.03146	06	1000.000	0.03235	07	2000.000	0.03766	08	3000.000	0.03788
09	4000.000	0.03893									

2-Nitropropane Average RF RSD = 16.0 Average RF = 0.04263

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	4.000	0.03671	04	10.000	0.03876	05	40.000	0.03745	06	100.000	0.04055
07	200.000	0.04924	08	300.000	0.05308						

2-Propanol Average RF RSD = 14.0 Average RF = 0.02621

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	10.000	0.02346	02	20.000	0.02420	03	40.000	0.02192	04	100.000	0.02336
05	400.000	0.02368	06	1000.000	0.02709	07	2000.000	0.03037	08	3000.000	0.03069
09	4000.000	0.03115									

00178

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

3,4- and 2,3-Dichlorotoluene Coelution Average RF RSD = 6.6 Average RF = 1.248

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.134	02	2.000	1.178	03	4.000	1.223	04	10.000	1.274
05	40.000	1.233	06	100.000	1.395	07	200.000	1.351	08	300.000	1.249
09	400.000	1.194									

3,4-Dichlorobenzotrifluoride Average RF RSD = 10.2 Average RF = 0.6591

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5820	02	1.000	0.6446	03	2.000	0.6063	04	5.000	0.6241
05	20.000	0.5932	06	50.000	0.6895	07	100.000	0.6947	08	150.000	0.7059
09	200.000	0.7916									

3-Chloro-1-propene Average RF RSD = 6.5 Average RF = 0.2397

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2321	02	1.000	0.2390	03	2.000	0.2200	04	5.000	0.2334
05	20.000	0.2183	06	50.000	0.2436	07	100.000	0.2570	08	150.000	0.2490
09	200.000	0.2647									

3-Chlorobenzotrifluoride Average RF RSD = 12.0 Average RF = 0.5472

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4541	02	1.000	0.5360	03	2.000	0.5465	04	5.000	0.5105
05	20.000	0.4841	06	50.000	0.5494	07	100.000	0.5703	08	150.000	0.5958
09	200.000	0.6785									

3-Chlorotoluene Average RF RSD = 4.4 Average RF = 1.967

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.842	02	1.000	1.890	03	2.000	1.944	04	5.000	2.019
05	20.000	1.859	06	50.000	2.080	07	100.000	2.033	08	150.000	1.999
09	200.000	2.034									

4-Bromofluorobenzene Average RF RSD = 4.8 Average RF = 0.4834

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
06	50.000	0.4799	04	60.000	0.4761	05	70.000	0.4624	07	100.000	0.4687
08	125.000	0.4858	09	150.000	0.5278						

4-Chlorotoluene Average RF RSD = 5.6 Average RF = 2.220

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	2.119	02	1.000	1.980	03	2.000	2.299	04	5.000	2.229
05	20.000	2.149	06	50.000	2.321	07	100.000	2.393	08	150.000	2.296
09	200.000	2.196									

4-Isopropyltoluene Average RF RSD = 7.5 Average RF = 2.330

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	2.048	02	1.000	2.143	03	2.000	2.316	04	5.000	2.375
05	20.000	2.294	06	50.000	2.517	07	100.000	2.610	08	150.000	2.422
09	200.000	2.243									

4-Methyl-2-pentanone Average RF RSD = 12.9 Average RF = 0.3164

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2719	02	1.000	0.2821	03	2.000	0.2989	04	5.000	0.3076
05	20.000	0.2728	06	50.000	0.3218	07	100.000	0.3438	08	150.000	0.3613
09	200.000	0.3872									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Acetone — Curve Fit: Quadratic — Weighting: 1/X — COD = 0.9909 — Y = 0.003673 X² + 0.1296 X + 0.01361

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	5.000	0.2936	05	20.000	0.1346	06	50.000	0.1404	07	100.000	0.1495
08	150.000	0.1548	09	200.000	0.1414						

Acetonitrile — Curve Fit: Average RF — RSD = 12.2 — Average RF = 0.02305

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.01960	03	10.000	0.02465	04	25.000	0.01901	05	100.000	0.02219
06	250.000	0.02267	07	500.000	0.02403	08	750.000	0.02474	09	1000.000	0.02748

Acrolein — Curve Fit: Average RF — RSD = 11.1 — Average RF = 0.07561

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.500	0.06107	02	5.000	0.07881	03	10.000	0.07112	04	25.000	0.07339
05	100.000	0.06738	06	250.000	0.07659	07	500.000	0.07967	08	750.000	0.08451
09	1000.000	0.08794									

Acrylonitrile — Curve Fit: Average RF — RSD = 8.7 — Average RF = 0.1616

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.500	0.1452	02	5.000	0.1392	03	10.000	0.1608	04	25.000	0.1525
05	100.000	0.1643	06	250.000	0.1627	07	500.000	0.1750	08	750.000	0.1734
09	1000.000	0.1818									

Benzene — Curve Fit: Average RF — RSD = 7.3 — Average RF = 1.253

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.284	02	1.000	1.102	03	2.000	1.278	04	5.000	1.214
05	20.000	1.154	06	50.000	1.217	07	100.000	1.300	08	150.000	1.327
09	200.000	1.402									

Bromobenzene — Curve Fit: Average RF — RSD = 4.6 — Average RF = 0.7243

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.7305	02	1.000	0.6936	03	2.000	0.7277	04	5.000	0.7174
05	20.000	0.6838	06	50.000	0.6996	07	100.000	0.7305	08	150.000	0.7390
09	200.000	0.7962									

Bromochloromethane — Curve Fit: Average RF — RSD = 4.4 — Average RF = 0.3056

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2899	02	1.000	0.3305	03	2.000	0.3021	04	5.000	0.2945
05	20.000	0.2894	06	50.000	0.3062	07	100.000	0.3112	08	150.000	0.3095
09	200.000	0.3169									

Bromodichloromethane — Curve Fit: Average RF — RSD = 10.1 — Average RF = 0.3893

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3543	02	1.000	0.3592	03	2.000	0.3743	04	5.000	0.3619
05	20.000	0.3561	06	50.000	0.3855	07	100.000	0.4172	08	150.000	0.4313
09	200.000	0.4634									

Bromoform — Curve Fit: Average RF — RSD = 18.4 — Average RF = 0.1624

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.1234	03	2.000	0.1483	04	5.000	0.1418	05	20.000	0.1495
06	50.000	0.1723	07	100.000	0.1979	08	150.000	0.2034			

Bromomethane — Curve Fit: Average RF — RSD = 7.4 — Average RF = 0.2864

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3189	02	1.000	0.2766	03	2.000	0.2912	04	5.000	0.2641
05	20.000	0.2578	06	50.000	0.2713	07	100.000	0.2851	08	150.000	0.3001
09	200.000	0.3126									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

Carbon Disulfide Average RF RSD = 10.0 Average RF = 1.323

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.332	02	1.000	1.366	03	2.000	1.347	04	5.000	1.309
05	20.000	1.016	06	50.000	1.304	07	100.000	1.304	08	150.000	1.429
09	200.000	1.501									

Carbon Tetrachloride Average RF RSD = 13.9 Average RF = 0.1235

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1218	02	1.000	0.1121	03	2.000	0.1055	04	5.000	0.1122
05	20.000	0.1062	06	50.000	0.1230	07	100.000	0.1346	08	150.000	0.1406
09	200.000	0.1559									

Chlorobenzene Average RF RSD = 6.3 Average RF = 0.9831

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.9365	02	1.000	0.9043	03	2.000	0.9523	04	5.000	0.9698
05	20.000	0.9240	06	50.000	0.9846	07	100.000	1.055	08	150.000	1.045
09	200.000	1.076									

Chloroethane Average RF RSD = 6.4 Average RF = 0.3399

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3471	02	1.000	0.3602	03	2.000	0.3216	04	5.000	0.3140
05	20.000	0.3137	06	50.000	0.3282	07	100.000	0.3431	08	150.000	0.3582
09	200.000	0.3731									

Chloroform Average RF RSD = 5.6 Average RF = 0.8234

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.7967	02	1.000	0.7722	03	2.000	0.8062	04	5.000	0.8126
05	20.000	0.7776	06	50.000	0.8146	07	100.000	0.8510	08	150.000	0.8653
09	200.000	0.9147									

Chloromethane Average RF RSD = 9.7 Average RF = 0.9504

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.8764	02	1.000	0.8872	03	2.000	0.8927	04	5.000	0.8437
05	20.000	0.9139	06	50.000	0.9604	07	100.000	1.011	08	150.000	1.050
09	200.000	1.119									

Cyclohexane Average RF RSD = 11.5 Average RF = 0.4754

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4368	02	1.000	0.4546	03	2.000	0.4542	04	5.000	0.4330
05	20.000	0.4078	06	50.000	0.4757	07	100.000	0.5040	08	150.000	0.5332
09	200.000	0.5794									

Cyclohexanone Average RF RSD = 16.2 Average RF = 0.01611

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	10.000	0.01299	02	20.000	0.01336	03	40.000	0.01609	04	100.000	0.01527
05	400.000	0.01408	06	1000.000	0.01521	07	2000.000	0.01883	08	3000.000	0.01914
09	4000.000	0.01997									

Dibromochloromethane Average RF RSD = 16.9 Average RF = 0.2981

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2264	02	1.000	0.2577	03	2.000	0.2689	04	5.000	0.2724
05	20.000	0.2771	06	50.000	0.3075	07	100.000	0.3426	08	150.000	0.3522
09	200.000	0.3786									

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte **Curve Fit** **Weighting**

Dibromofluoromethane Average RF RSD = 4.6 Average RF = 0.3120

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
06	50.000	0.3023	04	60.000	0.3065	05	70.000	0.3034	07	100.000	0.3060
08	125.000	0.3142	09	150.000	0.3398						

Dibromomethane Average RF RSD = 6.5 Average RF = 0.1625

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1443	02	1.000	0.1666	03	2.000	0.1614	04	5.000	0.1679
05	20.000	0.1525	06	50.000	0.1558	07	100.000	0.1650	08	150.000	0.1679
09	200.000	0.1811									

Dichlorodifluoromethane (CFC 12) Average RF RSD = 16.1 Average RF = 0.5192

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3968	02	1.000	0.4846	03	2.000	0.4141	04	5.000	0.4532
05	20.000	0.5573	06	50.000	0.5648	07	100.000	0.5838	08	150.000	0.5901
09	200.000	0.6280									

Dichlorofluoromethane (CFC 21) Average RF RSD = 13.8 Average RF = 0.8305

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.7651	02	1.000	0.7221	03	2.000	0.6972	04	5.000	0.7400
05	20.000	0.7842	06	50.000	0.8781	07	100.000	0.9038	08	150.000	0.9662
09	200.000	1.018									

Dichloromethane Average RF RSD = 6.5 Average RF = 0.4520

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5134	02	1.000	0.4512	03	2.000	0.4616	04	5.000	0.4205
05	20.000	0.4277	06	50.000	0.4280	07	100.000	0.4380	08	150.000	0.4505
09	200.000	0.4766									

Diethyl Ether Average RF RSD = 10.9 Average RF = 0.4025

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3062	02	1.000	0.3605	03	2.000	0.4257	04	5.000	0.4081
05	20.000	0.3986	06	50.000	0.4146	07	100.000	0.4266	08	150.000	0.4344
09	200.000	0.4481									

Diisopropyl Ether Average RF RSD = 6.9 Average RF = 2.538

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	2.207	02	1.000	2.329	03	2.000	2.492	04	5.000	2.481
05	20.000	2.620	06	50.000	2.668	07	100.000	2.684	08	150.000	2.714
09	200.000	2.644									

Ethyl Methacrylate Average RF RSD = 18.6 Average RF = 0.2898

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2180	02	1.000	0.2409	03	2.000	0.2617	04	5.000	0.2557
05	20.000	0.2695	06	50.000	0.2989	07	100.000	0.3412	08	150.000	0.3478
09	200.000	0.3744									

Ethyl tert-Butyl Ether Average RF RSD = 9.0 Average RF = 1.733

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.478	02	1.000	1.544	03	2.000	1.691	04	5.000	1.679
05	20.000	1.748	06	50.000	1.772	07	100.000	1.834	08	150.000	1.917
09	200.000	1.936									

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte **Curve Fit** **Weighting**

Ethylbenzene Average RF RSD = 11.1 Average RF = 0.5157

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4604	02	1.000	0.4615	03	2.000	0.4914	04	5.000	0.4908
05	20.000	0.4683	06	50.000	0.5130	07	100.000	0.5596	08	150.000	0.5744
09	200.000	0.6217									

Hexachlorobutadiene Average RF RSD = 6.7 Average RF = 0.3554

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3808	02	1.000	0.3585	03	2.000	0.3195	04	5.000	0.3531
05	20.000	0.3201	06	50.000	0.3532	07	100.000	0.3653	08	150.000	0.3589
09	200.000	0.3895									

Iodomethane Average RF RSD = 11.7 Average RF = 0.5455

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.6079	02	1.000	0.5012	03	2.000	0.5133	04	5.000	0.4590
05	20.000	0.4574	06	50.000	0.5740	07	100.000	0.5743	08	150.000	0.6049
09	200.000	0.6179									

Isopropylbenzene (Cumene) Average RF RSD = 9.5 Average RF = 1.512

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.225	02	1.000	1.392	03	2.000	1.487	04	5.000	1.507
05	20.000	1.476	06	50.000	1.630	07	100.000	1.703	08	150.000	1.638
09	200.000	1.549									

Methacrylonitrile Average RF RSD = 5.9 Average RF = 0.1379

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1315	02	1.000	0.1332	03	2.000	0.1397	04	5.000	0.1303
05	20.000	0.1289	06	50.000	0.1354	07	100.000	0.1437	08	150.000	0.1453
09	200.000	0.1533									

Methyl Acetate Average RF RSD = 6.6 Average RF = 0.3642

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3622	02	1.000	0.3742	03	2.000	0.3543	04	5.000	0.3418
05	20.000	0.3255	06	50.000	0.3504	07	100.000	0.3794	08	150.000	0.3885
09	200.000	0.4013									

Methyl Methacrylate Average RF RSD = 13.1 Average RF = 0.1455

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1243	02	1.000	0.1202	03	2.000	0.1414	04	5.000	0.1394
05	20.000	0.1333	06	50.000	0.1480	07	100.000	0.1611	08	150.000	0.1656
09	200.000	0.1765									

Methyl tert-Butyl Ether Average RF RSD = 5.3 Average RF = 1.053

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.9905	02	1.000	1.013	03	2.000	1.062	04	5.000	1.014
05	20.000	1.008	06	50.000	1.028	07	100.000	1.103	08	150.000	1.111
09	200.000	1.151									

Methylcyclohexane Average RF RSD = 13.5 Average RF = 0.5121

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4480	02	1.000	0.4780	03	2.000	0.4804	04	5.000	0.4612
05	20.000	0.4414	06	50.000	0.5126	07	100.000	0.5577	08	150.000	0.5867
09	200.000	0.6425									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

Naphthalene Average RF RSD = 8.9 Average RF = 1.609

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.463	02	1.000	1.353	03	2.000	1.527	04	5.000	1.606
05	20.000	1.602	06	50.000	1.705	07	100.000	1.821	08	150.000	1.718
09	200.000	1.685									

Propionitrile Average RF RSD = 10.3 Average RF = 0.05838

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.500	0.05760	02	5.000	0.04606	03	10.000	0.05879	04	25.000	0.05669
05	100.000	0.05440	06	250.000	0.05845	07	500.000	0.06379	08	750.000	0.06348
09	1000.000	0.06613									

Styrene Average RF RSD = 13.2 Average RF = 1.042

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.8100	02	1.000	0.9196	03	2.000	0.9641	04	5.000	0.9990
05	20.000	1.006	06	50.000	1.100	07	100.000	1.202	08	150.000	1.183
09	200.000	1.196									

Tetrachloroethene (PCE) Average RF RSD = 7.9 Average RF = 0.3005

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2969	02	1.000	0.3072	03	2.000	0.2823	04	5.000	0.2972
05	20.000	0.2620	06	50.000	0.2866	07	100.000	0.3087	08	150.000	0.3183
09	200.000	0.3453									

Tetrahydrofuran (THF) Average RF RSD = 9.8 Average RF = 0.1454

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1413	02	1.000	0.1630	03	2.000	0.1502	04	5.000	0.1162
05	20.000	0.1341	06	50.000	0.1409	07	100.000	0.1534	08	150.000	0.1502
09	200.000	0.1591									

Toluene Average RF RSD = 5.2 Average RF = 1.353

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.286	02	1.000	1.283	03	2.000	1.414	04	5.000	1.330
05	20.000	1.258	06	50.000	1.325	07	100.000	1.415	08	150.000	1.424
09	200.000	1.444									

Toluene-d8 Average RF RSD = 3.8 Average RF = 1.190

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
06	50.000	1.170	04	60.000	1.174	05	70.000	1.160	07	100.000	1.159
08	125.000	1.198	09	150.000	1.276						

Trichloroethene (TCE) Average RF RSD = 8.4 Average RF = 0.3463

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3038	02	1.000	0.3475	03	2.000	0.3294	04	5.000	0.3381
05	20.000	0.3224	06	50.000	0.3407	07	100.000	0.3615	08	150.000	0.3704
09	200.000	0.4025									

Trichlorofluoromethane (CFC 11) Average RF RSD = 4.7 Average RF = 0.6683

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5984	02	1.000	0.6930	03	2.000	0.6858	04	5.000	0.6681
05	20.000	0.6534	06	50.000	0.6746	07	100.000	0.6592	08	150.000	0.6719
09	200.000	0.7101									

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte **Curve Fit** **Weighting**

Vinyl Acetate Average RF RSD = 19.8 Average RF = 0.07465

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.04980	03	2.000	0.09640	04	5.000	0.07685	05	20.000	0.05842
06	50.000	0.07251	07	100.000	0.07834	08	150.000	0.07854	09	200.000	0.08633

Vinyl Chloride Average RF RSD = 7.4 Average RF = 0.6923

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.6483	02	1.000	0.6271	03	2.000	0.6957	04	5.000	0.6599
05	20.000	0.6520	06	50.000	0.6962	07	100.000	0.7212	08	150.000	0.7441
09	200.000	0.7864									

cis-1,2-Dichloroethene Average RF RSD = 6.1 Average RF = 0.4970

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4682	02	1.000	0.4659	03	2.000	0.4948	04	5.000	0.4849
05	20.000	0.4701	06	50.000	0.4900	07	100.000	0.5207	08	150.000	0.5233
09	200.000	0.5546									

cis-1,3-Dichloropropene Average RF RSD = 15.1 Average RF = 0.4412

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.3405	02	1.000	0.3852	03	2.000	0.4116	04	5.000	0.4105
05	20.000	0.4138	06	50.000	0.4547	07	100.000	0.4923	08	150.000	0.5118
09	200.000	0.5504									

m,p-Xylenes Average RF RSD = 9.1 Average RF = 0.6204

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.5485	02	2.000	0.5372	03	4.000	0.6174	04	10.000	0.6117
05	40.000	0.5811	06	100.000	0.6429	07	200.000	0.6904	08	300.000	0.6761
09	400.000	0.6780									

n-Butyl Acetate Average RF RSD = 19.9 Average RF = 0.5418

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	1.000	0.4033	03	2.000	0.4982	04	5.000	0.4564	05	20.000	0.5005
06	50.000	0.5740	07	100.000	0.6698	08	150.000	0.6901			

n-Butylbenzene Average RF RSD = 7.4 Average RF = 2.058

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.796	02	1.000	1.925	03	2.000	2.008	04	5.000	2.073
05	20.000	1.998	06	50.000	2.216	07	100.000	2.301	08	150.000	2.144
09	200.000	2.057									

n-Heptane Average RF RSD = 9.0 Average RF = 0.5448

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5576	02	1.000	0.5149	03	2.000	0.4784	04	5.000	0.5105
05	20.000	0.5012	06	50.000	0.5446	07	100.000	0.5819	08	150.000	0.5809
09	200.000	0.6332									

n-Propylbenzene Average RF RSD = 7.3 Average RF = 2.971

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	2.623	02	1.000	3.063	03	2.000	3.093	04	5.000	3.074
05	20.000	2.964	06	50.000	3.199	07	100.000	3.200	08	150.000	2.883
09	200.000	2.637									

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
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Analyte **Curve Fit** **Weighting**

o-Xylene Average RF RSD = 10.7 Average RF = 0.6155

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5319	02	1.000	0.5594	03	2.000	0.5842	04	5.000	0.5883
05	20.000	0.5701	06	50.000	0.6230	07	100.000	0.6669	08	150.000	0.6822
09	200.000	0.7333									

sec-Butylbenzene Average RF RSD = 7.9 Average RF = 2.615

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	2.199	02	1.000	2.531	03	2.000	2.678	04	5.000	2.692
05	20.000	2.592	06	50.000	2.832	07	100.000	2.897	08	150.000	2.654
09	200.000	2.462									

tert-Amyl Methyl Ether Average RF RSD = 13.8 Average RF = 0.7222

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.5607	02	1.000	0.6193	03	2.000	0.6791	04	5.000	0.6796
05	20.000	0.7127	06	50.000	0.7560	07	100.000	0.7905	08	150.000	0.8375
09	200.000	0.8648									

tert-Butylbenzene Average RF RSD = 7.2 Average RF = 1.926

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	1.661	02	1.000	1.844	03	2.000	1.861	04	5.000	1.965
05	20.000	1.828	06	50.000	2.017	07	100.000	2.105	08	150.000	2.041
09	200.000	2.013									

trans-1,2-Dichloroethene Average RF RSD = 5.3 Average RF = 0.4146

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.4177	02	1.000	0.3856	03	2.000	0.4072	04	5.000	0.4098
05	20.000	0.3890	06	50.000	0.4067	07	100.000	0.4280	08	150.000	0.4316
09	200.000	0.4561									

trans-1,3-Dichloropropene Average RF RSD = 17.3 Average RF = 0.3677

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.2723	02	1.000	0.3393	03	2.000	0.3155	04	5.000	0.3334
05	20.000	0.3431	06	50.000	0.3784	07	100.000	0.4230	08	150.000	0.4367
09	200.000	0.4677									

trans-1,4-Dichloro-2-butene Average RF RSD = 13.1 Average RF = 0.1091

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.500	0.1112	02	1.000	0.1025	03	2.000	0.09048	04	5.000	0.09872
05	20.000	0.09553	06	50.000	0.1058	07	100.000	0.1219	08	150.000	0.1220
09	200.000	0.1337									

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

1,1,1,2-Tetrachloroethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.39	-21.5	02	1.000	0.89	-11.4	03	2.000	1.83	-8.3
04	5.000	4.43	-11.4	05	20.000	17.95	-10.2	06	50.000	50.85	1.7
07	100.000	114.02	14.0	08	150.000	176.55	17.7	09	200.000	259.00	29.5

1,1,1-Trichloroethane (TCA)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.46	-7.8	02	1.000	0.93	-6.6	03	2.000	1.90	-5.2
04	5.000	4.72	-5.7	05	20.000	18.39	-8.0	06	50.000	49.63	-0.7
07	100.000	106.91	6.9	08	150.000	164.34	9.6	09	200.000	235.02	17.5

1,1,2,2-Tetrachloroethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.40	-20.0	02	1.000	0.91	-8.9	03	2.000	1.95	-2.4
04	5.000	4.99	-0.2	05	20.000	20.11	0.6	06	50.000	50.97	1.9
07	100.000	107.44	7.4	08	150.000	160.72	7.1	09	200.000	228.89	14.4

1,1,2-Trichloroethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-10.1	02	1.000	0.94	-5.9	03	2.000	1.95	-2.6
04	5.000	5.11	2.3	05	20.000	19.15	-4.2	06	50.000	48.67	-2.7
07	100.000	103.80	3.8	08	150.000	159.47	6.3	09	200.000	226.24	13.1

1,1,2-Trichlorotrifluoroethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.46	-7.4	02	1.000	0.96	-4.2	03	2.000	2.08	4.1
04	5.000	4.88	-2.4	05	20.000	18.81	-6.0	06	50.000	48.55	-2.9
07	100.000	101.62	1.6	08	150.000	157.72	5.1	09	200.000	223.97	12.0

1,1-Dichloroethane (1,1-DCA)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-3.9	02	1.000	1.01	0.8	03	2.000	1.98	-0.8
04	5.000	4.81	-3.8	05	20.000	18.86	-5.7	06	50.000	49.99	0.0
07	100.000	104.89	4.9	08	150.000	150.96	0.6	09	200.000	215.79	7.9

1,1-Dichloroethene (1,1-DCE)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.5	02	1.000	0.87	-13.3	03	2.000	1.99	-0.5
04	5.000	4.94	-1.1	05	20.000	19.04	-4.8	06	50.000	48.77	-2.5
07	100.000	102.98	3.0	08	150.000	161.92	7.9	09	200.000	231.62	15.8

1,1-Dichloropropene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-9.3	02	1.000	0.97	-3.4	03	2.000	1.94	-3.2
04	5.000	4.95	-1.1	05	20.000	18.10	-9.5	06	50.000	49.04	-1.9
07	100.000	104.50	4.5	08	150.000	161.61	7.7	09	200.000	232.13	16.1

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
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Analyte

1,2,3-Trichlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.5	02	1.000	0.89	-10.6	03	2.000	2.07	3.6
04	5.000	5.01	0.3	05	20.000	18.91	-5.5	06	50.000	51.75	3.5
07	100.000	109.44	9.4	08	150.000	155.41	3.6	09	200.000	216.39	8.2

1,2,3-Trichloropropane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.53	7.0	02	1.000	0.98	-2.5	03	2.000	2.05	2.7
04	5.000	5.16	3.3	05	20.000	19.07	-4.7	06	50.000	46.70	-6.6
07	100.000	98.09	-1.9	08	150.000	147.73	-1.5	09	200.000	208.49	4.2

1,2,4-Trichlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-10.7	02	1.000	1.02	1.7	03	2.000	1.90	-5.2
04	5.000	4.84	-3.2	05	20.000	19.08	-4.6	06	50.000	51.52	3.0
07	100.000	107.61	7.6	08	150.000	155.35	3.6	09	200.000	215.60	7.8

1,2,4-Trimethylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.42	-15.7	02	1.000	0.96	-4.3	03	2.000	1.96	-1.9
04	5.000	5.18	3.6	05	20.000	19.94	-0.3	06	50.000	53.35	6.7
07	100.000	109.59	9.6	08	150.000	155.51	3.7	09	200.000	197.36	-1.3

1,2-Dibromo-3-chloropropane (DBCP)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.3	02	1.000	1.08	8.2	03	2.000	1.95	-2.6
04	5.000	4.52	-9.6	05	20.000	18.45	-7.7	06	50.000	47.47	-5.1
07	100.000	107.79	7.8	08	150.000	160.23	6.8	09	200.000	228.86	14.4

1,2-Dibromoethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-11.8	02	1.000	0.88	-11.7	03	2.000	1.94	-3.0
04	5.000	4.75	-5.0	05	20.000	19.37	-3.1	06	50.000	49.62	-0.8
07	100.000	109.51	9.5	08	150.000	163.12	8.7	09	200.000	234.42	17.2

1,2-Dichloro-1,1,2-trifluoroethane (CFC

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.42	-15.0	02	1.000	1.02	2.1	03	2.000	1.89	-5.5
04	5.000	4.98	-0.4	05	20.000	18.41	-8.0	06	50.000	51.55	3.1
07	100.000	105.77	5.8	08	150.000	167.99	12.0	09	200.000	211.73	5.9

1,2-Dichlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-6.8	02	1.000	0.95	-4.7	03	2.000	2.03	1.7
04	5.000	4.99	-0.1	05	20.000	19.40	-3.0	06	50.000	50.22	0.4
07	100.000	105.52	5.5	08	150.000	153.84	2.6	09	200.000	208.75	4.4

Initial Calibration - Detailed Report

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Analyte

1,2-Dichloroethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-9.1	02	1.000	0.94	-6.4	03	2.000	2.02	1.0
04	5.000	5.02	0.4	05	20.000	18.81	-6.0	06	50.000	49.94	-0.1
07	100.000	104.51	4.5	08	150.000	156.90	4.6	09	200.000	222.10	11.0

1,2-Dichloroethane-d4

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
06	50.000	48.36	-3.3	04	60.000	59.98	0.0	05	70.000	68.23	-2.5
07	100.000	98.16	-1.8	08	125.000	125.73	0.6	09	150.000	160.66	7.1

1,2-Dichloropropane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-5.7	02	1.000	0.99	-0.8	03	2.000	1.98	-1.1
04	5.000	4.73	-5.5	05	20.000	18.49	-7.5	06	50.000	48.30	-3.4
07	100.000	103.27	3.3	08	150.000	158.76	5.8	09	200.000	229.74	14.9

1,3,5-Trichlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.49	-2.8	02	1.000	0.95	-5.4	03	2.000	1.92	-4.1
04	5.000	4.92	-1.5	05	20.000	18.40	-8.0	06	50.000	52.07	4.1
07	100.000	102.89	2.9	08	150.000	154.10	2.7	09	200.000	224.22	12.1

1,3,5-Trimethylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.42	-16.2	02	1.000	0.92	-7.9	03	2.000	1.99	-0.3
04	5.000	5.10	2.0	05	20.000	19.64	-1.8	06	50.000	53.74	7.5
07	100.000	111.48	11.5	08	150.000	157.81	5.2	09	200.000	200.31	0.2

1,3-Dichlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.52	3.1	02	1.000	0.94	-6.3	03	2.000	1.88	-6.2
04	5.000	5.02	0.4	05	20.000	19.06	-4.7	06	50.000	50.42	0.8
07	100.000	104.80	4.8	08	150.000	153.81	2.5	09	200.000	211.14	5.6

1,3-Dichloropropane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.6	02	1.000	0.93	-7.2	03	2.000	2.03	1.4
04	5.000	4.65	-7.0	05	20.000	18.66	-6.7	06	50.000	48.91	-2.2
07	100.000	106.71	6.7	08	150.000	160.23	6.8	09	200.000	225.34	12.7

1,4-Dichlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.51	1.7	02	1.000	0.94	-6.4	03	2.000	2.11	5.3
04	5.000	4.98	-0.4	05	20.000	18.88	-5.6	06	50.000	49.18	-1.6
07	100.000	103.64	3.6	08	150.000	151.83	1.2	09	200.000	204.36	2.2

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

1,4-Dioxane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
02	20.000	17.79	-11.0	03	40.000	40.96	2.4	04	100.000	93.13	-6.9
05	400.000	368.09	-8.0	06	1000.000	909.86	-9.0	07	2000.000	2,224.54	11.2
08	3000.000	3,255.39	8.5	09	4000.000	4,509.62	12.7				

1-Butanol

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
02	50.000	49.13	-1.7	03	100.000	107.14	7.1	04	250.000	229.57	-8.2
05	1000.000	939.84	-6.0	06	2500.000	2,548.95	2.0	07	5000.000	5,352.80	7.1
08	7500.000	7,610.84	1.5	09	10000.000	9,656.73	-3.4				

1-Chloro-4-(trifluoromethyl)benzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.40	-20.0	02	1.000	0.88	-12.2	03	2.000	2.03	1.5
04	5.000	4.69	-6.2	05	20.000	17.80	-11.0	06	50.000	51.10	2.2
07	100.000	106.66	6.7	08	150.000	166.78	11.2	09	200.000	255.79	27.9

2,2-Dichloro-1,1,1-trifluoroethane (CFC

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.9	02	1.000	0.91	-9.4	03	2.000	1.96	-1.9
04	5.000	4.92	-1.5	05	20.000	18.28	-8.6	06	50.000	49.74	-0.5
07	100.000	103.12	3.1	08	150.000	167.41	11.6	09	200.000	240.08	20.0

2,2-Dichloropropane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.42	-16.3	02	1.000	0.99	-1.0	03	2.000	1.98	-0.9
04	5.000	4.89	-2.1	05	20.000	18.31	-8.4	06	50.000	49.44	-1.1
07	100.000	106.38	6.4	08	150.000	163.07	8.7	09	200.000	229.50	14.8

2,3,6-Trichlorotoluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-14.3	02	1.000	0.85	-15.0	03	2.000	2.02	0.9
04	5.000	4.64	-7.1	05	20.000	18.46	-7.7	06	50.000	52.79	5.6
07	100.000	109.75	9.7	08	150.000	163.97	9.3	09	200.000	237.19	18.6

2,4,5-Trichlorotoluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.37	-25.5	02	1.000	0.92	-7.9	03	2.000	1.82	-9.0
04	5.000	4.61	-7.7	05	20.000	18.36	-8.2	06	50.000	55.41	10.8
07	100.000	113.04	13.0	08	150.000	168.59	12.4	09	200.000	244.14	22.1

2,4-, 2,5-, and 2,6-Dichlorotoluene Coelut

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.500	1.27	-15.4	02	3.000	2.78	-7.4	03	6.000	5.87	-2.1
04	15.000	15.17	1.2	05	60.000	58.85	-1.9	06	150.000	167.00	11.3
07	300.000	327.67	9.2	08	450.000	467.80	4.0	09	600.000	607.54	1.3

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

2,4-Dichlorobenzotrifluoride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-9.8	02	1.000	1.04	3.6	03	2.000	1.88	-6.2
04	5.000	4.77	-4.6	05	20.000	17.38	-13.1	06	50.000	51.04	2.1
07	100.000	101.90	1.9	08	150.000	156.96	4.6	09	200.000	242.71	21.4

2,5-Dichlorobenzotrifluoride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.49	-2.6	02	1.000	0.99	-1.0	03	2.000	1.97	-1.3
04	5.000	4.62	-7.5	05	20.000	17.64	-11.8	06	50.000	50.73	1.5
07	100.000	102.79	2.8	08	150.000	157.11	4.7	09	200.000	230.43	15.2

2-Butanone (MEK)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.61	21.2	02	1.000	0.82	-17.7	03	2.000	2.08	3.8
04	5.000	4.82	-3.5	05	20.000	17.78	-11.1	06	50.000	48.28	-3.4
07	100.000	99.68	-0.3	08	150.000	152.84	1.9	09	200.000	218.50	9.2

2-Chloro-1,3-butadiene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.49	-2.9	02	1.000	0.90	-10.0	03	2.000	1.97	-1.4
04	5.000	5.04	0.7	05	20.000	15.64	-21.8	06	50.000	51.70	3.4
07	100.000	103.90	3.9	08	150.000	165.20	10.1	09	200.000	235.71	17.9

2-Chlorobenzotrifluoride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.41	-18.0	02	1.000	0.88	-12.4	03	2.000	1.86	-7.2
04	5.000	4.74	-5.2	05	20.000	17.72	-11.4	06	50.000	52.51	5.0
07	100.000	106.77	6.8	08	150.000	169.83	13.2	09	200.000	258.43	29.2

2-Chloroethyl Vinyl Ether

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-6.5	02	1.000	0.92	-8.2	03	2.000	1.83	-8.5
04	5.000	4.76	-4.8	05	20.000	16.39	-18.0	06	50.000	50.80	1.6
07	100.000	106.95	6.9	08	150.000	171.83	14.6	09	200.000	245.98	23.0

2-Chlorotoluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-14.2	02	1.000	0.95	-5.2	03	2.000	2.05	2.6
04	5.000	5.07	1.5	05	20.000	19.39	-3.0	06	50.000	51.12	2.2
07	100.000	106.31	6.3	08	150.000	157.78	5.2	09	200.000	209.29	4.6

2-Hexanone

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.4	02	1.000	0.82	-18.0	03	2.000	1.94	-3.1
04	5.000	4.43	-11.4	05	20.000	17.22	-13.9	06	50.000	50.41	0.8
07	100.000	111.97	12.0	08	150.000	172.45	15.0	09	200.000	246.08	23.0

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

2-Methyl-1-propanol

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
03	40.000	34.67	-13.3	04	100.000	83.98	-16.0	05	400.000	336.95	-15.8
06	1000.000	913.91	-8.6	07	2000.000	2,254.99	12.7	08	3000.000	3,497.51	16.6
09	4000.000	4,975.35	24.4								

2-Methyl-2-propanol

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	10.000	8.33	-16.7	02	20.000	17.16	-14.2	03	40.000	41.78	4.4
04	100.000	95.50	-4.5	05	400.000	374.79	-6.3	06	1000.000	963.51	-3.6
07	2000.000	2,242.95	12.1	08	3000.000	3,384.21	12.8	09	4000.000	4,637.19	15.9

2-Nitropropane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
03	4.000	3.44	-13.9	04	10.000	9.09	-9.1	05	40.000	35.14	-12.1
06	100.000	95.12	-4.9	07	200.000	231.01	15.5	08	300.000	373.52	24.5

2-Propanol

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	10.000	8.95	-10.5	02	20.000	18.46	-7.7	03	40.000	33.45	-16.4
04	100.000	89.12	-10.9	05	400.000	361.34	-9.7	06	1000.000	1,033.51	3.4
07	2000.000	2,316.76	15.8	08	3000.000	3,512.46	17.1	09	4000.000	4,753.05	18.8

3,4- and 2,3-Dichlorotoluene Coelution

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.000	0.91	-9.1	02	2.000	1.89	-5.6	03	4.000	3.92	-2.0
04	10.000	10.21	2.1	05	40.000	39.53	-1.2	06	100.000	111.77	11.8
07	200.000	216.51	8.3	08	300.000	300.30	0.1	09	400.000	382.64	-4.3

3,4-Dichlorobenzotrifluoride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-11.7	02	1.000	0.98	-2.2	03	2.000	1.84	-8.0
04	5.000	4.73	-5.3	05	20.000	18.00	-10.0	06	50.000	52.30	4.6
07	100.000	105.40	5.4	08	150.000	160.65	7.1	09	200.000	240.21	20.1

3-Chloro-1-propene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-3.1	02	1.000	1.00	-0.3	03	2.000	1.84	-8.2
04	5.000	4.87	-2.6	05	20.000	18.22	-8.9	06	50.000	50.81	1.6
07	100.000	107.22	7.2	08	150.000	155.82	3.9	09	200.000	220.90	10.4

3-Chlorobenzotrifluoride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.41	-17.0	02	1.000	0.98	-2.1	03	2.000	2.00	-0.1
04	5.000	4.66	-6.7	05	20.000	17.69	-11.5	06	50.000	50.20	0.4
07	100.000	104.21	4.2	08	150.000	163.32	8.9	09	200.000	247.98	24.0

Initial Calibration - Detailed Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Signal ID: 1

Analyte

3-Chlorotoluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-6.3	02	1.000	0.96	-3.9	03	2.000	1.98	-1.1
04	5.000	5.13	2.6	05	20.000	18.91	-5.5	06	50.000	52.89	5.8
07	100.000	103.37	3.4	08	150.000	152.46	1.6	09	200.000	206.78	3.4

4-Bromofluorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
06	50.000	49.63	-0.7	04	60.000	59.08	-1.5	05	70.000	66.95	-4.4
07	100.000	96.96	-3.0	08	125.000	125.61	0.5	09	150.000	163.76	9.2

4-Chlorotoluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.5	02	1.000	0.89	-10.8	03	2.000	2.07	3.5
04	5.000	5.02	0.4	05	20.000	19.36	-3.2	06	50.000	52.28	4.6
07	100.000	107.80	7.8	08	150.000	155.08	3.4	09	200.000	197.80	-1.1

4-Isopropyltoluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.1	02	1.000	0.92	-8.0	03	2.000	1.99	-0.6
04	5.000	5.10	1.9	05	20.000	19.70	-1.5	06	50.000	54.02	8.0
07	100.000	112.01	12.0	08	150.000	155.94	4.0	09	200.000	192.55	-3.7

4-Methyl-2-pentanone

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-14.1	02	1.000	0.89	-10.8	03	2.000	1.89	-5.5
04	5.000	4.86	-2.8	05	20.000	17.25	-13.8	06	50.000	50.86	1.7
07	100.000	108.67	8.7	08	150.000	171.32	14.2	09	200.000	244.78	22.4

Acetone

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
04	5.000	6.06	21.1	05	20.000	15.40	-23.0	06	50.000	47.65	-4.7
07	100.000	104.02	4.0	08	150.000	159.54	6.4	09	200.000	192.15	-3.9

Acetonitrile

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
02	5.000	4.25	-14.9	03	10.000	10.69	6.9	04	25.000	20.62	-17.5
05	100.000	96.29	-3.7	06	250.000	245.95	-1.6	07	500.000	521.35	4.3
08	750.000	805.12	7.3	09	1000.000	1,192.27	19.2				

Acrolein

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.500	2.02	-19.2	02	5.000	5.21	4.2	03	10.000	9.41	-5.9
04	25.000	24.27	-2.9	05	100.000	89.12	-10.9	06	250.000	253.24	1.3
07	500.000	526.85	5.4	08	750.000	838.29	11.8	09	1000.000	1,163.10	16.3

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

Acrylonitrile

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.500	2.25	-10.2	02	5.000	4.30	-13.9	03	10.000	9.95	-0.5
04	25.000	23.59	-5.6	05	100.000	101.62	1.6	06	250.000	251.63	0.7
07	500.000	541.42	8.3	08	750.000	804.37	7.2	09	1000.000	1,124.66	12.5

Benzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.51	2.5	02	1.000	0.88	-12.1	03	2.000	2.04	2.0
04	5.000	4.84	-3.1	05	20.000	18.42	-7.9	06	50.000	48.56	-2.9
07	100.000	103.71	3.7	08	150.000	158.88	5.9	09	200.000	223.79	11.9

Bromobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.50	0.9	02	1.000	0.96	-4.2	03	2.000	2.01	0.5
04	5.000	4.95	-0.9	05	20.000	18.88	-5.6	06	50.000	48.29	-3.4
07	100.000	100.86	0.9	08	150.000	153.06	2.0	09	200.000	219.88	9.9

Bromochloromethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-5.1	02	1.000	1.08	8.1	03	2.000	1.98	-1.1
04	5.000	4.82	-3.6	05	20.000	18.94	-5.3	06	50.000	50.11	0.2
07	100.000	101.85	1.8	08	150.000	151.90	1.3	09	200.000	207.43	3.7

Bromodichloromethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.46	-9.0	02	1.000	0.92	-7.7	03	2.000	1.92	-3.8
04	5.000	4.65	-7.0	05	20.000	18.30	-8.5	06	50.000	49.52	-1.0
07	100.000	107.18	7.2	08	150.000	166.20	10.8	09	200.000	238.08	19.0

Bromoform

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
02	1.000	0.76	-24.0	03	2.000	1.83	-8.7	04	5.000	4.37	-12.7
05	20.000	18.41	-8.0	06	50.000	53.07	6.1	07	100.000	121.88	21.9
08	150.000	187.92	25.3								

Bromomethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.56	11.3	02	1.000	0.97	-3.4	03	2.000	2.03	1.7
04	5.000	4.61	-7.8	05	20.000	18.00	-10.0	06	50.000	47.36	-5.3
07	100.000	99.55	-0.5	08	150.000	157.16	4.8	09	200.000	218.29	9.1

Carbon Disulfide

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.50	0.6	02	1.000	1.03	3.2	03	2.000	2.04	1.8
04	5.000	4.95	-1.1	05	20.000	15.36	-23.2	06	50.000	49.28	-1.4
07	100.000	98.59	-1.4	08	150.000	161.97	8.0	09	200.000	226.94	13.5

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

Carbon Tetrachloride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.49	-1.4	02	1.000	0.91	-9.2	03	2.000	1.71	-14.6
04	5.000	4.54	-9.2	05	20.000	17.19	-14.0	06	50.000	49.78	-0.4
07	100.000	108.95	8.9	08	150.000	170.72	13.8	09	200.000	252.43	26.2

Chlorobenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.7	02	1.000	0.92	-8.0	03	2.000	1.94	-3.1
04	5.000	4.93	-1.4	05	20.000	18.80	-6.0	06	50.000	50.07	0.1
07	100.000	107.34	7.3	08	150.000	159.46	6.3	09	200.000	218.91	9.5

Chloroethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.51	2.1	02	1.000	1.06	6.0	03	2.000	1.89	-5.4
04	5.000	4.62	-7.6	05	20.000	18.46	-7.7	06	50.000	48.27	-3.5
07	100.000	100.95	0.9	08	150.000	158.05	5.4	09	200.000	219.52	9.8

Chloroform

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-3.2	02	1.000	0.94	-6.2	03	2.000	1.96	-2.1
04	5.000	4.93	-1.3	05	20.000	18.89	-5.6	06	50.000	49.47	-1.1
07	100.000	103.35	3.3	08	150.000	157.62	5.1	09	200.000	222.18	11.1

Chloromethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.46	-7.8	02	1.000	0.93	-6.6	03	2.000	1.88	-6.1
04	5.000	4.44	-11.2	05	20.000	19.23	-3.8	06	50.000	50.53	1.1
07	100.000	106.33	6.3	08	150.000	165.67	10.4	09	200.000	235.48	17.7

Cyclohexane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.46	-8.1	02	1.000	0.96	-4.4	03	2.000	1.91	-4.5
04	5.000	4.55	-8.9	05	20.000	17.16	-14.2	06	50.000	50.03	0.1
07	100.000	106.01	6.0	08	150.000	168.25	12.2	09	200.000	243.75	21.9

Cyclohexanone

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	10.000	8.07	-19.3	02	20.000	16.59	-17.0	03	40.000	39.97	-0.1
04	100.000	94.81	-5.2	05	400.000	349.72	-12.6	06	1000.000	944.38	-5.6
07	2000.000	2,338.68	16.9	08	3000.000	3,565.31	18.8	09	4000.000	4,959.13	24.0

Dibromochloromethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.38	-24.1	02	1.000	0.86	-13.6	03	2.000	1.80	-9.8
04	5.000	4.57	-8.6	05	20.000	18.59	-7.1	06	50.000	51.57	3.1
07	100.000	114.92	14.9	08	150.000	177.17	18.1	09	200.000	253.96	27.0

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

Dibromofluoromethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
06	50.000	48.44	-3.1	04	60.000	58.93	-1.8	05	70.000	68.06	-2.8
07	100.000	98.07	-1.9	08	125.000	125.86	0.7	09	150.000	163.35	8.9

Dibromomethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-11.2	02	1.000	1.03	2.5	03	2.000	1.99	-0.7
04	5.000	5.17	3.4	05	20.000	18.77	-6.2	06	50.000	47.94	-4.1
07	100.000	101.52	1.5	08	150.000	154.95	3.3	09	200.000	222.86	11.4

Dichlorodifluoromethane (CFC 12)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.38	-23.6	02	1.000	0.93	-6.7	03	2.000	1.60	-20.2
04	5.000	4.36	-12.7	05	20.000	21.47	7.3	06	50.000	54.39	8.8
07	100.000	112.44	12.4	08	150.000	170.48	13.7	09	200.000	241.92	21.0

Dichlorofluoromethane (CFC 21)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.46	-7.9	02	1.000	0.87	-13.1	03	2.000	1.68	-16.1
04	5.000	4.46	-10.9	05	20.000	18.89	-5.6	06	50.000	52.86	5.7
07	100.000	108.82	8.8	08	150.000	174.50	16.3	09	200.000	245.17	22.6

Dichloromethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.57	13.6	02	1.000	1.00	-0.2	03	2.000	2.04	2.1
04	5.000	4.65	-7.0	05	20.000	18.93	-5.4	06	50.000	47.35	-5.3
07	100.000	96.92	-3.1	08	150.000	149.53	-0.3	09	200.000	210.92	5.5

Diethyl Ether

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.38	-23.9	02	1.000	0.90	-10.4	03	2.000	2.12	5.8
04	5.000	5.07	1.4	05	20.000	19.80	-1.0	06	50.000	51.50	3.0
07	100.000	105.98	6.0	08	150.000	161.86	7.9	09	200.000	222.66	11.3

Diisopropyl Ether

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-13.0	02	1.000	0.92	-8.2	03	2.000	1.96	-1.8
04	5.000	4.89	-2.2	05	20.000	20.65	3.2	06	50.000	52.56	5.1
07	100.000	105.79	5.8	08	150.000	160.40	6.9	09	200.000	208.40	4.2

Ethyl Methacrylate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.38	-24.8	02	1.000	0.83	-16.9	03	2.000	1.81	-9.7
04	5.000	4.41	-11.8	05	20.000	18.60	-7.0	06	50.000	51.57	3.1
07	100.000	117.76	17.8	08	150.000	180.01	20.0	09	200.000	258.38	29.2

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

Ethyl tert-Butyl Ether

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-14.7	02	1.000	0.89	-10.9	03	2.000	1.95	-2.4
04	5.000	4.84	-3.1	05	20.000	20.17	0.8	06	50.000	51.13	2.3
07	100.000	105.81	5.8	08	150.000	165.93	10.6	09	200.000	223.39	11.7

Ethylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-10.7	02	1.000	0.89	-10.5	03	2.000	1.91	-4.7
04	5.000	4.76	-4.8	05	20.000	18.16	-9.2	06	50.000	49.74	-0.5
07	100.000	108.52	8.5	08	150.000	167.08	11.4	09	200.000	241.13	20.6

Hexachlorobutadiene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.54	7.1	02	1.000	1.01	0.9	03	2.000	1.80	-10.1
04	5.000	4.97	-0.6	05	20.000	18.01	-9.9	06	50.000	49.68	-0.6
07	100.000	102.77	2.8	08	150.000	151.48	1.0	09	200.000	219.17	9.6

Iodomethane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.56	11.4	02	1.000	0.92	-8.1	03	2.000	1.88	-5.9
04	5.000	4.21	-15.9	05	20.000	16.77	-16.2	06	50.000	52.61	5.2
07	100.000	105.27	5.3	08	150.000	166.32	10.9	09	200.000	226.52	13.3

Isopropylbenzene (Cumene)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.41	-19.0	02	1.000	0.92	-7.9	03	2.000	1.97	-1.7
04	5.000	4.98	-0.3	05	20.000	19.53	-2.4	06	50.000	53.92	7.8
07	100.000	112.66	12.7	08	150.000	162.48	8.3	09	200.000	204.87	2.4

Methacrylonitrile

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.7	02	1.000	0.97	-3.4	03	2.000	2.03	1.3
04	5.000	4.72	-5.5	05	20.000	18.69	-6.5	06	50.000	49.08	-1.8
07	100.000	104.17	4.2	08	150.000	157.98	5.3	09	200.000	222.33	11.2

Methyl Acetate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.50	-0.5	02	1.000	1.03	2.8	03	2.000	1.95	-2.7
04	5.000	4.69	-6.2	05	20.000	17.88	-10.6	06	50.000	48.11	-3.8
07	100.000	104.18	4.2	08	150.000	160.01	6.7	09	200.000	220.37	10.2

Methyl Methacrylate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-14.6	02	1.000	0.83	-17.4	03	2.000	1.94	-2.8
04	5.000	4.79	-4.2	05	20.000	18.32	-8.4	06	50.000	50.84	1.7
07	100.000	110.69	10.7	08	150.000	170.66	13.8	09	200.000	242.58	21.3

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

Methyl tert-Butyl Ether

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-6.0	02	1.000	0.96	-3.9	03	2.000	2.02	0.8
04	5.000	4.82	-3.7	05	20.000	19.14	-4.3	06	50.000	48.78	-2.4
07	100.000	104.69	4.7	08	150.000	158.16	5.4	09	200.000	218.58	9.3

Methylcyclohexane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.5	02	1.000	0.93	-6.6	03	2.000	1.88	-6.2
04	5.000	4.50	-9.9	05	20.000	17.24	-13.8	06	50.000	50.05	0.1
07	100.000	108.92	8.9	08	150.000	171.86	14.6	09	200.000	250.94	25.5

Naphthalene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-9.1	02	1.000	0.84	-15.9	03	2.000	1.90	-5.1
04	5.000	4.99	-0.2	05	20.000	19.91	-0.4	06	50.000	52.99	6.0
07	100.000	113.19	13.2	08	150.000	160.15	6.8	09	200.000	209.50	4.8

Propionitrile

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	2.500	2.47	-1.3	02	5.000	3.95	-21.1	03	10.000	10.07	0.7
04	25.000	24.28	-2.9	05	100.000	93.19	-6.8	06	250.000	250.34	0.1
07	500.000	546.39	9.3	08	750.000	815.53	8.7	09	1000.000	1,132.84	13.3

Styrene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.39	-22.3	02	1.000	0.88	-11.8	03	2.000	1.85	-7.5
04	5.000	4.79	-4.2	05	20.000	19.31	-3.4	06	50.000	52.79	5.6
07	100.000	115.29	15.3	08	150.000	170.21	13.5	09	200.000	229.59	14.8

Tetrachloroethene (PCE)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.49	-1.2	02	1.000	1.02	2.2	03	2.000	1.88	-6.1
04	5.000	4.95	-1.1	05	20.000	17.44	-12.8	06	50.000	47.69	-4.6
07	100.000	102.72	2.7	08	150.000	158.90	5.9	09	200.000	229.78	14.9

Tetrahydrofuran (THF)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.49	-2.8	02	1.000	1.12	12.1	03	2.000	2.07	3.3
04	5.000	4.00	-20.1	05	20.000	18.45	-7.7	06	50.000	48.45	-3.1
07	100.000	105.52	5.5	08	150.000	155.00	3.3	09	200.000	218.83	9.4

Toluene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.48	-4.9	02	1.000	0.95	-5.2	03	2.000	2.09	4.5
04	5.000	4.91	-1.7	05	20.000	18.59	-7.0	06	50.000	48.97	-2.1
07	100.000	104.54	4.5	08	150.000	157.81	5.2	09	200.000	213.38	6.7

00198

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

Toluene-d8

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
06	50.000	49.16	-1.7	04	60.000	59.23	-1.3	05	70.000	68.28	-2.5
07	100.000	97.40	-2.6	08	125.000	125.90	0.7	09	150.000	160.96	7.3

Trichloroethene (TCE)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.3	02	1.000	1.00	0.3	03	2.000	1.90	-4.9
04	5.000	4.88	-2.3	05	20.000	18.62	-6.9	06	50.000	49.20	-1.6
07	100.000	104.40	4.4	08	150.000	160.44	7.0	09	200.000	232.50	16.3

Trichlorofluoromethane (CFC 11)

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.45	-10.4	02	1.000	1.04	3.7	03	2.000	2.05	2.6
04	5.000	5.00	0.0	05	20.000	19.56	-2.2	06	50.000	50.47	0.9
07	100.000	98.64	-1.4	08	150.000	150.81	0.5	09	200.000	212.53	6.3

Vinyl Acetate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
02	1.000	0.67	-33.3	03	2.000	2.58	29.1	04	5.000	5.15	3.0
05	20.000	15.65	-21.7	06	50.000	48.57	-2.9	07	100.000	104.94	4.9
08	150.000	157.82	5.2	09	200.000	231.30	15.7				

Vinyl Chloride

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-6.4	02	1.000	0.91	-9.4	03	2.000	2.01	0.5
04	5.000	4.77	-4.7	05	20.000	18.84	-5.8	06	50.000	50.28	0.6
07	100.000	104.17	4.2	08	150.000	161.22	7.5	09	200.000	227.16	13.6

cis-1,2-Dichloroethene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.47	-5.8	02	1.000	0.94	-6.3	03	2.000	1.99	-0.4
04	5.000	4.88	-2.4	05	20.000	18.92	-5.4	06	50.000	49.30	-1.4
07	100.000	104.78	4.8	08	150.000	157.97	5.3	09	200.000	223.20	11.6

cis-1,3-Dichloropropene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.39	-22.8	02	1.000	0.87	-12.7	03	2.000	1.87	-6.7
04	5.000	4.65	-7.0	05	20.000	18.76	-6.2	06	50.000	51.53	3.1
07	100.000	111.58	11.6	08	150.000	174.00	16.0	09	200.000	249.51	24.8

m,p-Xylenes

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	1.000	0.88	-11.6	02	2.000	1.73	-13.4	03	4.000	3.98	-0.5
04	10.000	9.86	-1.4	05	40.000	37.47	-6.3	06	100.000	103.63	3.6
07	200.000	222.59	11.3	08	300.000	326.95	9.0	09	400.000	437.14	9.3

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

n-Butyl Acetate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
02	1.000	0.74	-25.6	03	2.000	1.84	-8.0	04	5.000	4.21	-15.8
05	20.000	18.48	-7.6	06	50.000	52.97	5.9	07	100.000	123.63	23.6
08	150.000	191.08	27.4								

n-Butylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-12.7	02	1.000	0.94	-6.4	03	2.000	1.95	-2.4
04	5.000	5.04	0.8	05	20.000	19.42	-2.9	06	50.000	53.86	7.7
07	100.000	111.85	11.9	08	150.000	156.27	4.2	09	200.000	199.90	-0.1

n-Heptane

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.51	2.3	02	1.000	0.95	-5.5	03	2.000	1.76	-12.2
04	5.000	4.69	-6.3	05	20.000	18.40	-8.0	06	50.000	49.98	0.0
07	100.000	106.81	6.8	08	150.000	159.95	6.6	09	200.000	232.47	16.2

n-Propylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.44	-11.7	02	1.000	1.03	3.1	03	2.000	2.08	4.1
04	5.000	5.17	3.5	05	20.000	19.96	-0.2	06	50.000	53.85	7.7
07	100.000	107.72	7.7	08	150.000	145.59	-2.9	09	200.000	177.55	-11.2

o-Xylene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-13.6	02	1.000	0.91	-9.1	03	2.000	1.90	-5.1
04	5.000	4.78	-4.4	05	20.000	18.52	-7.4	06	50.000	50.61	1.2
07	100.000	108.35	8.3	08	150.000	166.25	10.8	09	200.000	238.30	19.1

sec-Butylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.42	-15.9	02	1.000	0.97	-3.2	03	2.000	2.05	2.4
04	5.000	5.15	3.0	05	20.000	19.82	-0.9	06	50.000	54.15	8.3
07	100.000	110.77	10.8	08	150.000	152.20	1.5	09	200.000	188.25	-5.9

tert-Amyl Methyl Ether

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.39	-22.4	02	1.000	0.86	-14.2	03	2.000	1.88	-6.0
04	5.000	4.70	-5.9	05	20.000	19.74	-1.3	06	50.000	52.34	4.7
07	100.000	109.45	9.4	08	150.000	173.94	16.0	09	200.000	239.47	19.7

tert-Butylbenzene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.43	-13.7	02	1.000	0.96	-4.3	03	2.000	1.93	-3.4
04	5.000	5.10	2.0	05	20.000	18.98	-5.1	06	50.000	52.36	4.7
07	100.000	109.28	9.3	08	150.000	158.92	5.9	09	200.000	209.00	4.5

Initial Calibration - Detailed Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Signal ID:	1

Analyte

trans-1,2-Dichloroethene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.50	0.7	02	1.000	0.93	-7.0	03	2.000	1.96	-1.8
04	5.000	4.94	-1.2	05	20.000	18.76	-6.2	06	50.000	49.04	-1.9
07	100.000	103.23	3.2	08	150.000	156.13	4.1	09	200.000	219.98	10.0

trans-1,3-Dichloropropene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.37	-25.9	02	1.000	0.92	-7.7	03	2.000	1.72	-14.2
04	5.000	4.53	-9.3	05	20.000	18.66	-6.7	06	50.000	51.46	2.9
07	100.000	115.03	15.0	08	150.000	178.14	18.8	09	200.000	254.40	27.2

trans-1,4-Dichloro-2-butene

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.500	0.51	1.9	02	1.000	0.94	-6.0	03	2.000	1.66	-17.1
04	5.000	4.52	-9.5	05	20.000	17.52	-12.4	06	50.000	48.49	-3.0
07	100.000	111.71	11.7	08	150.000	167.82	11.9	09	200.000	245.08	22.5

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 09:13:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FD 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	921885	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1425855	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1351123	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	778182	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.829	113	422382	49.56	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.12%				
46) surr1,1,2-dichloroetha...	5.414	65	436128	49.16	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 98.32%				
64) SURR3,Toluene-d8	8.042	98	1646154	50.30	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 100.60%				
69) SURR2,BFB	10.675	95	669832	46.66	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 93.32%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.165	85	3658m	0.42	ug/L		
3) Chloromethane	1.281	50	8079	0.74	ug/L		96
4) Vinyl Chloride	1.354	62	5977m	0.59	ug/L		
5) Bromomethane	1.573	94	2940	0.83	ug/L	#	64
6) Chloroethane	1.634	64	3200m	0.55	ug/L		
7) Freon 21	1.768	67	7053	0.44	ug/L		93
8) Trichlorofluoromethane	1.817	101	5517	0.44	ug/L		96
9) Diethyl Ether	2.012	59	2823	0.43	ug/L	#	61
10) Freon 123a	2.012	67	3972	0.40	ug/L		90
11) Freon 123	2.061	83	4504	0.41	ug/L		85
12) Acrolein	2.110	56	2815	2.92	ug/L	#	59
13) 1,1-Diclethene	2.195	96	3243	0.46	ug/L	#	82
14) Freon 113	2.195	101	3288	0.42	ug/L		85
15) Acetone	2.226	43	4339	2.00	ug/L		98
16) 2-Propanol	2.329	45	4326	10.86	ug/L		62
17) Iodomethane	2.323	142	5604m	1.18	ug/L		
18) Carbon Disulfide	2.378	76	12277	0.47	ug/L		98
20) Allyl Chloride	2.488	76	2140	0.51	ug/L	#	46
21) Methyl Acetate	2.500	43	3339	0.69	ug/L		68
22) Methylene Chloride	2.597	84	4733	0.60	ug/L	#	79
23) TBA	2.695	59	5158	8.57	ug/L		68
24) Acrylonitrile	2.823	53	6692	3.00	ug/L		85
25) Methyl-t-Butyl Ether	2.860	73	9131	0.44	ug/L	#	39
26) trans-1,2-Dichloroethene	2.860	96	3851	0.48	ug/L	#	90
27) 1,1-Diclethane	3.311	63	8199	0.55	ug/L		93
28) Vinyl Acetate	3.384	86	375m	0.26	ug/L		
29) DIPE	3.402	45	20348	0.63	ug/L	#	67
30) 2-Chloro-1,3-Butadiene	3.414	53	9639	0.56	ug/L		84
31) ETBE	3.872	59	13622m	0.50	ug/L		
32) 2,2-Dichloropropane	4.048	77	4615	0.39	ug/L		95
33) cis-1,2-Dichloroethene	4.048	96	4316	0.48	ug/L	#	76
34) 2-Butanone	4.103	43	2628m	0.88	ug/L		
35) Propionitrile	4.170	54	2655	3.28	ug/L		89
36) Bromochloromethane	4.414	130	2673m	0.53	ug/L		

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 09:13:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37) Methacrylonitrile	4.402	67	1212	0.51 ug/L		96
38) Tetrahydrofuran	4.493	42	1303	0.67 ug/L	#	38
39) Chloroform	4.561	83	7345	0.52 ug/L	#	76
40) 1,1,1-Trichloroethane	4.847	97	5954m	0.46 ug/L		
42) Cyclohexane	4.957	41	6228m	0.57 ug/L		
44) Carbontetrachloride	5.140	121	1736	0.45 ug/L		82
45) 1,1-Dichloropropene	5.158	75	5229	0.45 ug/L		85
47) Benzene	5.499	78	18312	0.53 ug/L		86
48) 1,2-Dichloroethane	5.554	62	5609	0.48 ug/L		91
49) Iso-Butyl Alcohol	5.505	43	2936m	9.36 ug/L		
50) TAME	5.755	73	7995m	0.36 ug/L		
51) n-Heptane	6.011	43	7950	0.66 ug/L	#	70
52) 1-Butanol	6.524	56	2096	11.71 ug/L		88
53) Trichloroethene	6.499	130	4332	0.46 ug/L	#	87
54) Methylcyclohexane	6.755	55	6388m	0.49 ug/L		
55) 1,2-Diclpropane	6.798	63	4967	0.54 ug/L		94
56) Dibromomethane	6.938	93	2058	0.44 ug/L		88
58) Methyl Methacrylate	7.023	69	1772	0.39 ug/L	#	45
59) Bromodichloromethane	7.176	83	5052	0.44 ug/L		82
60) 2-Nitropropane	7.462	41	1141m	0.59 ug/L		
61) 2-Chloroethylvinyl Ether	7.596	63	2303	0.52 ug/L		68
62) cis-1,3-Dichloropropene	7.731	75	4855	0.35 ug/L		78
63) 4-Methyl-2-pentanone	7.956	43	3877m	0.55 ug/L		
65) Toluene	8.121	91	18343	0.50 ug/L		91
66) trans-1,3-Dichloropropene	8.395	75	3883	0.32 ug/L		90
67) Ethyl Methacrylate	8.548	69	3108	0.33 ug/L	#	53
68) 1,1,2-Trichloroethane	8.584	97	3094m	0.45 ug/L		
71) Tetrachloroethene	8.730	164	4012	0.54 ug/L	#	70
72) 2-Hexanone	8.895	43	2914	0.60 ug/L	#	61
73) 1,3-Dichloropropane	8.767	76	5633	0.53 ug/L	#	73
74) Dibromochloromethane	8.999	129	3059	0.36 ug/L		89
75) N-Butyl Acetate	9.054	43	5468	0.45 ug/L		92
76) 1,2-Dibromoethane	9.102	107	2901	0.45 ug/L		95
77) 3-Chlorobenzotrifluoride	9.627	180	6136	0.42 ug/L		90
78) Chlorobenzene	9.608	112	12653	0.51 ug/L		88
79) 4-Chlorobenzotrifluoride	9.681	180	5207	0.40 ug/L		96
80) 1,1,1,2-Tetrachloroethane	9.694	131	3571	0.38 ug/L		83
81) Ethylbenzene	9.730	106	6220	0.47 ug/L	#	64
82) (m+p)Xylene	9.846	106	14823	0.93 ug/L	#	85
83) o-Xylene	10.206	106	7187	0.45 ug/L		89
84) Styrene	10.218	104	10944	0.40 ug/L		89
85) Bromoform	10.376	173	1896	0.36 ug/L		81
86) 2-Chlorobenzotrifluoride	10.456	180	5739	0.40 ug/L		86
87) Isopropylbenzene	10.547	105	16549	0.42 ug/L		88
88) Cyclohexanone	10.608	55	3511	6.77 ug/L		97
89) trans-1,4-Dichloro-2-B...	10.852	53	1502	0.56 ug/L	#	43
91) 1,1,2,2-Tetrachloroethane	10.815	83	3178	0.42 ug/L		93
92) Bromobenzene	10.797	156	5685	0.54 ug/L	#	76
93) 1,2,3-Trichloropropane	10.852	110	1251m	0.59 ug/L		
94) n-Propylbenzene	10.907	91	20408	0.47 ug/L		98
95) 2-Chlorotoluene	10.974	91	12440	0.45 ug/L		91

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

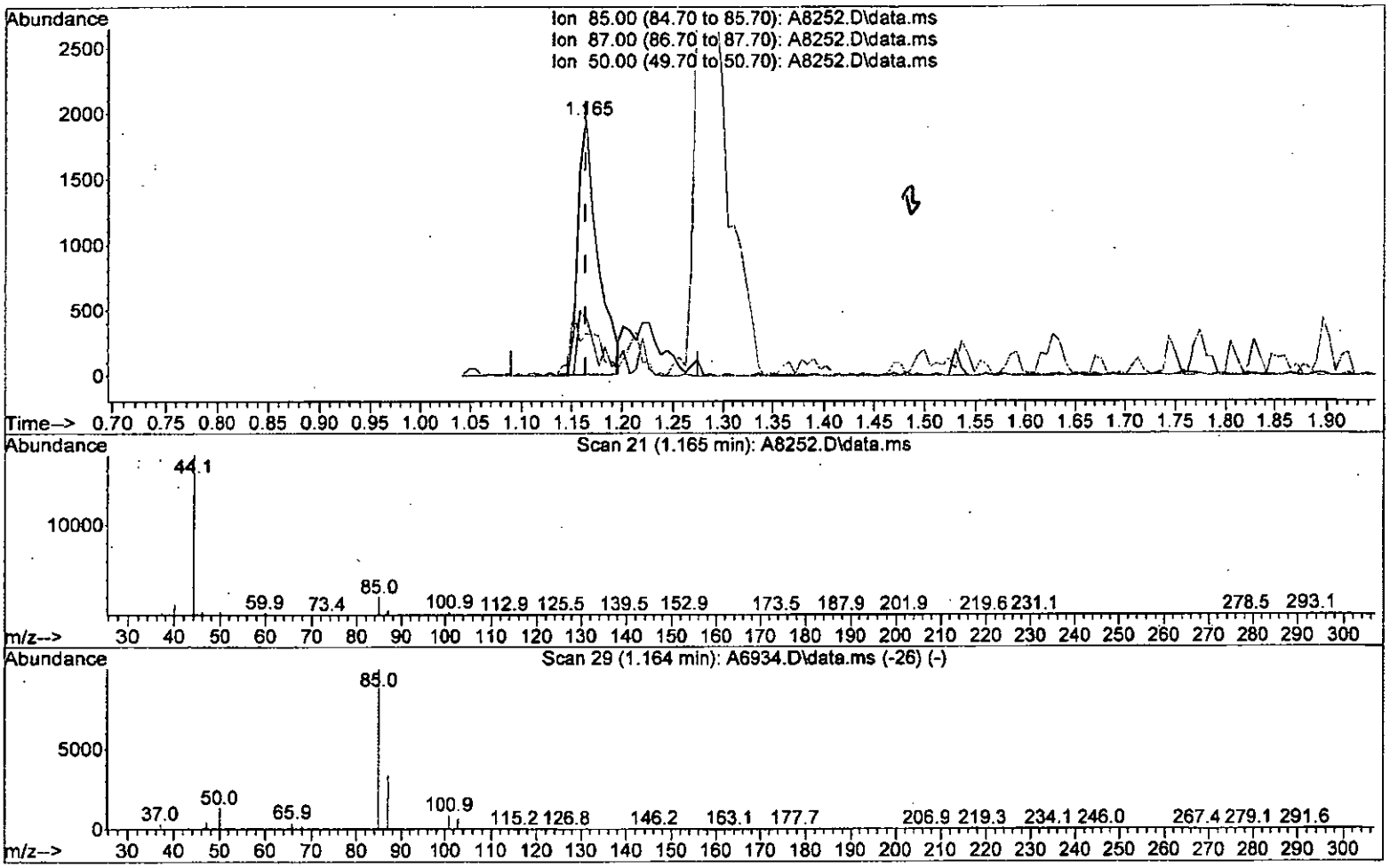
Quant Time: May 07 09:13:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96)	3-Chlorotoluene	11.029	91	14338	0.49	ug/L		89
97)	4-Chlorotoluene	11.065	91	16493	0.51	ug/L		97
98)	1,3,5-Trimethylbenzene	11.065	105	14465	0.45	ug/L		83
99)	tert-Butylbenzene	11.340	119	12929	0.46	ug/L		95
100)	1,2,4-Trimethylbenzene	11.376	105	14861	0.44	ug/L		97
101)	3,4-Dichlorobenzotrifl...	11.443	214	4529	0.43	ug/L		82
102)	sec-Butylbenzene	11.523	105	17110	0.45	ug/L		84
103)	p-Isopropyltoluene	11.651	119	15936	0.47	ug/L		95
104)	1,3-Dclbenz	11.602	146	11824	0.56	ug/L		90
105)	1,4-Dclbenz	11.681	146	12228	0.57	ug/L		94
106)	2,4-Dichlorobenzotrifl...	11.730	214	4342	0.45	ug/L		88
107)	2,5-Dichlorobenzotrifl...	11.779	214	5311	0.49	ug/L		90
108)	n-Butylbenzene	11.980	91	13973	0.47	ug/L		93
109)	1,2-Dclbenz	11.986	146	9879	0.51	ug/L		89
110)	1,2-Dibromo-3-chloropr...	12.608	157	638	0.42	ug/L	#	66
111)	Trielution Dichlorotol...	12.736	125	23060	1.34	ug/L		90
112)	1,3,5-Trichlorobenzene	12.785	180	7544	0.52	ug/L		90
113)	Coelution Dichlorotoluene	13.059	125	17649	0.99	ug/L		92
114)	1,2,4-Tcbenzene	13.266	180	5964	0.49	ug/L		95
115)	Hexachlorobt	13.406	225	2963	0.54	ug/L		89
116)	Naphthalen	13.461	128	11384	0.53	ug/L		97
117)	1,2,3-Tclbenzene	13.650	180	4813	0.53	ug/L		84
118)	2,4,5-Trichlorotoluene	14.235	159	3021m	0.51	ug/L		
119)	2,3,6-Trichlorotoluene	14.321	159	3038m	0.60	ug/L		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD. Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(2) Dichlorodifluoromethane (P)

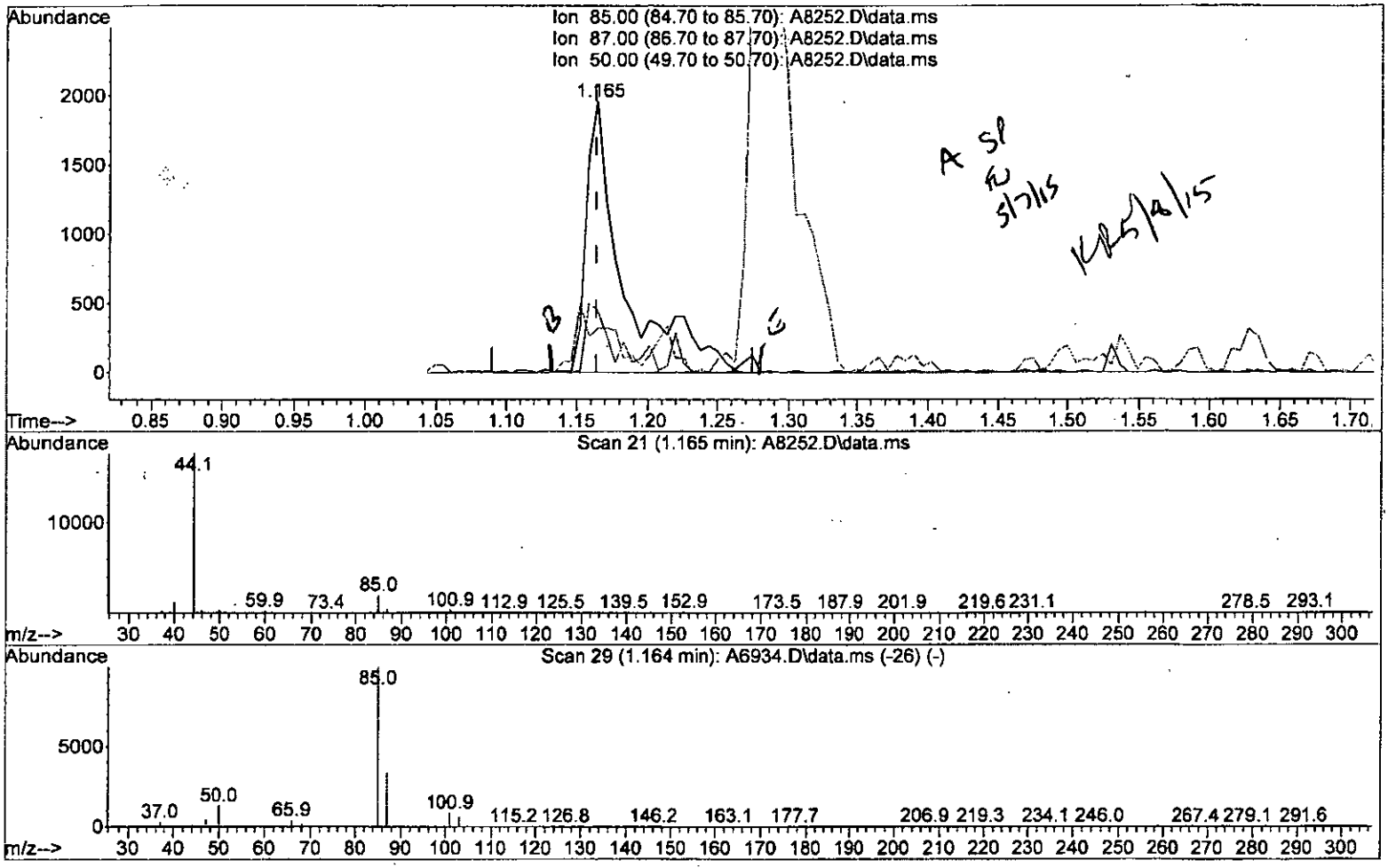
1.165min (+0.001) 0.29 ug/L

response 2579

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	22.66
50.00	15.00	16.23
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(2) Dichlorodifluoromethane (P)

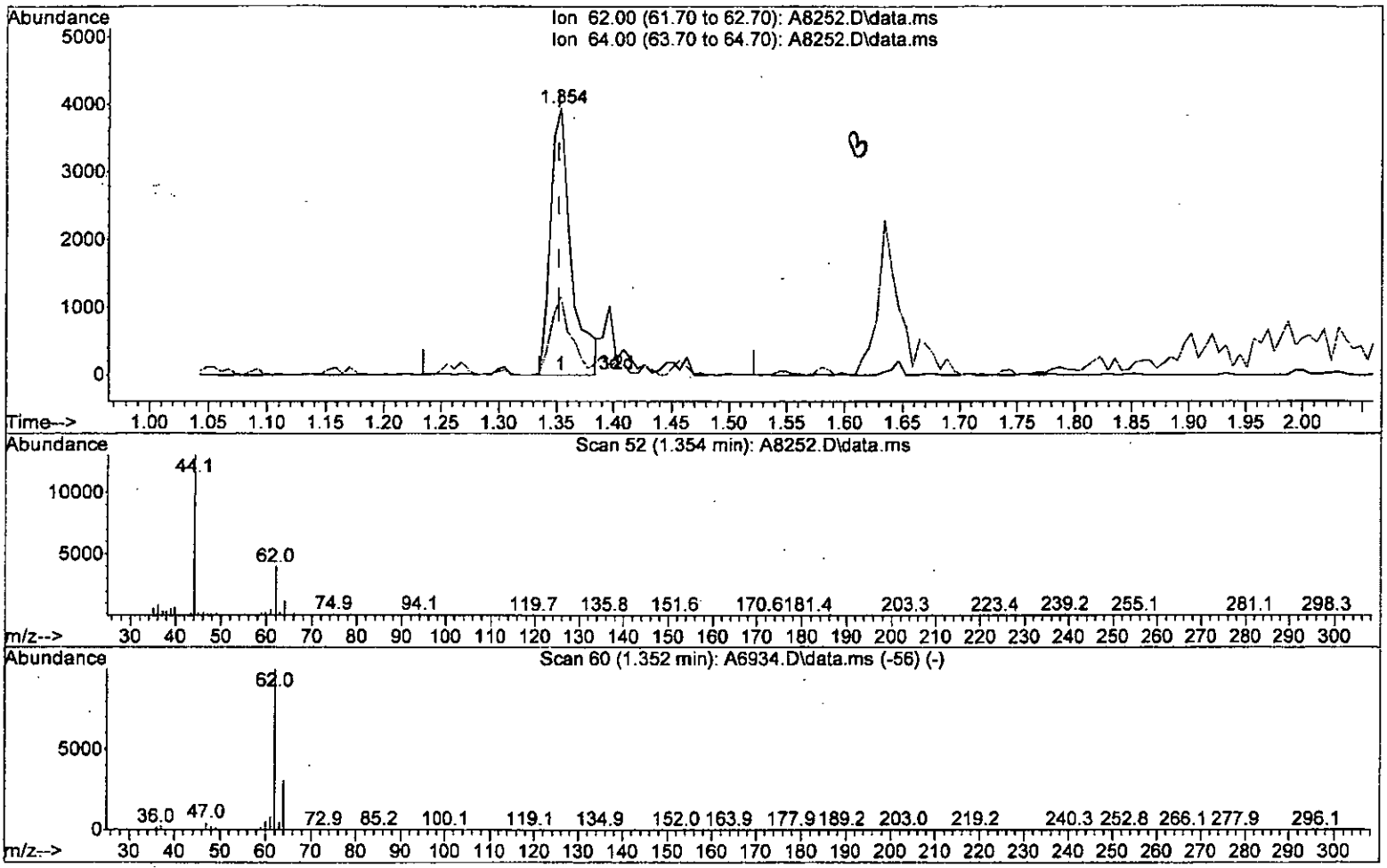
1.165min (+0.001) 0.42 ug/L m

response 3658

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	22.66
50.00	15.00	16.23
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(4) Vinyl Chloride (P)

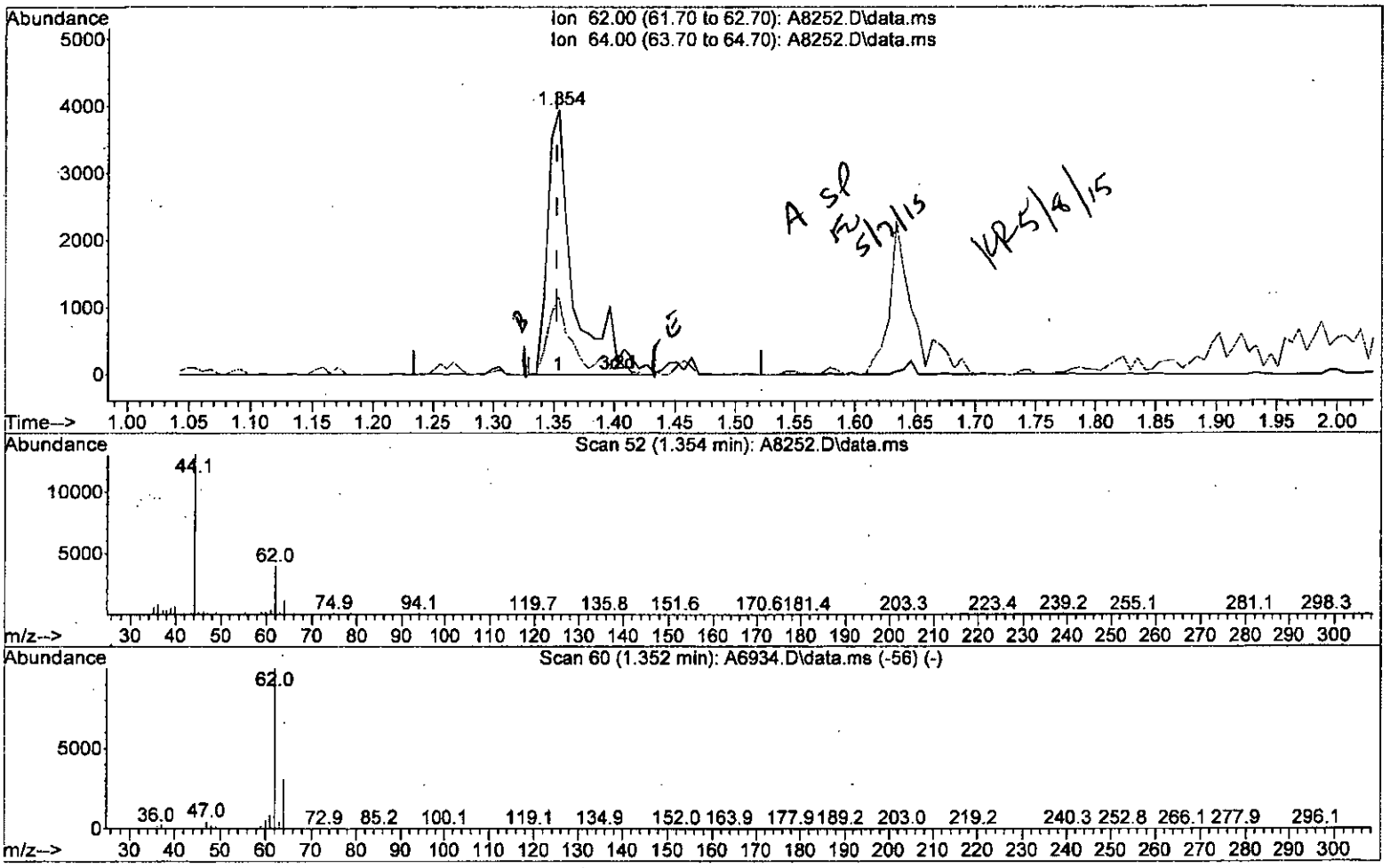
1.354min (+0.002) 0.49 ug/L

response 5008

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	29.02
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(4) Vinyl Chloride (P)

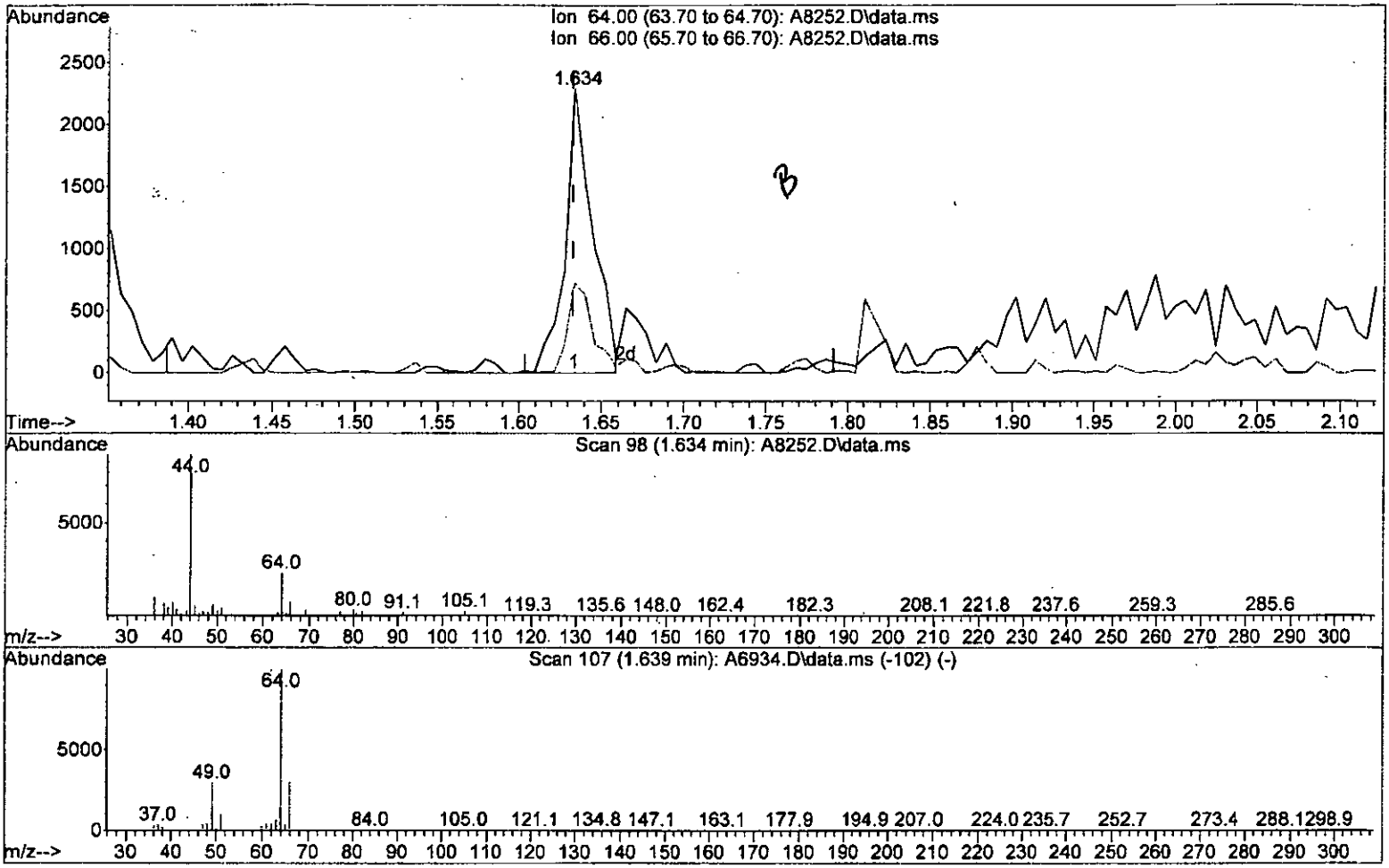
1.354min (+0.002) 0.59 ug/L m

response 5977

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	29.02
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(6) Chloroethane (P)

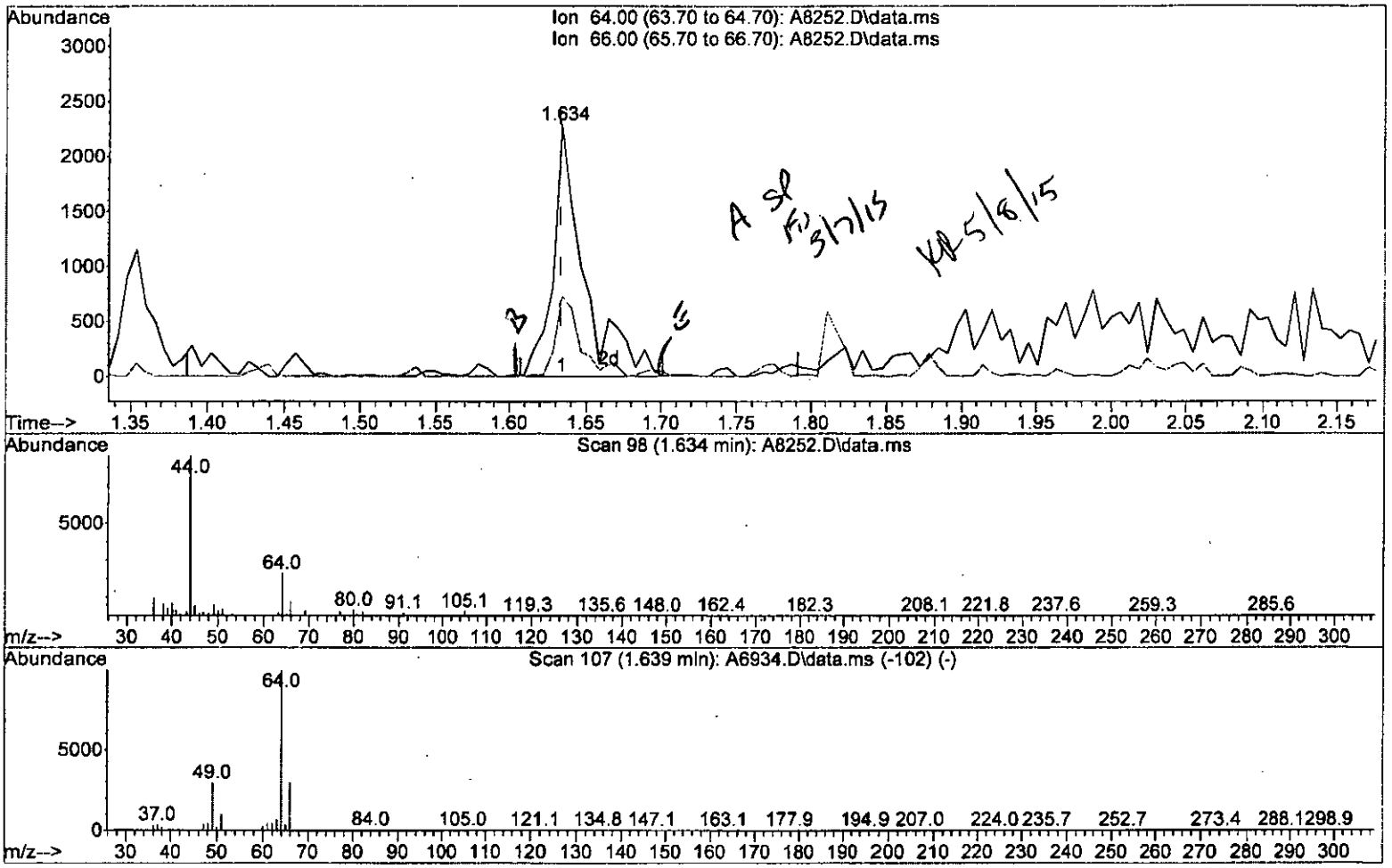
1.634min (+0.001) 0.45 ug/L

response 2600

Ion	Exp%	Act%
64.00	100	100
66.00	33.00	31.61
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(6) Chloroethane (P)

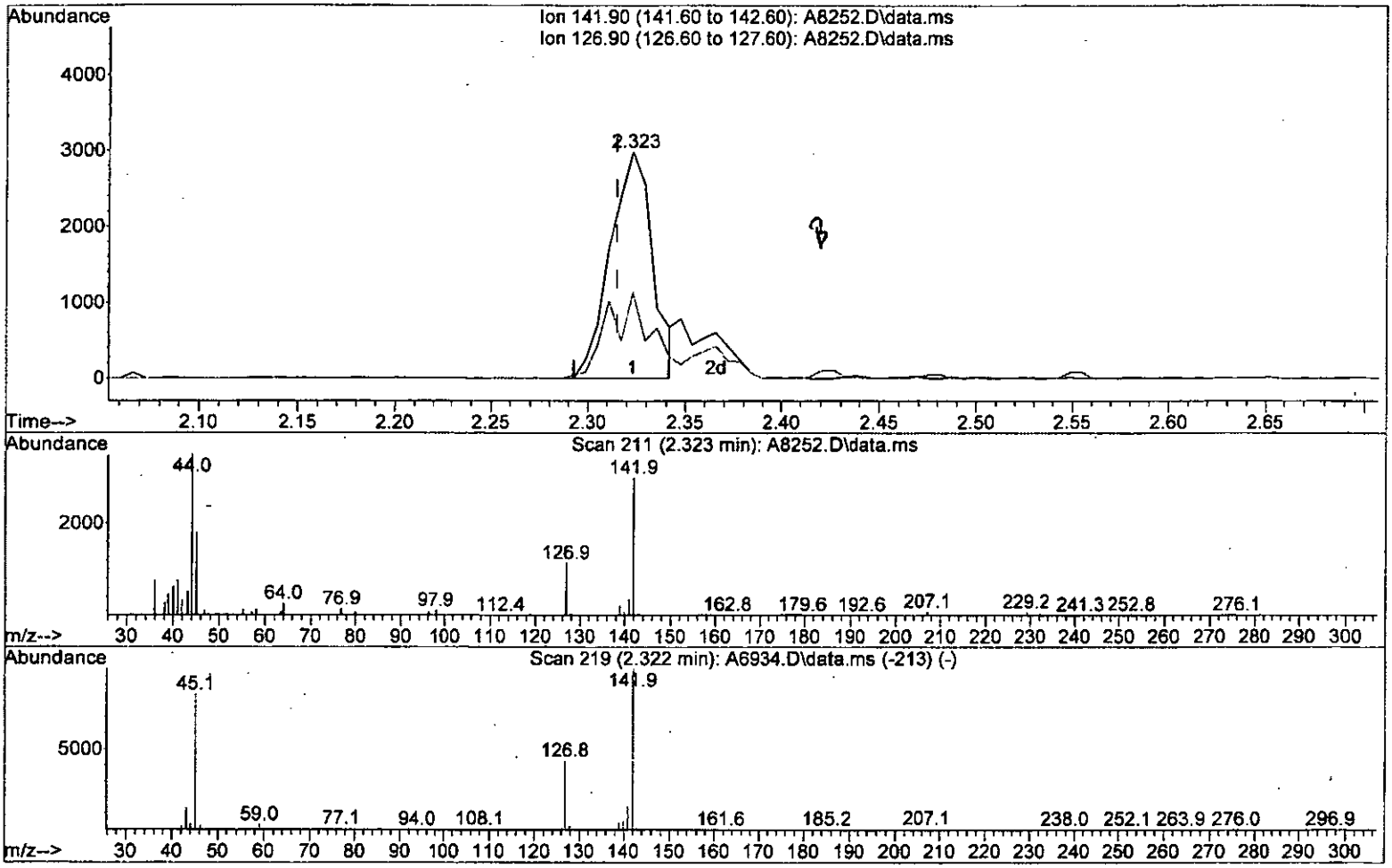
1.634min (+0.001) 0.55 ug/L m

response 3200

Ion	Exp%	Act%
64.00	100	100
66.00	33.00	31.61
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(17) Iodomethane

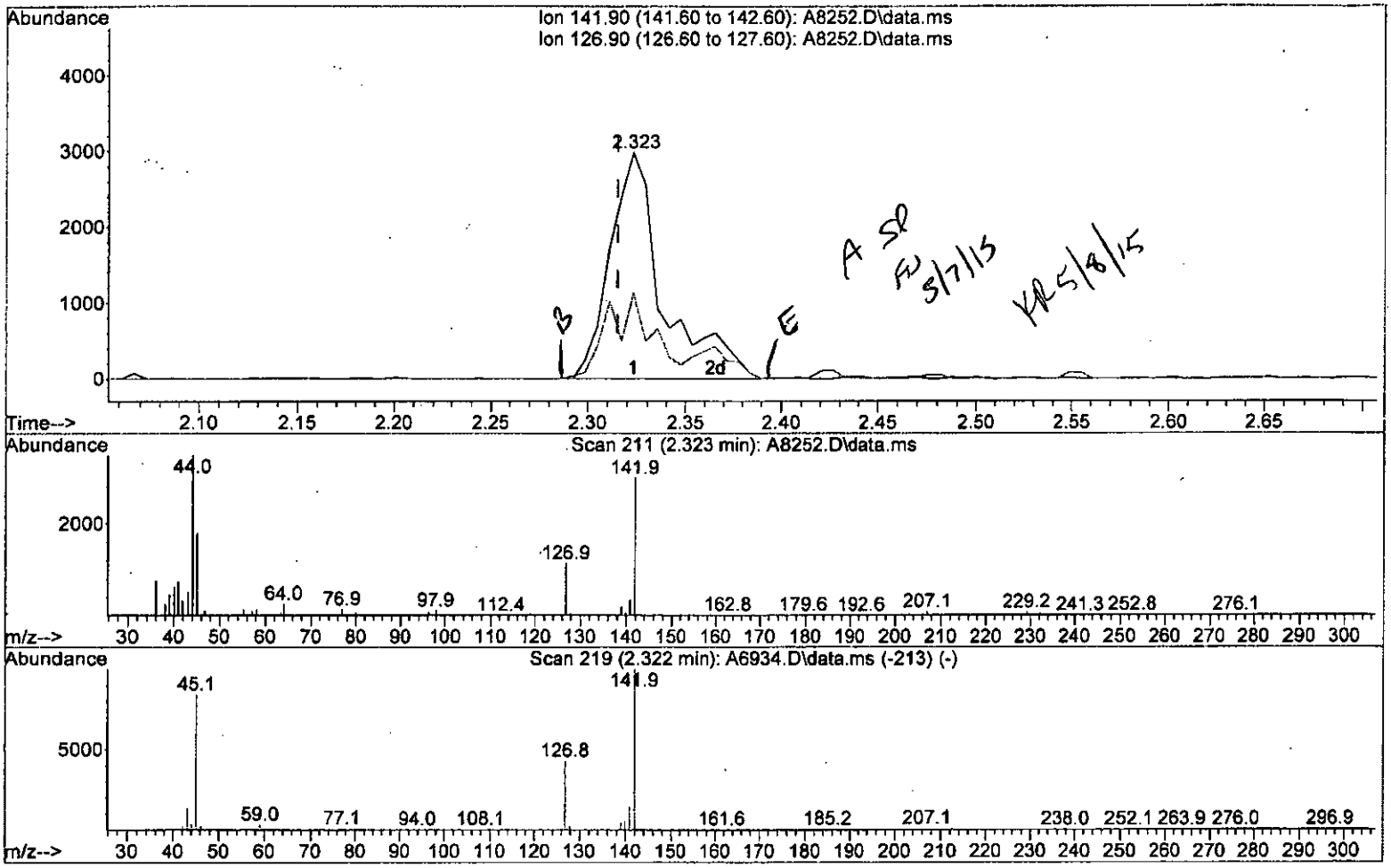
2.323min (+0.008) 0.94 ug/L

response 4464

Ion	Exp%	Act%
141.90	100	100
126.90	43.50	37.95
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(17) Iodomethane

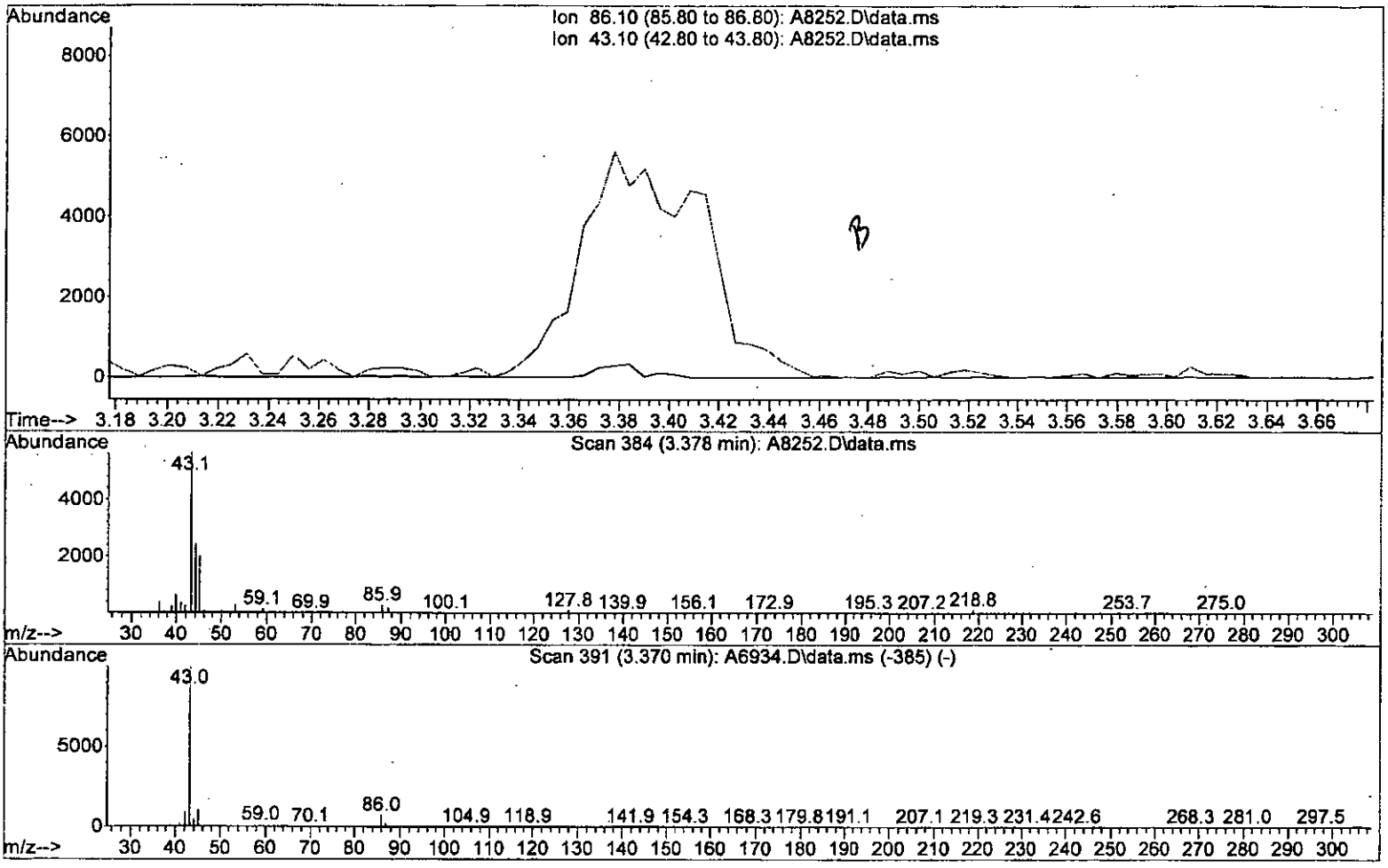
2.323min (+0.008) 1.18 ug/L m

response 5604

Ion	Exp%	Act%
141.90	100	100
126.90	43.50	37.95
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(28) Vinyl Acetate

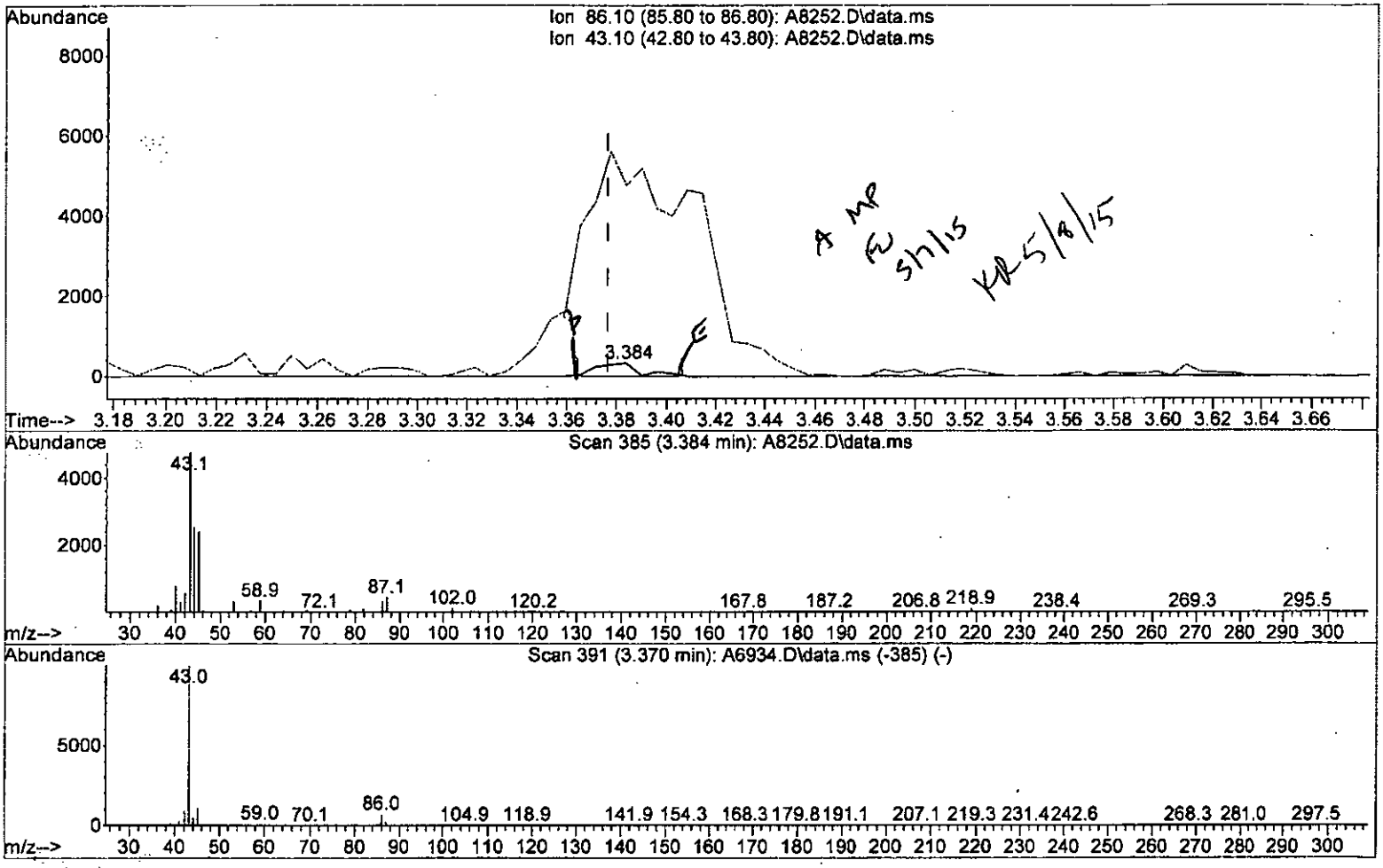
3.377min (-3.377) 0.00 ug/L

response 0

Ion	Exp%	Act%
86.10	100	0.00
43.10	1730.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(28) Vinyl Acetate

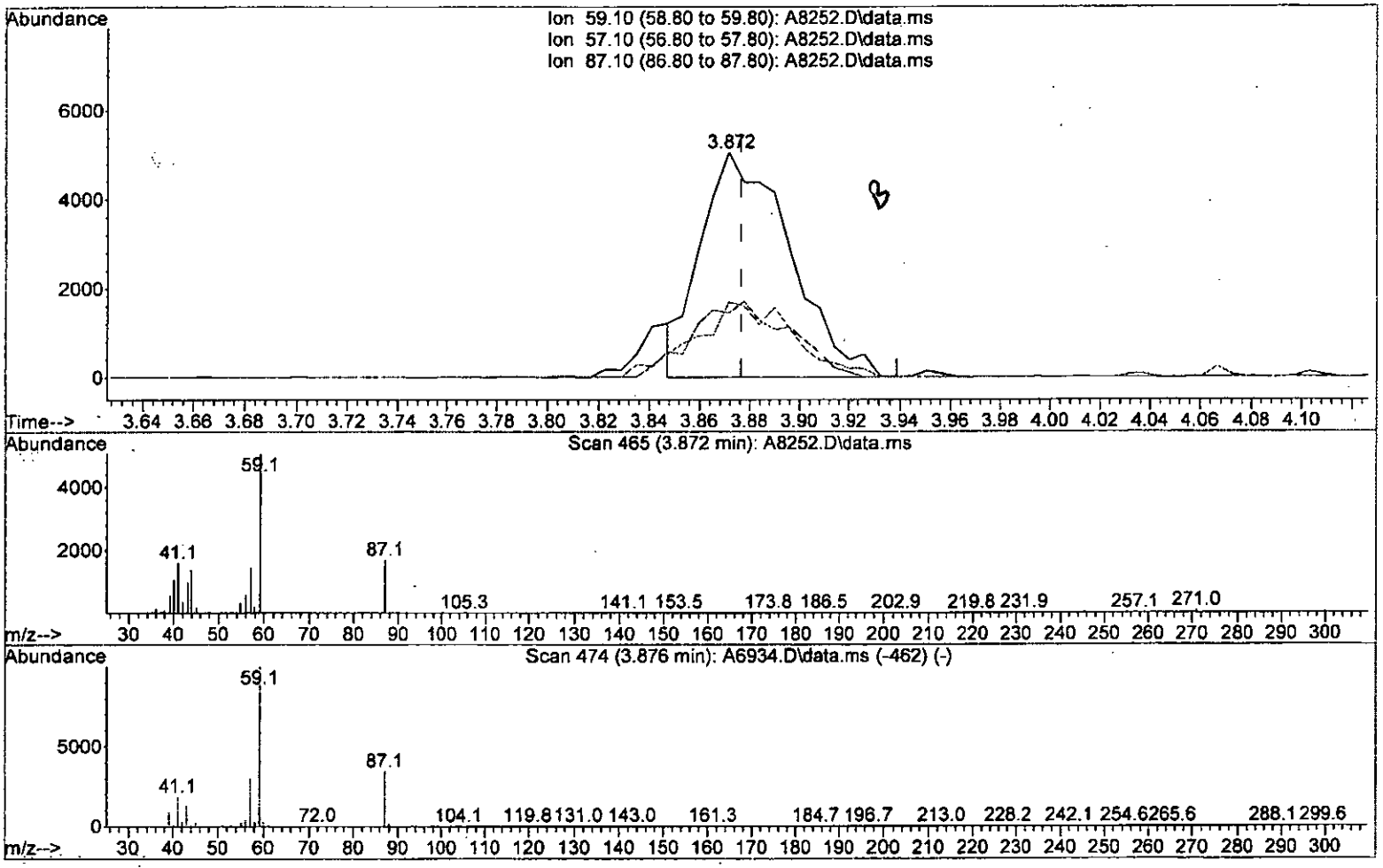
3.384min (+0.007) 0.26 ug/L m

response 375

Ion	Exp%	Act%
86.10	100	100
43.10	1730.10	1445.29#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(31) ETBE

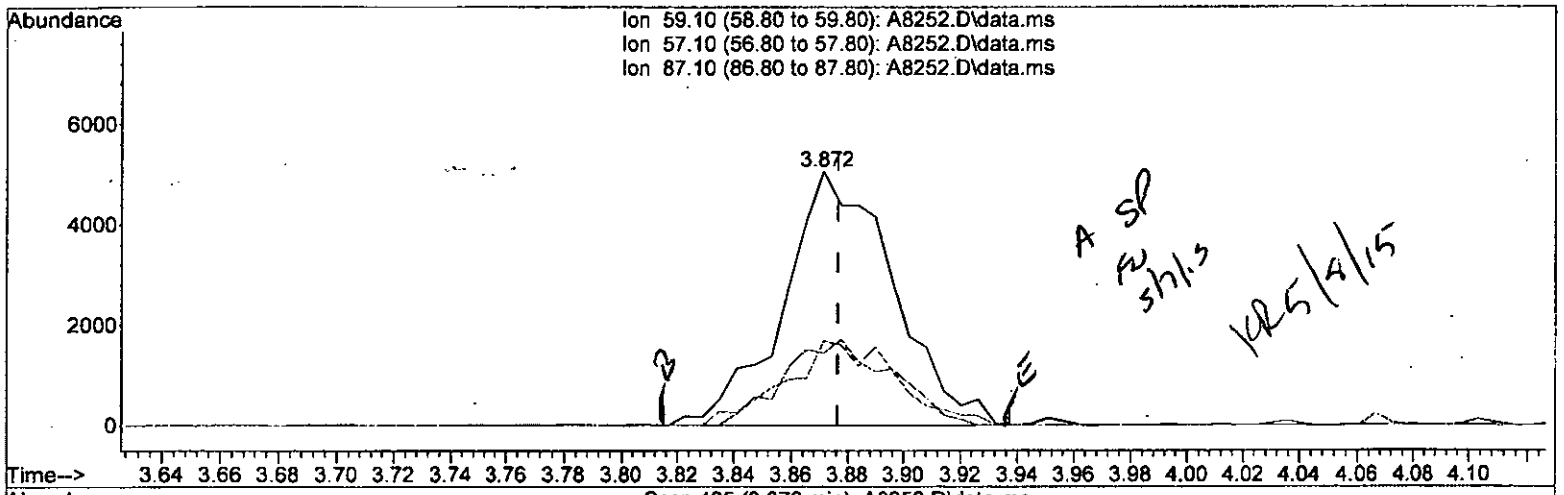
3.872min (-0.005) 0.45 ug/L

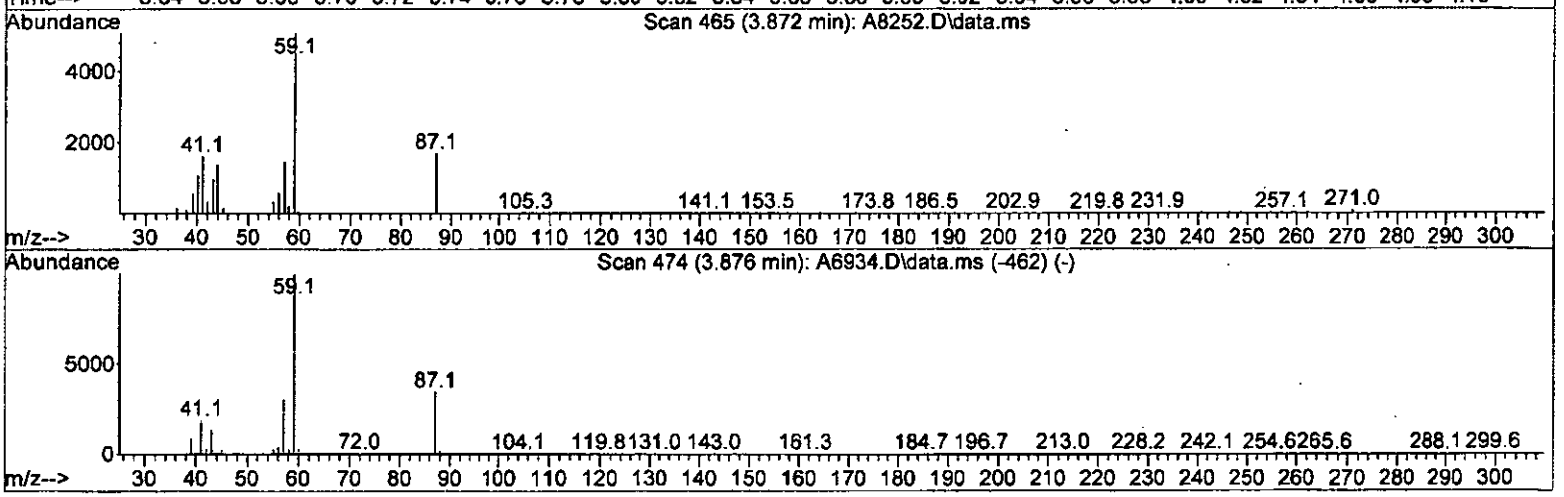
response 12454

Ion	Exp%	Act%
59.10	100	100
57.10	30.90	28.47
87.10	37.30	33.37
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration





TIC: A8252.D\data.ms

(31) ETBE

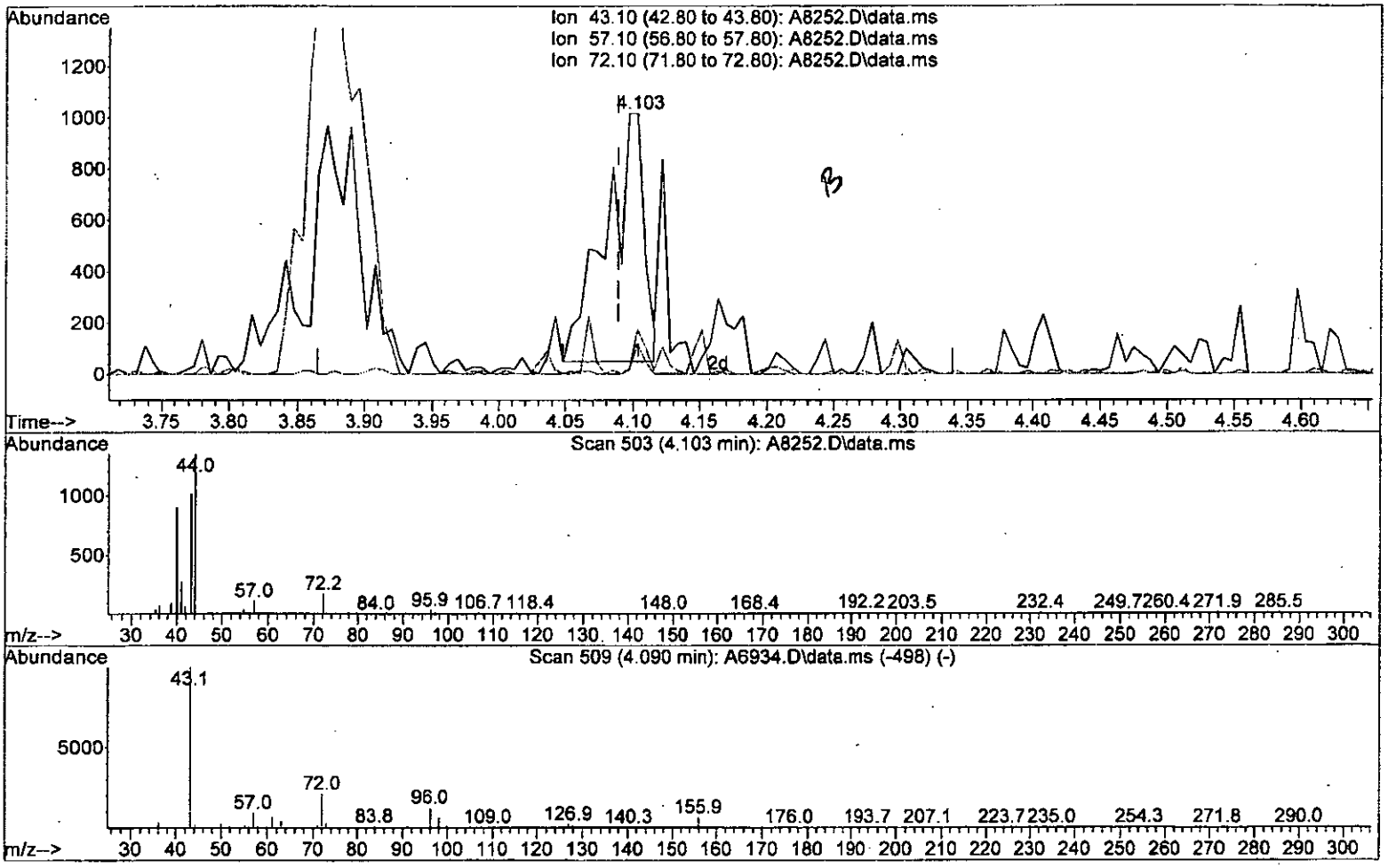
3.872min (-0.005) 0.50 ug/L m

response 13622

Ion	Exp%	Act%
59.10	100	100
57.10	30.90	28.47
87.10	37.30	33.37
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(34) 2-Butanone (P)

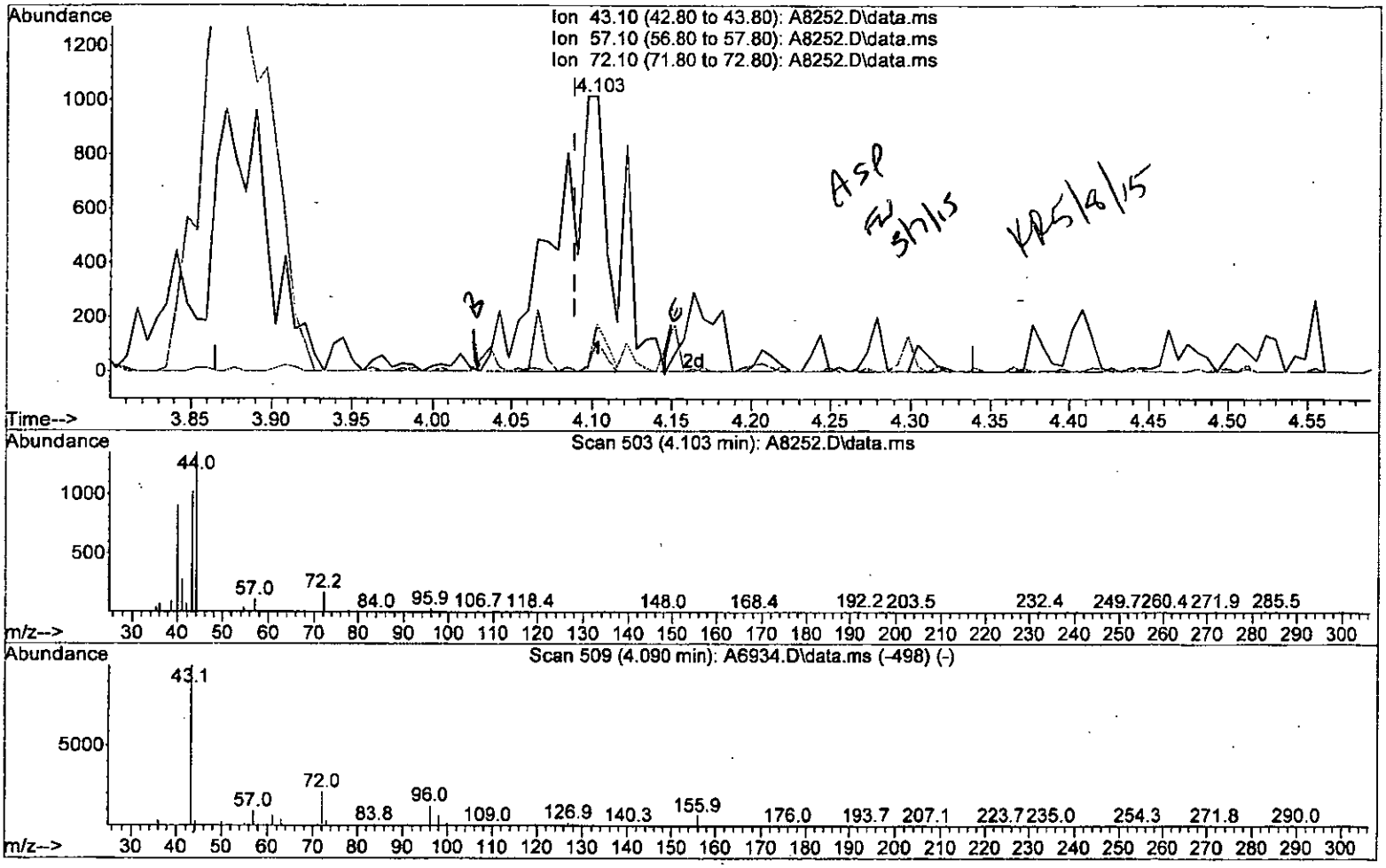
4.103min (+0.014) 0.63 ug/L

response 1889

Ion	Exp%	Act%
43.10	100	100
57.10	7.80	11.12
72.10	22.60	17.13
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(34) 2-Butanone (P)

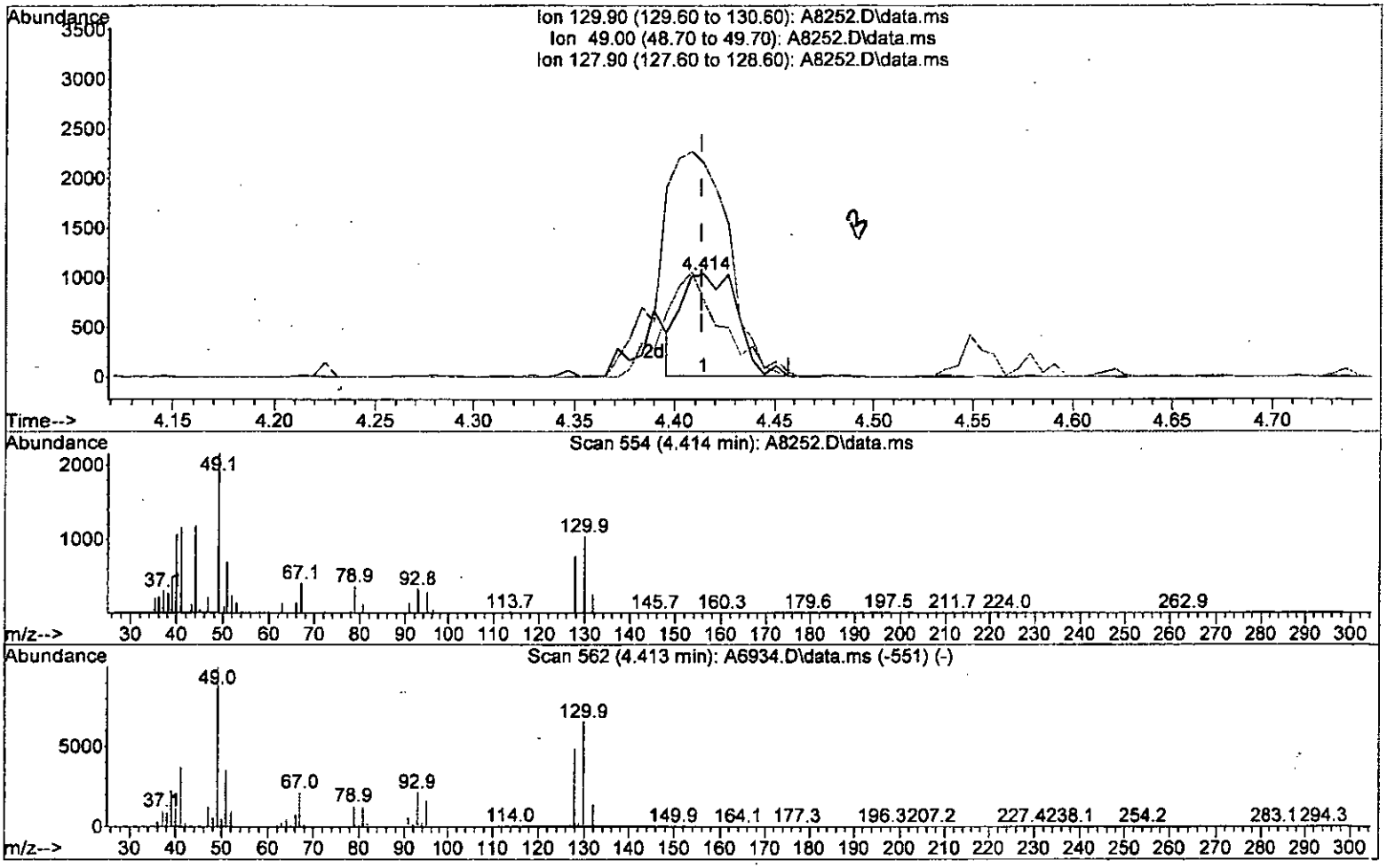
4.103min (+0.014) 0.88 ug/L m

response 2628

Ion	Exp%	Act%
43.10	100	100
57.10	7.80	11.12
72.10	22.60	17.13
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(36) Bromochloromethane

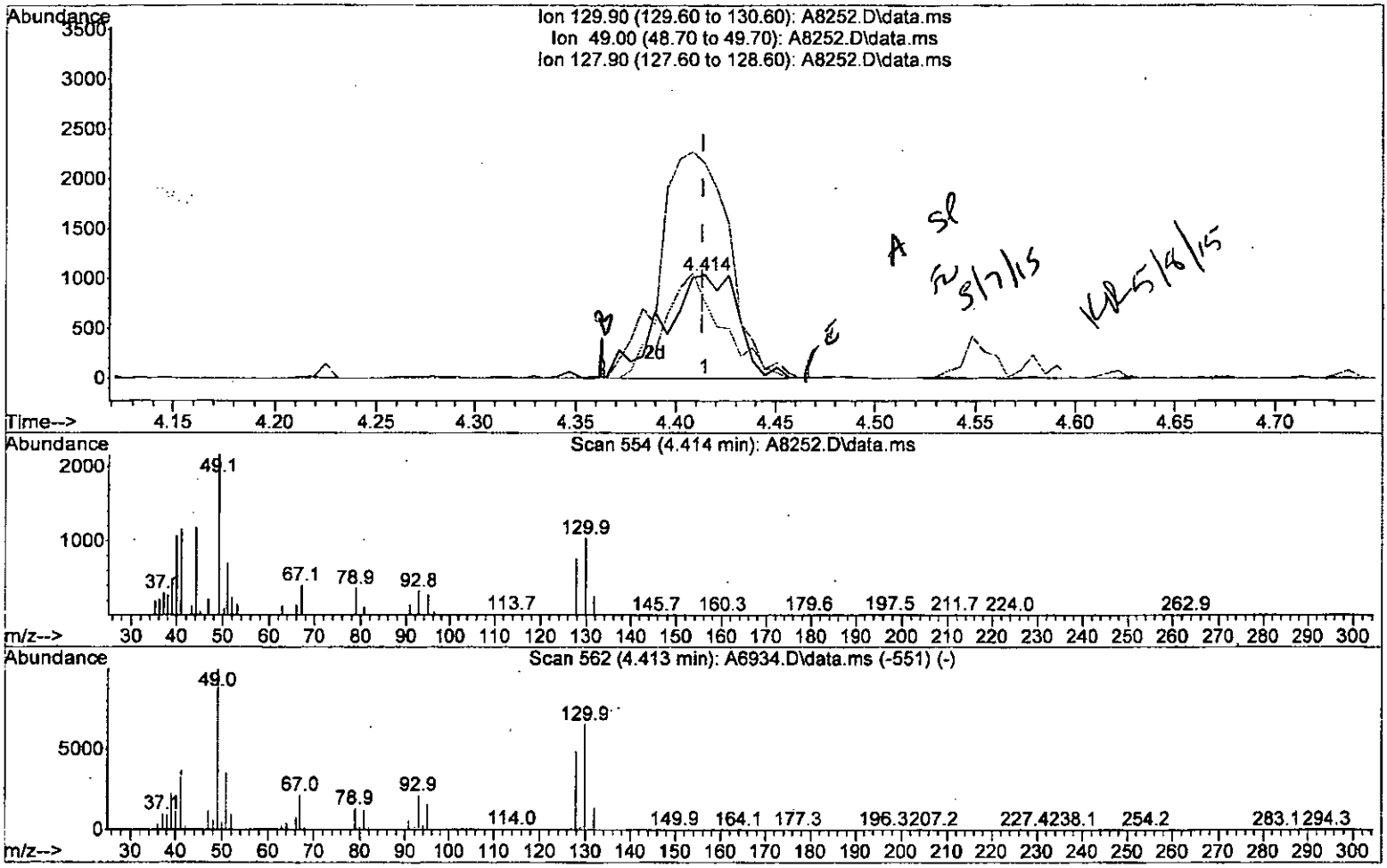
4.414min (+0.001) 0.39 ug/L

response 1976

Ion	Exp%	Act%
129.90	100	100
49.00	133.80	207.72#
127.90	75.20	74.13
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(36) Bromochloromethane

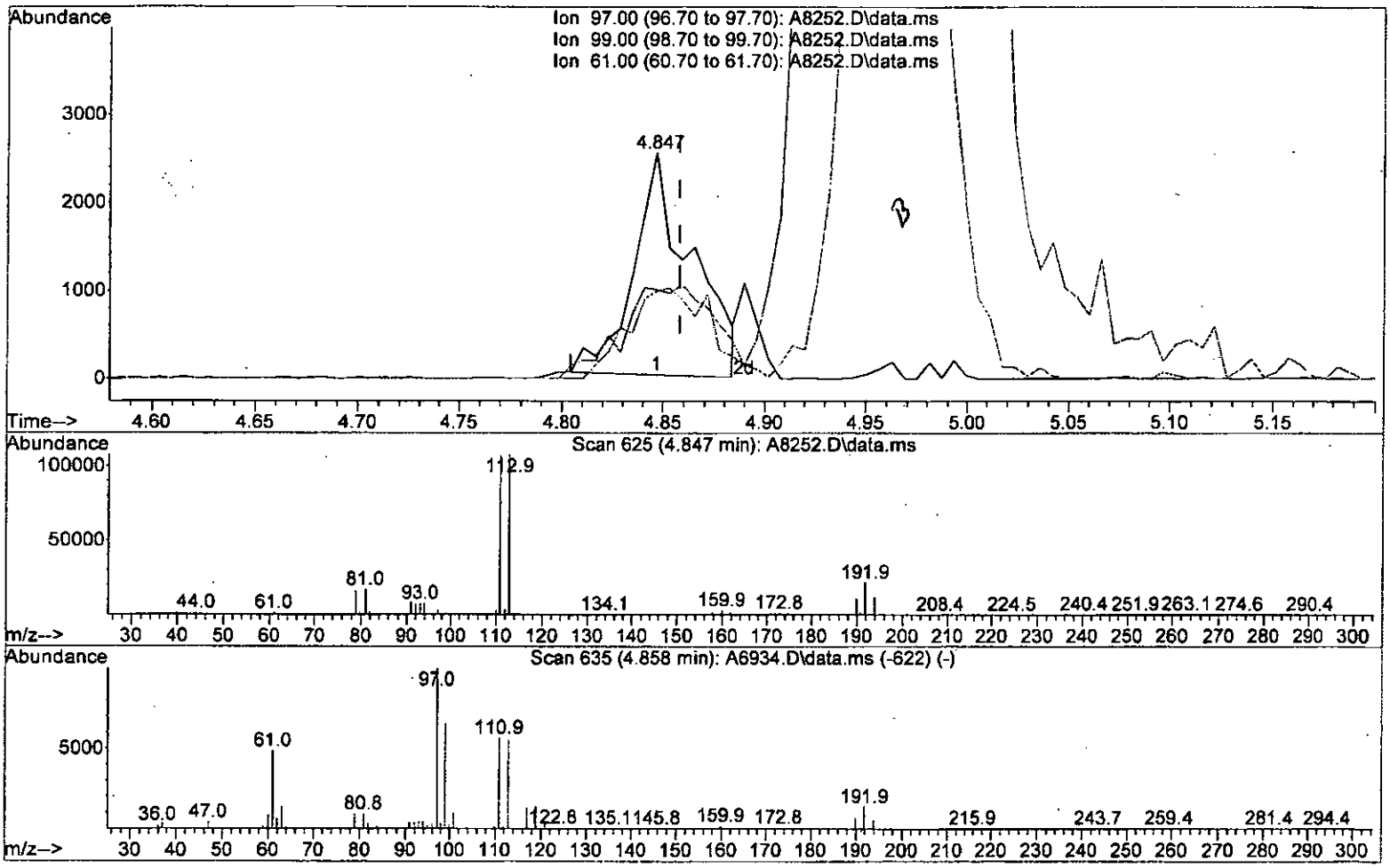
4.414min (+0.001) 0.53 ug/L m

response 2673

Ion	Exp%	Act%
129.90	100	100
49.00	133.80	207.72#
127.90	75.20	74.13
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(40) 1,1,1-Trichloroethane (P)

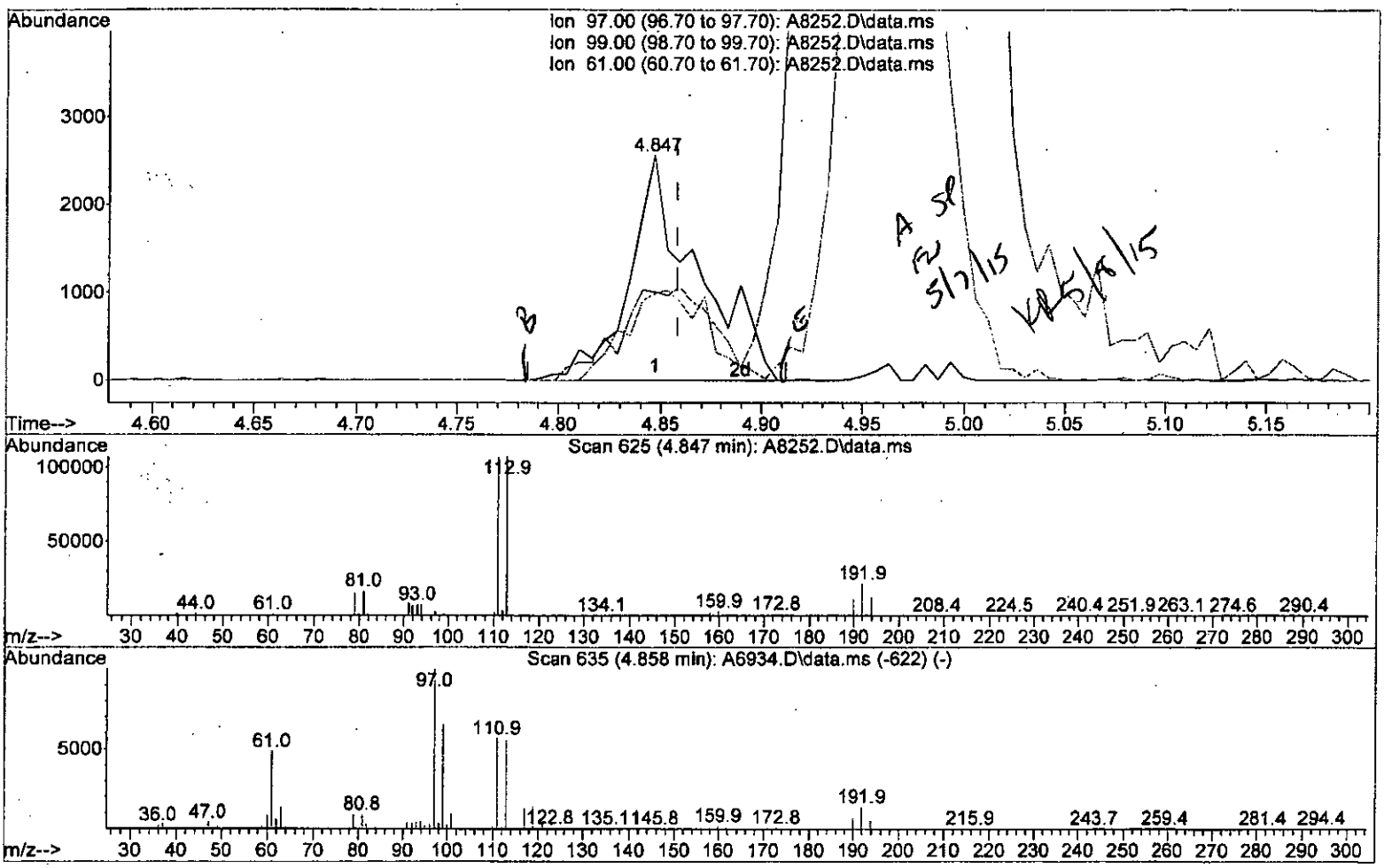
4.847min (-0.011) 0.38 ug/L

response 4964

Ion	Exp%	Act%
97.00	100	100
99.00	60.90	39.35#
61.00	45.20	38.61
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(40) 1,1,1-Trichloroethane (P)

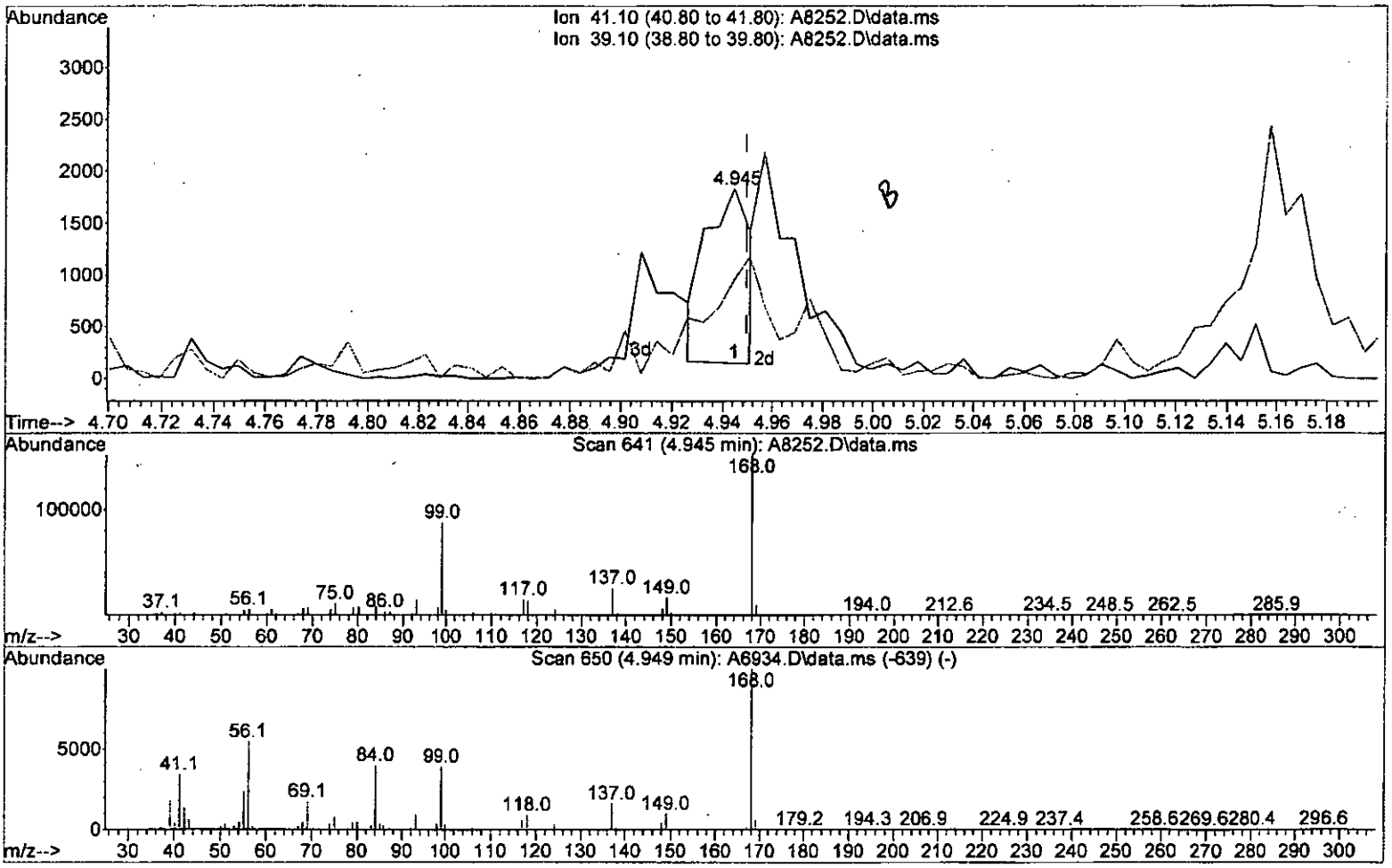
4.847min (-0.011) 0.46 ug/L m

response 5954

Ion	Exp%	Act%
97.00	100	100
99.00	60.90	39.35#
61.00	45.20	38.61
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(42) Cyclohexane (P)

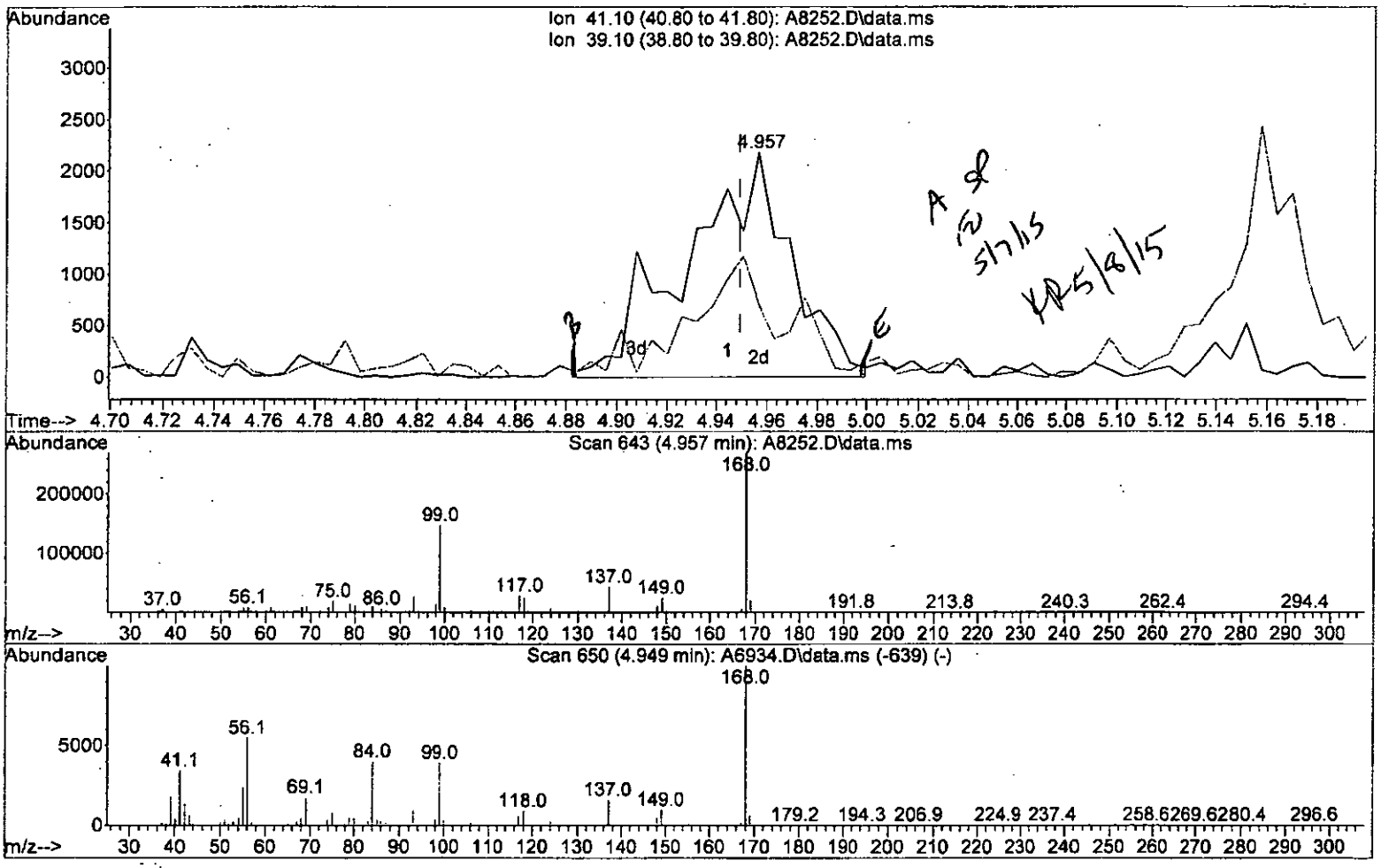
4.945min (-0.005) 0.19 ug/L

response 2030

Ion	Exp%	Act%
41.10	100	100
39.10	49.60	52.00
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(42) Cyclohexane (P)

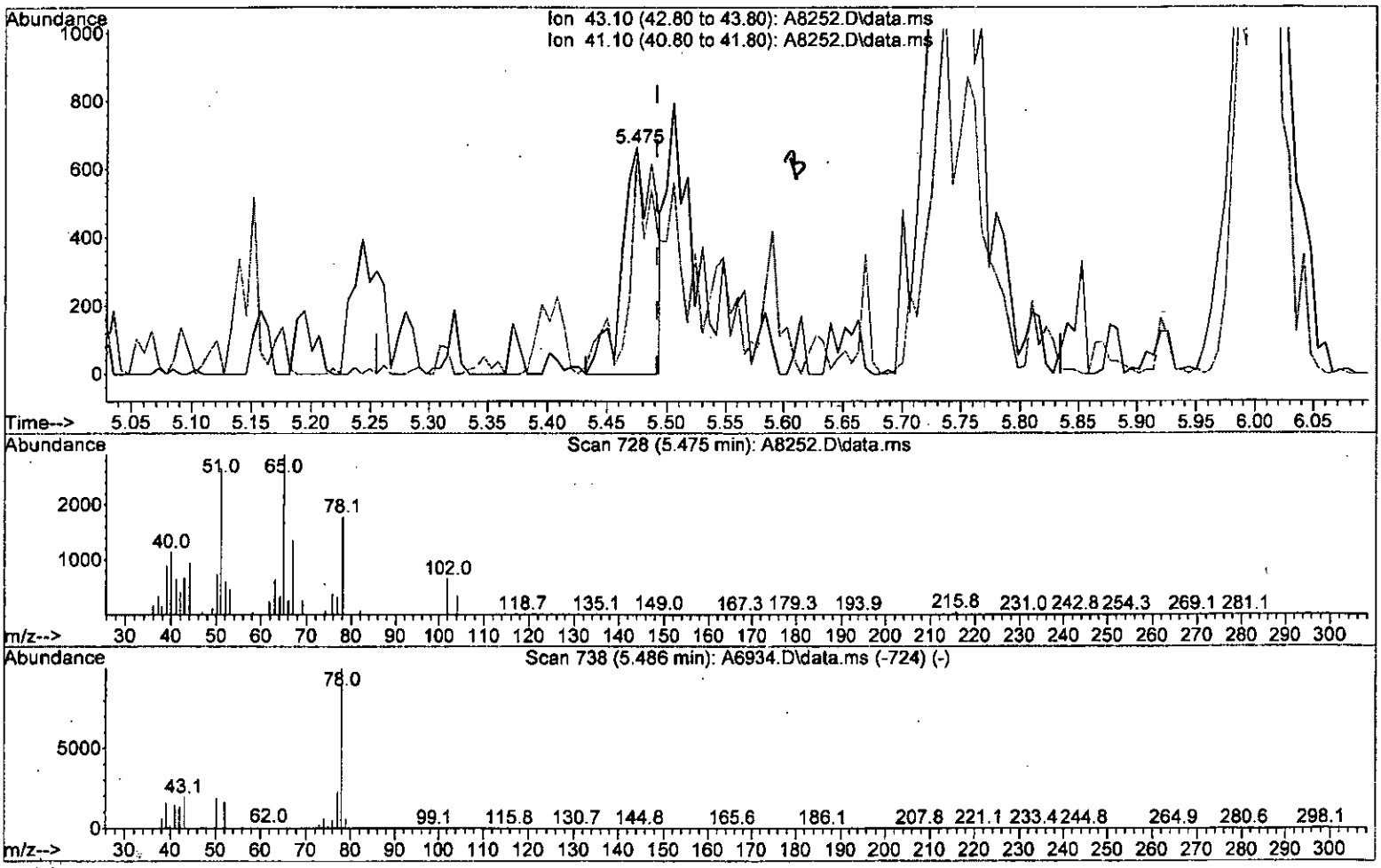
4.957min (+0.007) 0.57 ug/L m

response 6228

Ion	Exp%	Act%
41.10	100	100
39.10	49.60	32.19
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(49) Iso-Butyl Alcohol

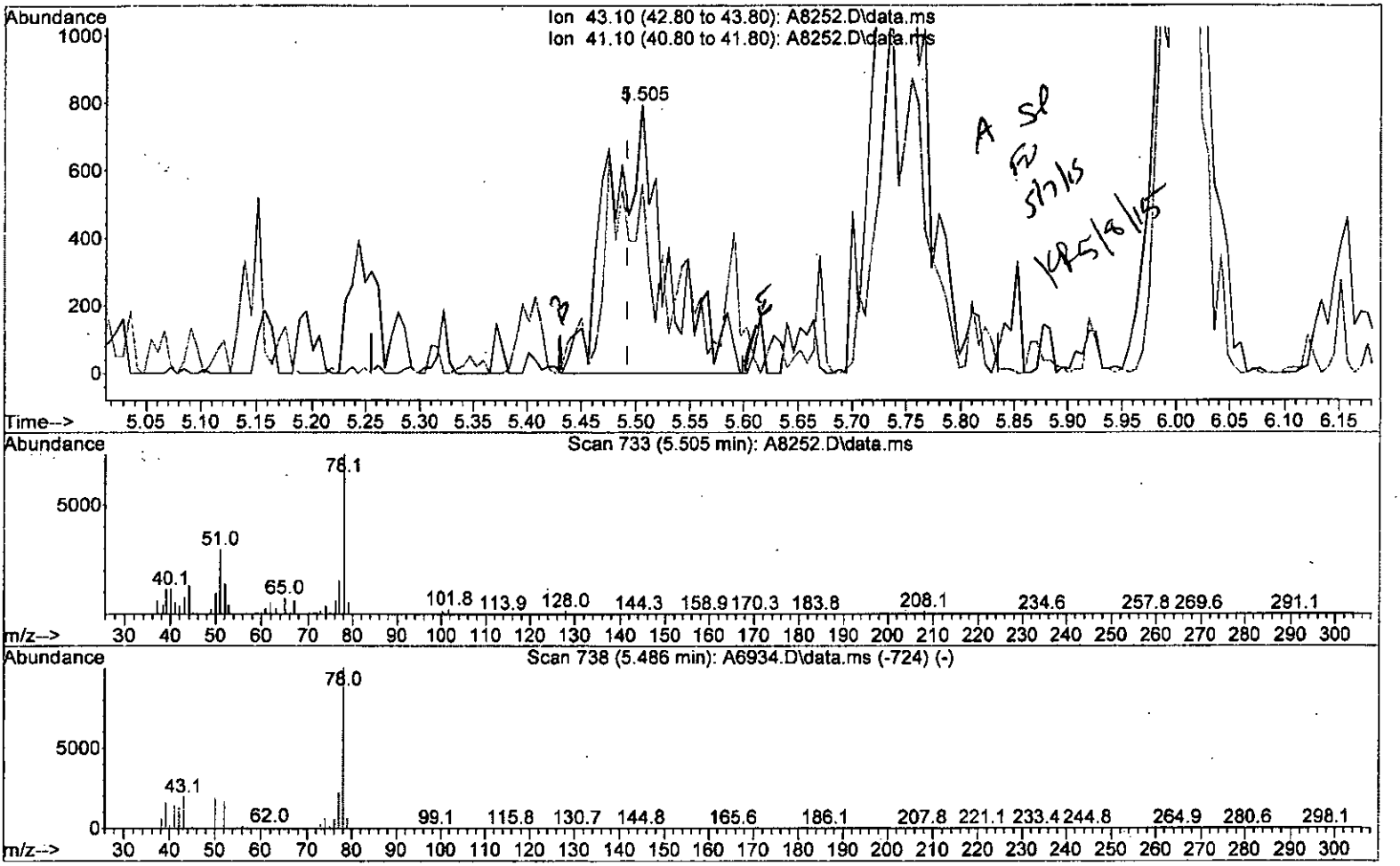
5.475min (-0.017) 4.06 ug/L

response 1272

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	97.29
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(49) Iso-Butyl Alcohol

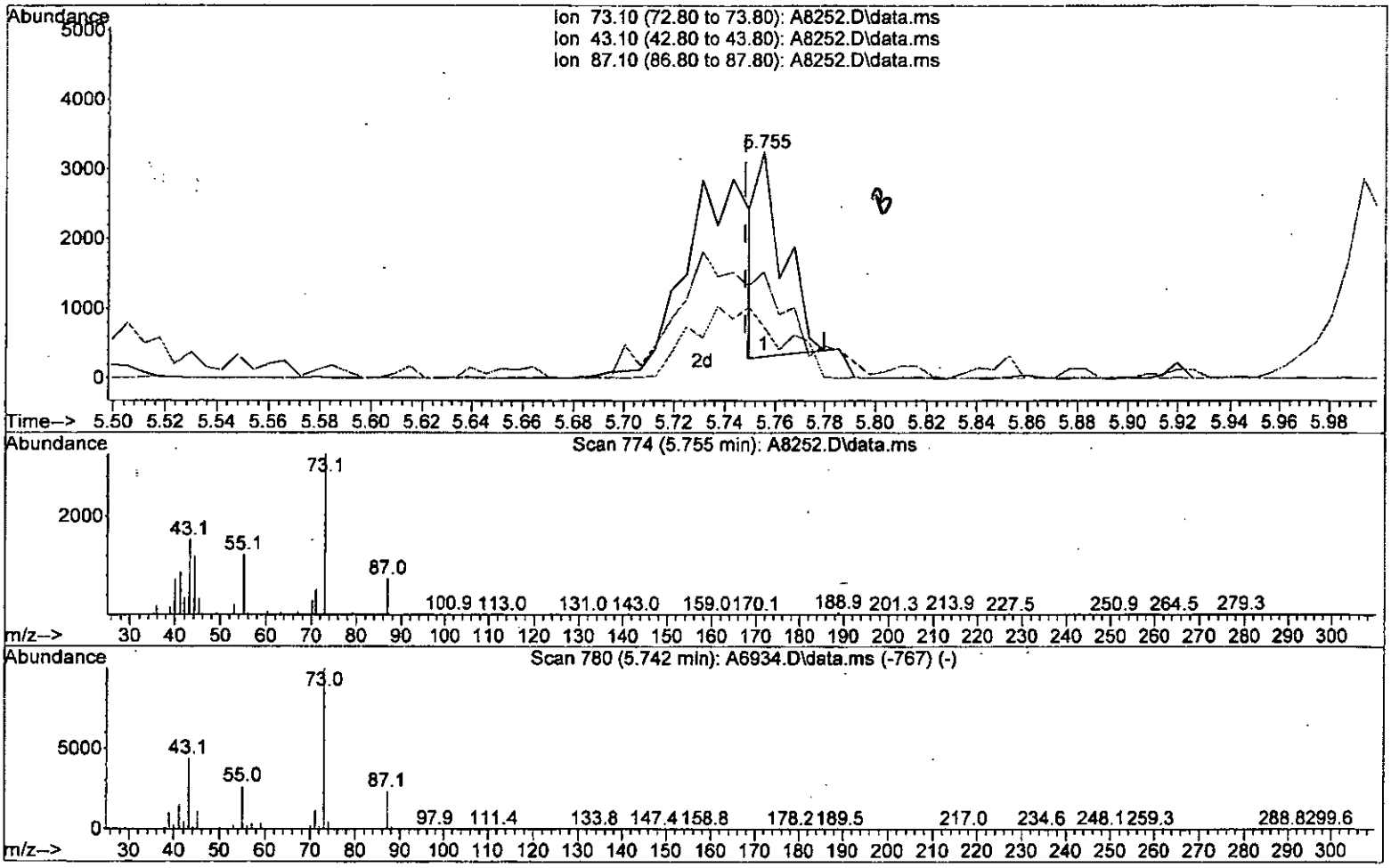
5.505min (+0.013) 9.36 ug/L m

response 2936

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	70.44
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(50) TAME

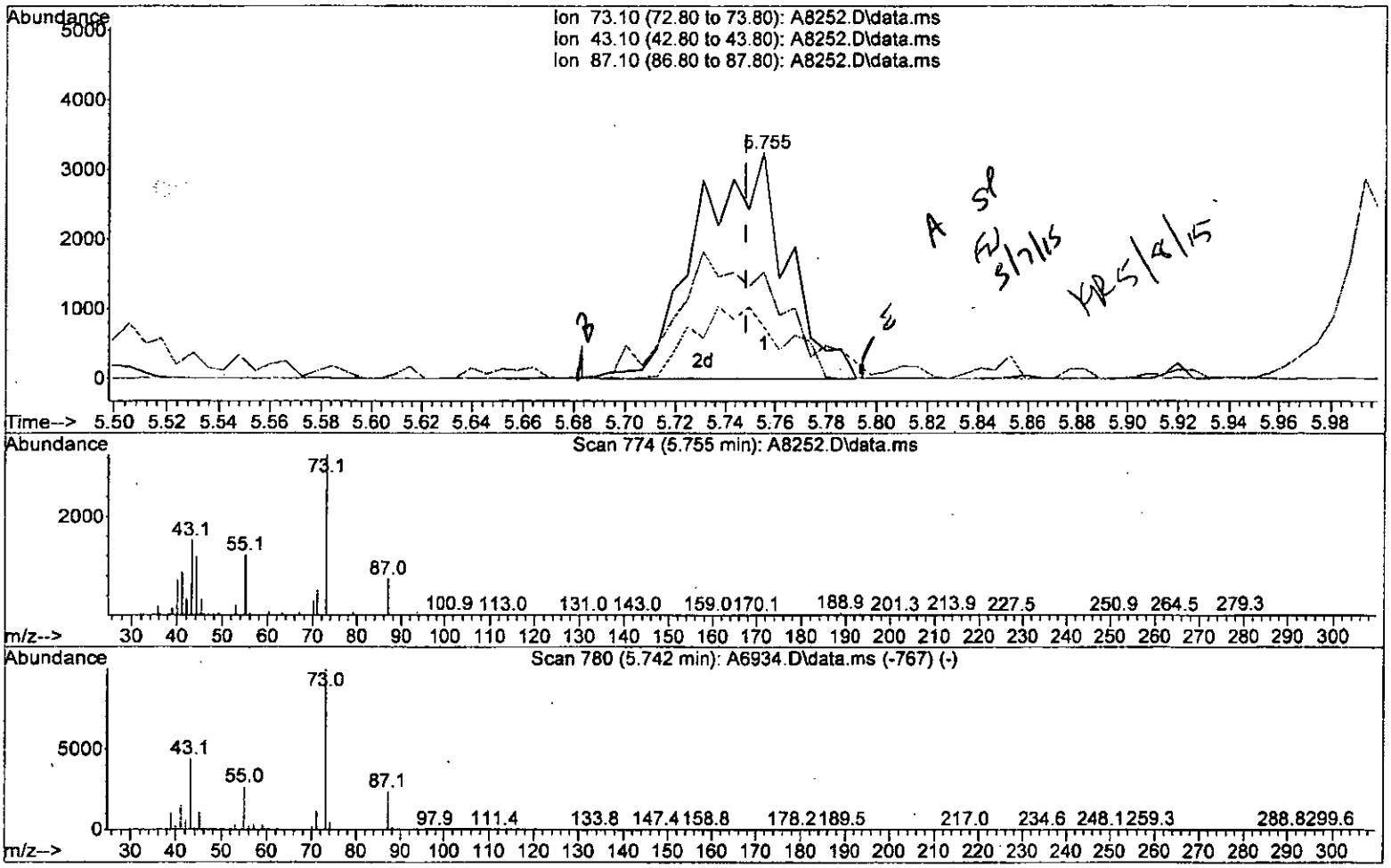
5.755min (+0.007) 0.10 ug/L

response 2137

Ion	Exp%	Act%
73.10	100	100
43.10	37.80	46.92
87.10	23.80	22.72
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(50) TAME

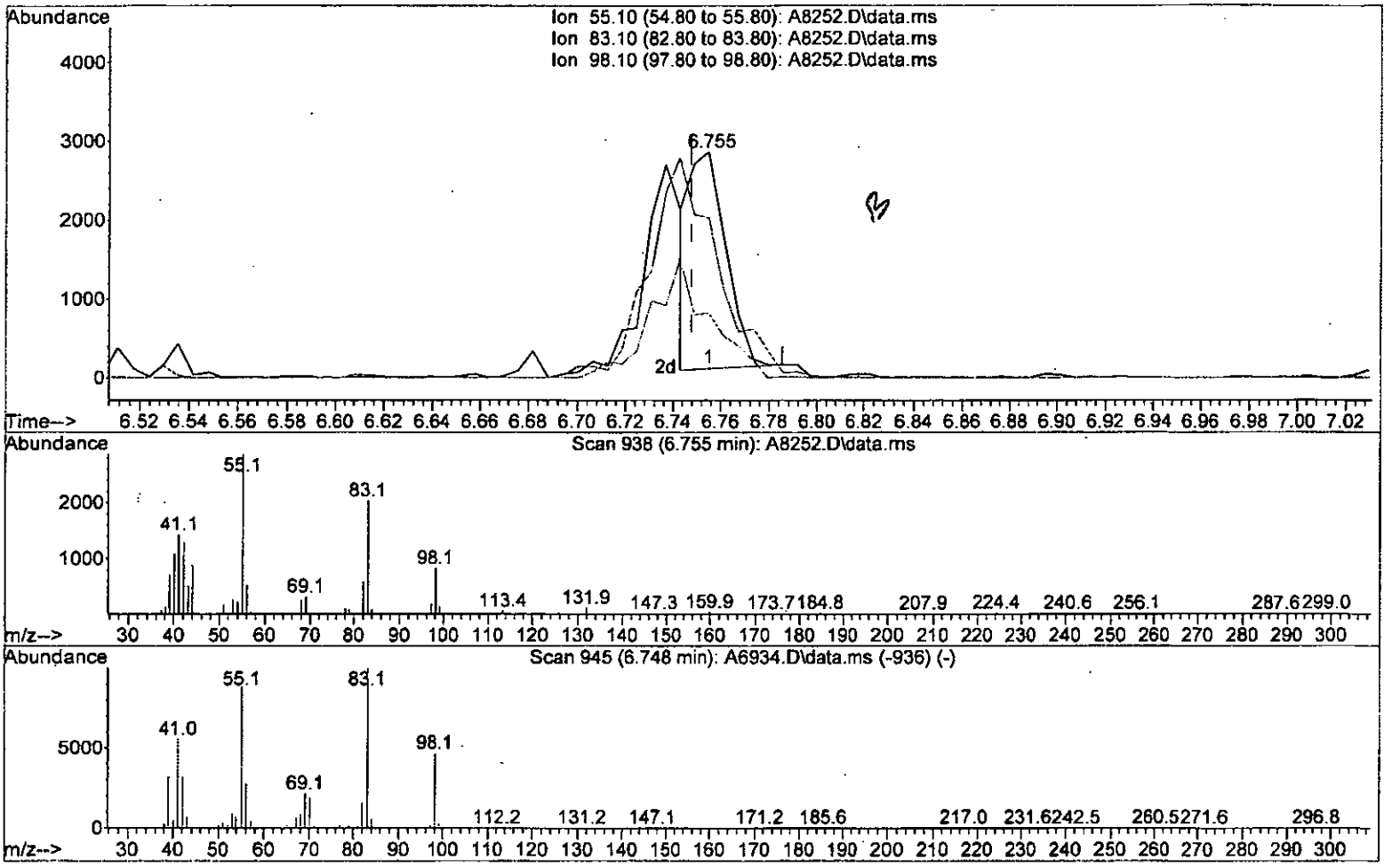
5.755min (+0.007) 0.36 ug/L m

response 7995

Ion	Exp%	Act%
73.10	100	100
43.10	37.80	46.92
87.10	23.80	22.72
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(54) Methylcyclohexane (P)

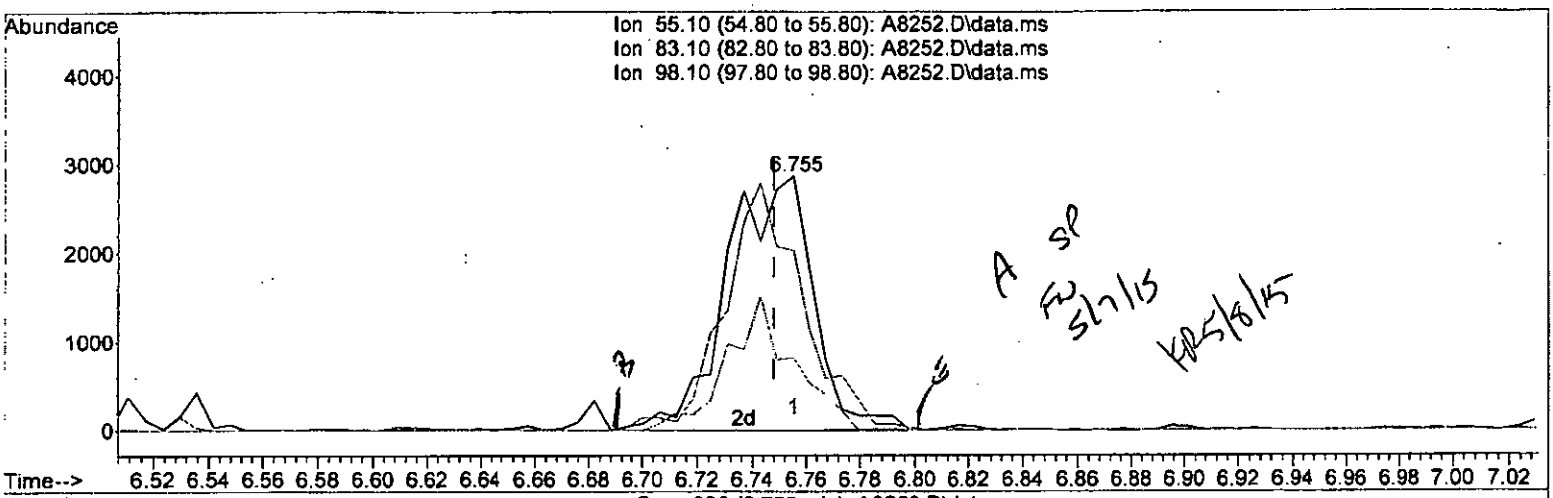
6.755min (+0.007) 0.22 ug/L

response 2870

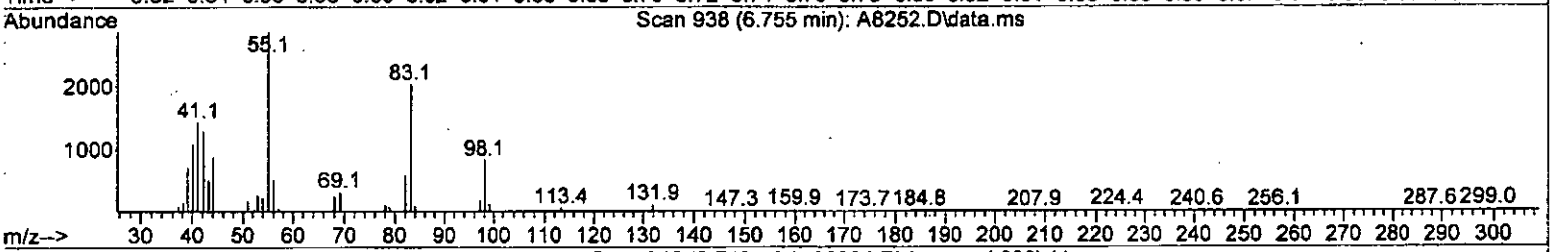
Ion	Exp%	Act%
55.10	100	100
83.10	118.00	70.76#
98.10	52.10	28.68#
0.00	0.00	0.00

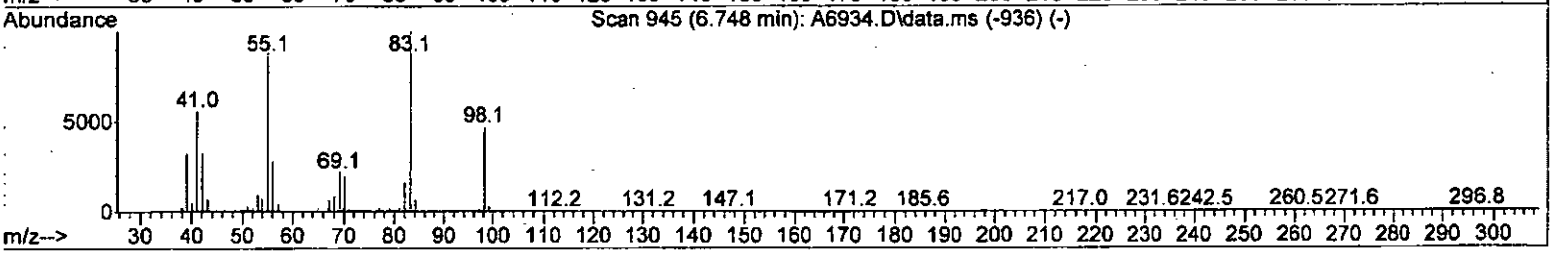
Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



A sl FW 5/7/15 KPS 5/8/15





TIC: A8252.D\data.ms

(54) Methylcyclohexane (P)

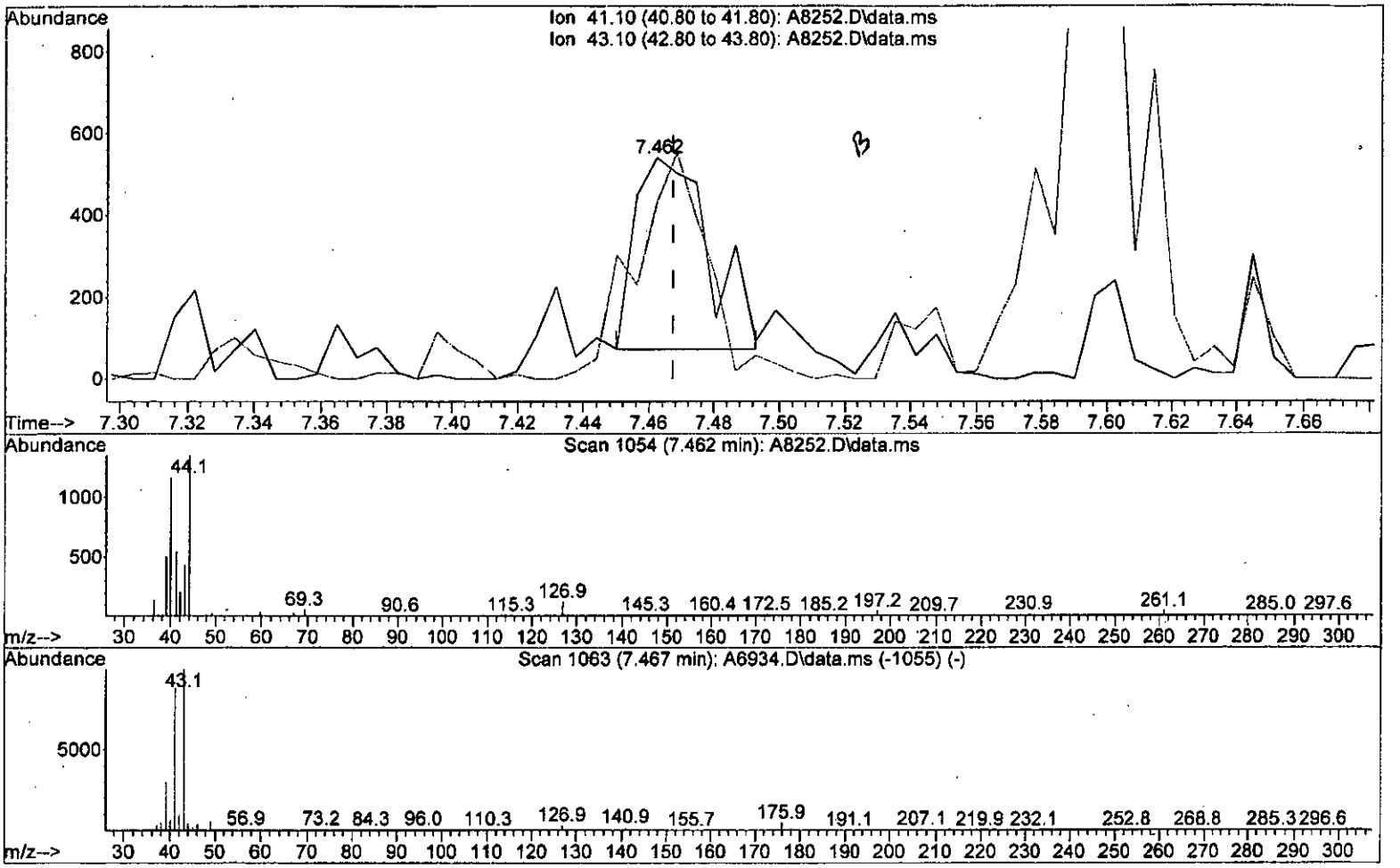
6.755min (+0.007) 0.49 ug/L m

response 6388

Ion	Exp%	Act%
55.10	100	100
83.10	118.00	70.76#
98.10	52.10	28.68#
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(60) 2-Nitropropane

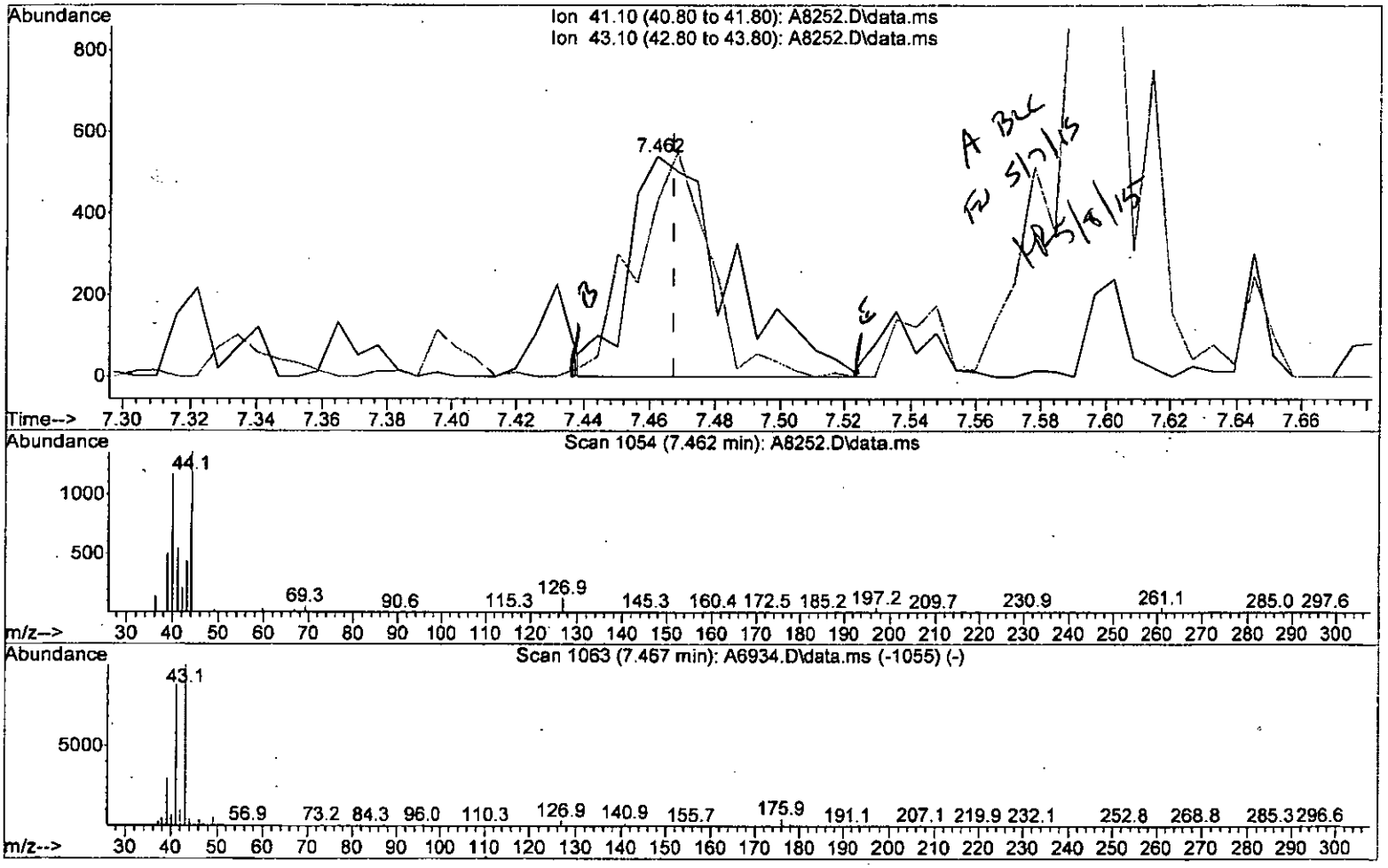
7.462min (-0.005) 0.38 ug/L

response 743

Ion	Exp%	Act%
41.10	100	100
43.10	111.20	79.85#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(60) 2-Nitropropane

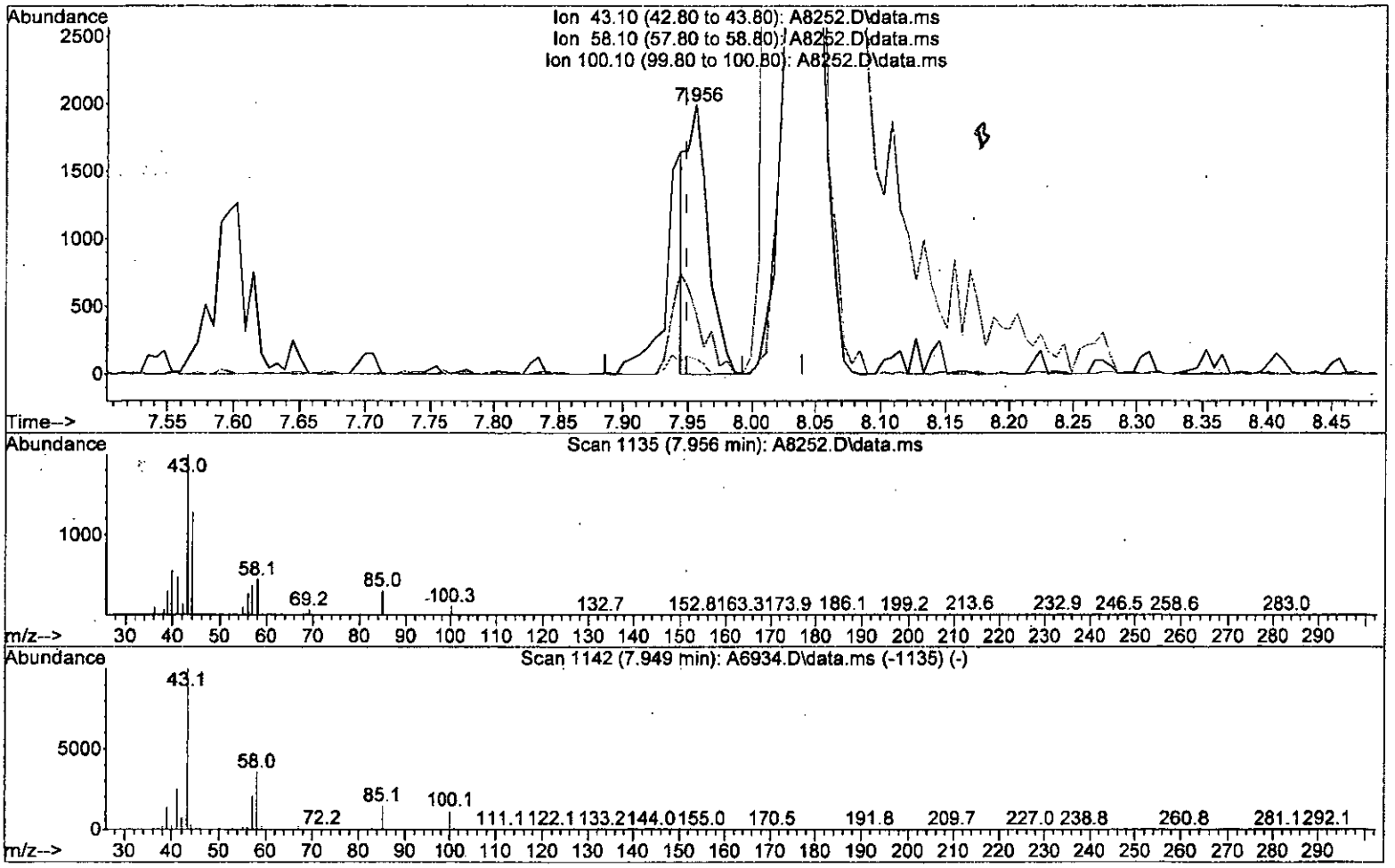
7.462min (-0.005) 0.59 ug/L m

response 1141

Ion	Exp%	Act%
41.10	100	100
43.10	111.20	79.85#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(63) 4-Methyl-2-pentanone (P)

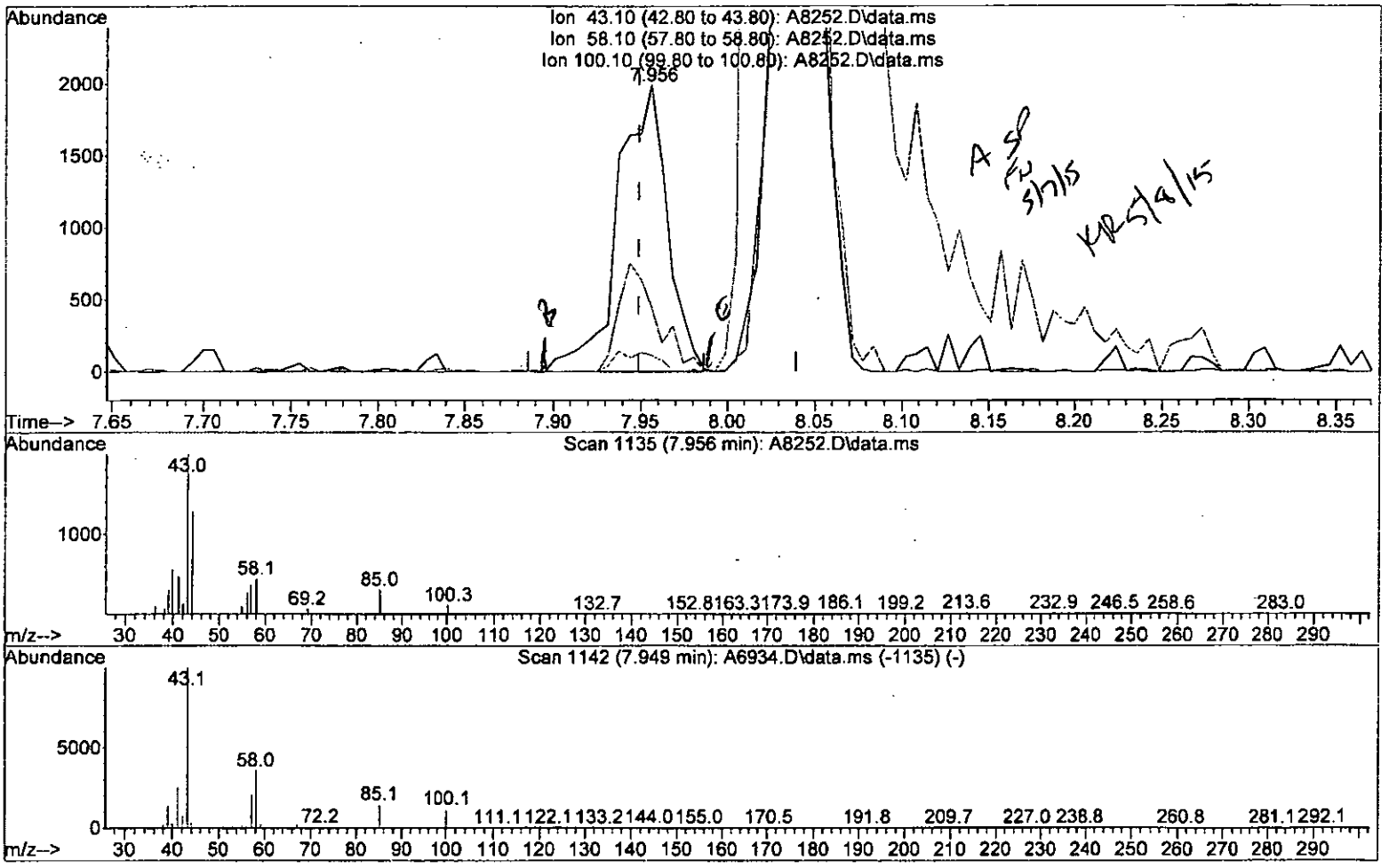
7.956min (+0.007) 0.32 ug/L

response 2302

Ion	Exp%	Act%
43.10	100	100
58.10	36.50	22.42
100.10	13.70	5.73
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(63) 4-Methyl-2-pentanone (P)

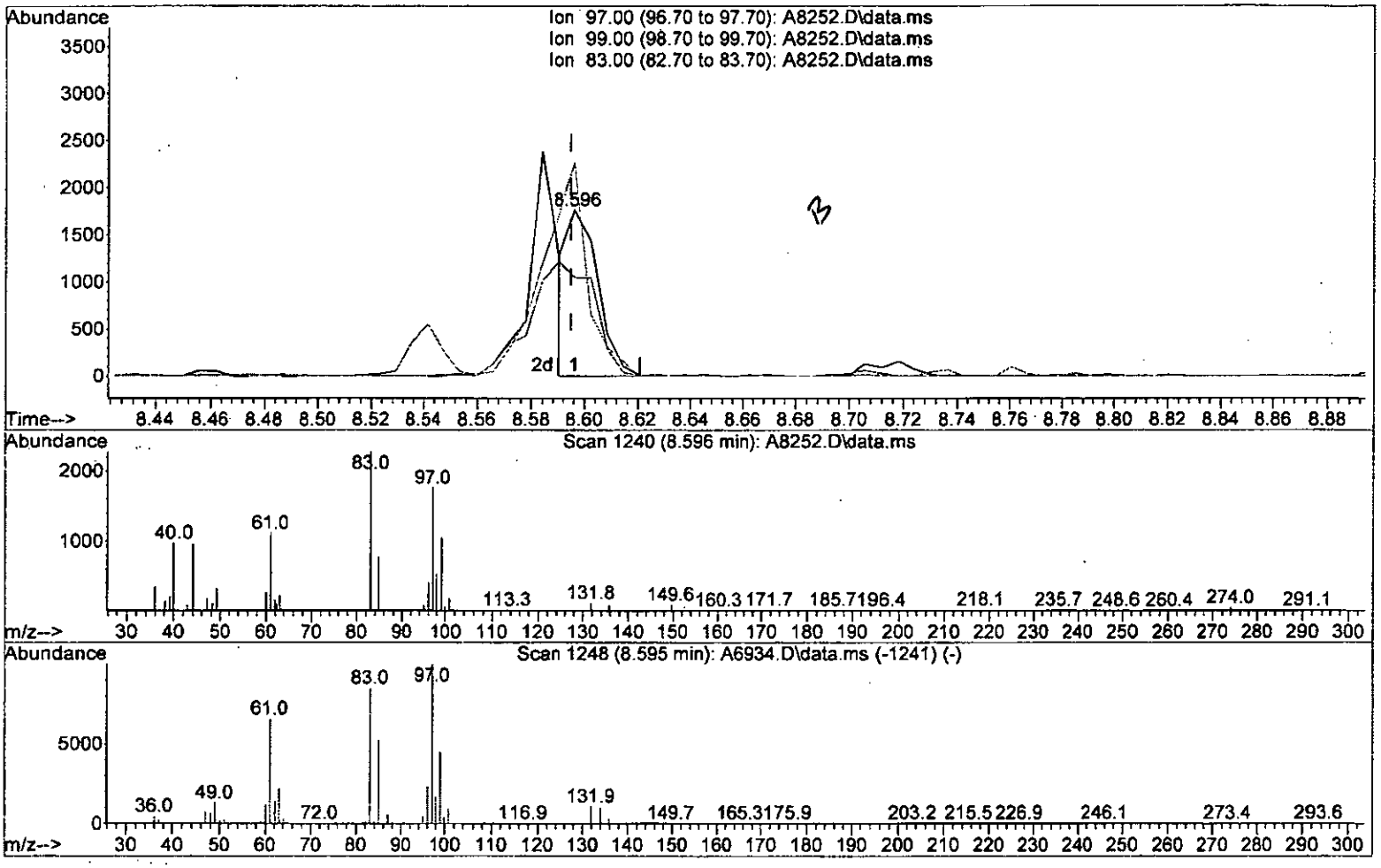
7.956min (+0.007) 0.55 ug/L m

response 3877

Ion	Exp%	Act%
43.10	100	100
58.10	36.50	22.42
100.10	13.70	5.73
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(68) 1,1,2-Trichloroethane (P)

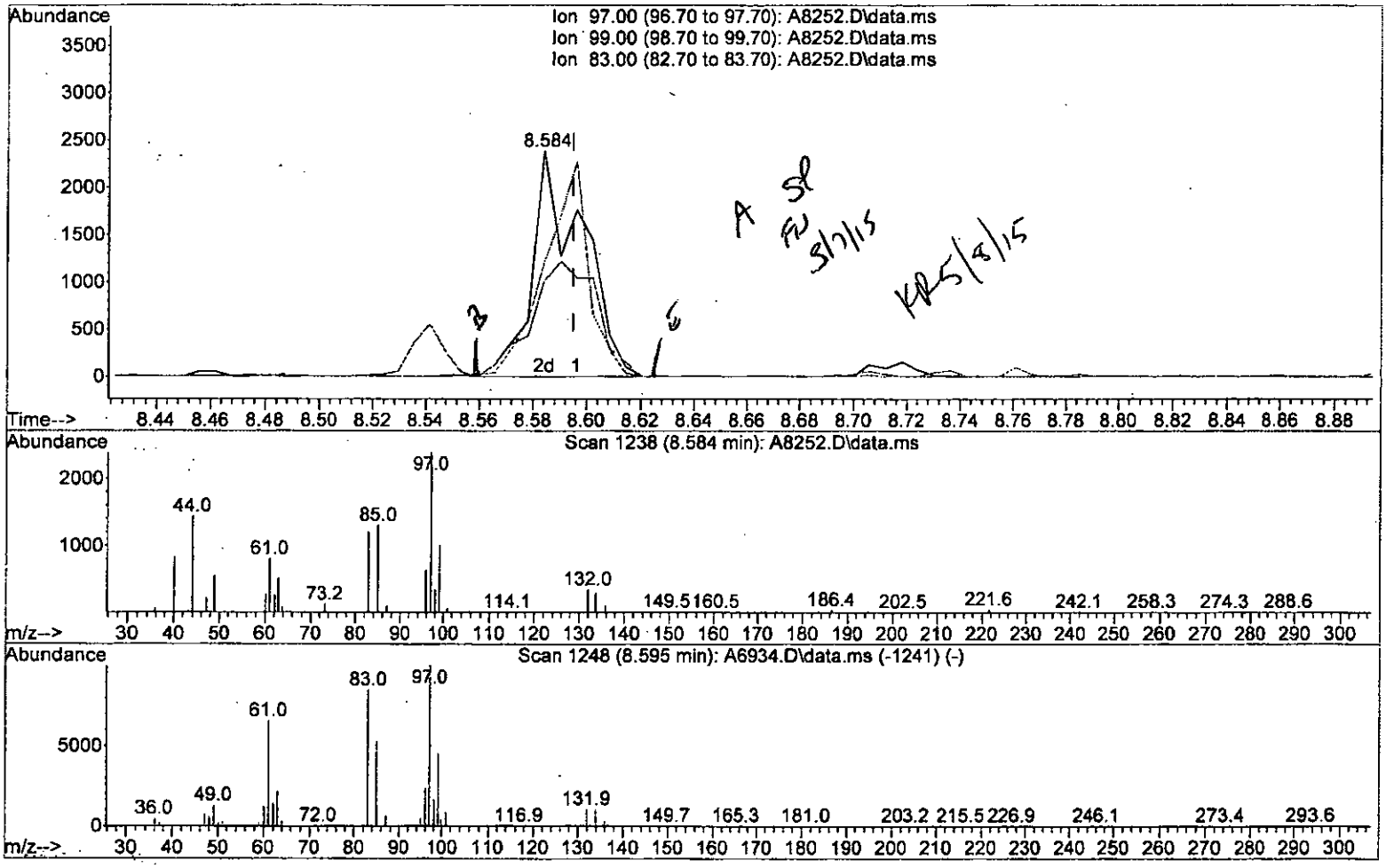
8.596min (+0.001) 0.20 ug/L

response 1367

Ion	Exp%	Act%
97.00	100	100
99.00	58.80	59.22
83.00	82.00	129.12#
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(68) 1,1,2-Trichloroethane (P)

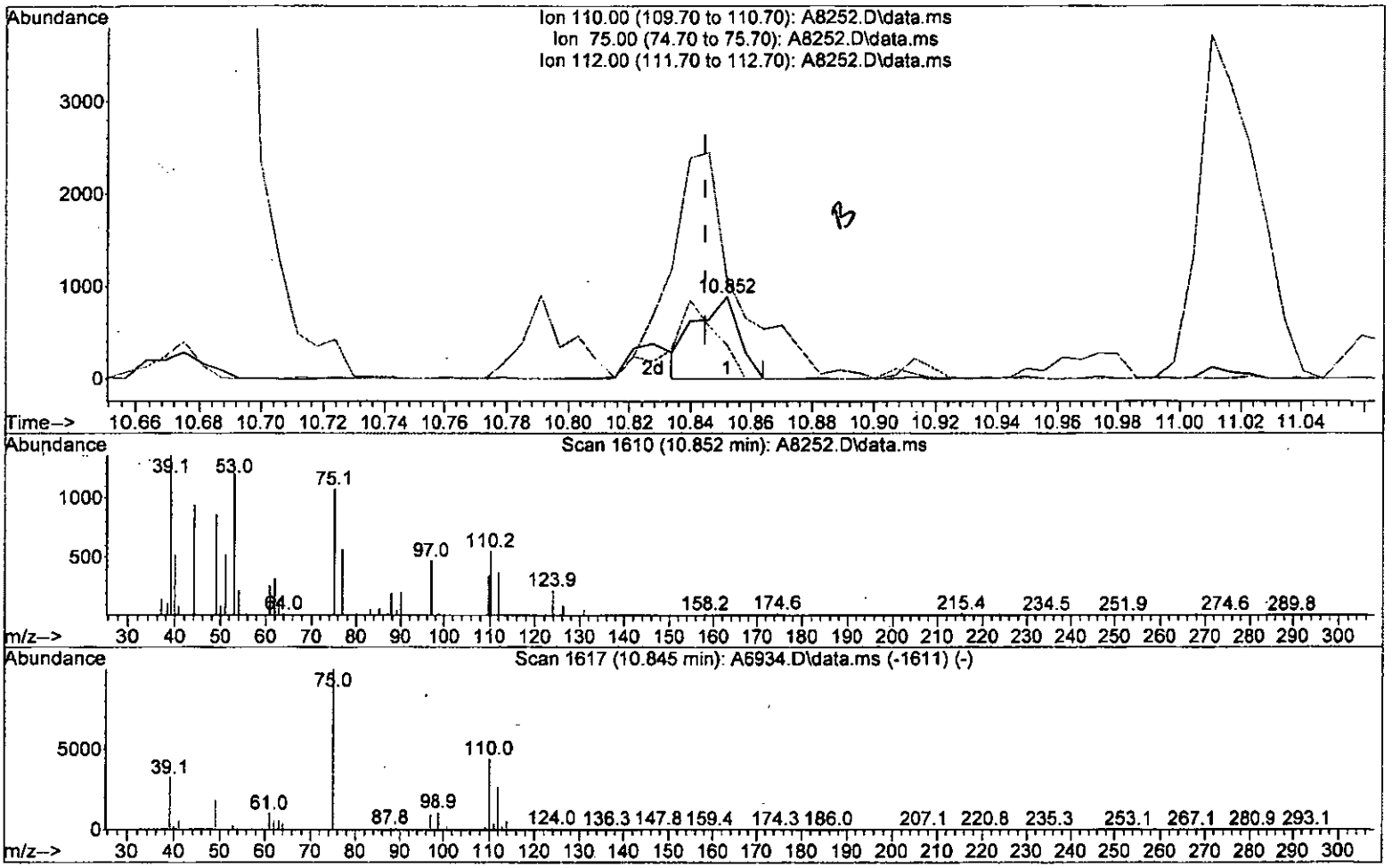
8.584min (-0.011) 0.45 ug/L m

response 3094

Ion	Exp%	Act%
97.00	100	100
99.00	58.80	42.26
83.00	82.00	50.48#
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(93) 1,2,3-Trichloropropane

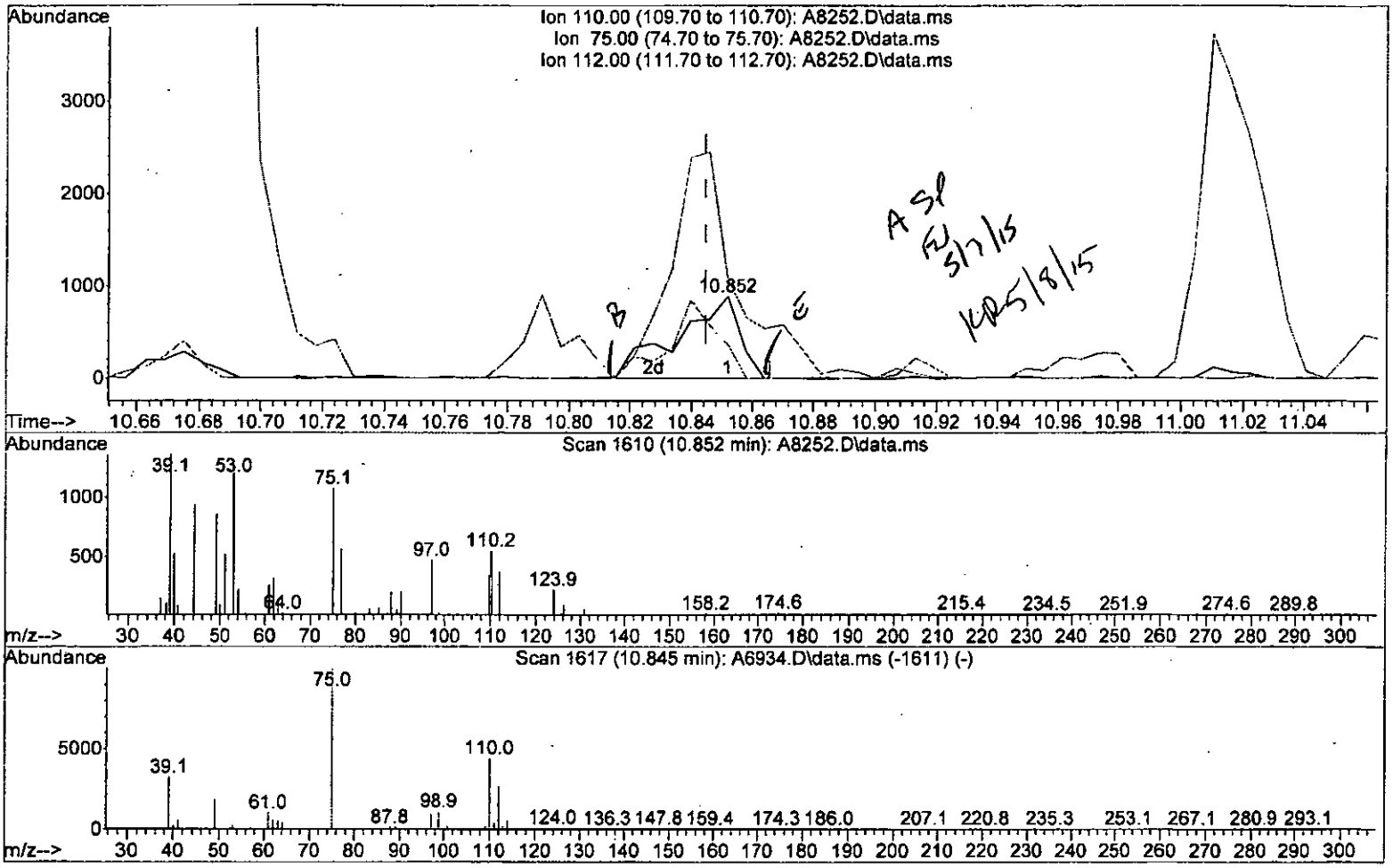
10.852min (+0.007) 0.42 ug/L

response 890

Ion	Exp%	Act%
110.00	100	100
75.00	238.20	121.06#
112.00	60.70	41.33
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(93) 1,2,3-Trichloropropane

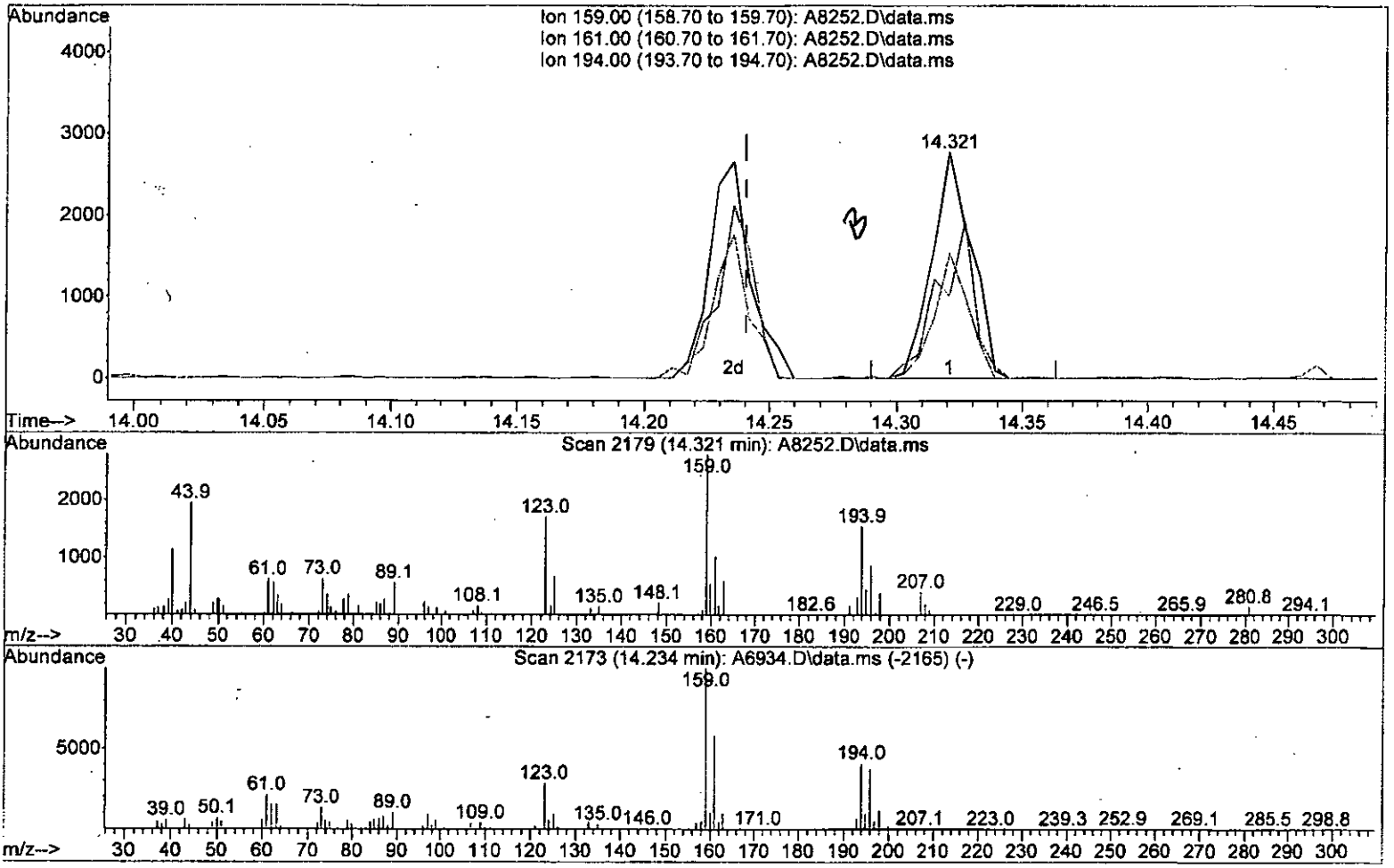
10.852min (+0.007) 0.59 ug/L m

response 1251

Ion	Exp%	Act%
110.00	100	100
75.00	238.20	196.53#
112.00	60.70	67.09
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(118) 2,4,5-Trichlorotoluene

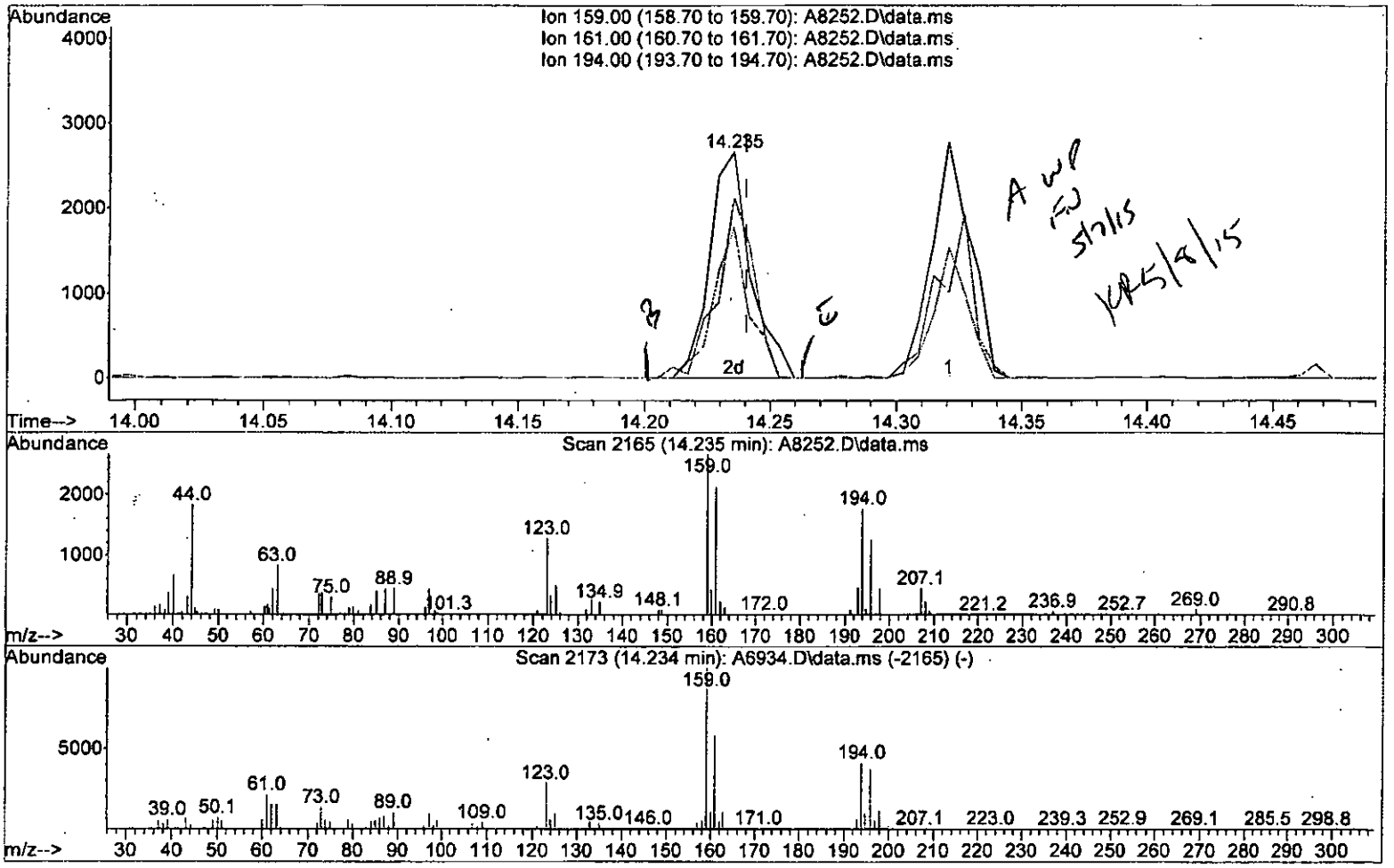
14.321min (+0.080) 0.51 ug/L

response 3037

Ion	Exp%	Act%
159.00	100	100
161.00	62.00	42.36
194.00	43.50	55.44
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(118) 2,4,5-Trichlorotoluene

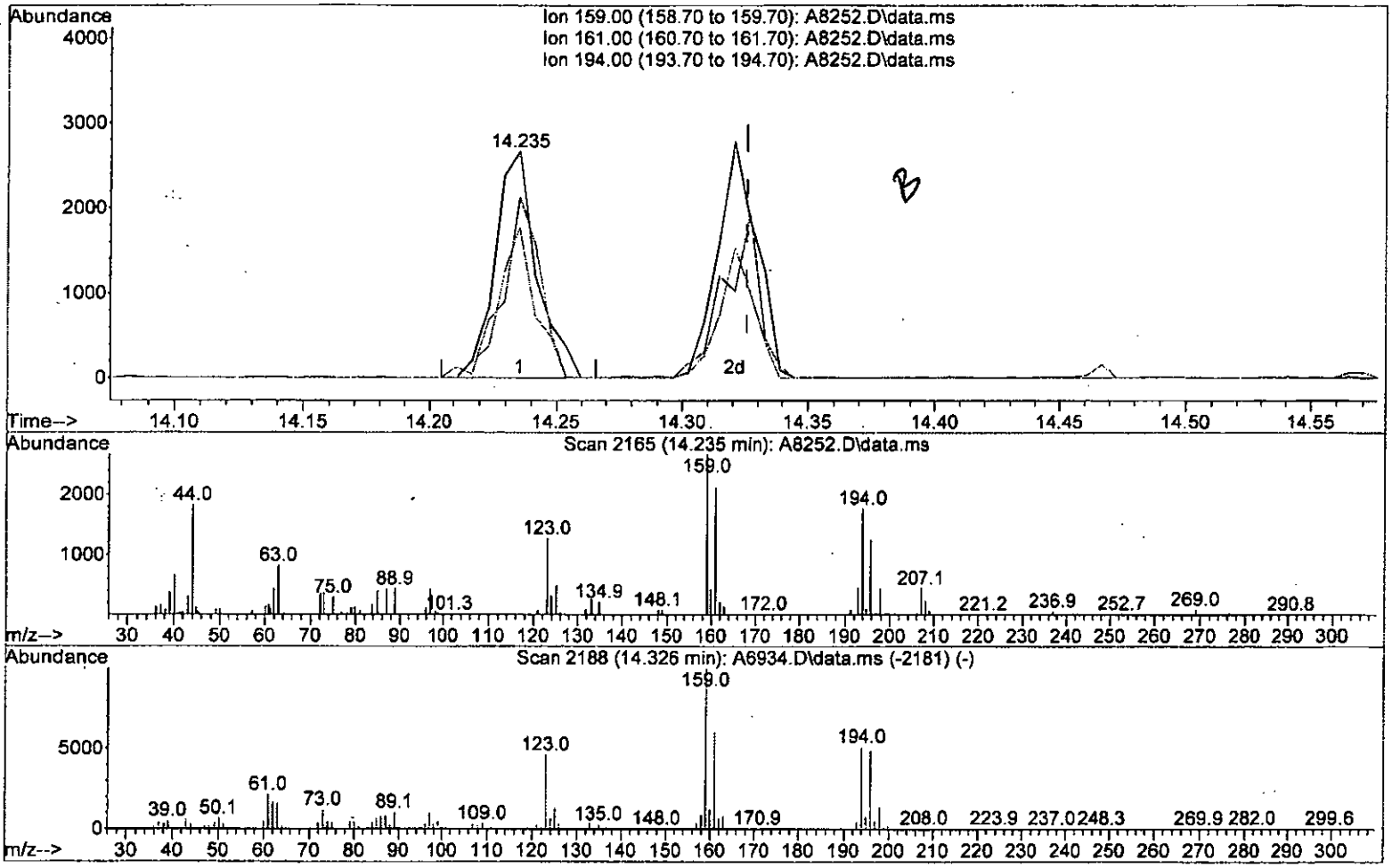
14.235min (-0.005) 0.51 ug/L m

response 3021

Ion	Exp%	Act%
159.00	100	100
161.00	62.00	79.71
194.00	43.50	66.42#
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(119) 2,3,6-Trichlorotoluene

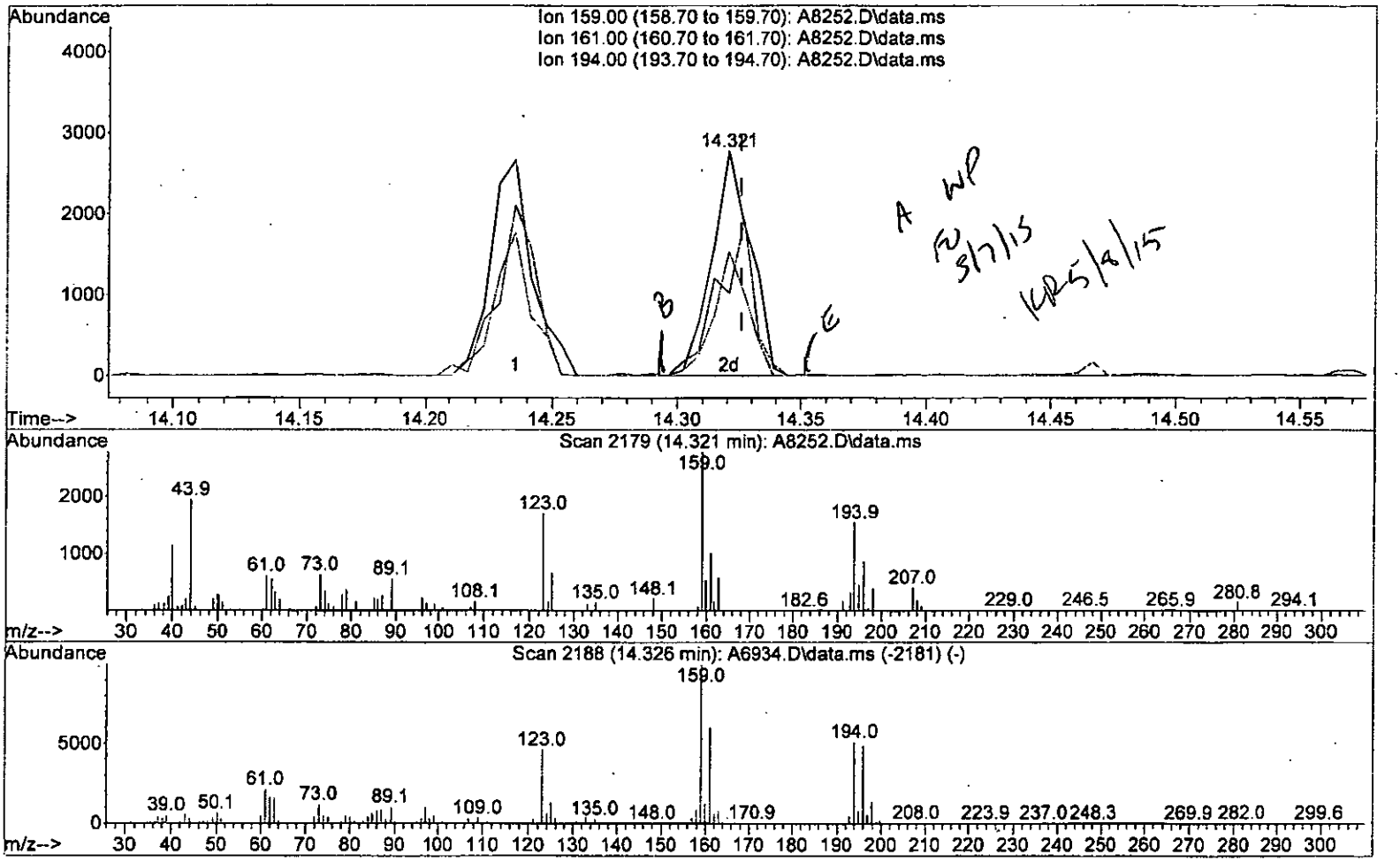
14.235min (-0.090) 0.60 ug/L

response 3020

Ion	Exp%	Act%
159.00	100	100
161.00	62.90	79.71
194.00	47.30	66.42
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 06 16:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8252.D\data.ms

(119) 2,3,6-Trichlorotoluene

14.321min (-0.005) 0.60 ug/L m

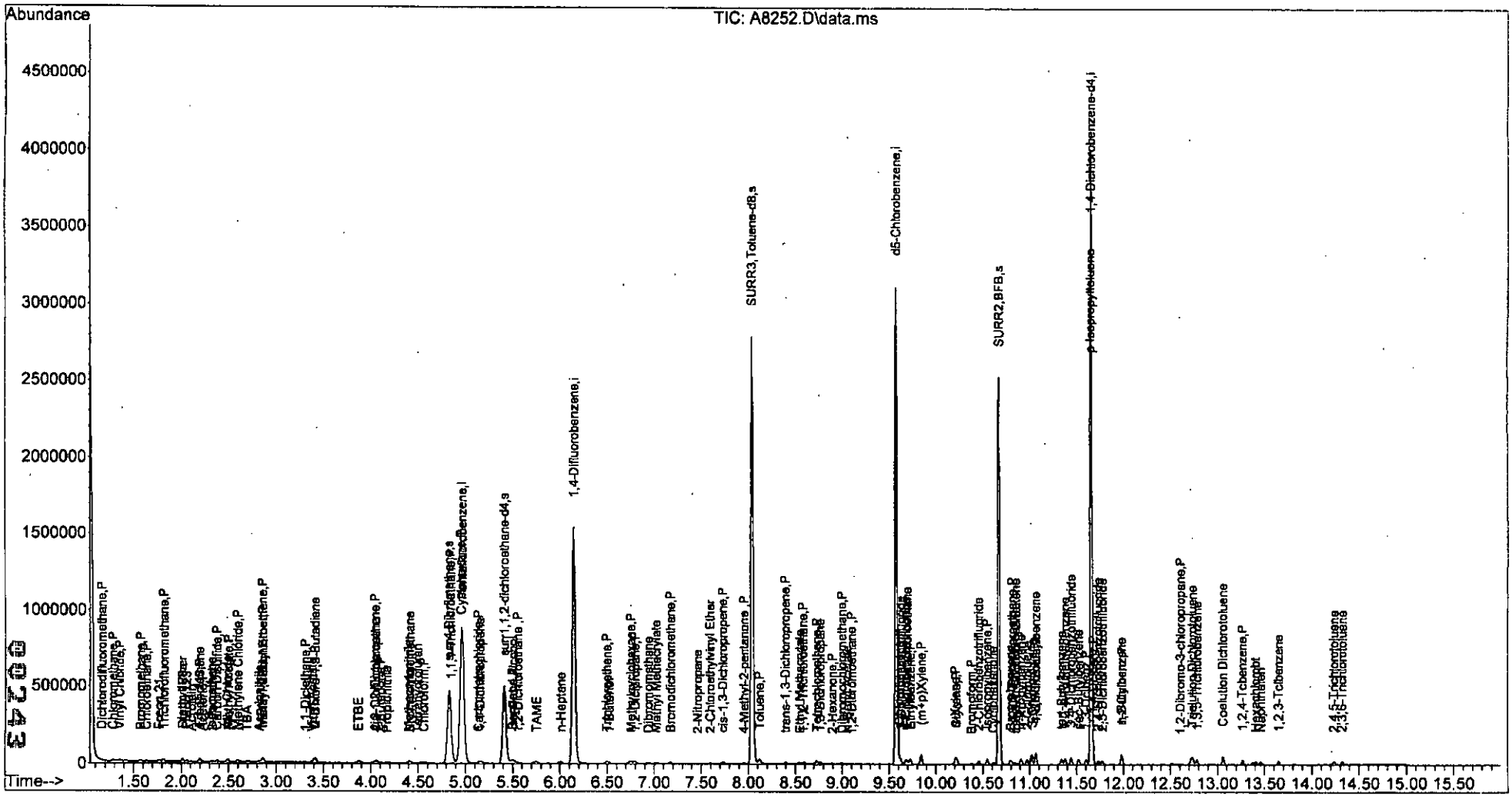
response 3038

Ion	Exp%	Act%
159.00	100	100
161.00	62.90	36.46#
194.00	47.30	55.44
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8252.D
Acq On : 6 May 2015 4:31 pm
Operator : F. NAEGLER
Sample : 0.5 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 09:13:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 10:01:27 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FV 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	919700	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1429798	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1336653	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	776663	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	430936	50.43	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 100.86%				
46) surr1,1,2-dichloroetha...	5.414	65	448817	50.45	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 100.90%				
64) SURR3,Toluene-d8	8.041	98	1652534	50.35	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 100.70%				
69) SURR2,BFB	10.675	95	664158	46.14	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 92.28%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	8914m	1.02	ug/L		
3) Chloromethane	1.281	50	16320	1.49	ug/L		93
4) Vinyl Chloride	1.354	62	11534	1.13	ug/L		85
5) Bromomethane	1.573	94	5088	1.45	ug/L		92
6) Chloroethane	1.640	64	6626	1.14	ug/L		88
7) Freon 21	1.768	67	13283	0.84	ug/L		99
8) Trichlorofluoromethane	1.811	101	12747	1.01	ug/L		90
9) Diethyl Ether	2.012	59	6631	1.01	ug/L	#	78
10) Freon 123a	2.012	67	9527m	0.96	ug/L		
11) Freon 123	2.061	83	9353	0.85	ug/L	#	71
12) Acrolein	2.104	56	7248	7.54	ug/L		84
13) 1,1-Diclethene	2.195	96	5876	0.83	ug/L	#	77
14) Freon 113	2.195	101	6793	0.88	ug/L		86
15) Acetone	2.226	43	6740	3.11	ug/L		89
16) 2-Propanol	2.329	45	8902m	22.41	ug/L		
17) Iodomethane	2.317	142	9219m	1.95	ug/L		
18) Carbon Disulfide	2.378	76	25125	0.97	ug/L		100
19) Acetonitrile	2.451	40	1803	5.98	ug/L	#	38
20) Allyl Chloride	2.488	76	4396	1.05	ug/L	#	63
21) Methyl Acetate	2.506	43	6883	1.42	ug/L		80
22) Methylene Chloride	2.597	84	8299	1.06	ug/L	#	67
23) TBA	2.701	59	10600	17.65	ug/L		71
24) Acrylonitrile	2.823	53	12800	5.75	ug/L		99
25) Methyl-t-Butyl Ether	2.866	73	18625	0.90	ug/L		68
26) trans-1,2-Dichloroethene	2.860	96	7093	0.89	ug/L		93
27) 1,1-Diclethane	3.311	63	17165	1.15	ug/L		88
28) Vinyl Acetate	3.378	86	916	0.65	ug/L	#	1
29) DIPE	3.402	45	42837	1.32	ug/L	#	77
30) 2-Chloro-1,3-Butadiene	3.408	53	17827	1.03	ug/L		83
31) ETBE	3.884	59	28405	1.04	ug/L		96
32) 2,2-Dichloropropane	4.054	77	10893m	0.93	ug/L		
33) cis-1,2-Dichloroethene	4.054	96	8569	0.96	ug/L	#	69
34) 2-Butanone	4.115	43	3559	1.20	ug/L		66
35) Propionitrile	4.176	54	4236	5.25	ug/L		88

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 10:01:27 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) Bromochloromethane	4.414	130	6079	1.22 ug/L #	75
37) Methacrylonitrile	4.408	67	2451	1.03 ug/L	88
38) Tetrahydrofuran	4.524	42	2999m	1.53 ug/L	
39) Chloroform	4.554	83	14203m	1.01 ug/L	
40) 1,1,1-Trichloroethane	4.853	97	12034m	0.93 ug/L	
42) Cyclohexane	4.938	41	12999	1.19 ug/L	88
44) Carbontetrachloride	5.140	121	3207	0.82 ug/L #	57
45) 1,1-Dichloropropene	5.152	75	11169	0.97 ug/L	94
47) Benzene	5.499	78	31500	0.90 ug/L	85
48) 1,2-Dichloroethane	5.536	62	11579	1.00 ug/L #	69
49) Iso-Butyl Alcohol	5.499	43	5255	16.71 ug/L	99
50) TAME	5.737	73	17710	0.79 ug/L	89
51) n-Heptane	6.005	43	14724	1.22 ug/L #	77
52) 1-Butanol	6.523	56	5356m	29.83 ug/L	
53) Trichloroethene	6.493	130	9936	1.05 ug/L #	81
54) Methylcyclohexane	6.743	55	13670	1.05 ug/L #	61
55) 1,2-Diclpropane	6.792	63	10481	1.13 ug/L	91
56) Dibromomethane	6.938	93	4764	1.02 ug/L #	78
57) 1,4-Dioxane	7.011	88	938	15.58 ug/L	99
58) Methyl Methacrylate	7.029	69	3437	0.76 ug/L	93
59) Bromodichloromethane	7.176	83	10273	0.88 ug/L	94
60) 2-Nitropropane	7.474	41	1936m	1.00 ug/L	
61) 2-Chloroethylvinyl Ether	7.590	63	4536	1.02 ug/L	74
62) cis-1,3-Dichloropropene	7.737	75	11015	0.79 ug/L	90
63) 4-Methyl-2-pentanone	7.950	43	8066	1.13 ug/L	92
65) Toluene	8.121	91	36698	0.99 ug/L	98
66) trans-1,3-Dichloropropene	8.395	75	9704	0.81 ug/L	85
67) Ethyl Methacrylate	8.541	69	6889	0.73 ug/L #	52
68) 1,1,2-Trichloroethane	8.590	97	6489	0.94 ug/L	83
71) Tetrachloroethene	8.736	164	8212	1.11 ug/L #	73
72) 2-Hexanone	8.889	43	4943	1.03 ug/L	87
73) 1,3-Dichloropropane	8.767	76	10844	1.03 ug/L	83
74) Dibromochloromethane	9.005	129	6888	0.83 ug/L	94
75) N-Butyl Acetate	9.053	43	10781	0.90 ug/L	91
76) 1,2-Dibromoethane	9.102	107	5746	0.90 ug/L #	62
77) 3-Chlorobenzotrifluoride	9.627	180	14328	1.00 ug/L	90
78) Chlorobenzene	9.602	112	24175	0.99 ug/L	97
79) 4-Chlorobenzotrifluoride	9.681	180	11299	0.87 ug/L	86
80) 1,1,1,2-Tetrachloroethane	9.694	131	7970	0.87 ug/L	97
81) Ethylbenzene	9.724	106	12336	0.95 ug/L #	81
82) (m+p)Xylene	9.840	106	28721	1.82 ug/L #	69
83) o-Xylene	10.206	106	14955	0.95 ug/L	97
84) Styrene	10.218	104	24583	0.91 ug/L	96
85) Bromoform	10.370	173	3300	0.64 ug/L	93
86) 2-Chlorobenzotrifluoride	10.462	180	12137	0.86 ug/L	94
87) Isopropylbenzene	10.547	105	37221	0.96 ug/L	94
88) Cyclohexanone	10.608	55	7145	13.93 ug/L	89
89) trans-1,4-Dichloro-2-B...	10.858	53	2740	1.04 ug/L #	53
91) 1,1,2,2-Tetrachloroethane	10.809	83	7227	0.96 ug/L	93
92) Bromobenzene	10.797	156	10774	1.02 ug/L	95
93) 1,2,3-Trichloropropane	10.840	110	2277	1.08 ug/L #	81

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

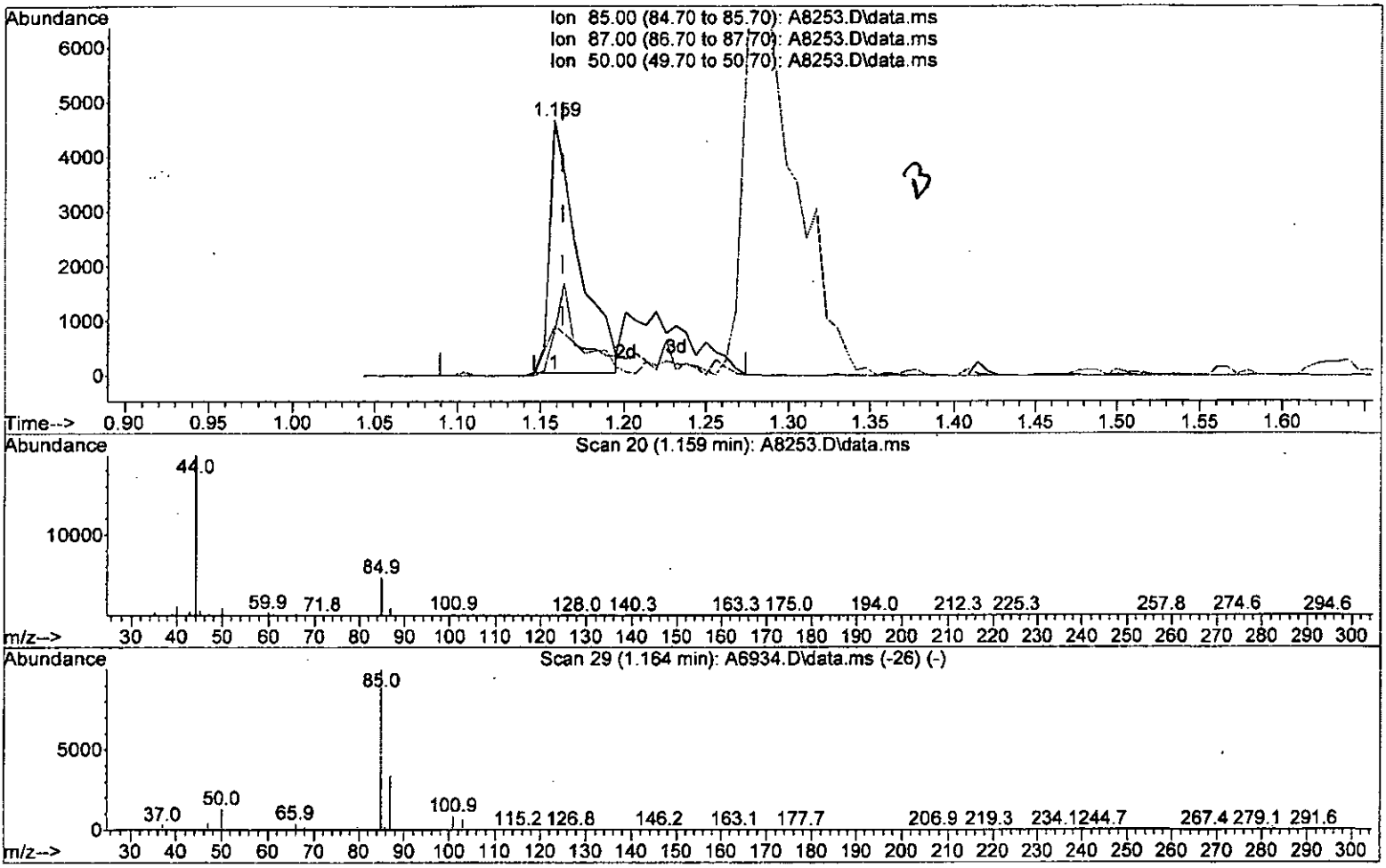
Quant Time: May 07 10:01:27 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94)	n-Propylbenzene	10.907	91	47573	1.10	ug/L		93
95)	2-Chlorotoluene	10.968	91	27433	1.00	ug/L		96
96)	3-Chlorotoluene	11.023	91	29362	1.01	ug/L		98
97)	4-Chlorotoluene	11.065	91	30760	0.95	ug/L		96
98)	1,3,5-Trimethylbenzene	11.065	105	31735	0.98	ug/L		97
99)	tert-Butylbenzene	11.340	119	28637	1.02	ug/L		92
100)	1,2,4-Trimethylbenzene	11.376	105	33665	1.01	ug/L		87
101)	3,4-Dichlorobenzotrifl...	11.443	214	10012	0.96	ug/L		81
102)	sec-Butylbenzene	11.522	105	39320	1.03	ug/L		98
103)	p-Isopropyltoluene	11.644	119	33292	0.99	ug/L		99
104)	1,3-Dclbenz	11.602	146	21445	1.03	ug/L		98
105)	1,4-Dclbenz	11.681	146	22460	1.04	ug/L		96
106)	2,4-Dichlorobenzotrifl...	11.736	214	9950	1.03	ug/L		97
107)	2,5-Dichlorobenzotrifl...	11.772	214	10775	1.01	ug/L		93
108)	n-Butylbenzene	11.980	91	29904	1.00	ug/L		93
109)	1,2-Dclbenz	11.986	146	20173	1.04	ug/L		92
110)	1,2-Dibromo-3-chloropr...	12.608	157	1570	1.04	ug/L	#	62
111)	Trielution Dichlorotol...	12.730	125	50381	2.93	ug/L		97
112)	1,3,5-Trichlorobenzene	12.784	180	14656	1.01	ug/L		98
113)	Coelution Dichlorotoluene	13.059	125	36604	2.05	ug/L		92
114)	1,2,4-Tcbenzene	13.266	180	13558	1.11	ug/L		90
115)	Hexachlorobt	13.406	225	5569	1.02	ug/L		84
116)	Naphthalen	13.461	128	21011	0.98	ug/L		98
117)	1,2,3-Tclbenzene	13.644	180	9814	1.08	ug/L		91
118)	2,4,5-Trichlorotoluene	14.235	159	7458	1.26	ug/L		85
119)	2,3,6-Trichlorotoluene	14.321	159	6014	1.19	ug/L		89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(2) Dichlorodifluoromethane (P)

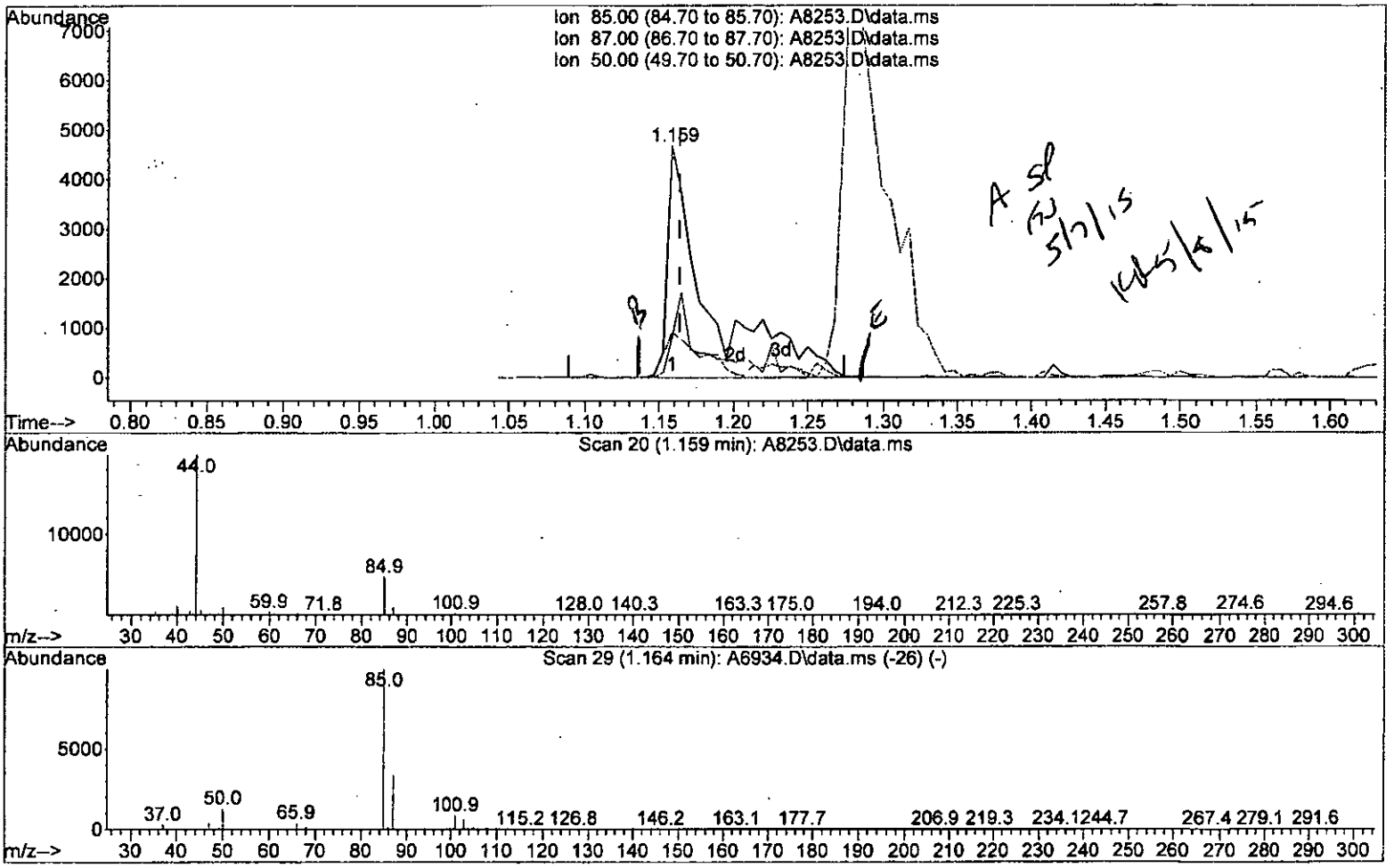
1.159min (-0.005) 0.64 ug/L

response 5560

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	17.34
50.00	15.00	19.50
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(2) Dichlorodifluoromethane (P)

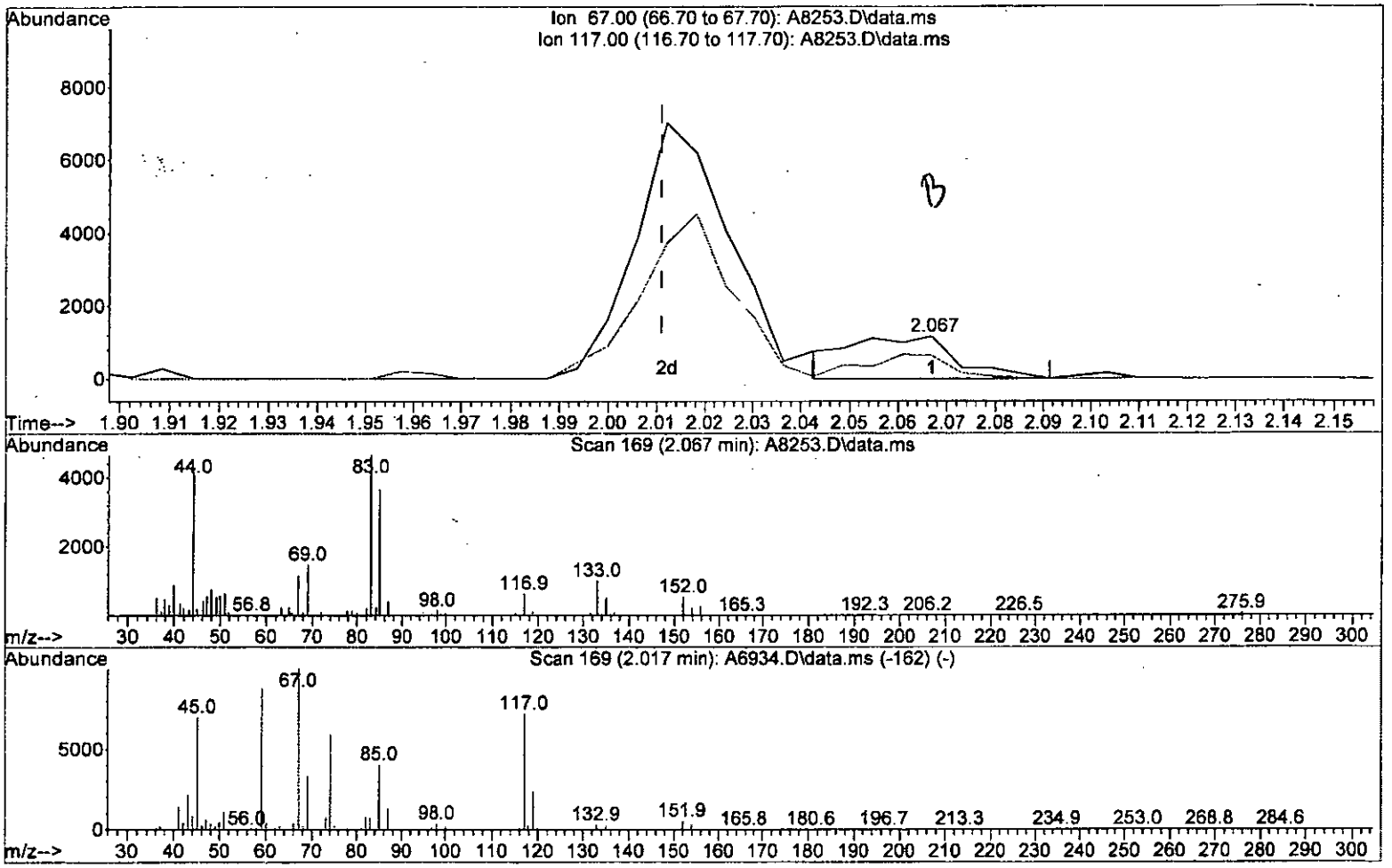
1.159min (-0.005) 1.02 ug/L m

response 8914

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	17.34
50.00	15.00	19.50
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(10) Freon 123a

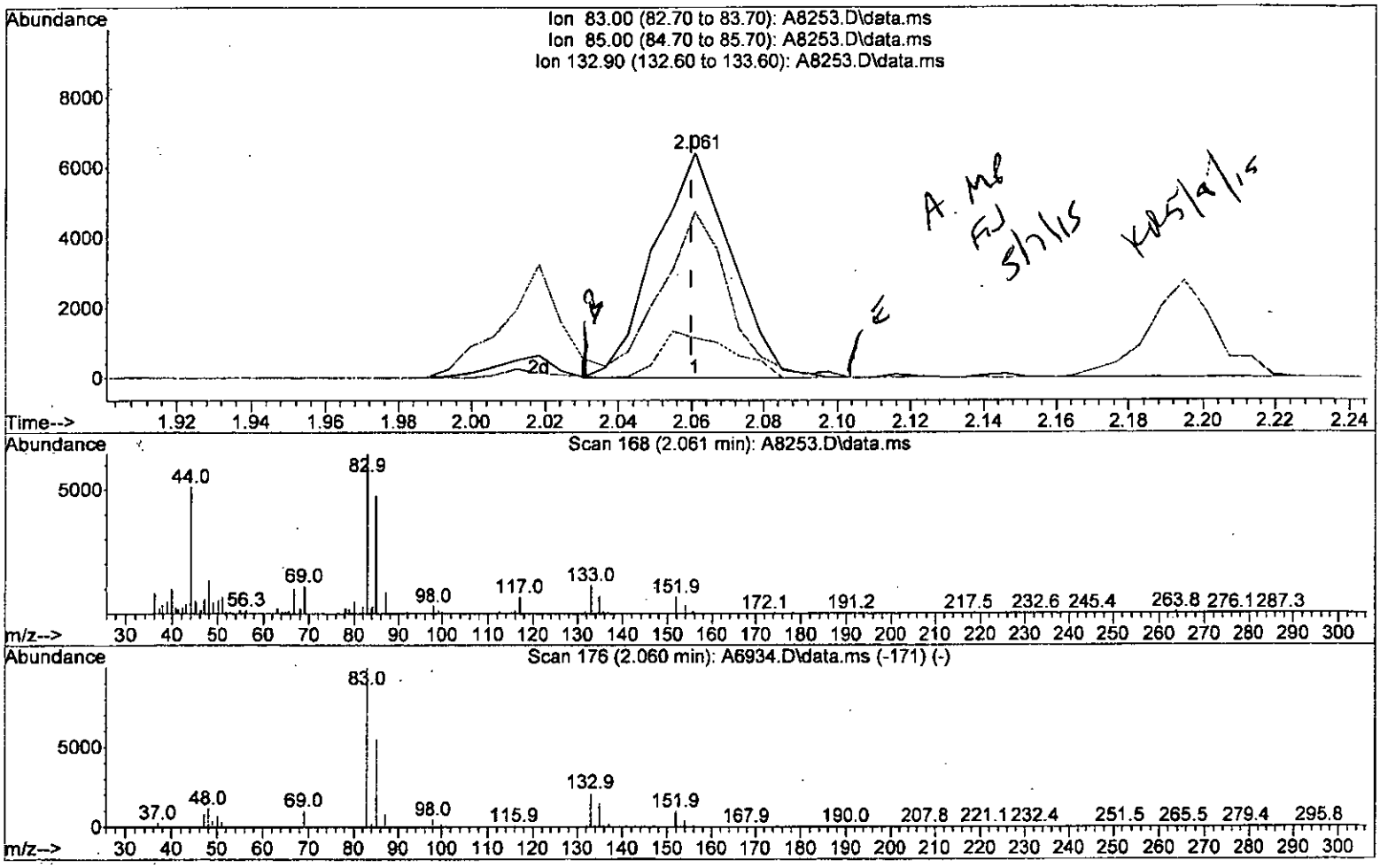
2.067min (+0.056) 0.18 ug/L

response 1754

Ion	Exp%	Act%
67.00	100	100
117.00	72.50	53.97
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(11) Freon 123

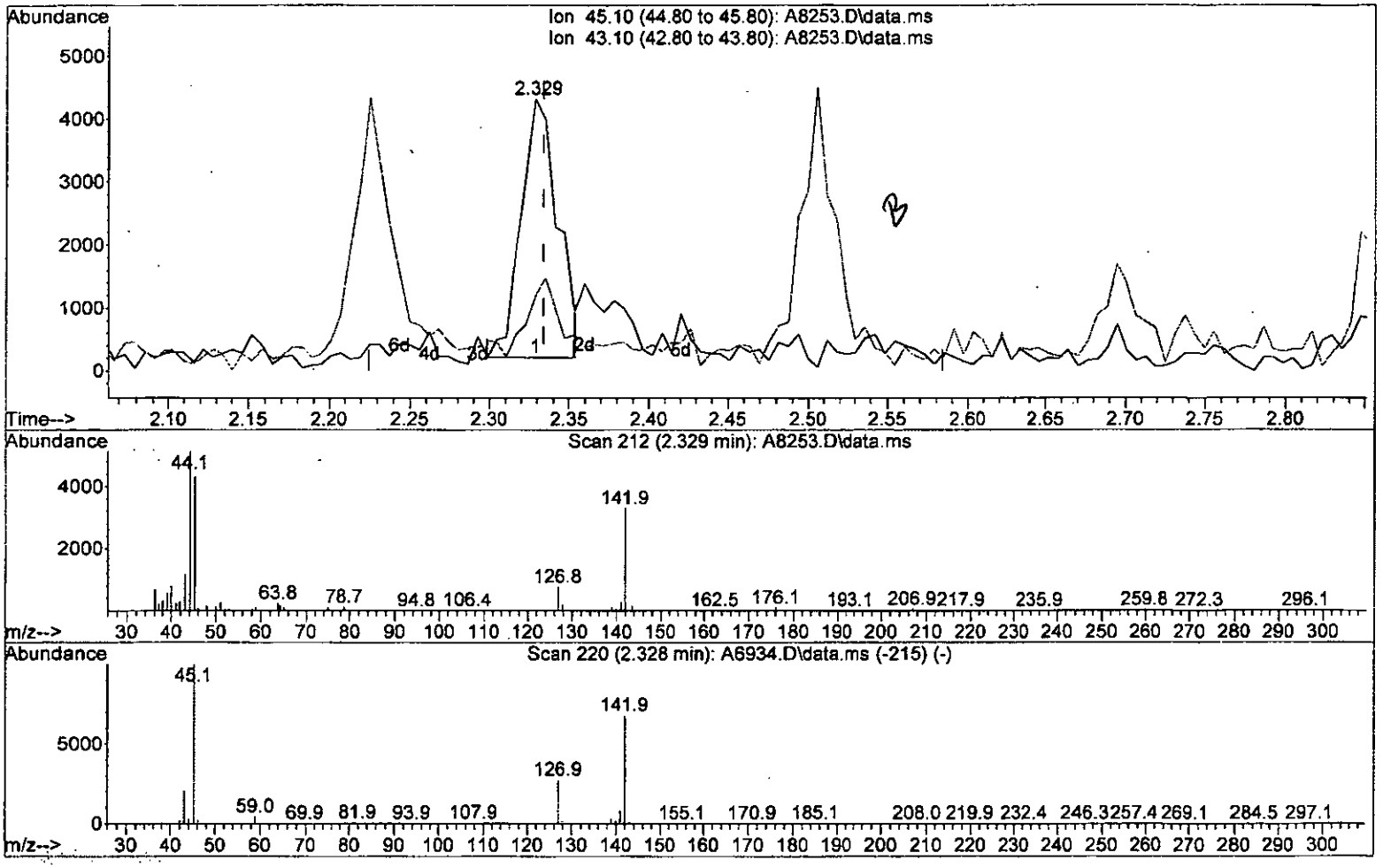
2.061min (+0.001) 0.85 ug/L

response 9353

Ion	Exp%	Act%
83.00	100	100
85.00	47.30	73.93#
132.90	19.90	17.67
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(16) 2-Propanol

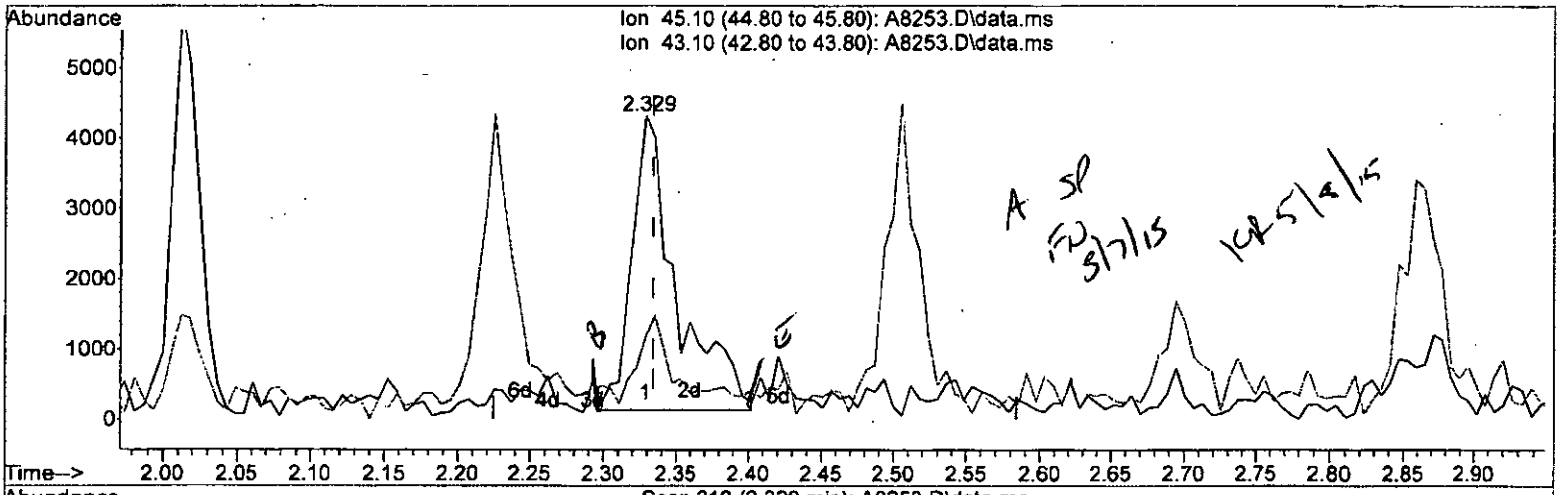
2.329min (-0.005) 16.41 ug/L

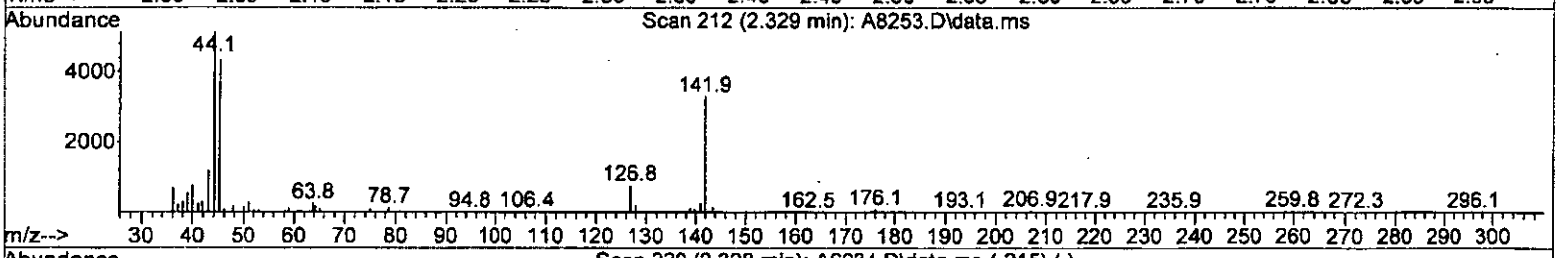
response 6520

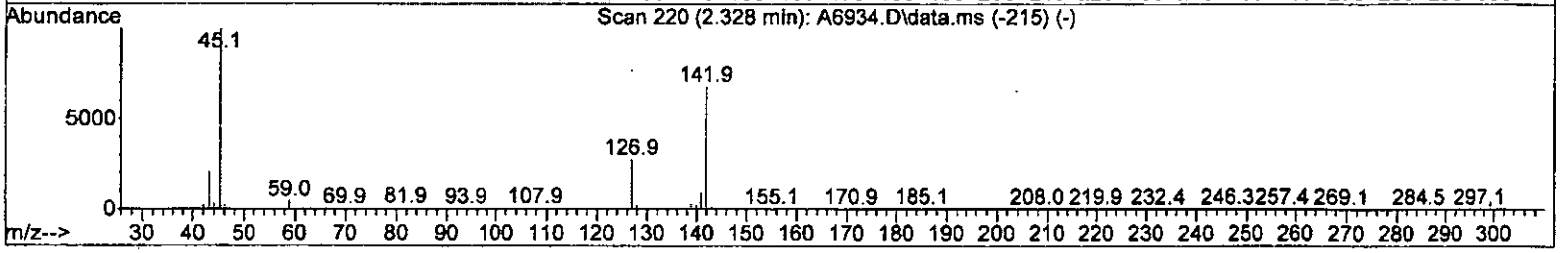
Ion	Exp%	Act%
45.10	100	100
43.10	18.20	27.41
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration







TIC: A8253.D\data.ms

(16) 2-Propanol

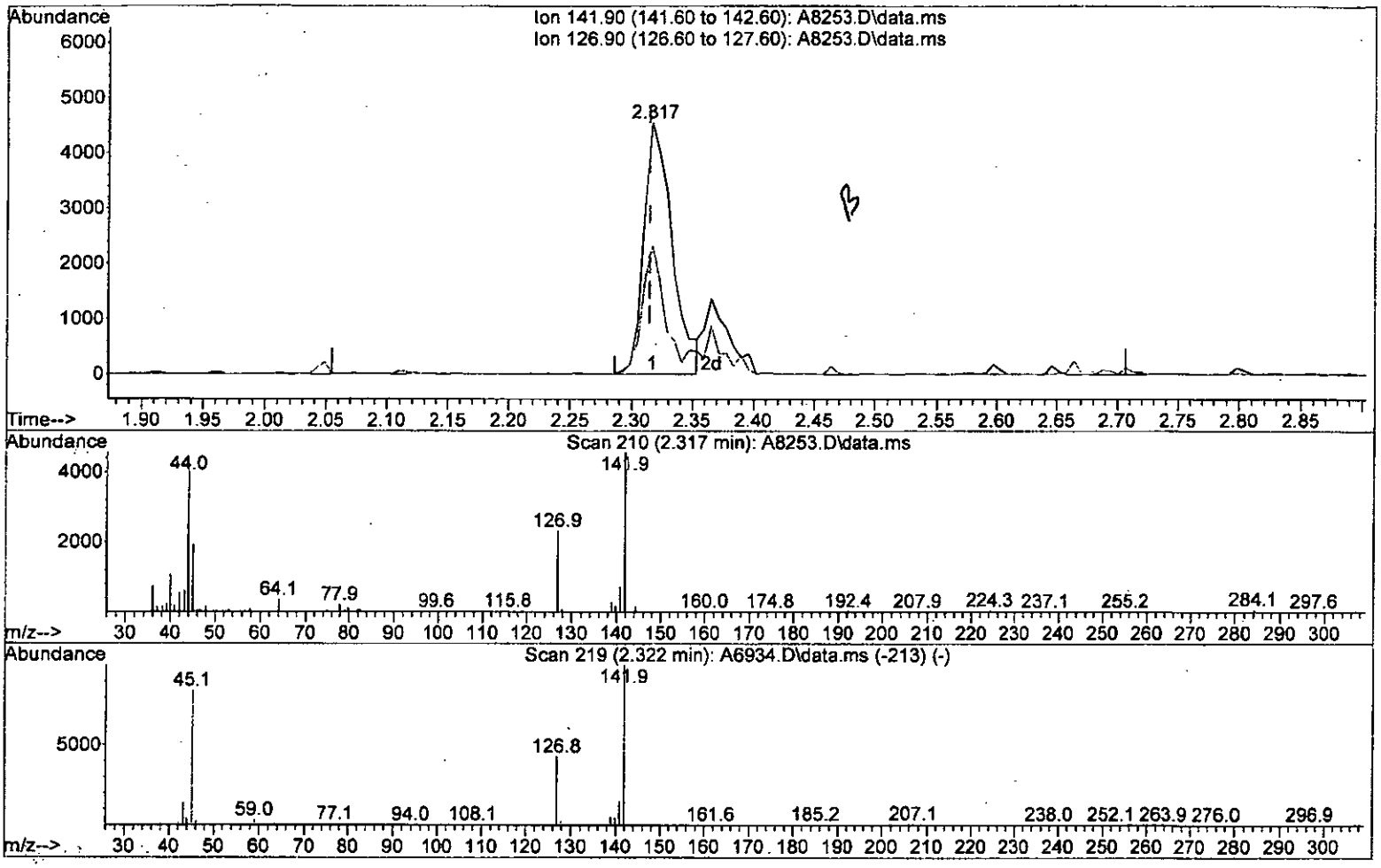
2.329min (-0.005) 22.41 ug/L m

response 8902

Ion	Exp%	Act%
45.10	100	100
43.10	18.20	27.41
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 09:18:12 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(17) Iodomethane

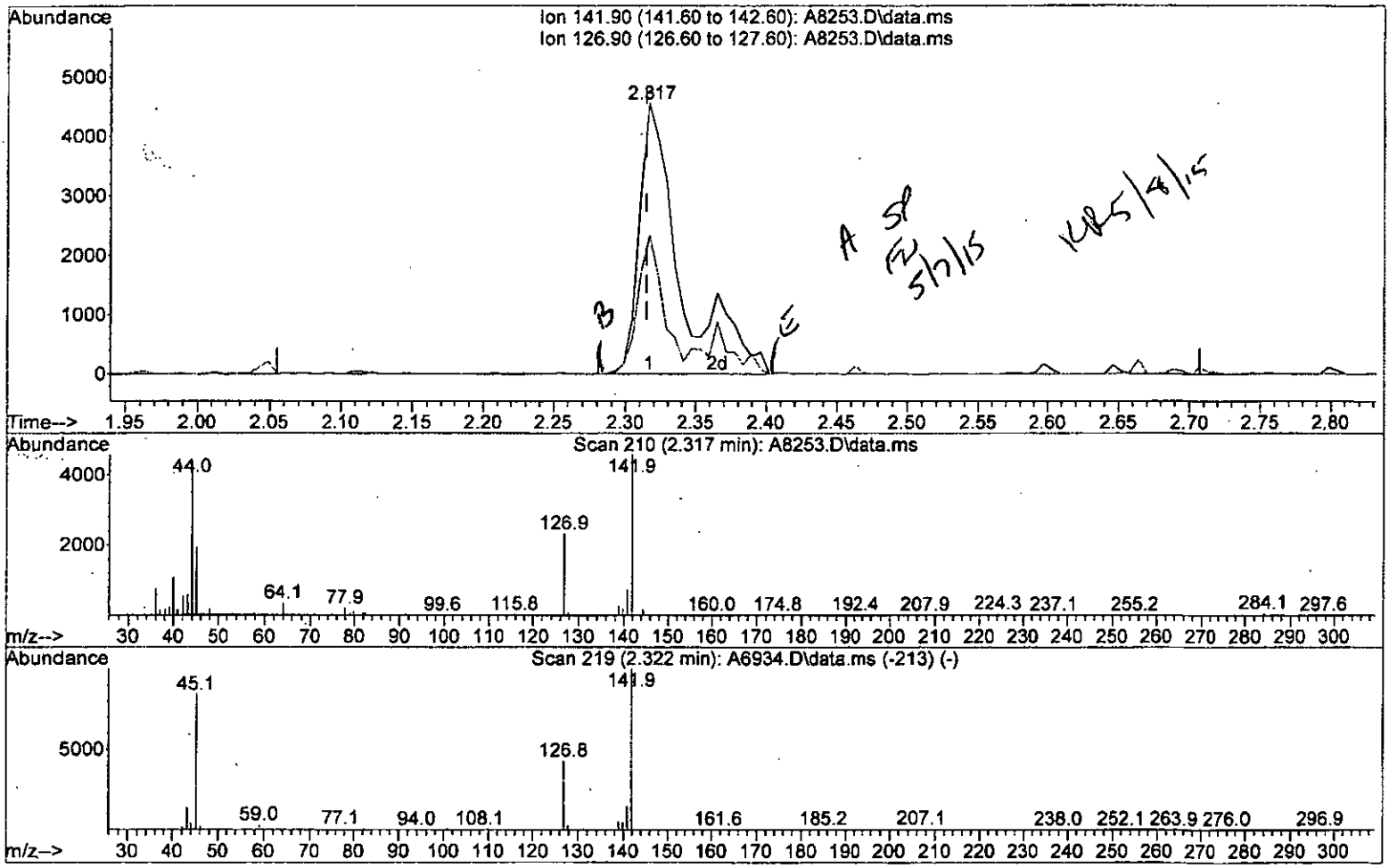
2.317min (+0.002) 1.55 ug/L

response 7324

Ion	Exp%	Act%
141.90	100	100
126.90	43.50	50.96
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 09:18:12 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(17) Iodomethane

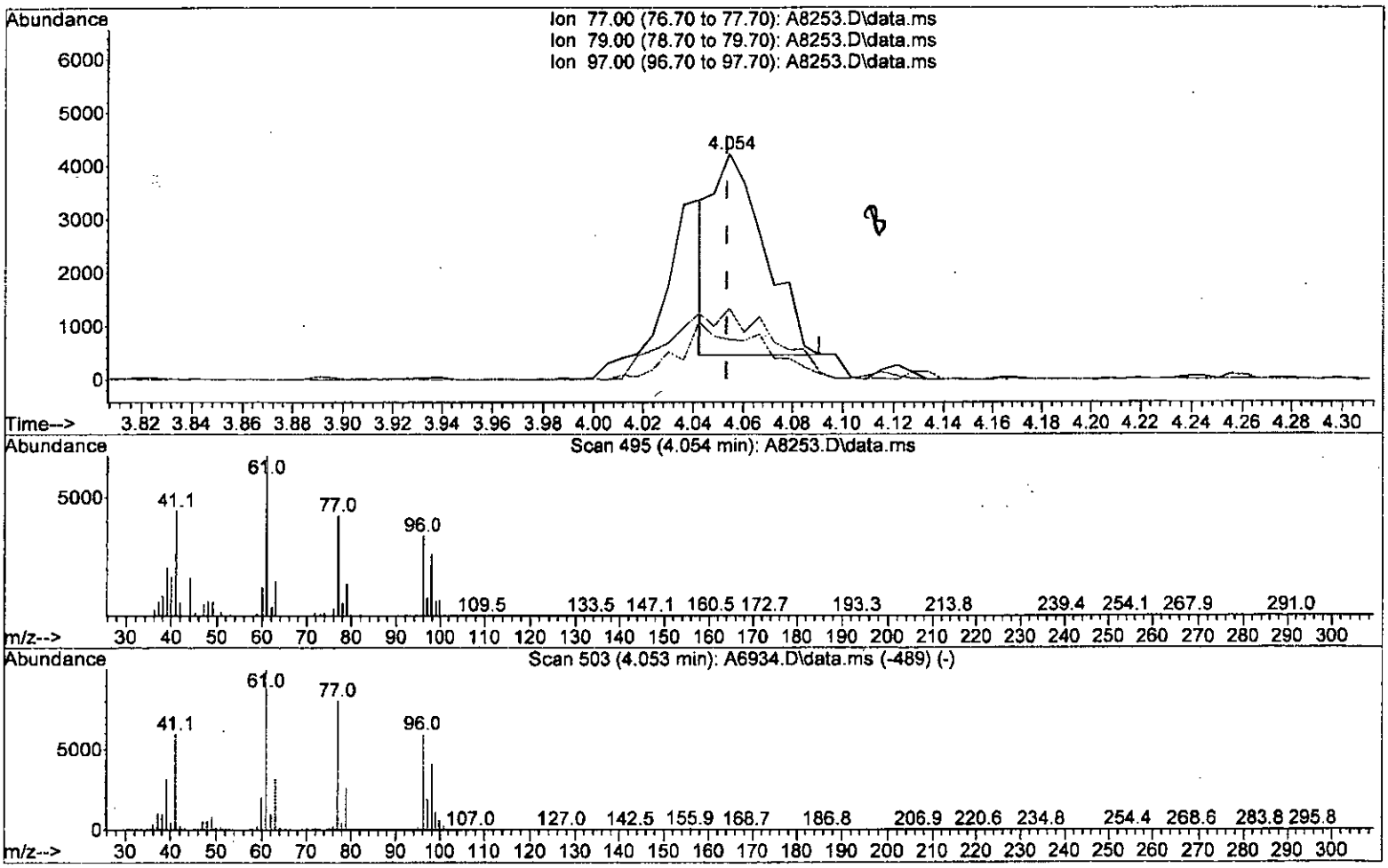
2.317min (+0.002) 1.95 ug/L m

response 9219

Ion	Exp%	Act%
141.90	100	100
126.90	43.50	50.96
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(32) 2,2-Dichloropropane

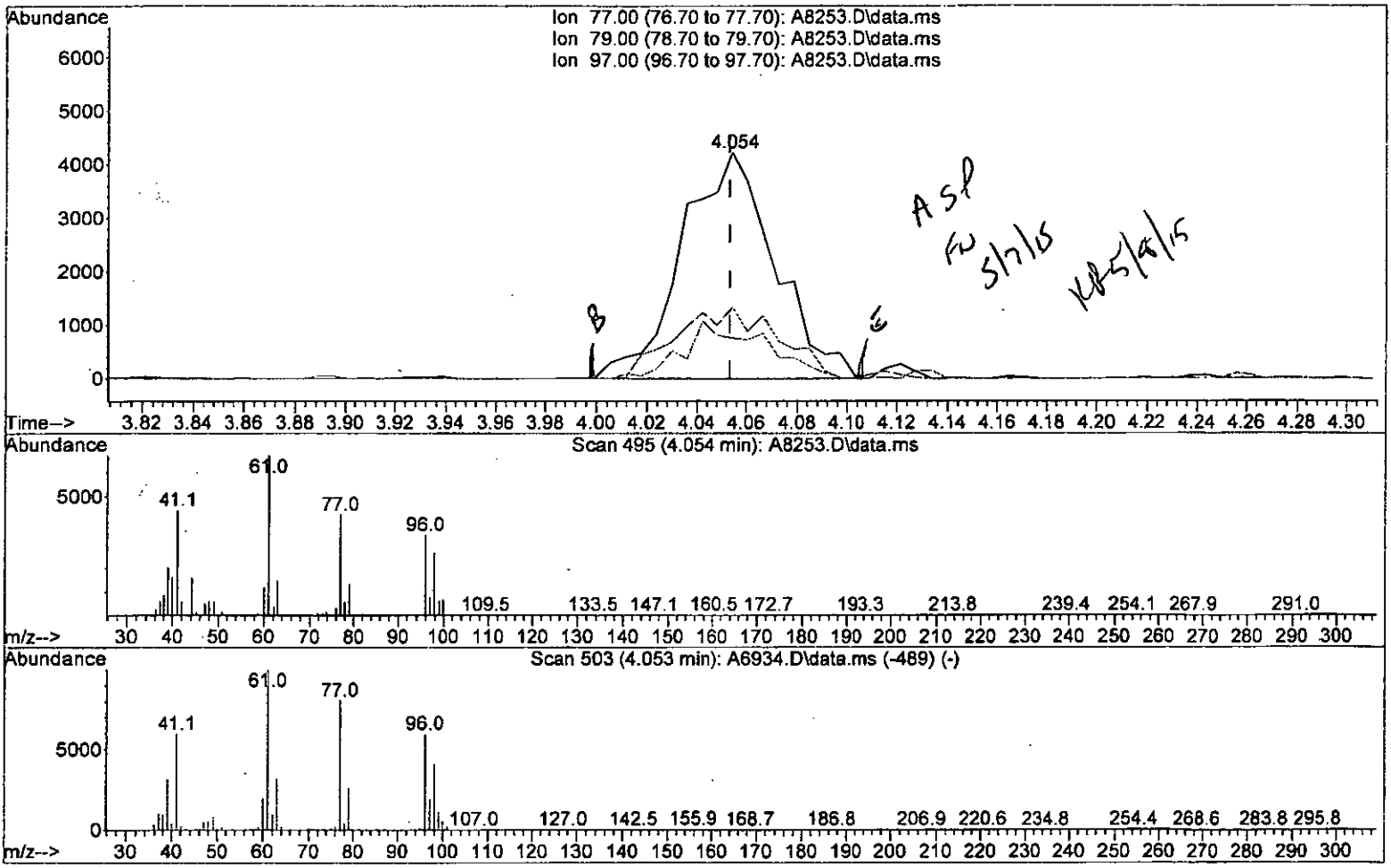
4.054min (+0.001) 0.48 ug/L

response 5546

Ion	Exp%	Act%
77.00	100	100
79.00	32.50	31.54
97.00	21.80	17.86
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(32) 2,2-Dichloropropane

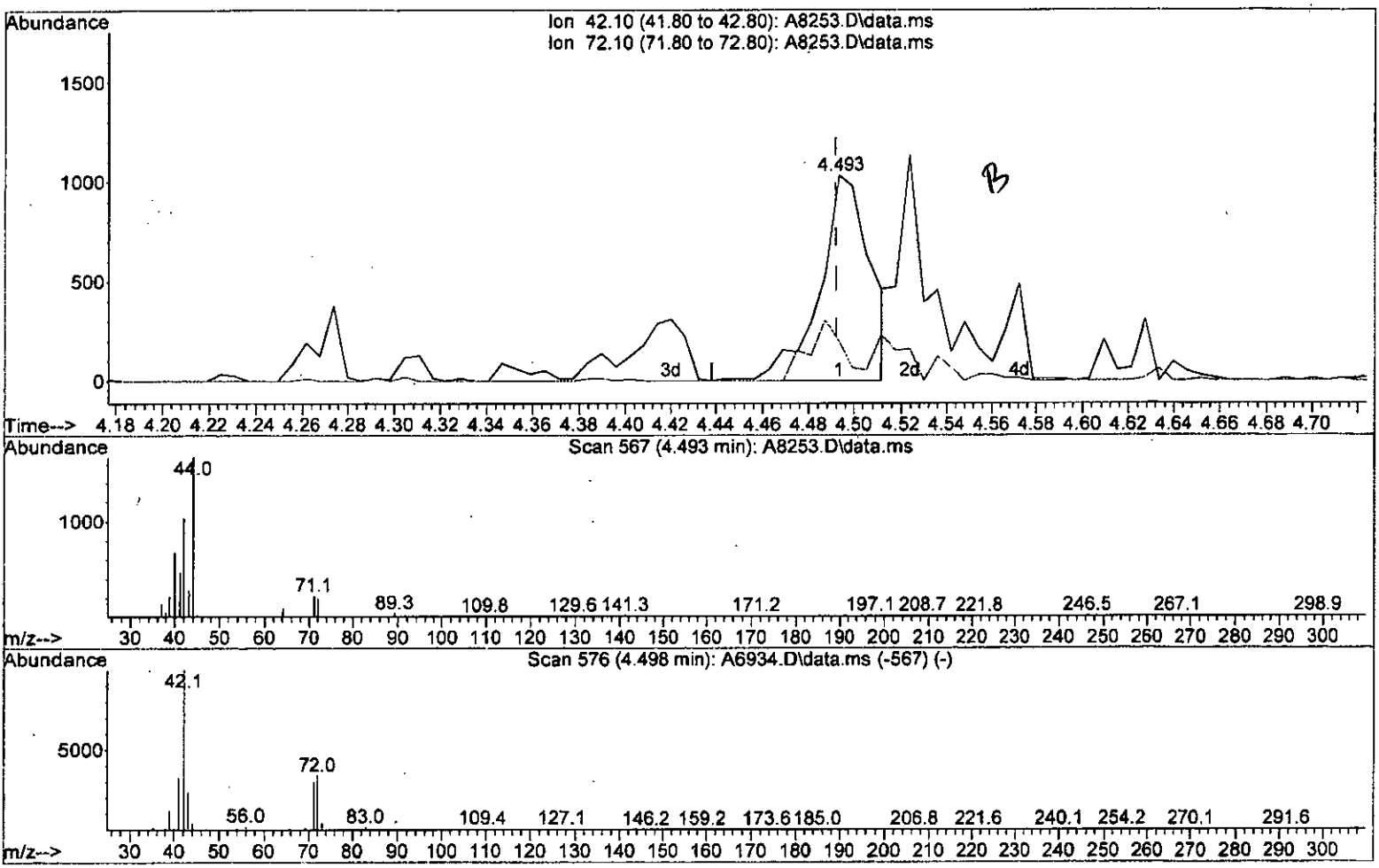
4.054min (+0.001) 0.93 ug/L m

response 10893

Ion	Exp%	Act%
77.00	100	100
79.00	32.50	31.54
97.00	21.80	17.86
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(38) Tetrahydrofuran

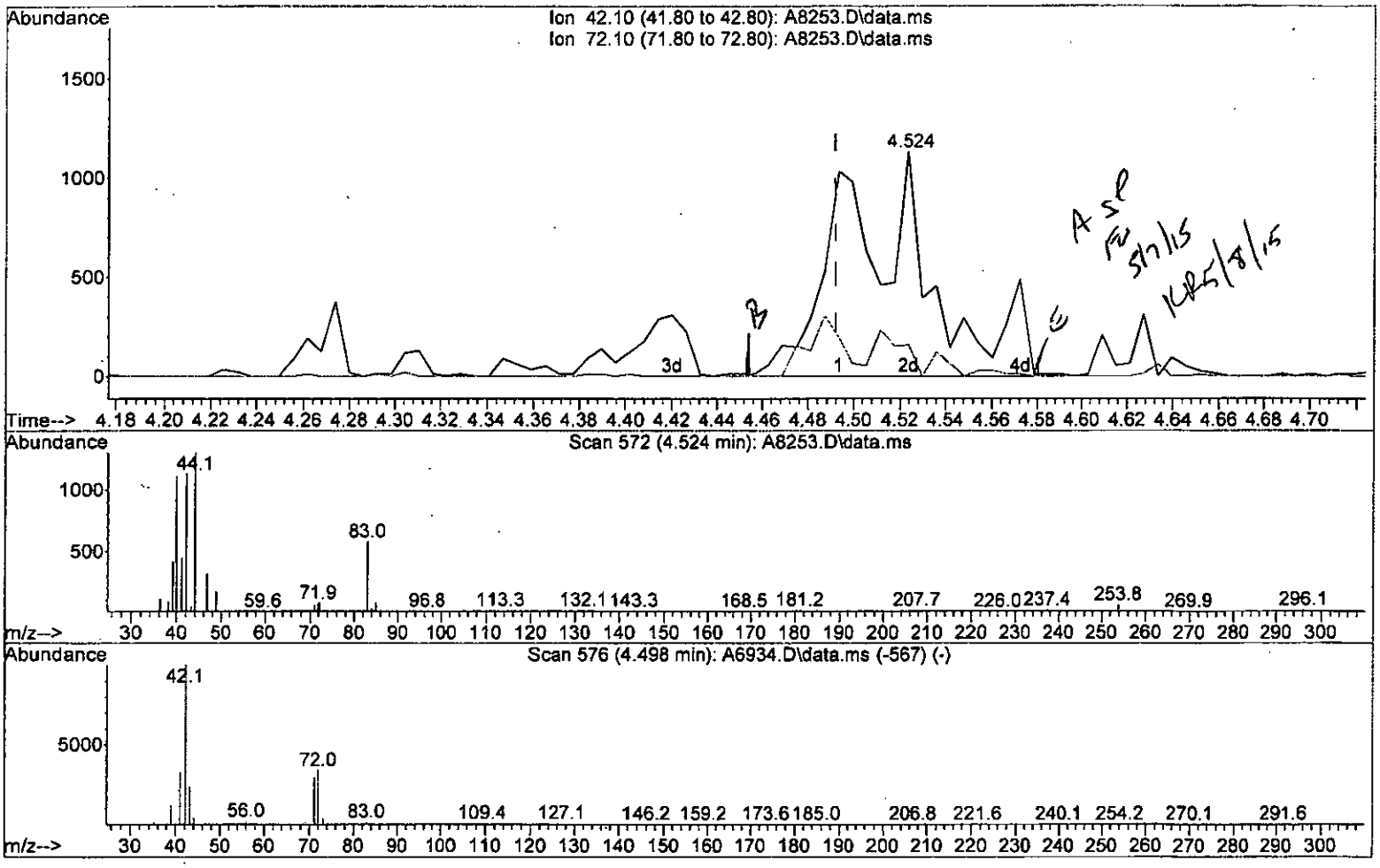
4.493min (+0.001) 0.81 ug/L

response 1577

Ion	Exp%	Act%
42.10	100	100
72.10	40.30	18.78#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(38) Tetrahydrofuran

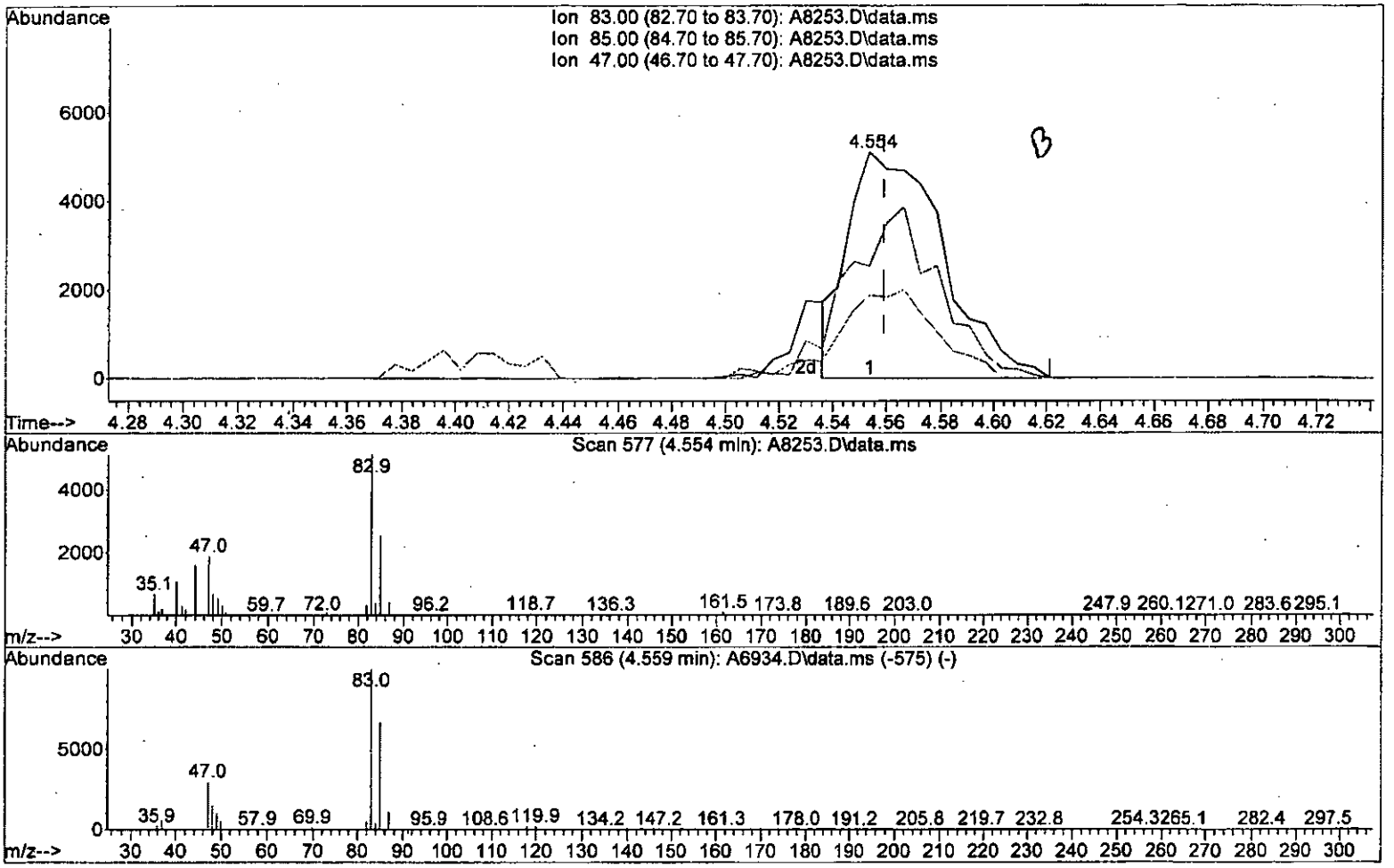
4.524min (+0.032) 1.53 ug/L m

response 2999

Ion	Exp%	Act%
42.10	100	100
72.10	40.30	7.42#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(39) Chloroform (P)

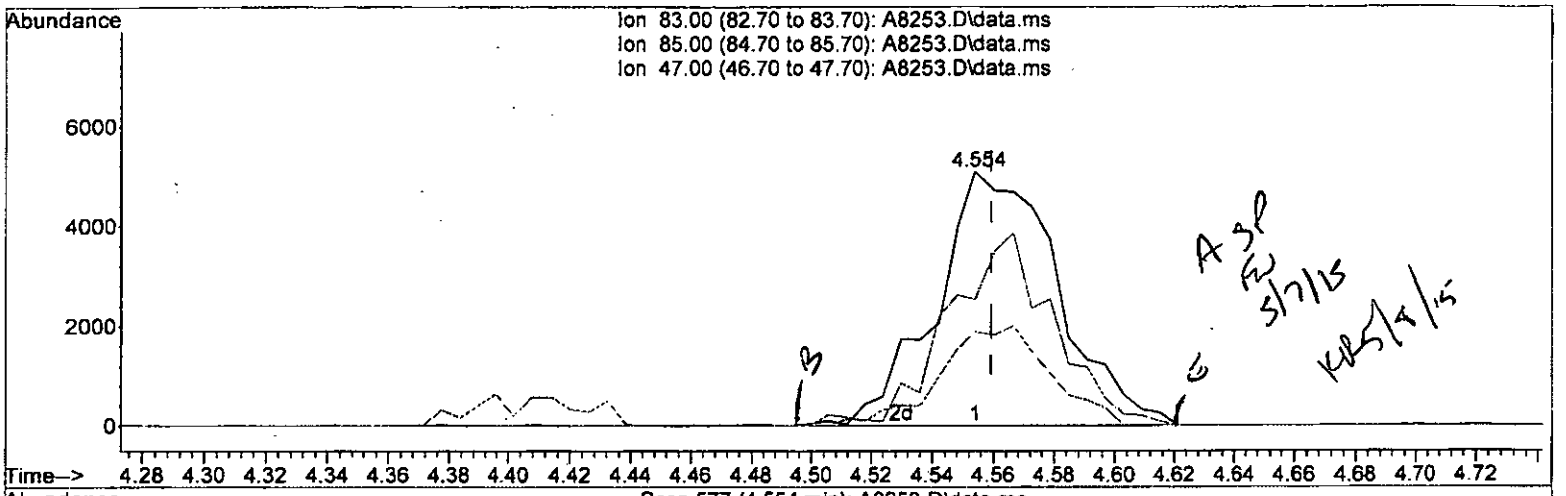
4.554min (-0.005) 0.89 ug/L

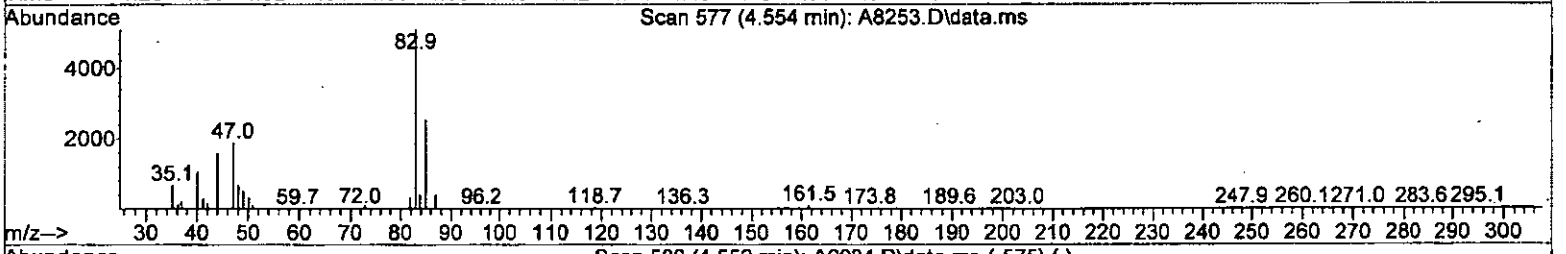
response 12510

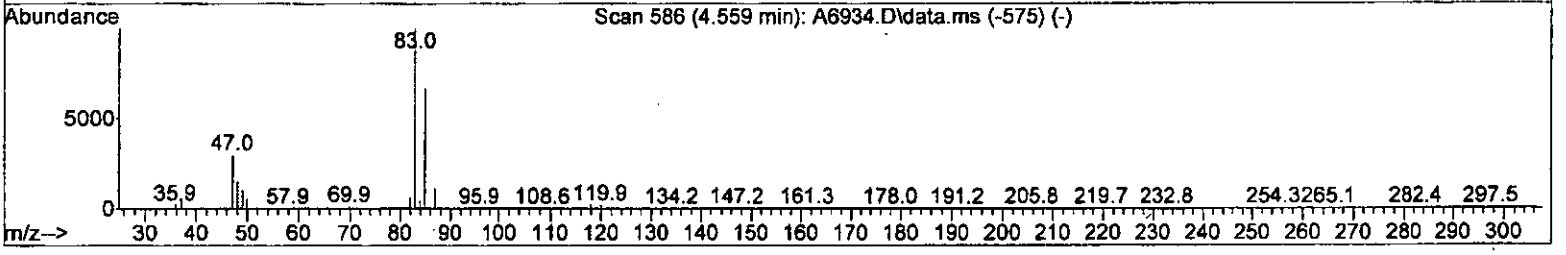
Ion	Exp%	Act%
83.00	100	100
85.00	64.00	49.62
47.00	29.90	36.74
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration







TIC: A8253.D\data.ms

(39) Chloroform (P)

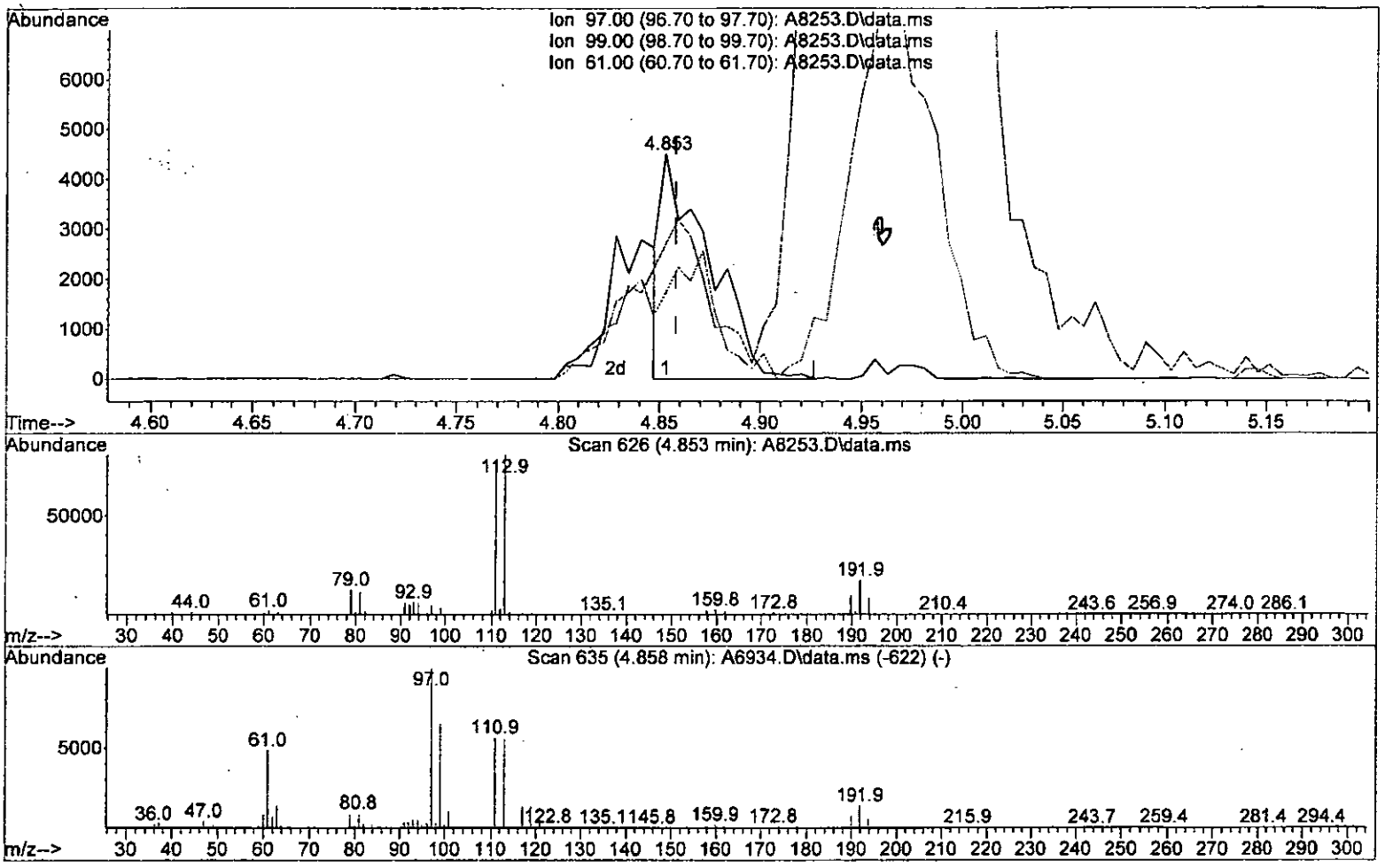
4.554min (-0.005) 1.01 ug/L m

response 14203

Ion	Exp%	Act%
83.00	100	100
85.00	64.00	49.62
47.00	29.90	36.74
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(40) 1,1,1-Trichloroethane (P)

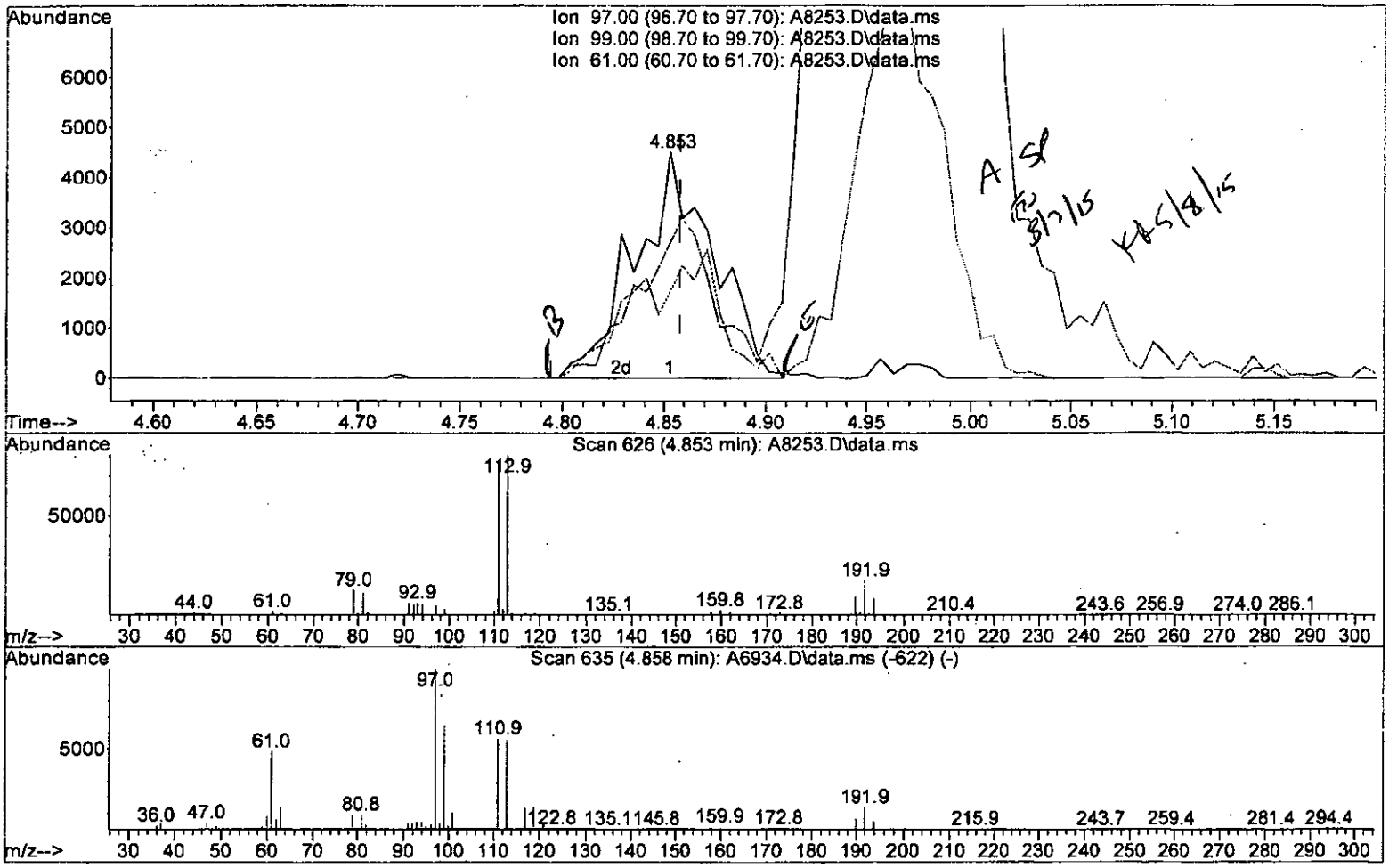
4.853min (-0.005) 0.58 ug/L

response 7436

Ion	Exp%	Act%
97.00	100	100
99.00	60.90	60.30
61.00	45.20	42.98
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(40) 1,1,1-Trichloroethane (P)

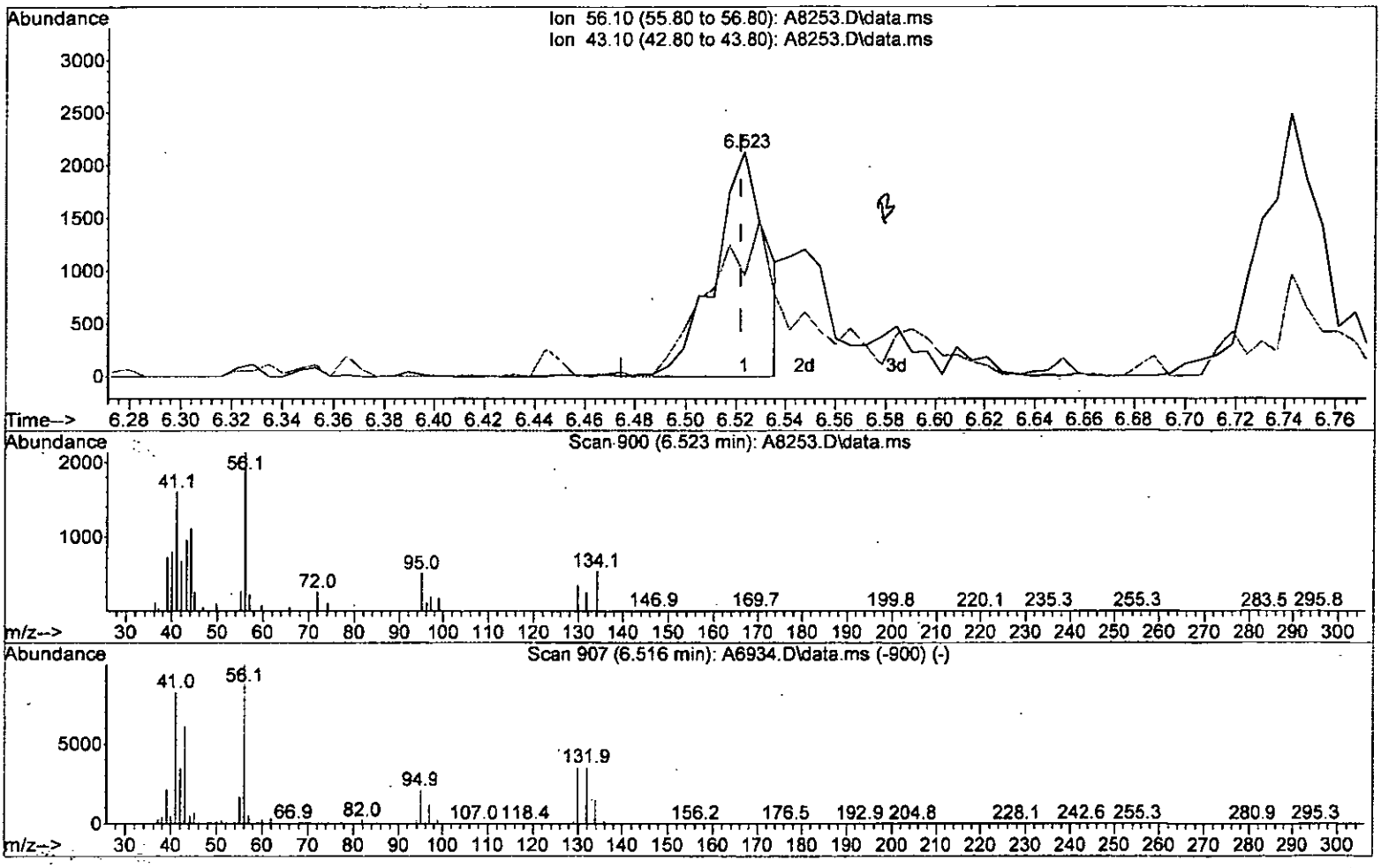
4.853min (-0.005) 0.93 ug/L m

response 12034

Ion	Exp%	Act%
97.00	100	100
99.00	60.90	60.30
61.00	45.20	38.37
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(52) 1-Butanol

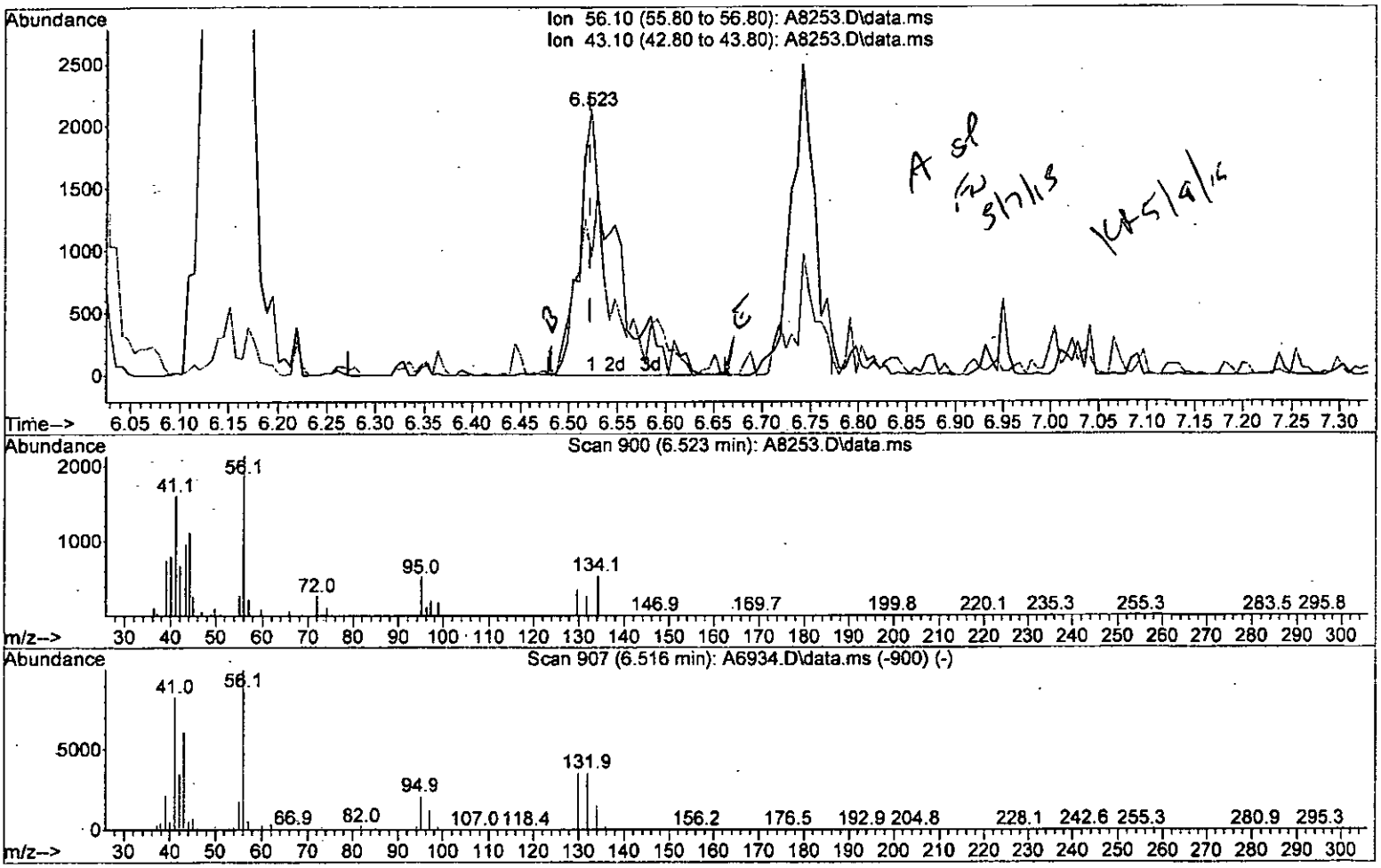
6.523min (+0.001) 16.94 ug/L

response 3042

Ion	Exp%	Act%
56.10	100	100
43.10	54.10	44.86
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 09:18:12 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(52) 1-Butanol

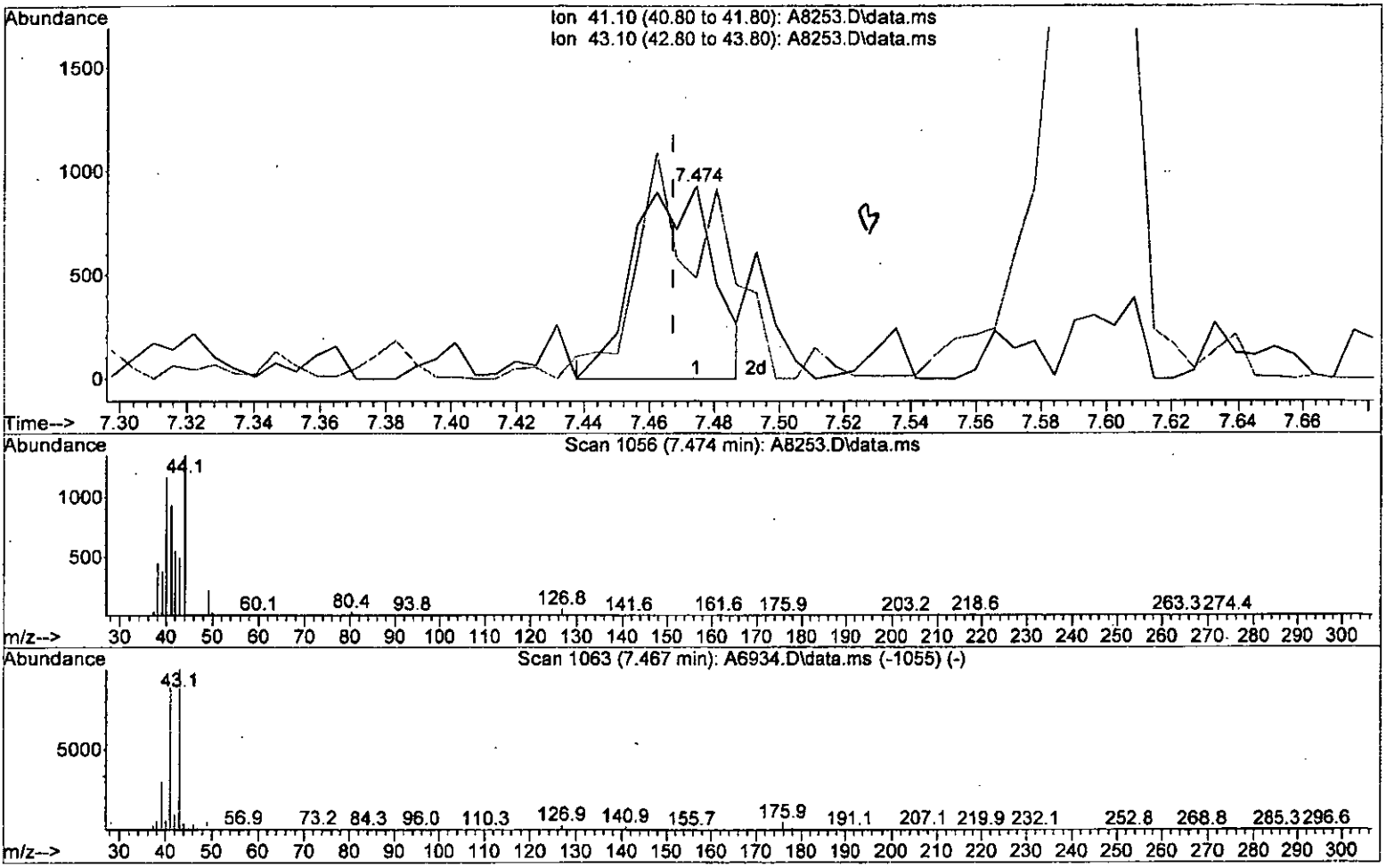
6.523min (+0.001) 29.83 ug/L m

response 5356

Ion	Exp%	Act%
56.10	100	100
43.10	54.10	44.86
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(60) 2-Nitropropane

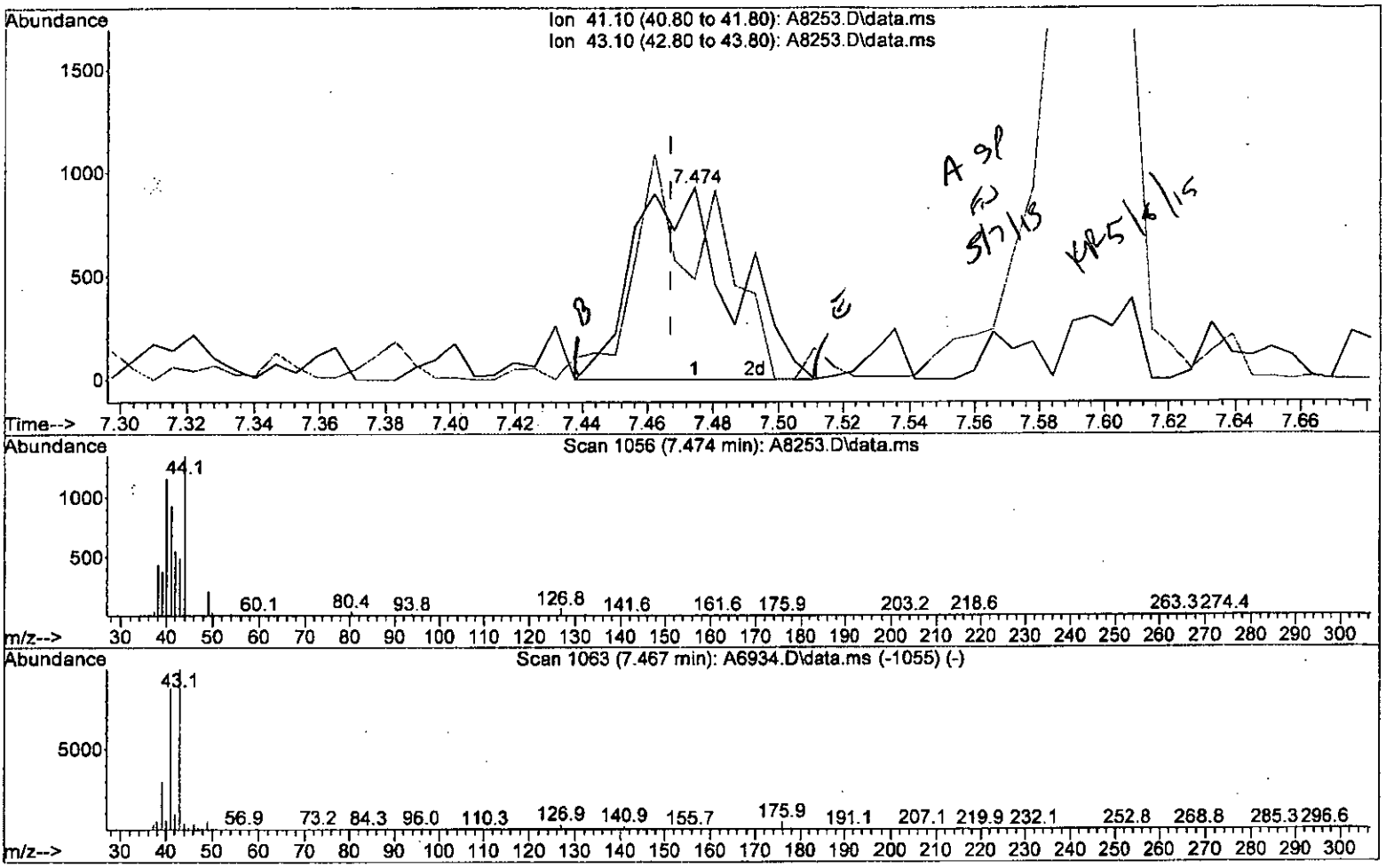
7.474min (+0.007) 0.82 ug/L

response 1587

Ion	Exp%	Act%
41.10	100	100
43.10	111.20	52.21#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 06 17:16:18 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8253.D\data.ms

(60) 2-Nitropropane

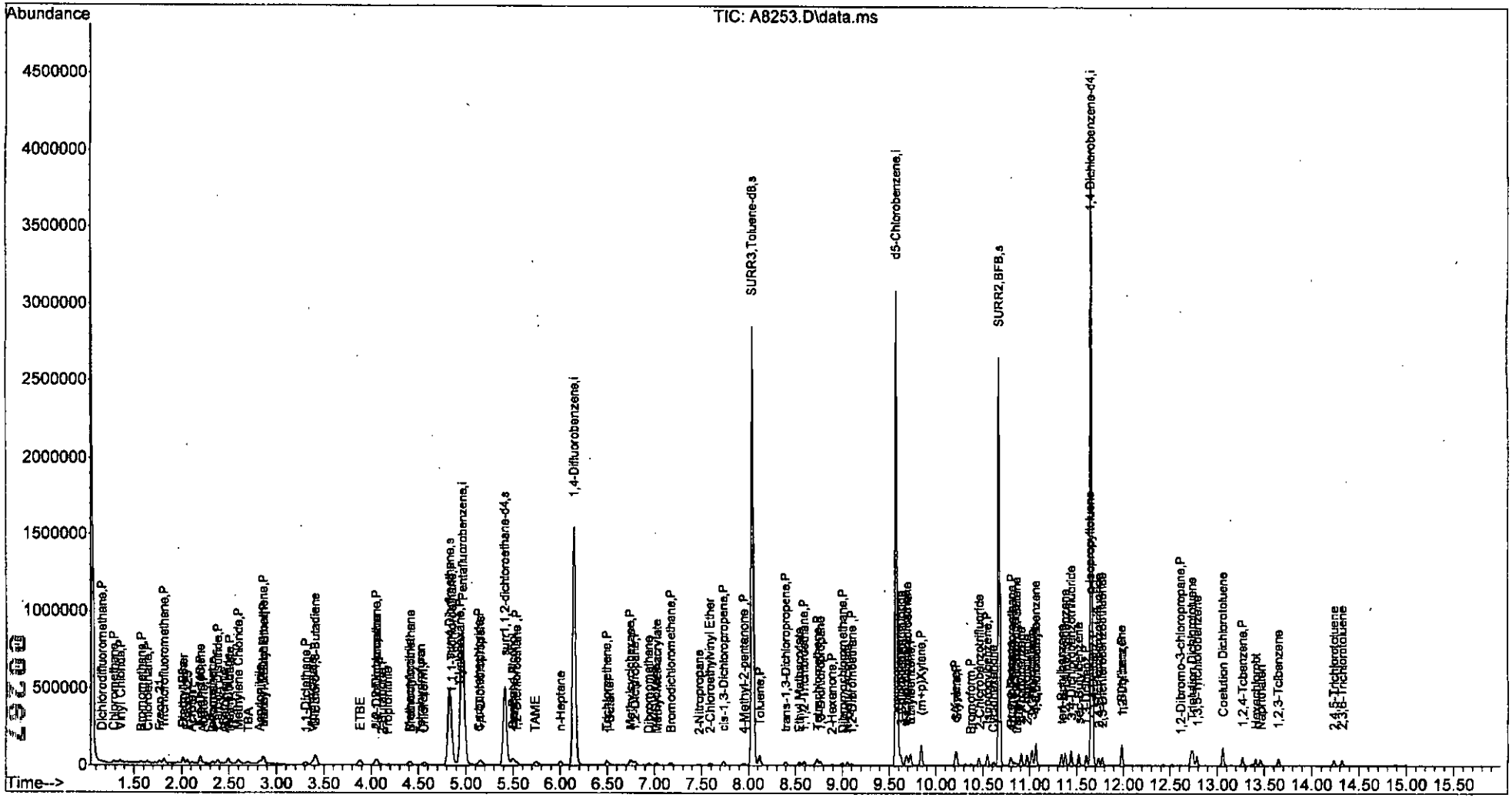
7.474min (+0.007) 1.00 ug/L m

response 1936

Ion	Exp%	Act%
41.10	100	100
43.10	111.20	52.21#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8253.D
Acq On : 6 May 2015 5:01 pm
Operator : F. NAEGLER
Sample : 1.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 10:01:27 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 10:04:32 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FV 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	946317	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.146	114	1460028	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1382906	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	790285	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	441550	50.60	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 101.20%				
46) surr1,1,2-dichloroetha...	5.414	65	456616	50.26	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 100.52%				
64) SURR3,Toluene-d8	8.042	98	1699285	50.71	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 101.42%				
69) SURR2,BFB	10.669	95	691588	47.05	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 94.10%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.165	85	15675m	1.74	ug/L		
3) Chloromethane	1.281	50	33792	3.00	ug/L		84
4) Vinyl Chloride	1.354	62	26336m	2.51	ug/L		
5) Bromomethane	1.573	94	11021	3.05	ug/L		86
6) Chloroethane	1.634	64	12174	2.03	ug/L		86
7) Freon 21	1.762	67	26389	1.61	ug/L		92
8) Trichlorofluoromethane	1.811	101	25958	2.00	ug/L		98
9) Diethyl Ether	2.012	59	16114	2.37	ug/L		83
10) Freon 123a	2.012	67	18145	1.78	ug/L		86
11) Freon 123	2.061	83	20843	1.85	ug/L	#	65
12) Acrolein	2.104	56	13461	13.62	ug/L		97
13) 1,1-Diclethene	2.195	96	13869	1.92	ug/L	#	74
14) Freon 113	2.195	101	15184	1.91	ug/L		99
15) Acetone	2.226	43	13188	5.91	ug/L		97
16) 2-Propanol	2.329	45	16598	40.60	ug/L		95
17) Iodomethane	2.323	142	19429m	3.99	ug/L		
18) Carbon Disulfide	2.378	76	50978	1.92	ug/L		99
19) Acetonitrile	2.451	40	4665	15.04	ug/L	#	84
20) Allyl Chloride	2.488	76	8326	1.94	ug/L	#	1
21) Methyl Acetate	2.500	43	13412	2.69	ug/L		80
22) Methylene Chloride	2.598	84	17474	2.17	ug/L	#	69
23) TBA	2.695	59	26551	42.97	ug/L		79
24) Acrylonitrile	2.823	53	30431	13.28	ug/L		97
25) Methyl-t-Butyl Ether	2.860	73	40205	1.89	ug/L		83
26) trans-1,2-Dichloroethene	2.860	96	15413	1.87	ug/L	#	84
27) 1,1-Diclethane	3.305	63	34766	2.27	ug/L		87
28) Vinyl Acetate	3.366	86	3649	2.51	ug/L	#	1
29) DIPE	3.408	45	94326	2.83	ug/L	#	75
30) 2-Chloro-1,3-Butadiene	3.414	53	40201	2.26	ug/L		97
31) ETBE	3.878	59	64002	2.27	ug/L		84
32) 2,2-Dichloropropane	4.049	77	22447	1.87	ug/L		89
33) cis-1,2-Dichloroethene	4.061	96	18731	2.04	ug/L		86
34) 2-Butanone	4.103	43	9239	3.02	ug/L		82
35) Propionitrile	4.158	54	11126	13.40	ug/L		91

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 10:04:32 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.414	130	11435	2.22	ug/L		93
37) Methacrylonitrile	4.396	67	5289	2.16	ug/L	#	69
38) Tetrahydrofuran	4.506	42	5686	2.83	ug/L	#	65
39) Chloroform	4.567	83	30517	2.11	ug/L		93
40) 1,1,1-Trichloroethane	4.853	97	25148	1.89	ug/L		93
42) Cyclohexane	4.945	41	26527	2.38	ug/L		86
44) Carbontetrachloride	5.158	121	6160	1.55	ug/L		86
45) 1,1-Dichloropropene	5.158	75	22855	1.94	ug/L		79
47) Benzene	5.499	78	74649	2.10	ug/L		90
48) 1,2-Dichloroethane	5.542	62	25515	2.15	ug/L		89
49) Iso-Butyl Alcohol	5.481	43	13157m	40.97	ug/L		
50) TAME	5.743	73	39659	1.74	ug/L		79
51) n-Heptane	6.012	43	27938	2.28	ug/L		79
52) 1-Butanol	6.524	56	13821m	75.39	ug/L		
53) Trichloroethene	6.493	130	19238	2.00	ug/L		94
54) Methylcyclohexane	6.743	55	28056	2.11	ug/L	#	67
55) 1,2-Diclpropane	6.786	63	21347	2.25	ug/L		93
56) Dibromomethane	6.938	93	9427	1.98	ug/L		98
57) 1,4-Dioxane	7.005	88	2205	35.86	ug/L	#	70
58) Methyl Methacrylate	7.024	69	8259	1.79	ug/L	#	31
59) Bromodichloromethane	7.170	83	21862	1.84	ug/L		93
60) 2-Nitropropane	7.463	41	4288	2.16	ug/L		99
61) 2-Chloroethylvinyl Ether	7.597	63	9227	2.04	ug/L		95
62) cis-1,3-Dichloropropene	7.737	75	24039	1.70	ug/L		91
63) 4-Methyl-2-pentanone	7.950	43	17457	2.40	ug/L		85
65) Toluene	8.115	91	82562	2.18	ug/L		93
66) trans-1,3-Dichloropropene	8.395	75	18425	1.50	ug/L		94
67) Ethyl Methacrylate	8.542	69	15286	1.59	ug/L	#	49
68) 1,1,2-Trichloroethane	8.590	97	13719	1.95	ug/L	#	74
71) Tetrachloroethene	8.731	164	15614	2.04	ug/L		95
72) 2-Hexanone	8.889	43	12089	2.44	ug/L		81
73) 1,3-Dichloropropane	8.767	76	24505	2.25	ug/L	#	77
74) Dibromochloromethane	8.999	129	14877	1.72	ug/L		84
75) N-Butyl Acetate	9.054	43	27561	2.22	ug/L		87
76) 1,2-Dibromoethane	9.096	107	13065	1.99	ug/L		99
77) 3-Chlorobenzotrifluoride	9.627	180	30231	2.04	ug/L	#	86
78) Chlorobenzene	9.602	112	52678	2.08	ug/L		93
79) 4-Chlorobenzotrifluoride	9.682	180	27041	2.01	ug/L		92
80) 1,1,1,2-Tetrachloroethane	9.694	131	17073	1.80	ug/L		92
81) Ethylbenzene	9.724	106	27184	2.02	ug/L		98
82) (m+p)Xylene	9.840	106	68302	4.19	ug/L		94
83) o-Xylene	10.206	106	32318	1.98	ug/L		95
84) Styrene	10.218	104	53328	1.90	ug/L		93
85) Bromoform	10.377	173	8201	1.54	ug/L		96
86) 2-Chlorobenzotrifluoride	10.456	180	26593	1.83	ug/L		93
87) Isopropylbenzene	10.547	105	82248	2.06	ug/L		99
88) Cyclohexanone	10.608	55	17806	33.54	ug/L		96
89) trans-1,4-Dichloro-2-B...	10.864	53	5005	1.84	ug/L	#	69
91) 1,1,2,2-Tetrachloroethane	10.816	83	15747	2.05	ug/L		84
92) Bromobenzene	10.797	156	23004	2.13	ug/L	#	86
93) 1,2,3-Trichloropropane	10.840	110	4880	2.28	ug/L		98

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

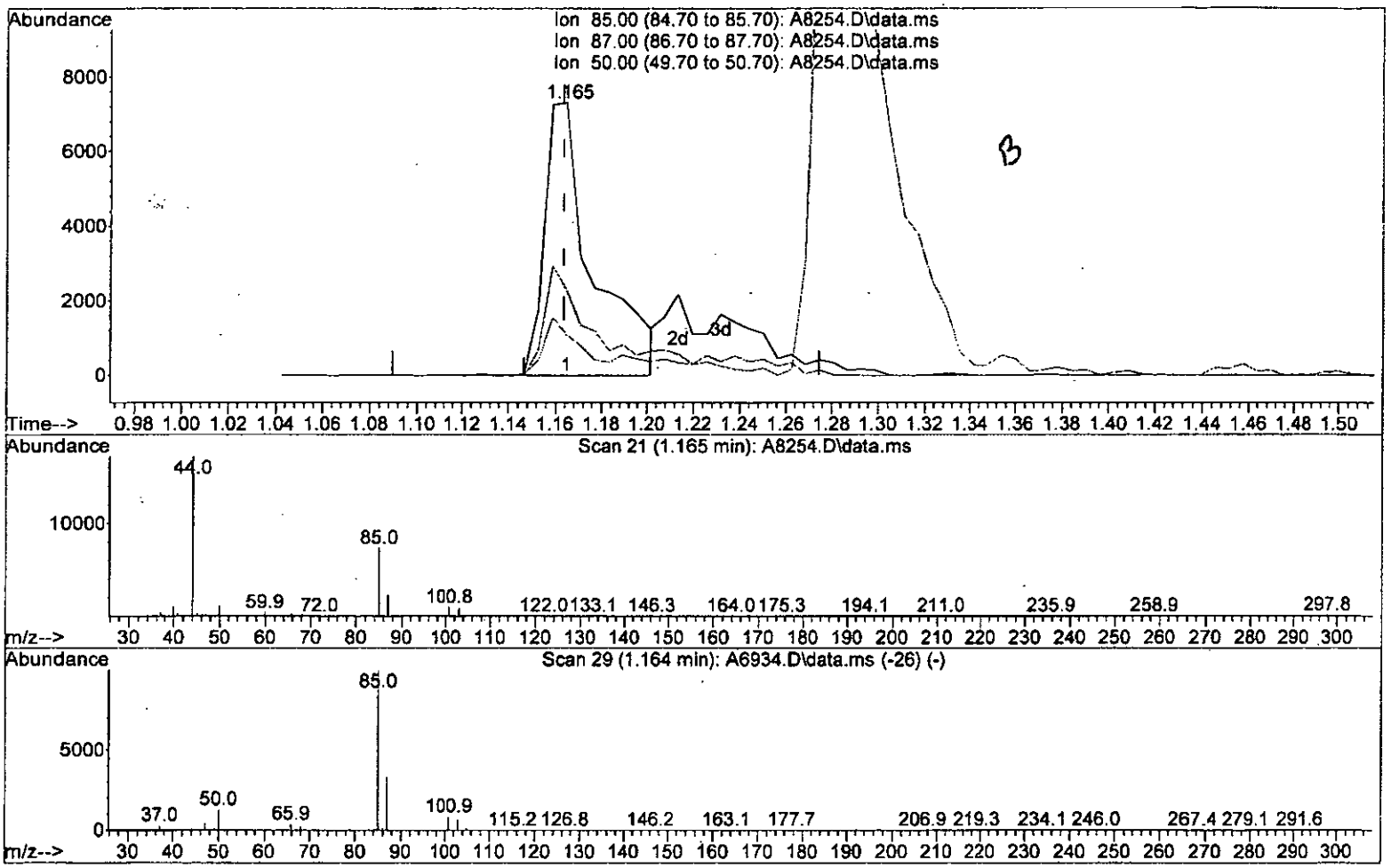
Quant Time: May 07 10:04:32 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94)	n-Propylbenzene	10.907	91	97775	2.23	ug/L		97
95)	2-Chlorotoluene	10.974	91	60387	2.17	ug/L		97
96)	3-Chlorotoluene	11.023	91	61467	2.07	ug/L		97
97)	4-Chlorotoluene	11.065	91	72667	2.20	ug/L		98
98)	1,3,5-Trimethylbenzene	11.065	105	69892	2.12	ug/L		97
99)	tert-Butylbenzene	11.340	119	58836	2.07	ug/L		97
100)	1,2,4-Trimethylbenzene	11.376	105	70236	2.06	ug/L		98
101)	3,4-Dichlorobenzotrifl...	11.443	214	19165	1.80	ug/L		98
102)	sec-Butylbenzene	11.523	105	84659	2.17	ug/L		97
103)	p-Isopropyltoluene	11.645	119	73212	2.13	ug/L		98
104)	1,3-Dclbenz	11.602	146	43707	2.06	ug/L		96
105)	1,4-Dclbenz	11.681	146	51454	2.34	ug/L		90
106)	2,4-Dichlorobenzotrifl...	11.730	214	18339	1.86	ug/L		86
107)	2,5-Dichlorobenzotrifl..:	11.773	214	21871	2.01	ug/L		93
108)	n-Butylbenzene	11.980	91	63480	2.09	ug/L		94
109)	1,2-Dclbenz	11.986	146	43817	2.21	ug/L		93
110)	1,2-Dibromo-3-chloropr...	12.608	157	2877	1.88	ug/L		88
111)	Trielution Dichlorotol...	12.730	125	108406	6.19	ug/L		96
112)	1,3,5-Trichlorobenzene	12.785	180	30258	2.05	ug/L		99
113)	Coelution Dichlorotoluene	13.059	125	77291	4.25	ug/L		96
114)	1,2,4-Tcbenzene	13.266	180	25731	2.07	ug/L		91
115)	Hexachlorobt	13.406	225	10099	1.82	ug/L	#	81
116)	Naphthalen	13.455	128	48261	2.20	ug/L		98
117)	1,2,3-Tclbenzene	13.650	180	23144	2.49	ug/L		97
118)	2,4,5-Trichlorotoluene	14.236	159	15003	2.48	ug/L		93
119)	2,3,6-Trichlorotoluene	14.321	159	14537m	2.82	ug/L		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 17:46:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(2) Dichlorodifluoromethane (P)

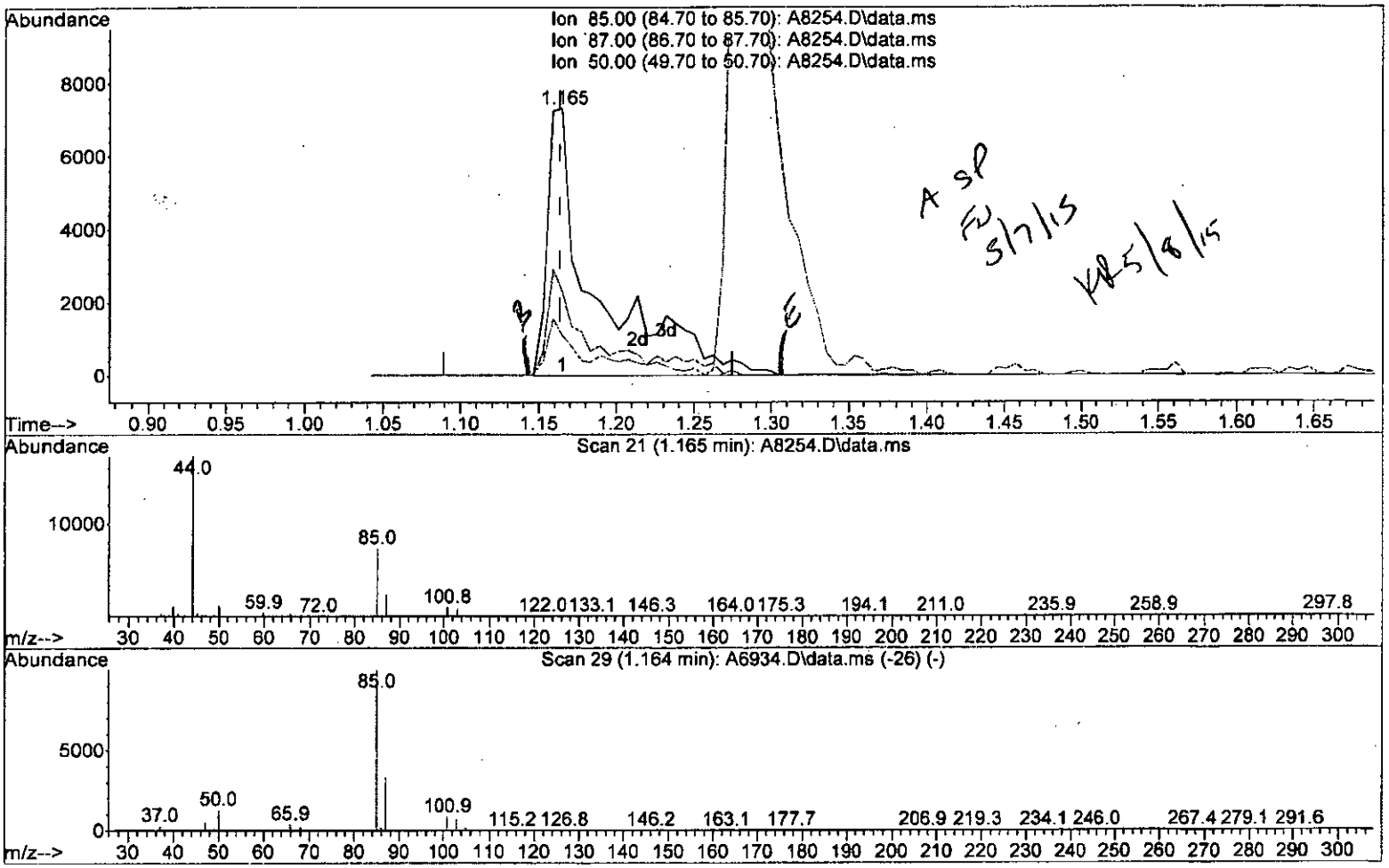
1.165min (+0.001) 1.18 ug/L

response 10617

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	31.26
50.00	15.00	14.86
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 17:46:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(2) Dichlorodifluoromethane (P)

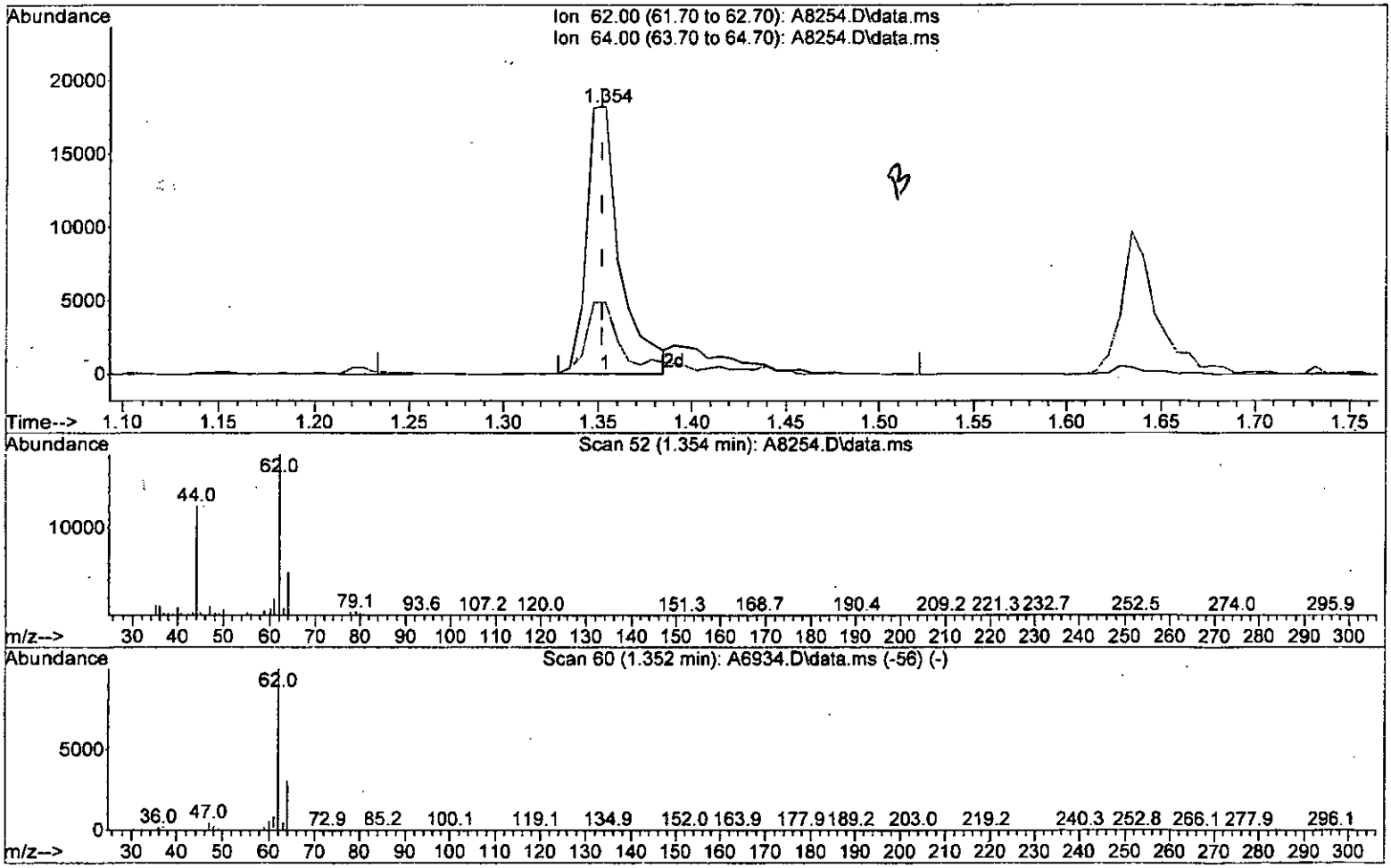
1.165min (+0.001) 1.74 ug/L m

response 15675

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	31.26
50.00	15.00	14.86
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 17:46:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(4) Vinyl Chloride (P)

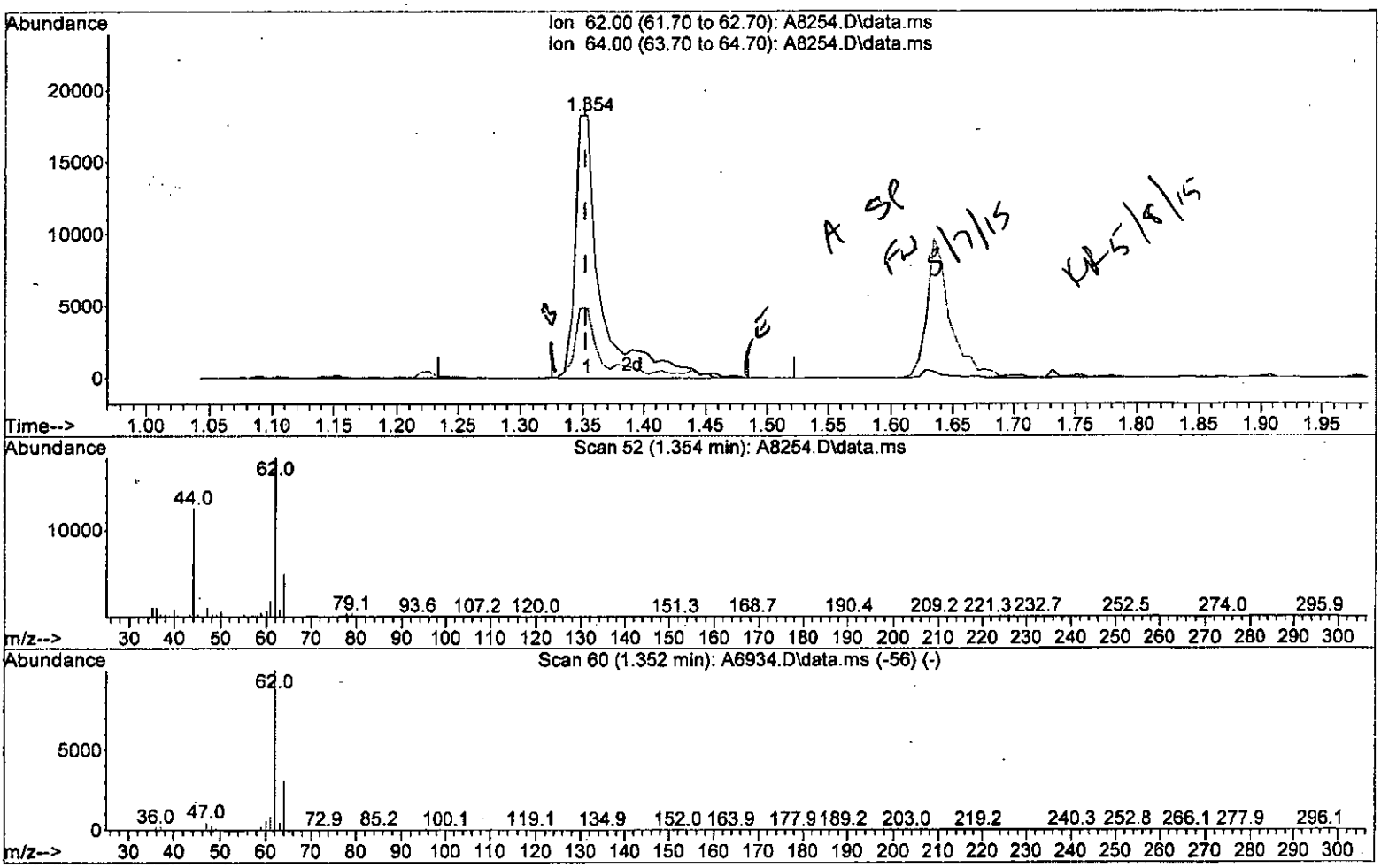
1.354min (+0.002) 2.09 ug/L

response 21858

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	26.70
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 17:46:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(4) Vinyl Chloride (P)

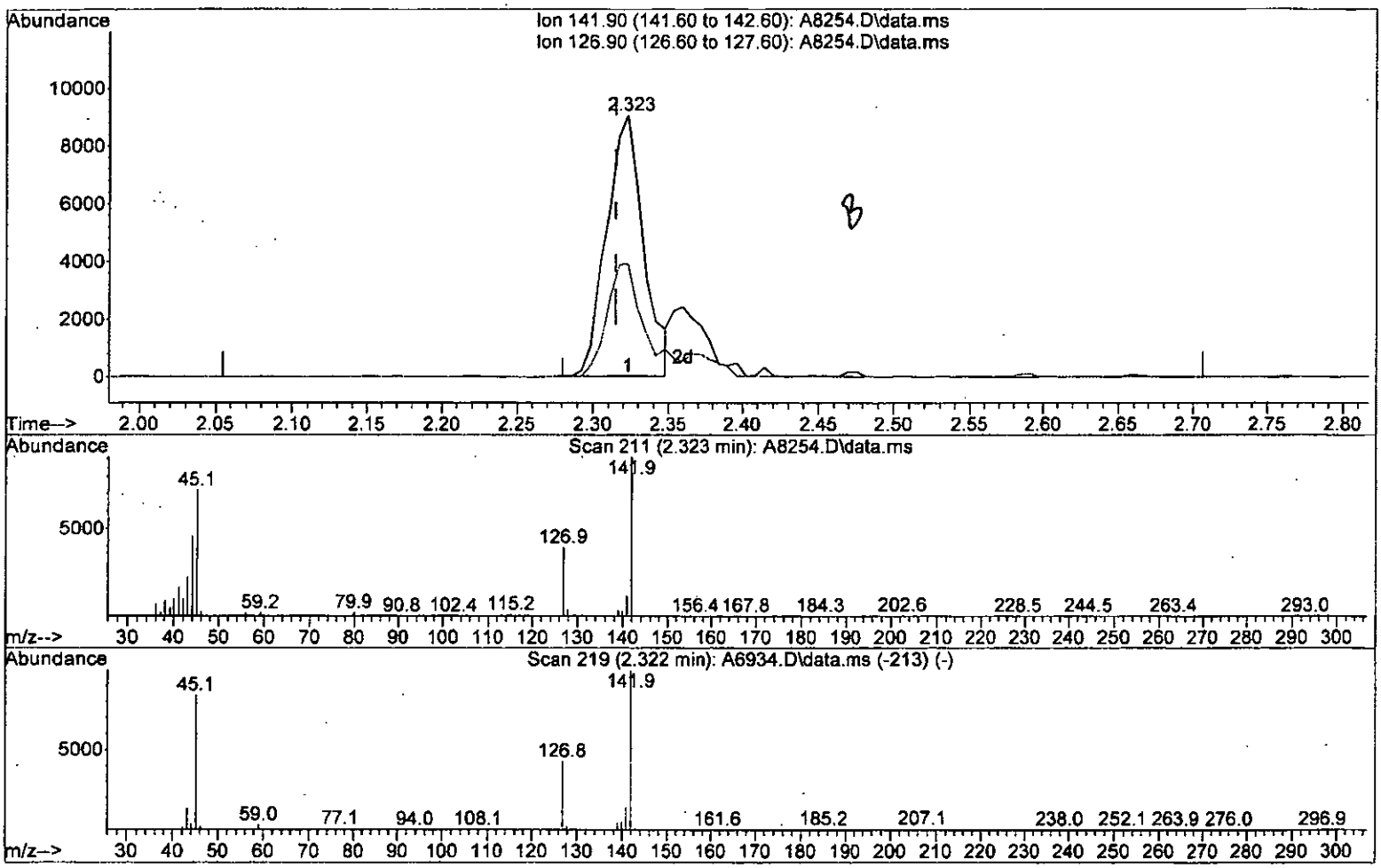
1.354min (+0.002) 2.51 ug/L m

response 26336

Ion	Exp%	Act%
62.00	100	100
64.00	31.70	26.70
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 09:26:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(17) Iodomethane

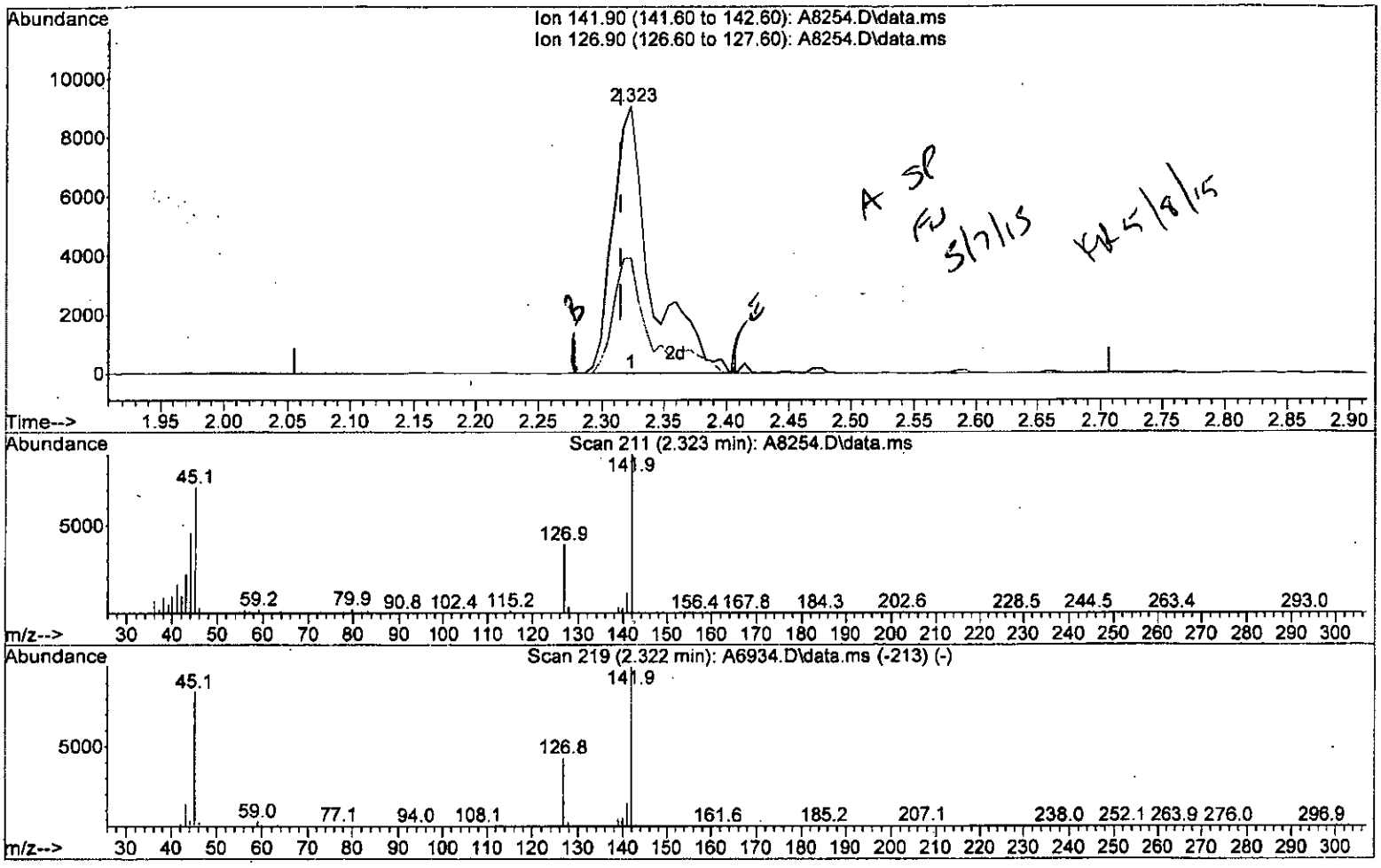
2.323min (+0.008) 3.15 ug/L

response 15301

Ion	Exp%	Act%
141.90	100	100
126.90	43.50	43.16
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 09:26:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(17) Iodomethane

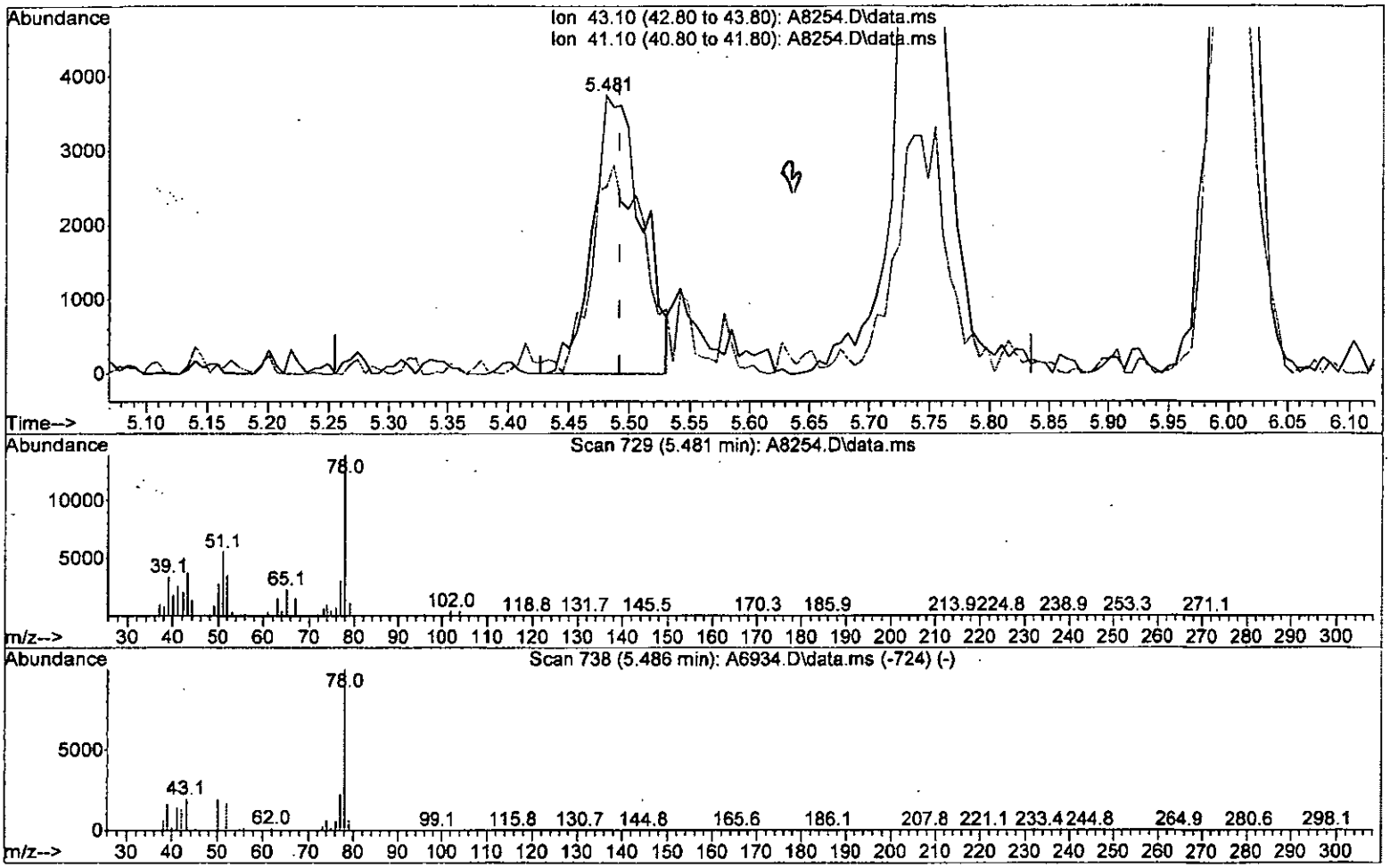
2.323min (+0.008) 3.99 ug/L m

response 19429

Ion	Exp%	Act%
141.90	100	100
126.90	43.50	43.16
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 09:26:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(49) Iso-Butyl Alcohol

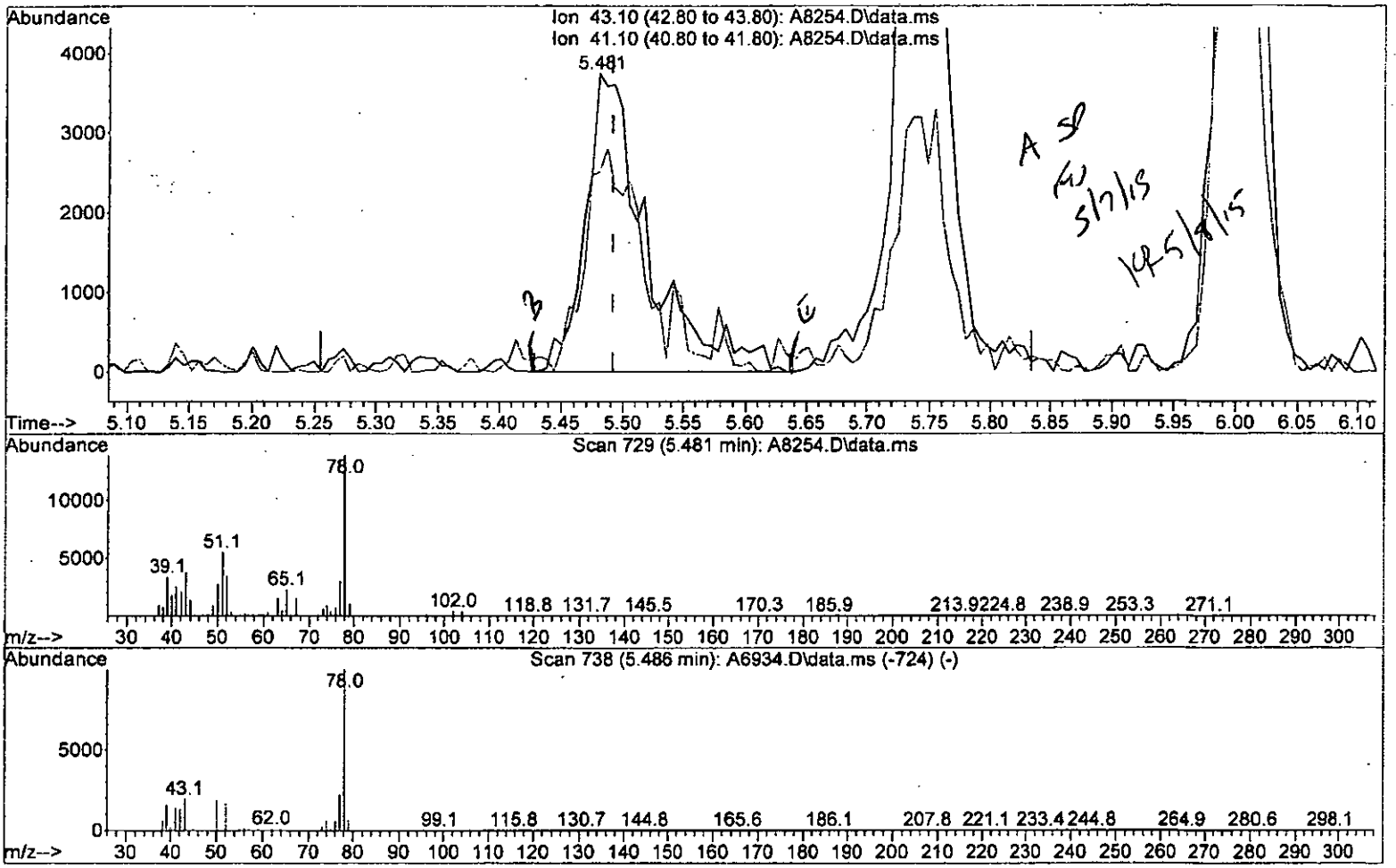
5.481min (-0.011) 33.00 ug/L

response 10599

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	67.04
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 09:26:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(49) Iso-Butyl Alcohol

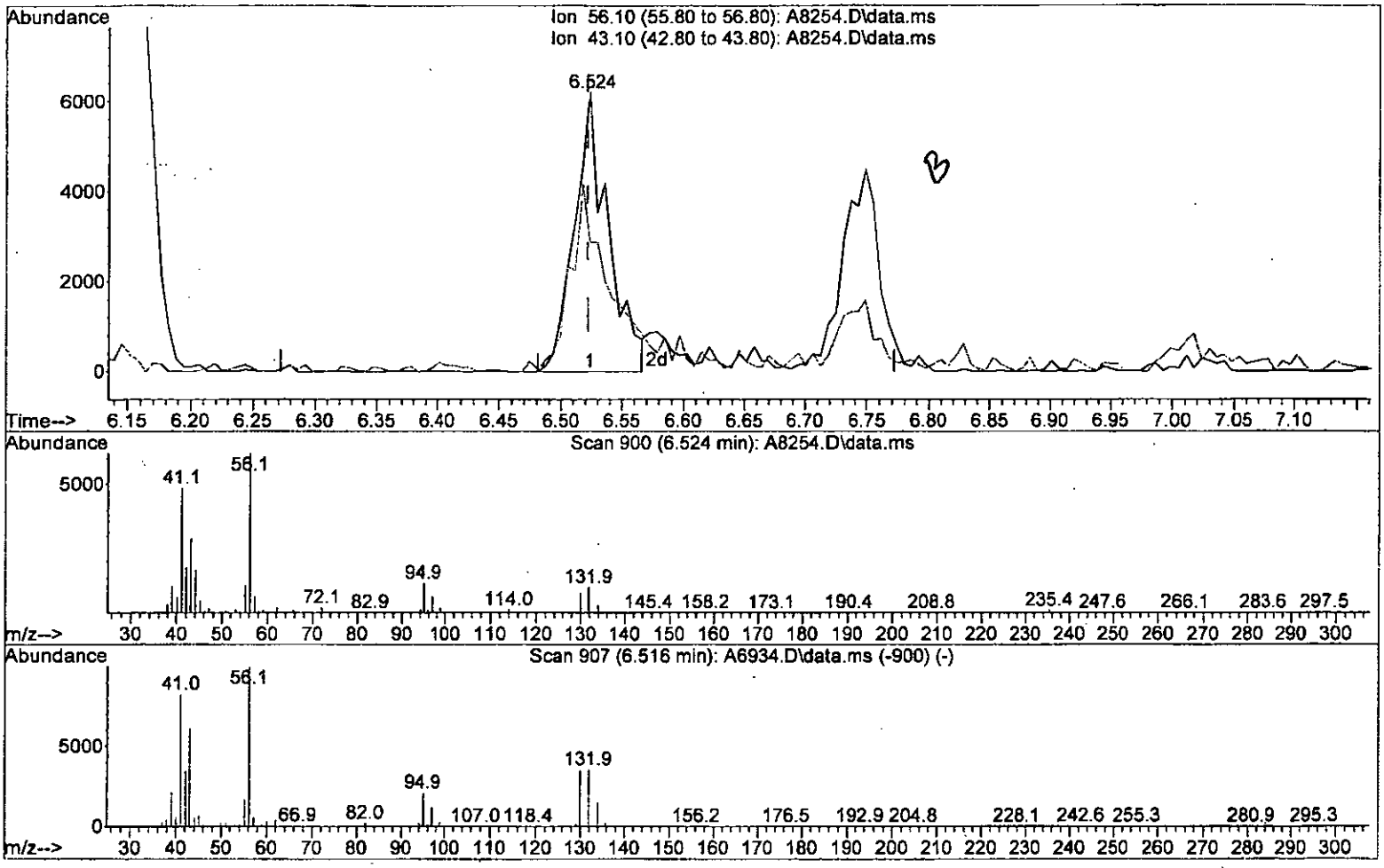
5.481min (-0.011) 40.97 ug/L m

response 13157

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	67.04
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 09:26:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(52) 1-Butanol

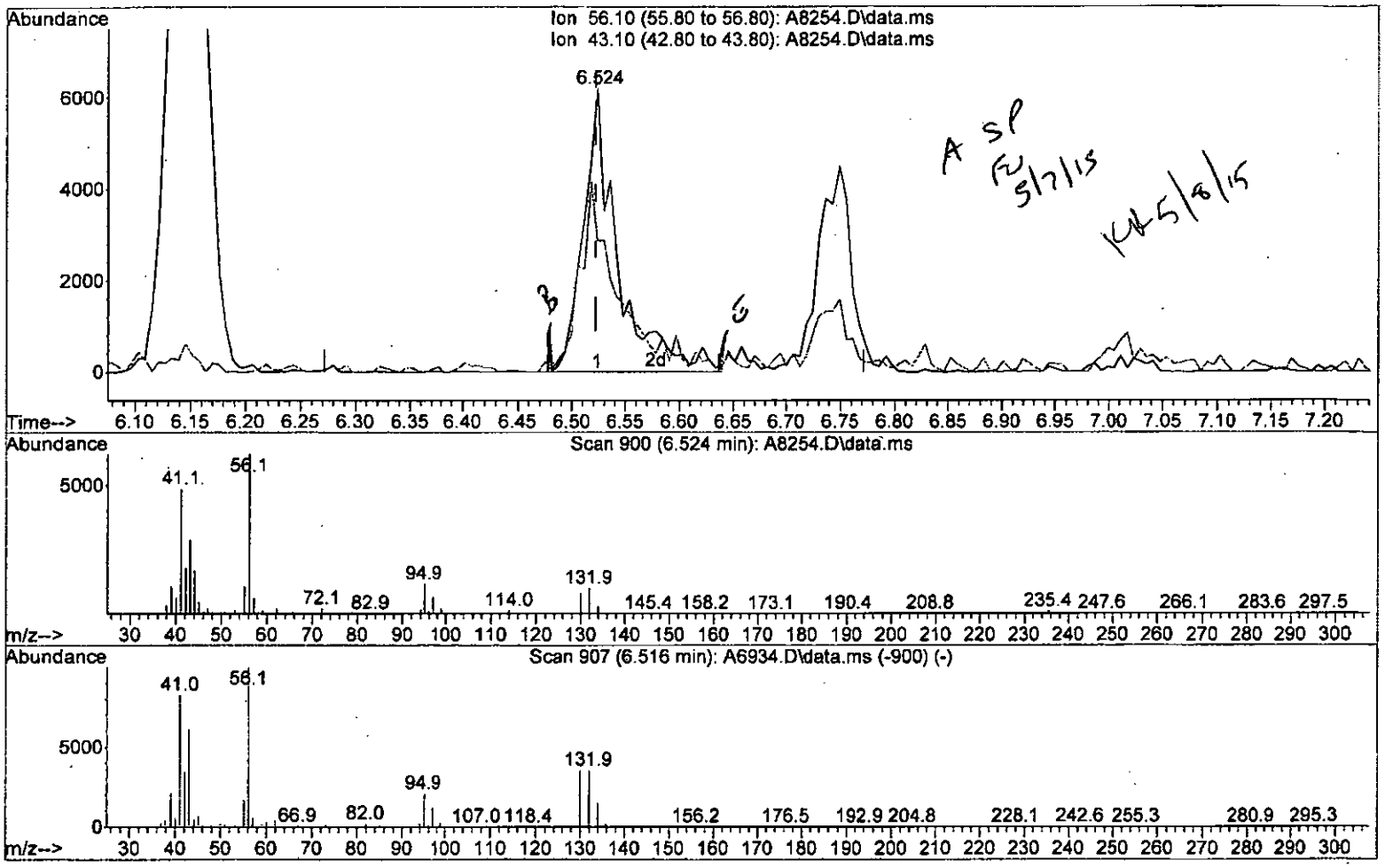
6.524min (+0.002) 65.30 ug/L

response 11971

Ion	Exp%	Act%
56.10	100	100
43.10	54.10	46.33
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 09:26:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(52) 1-Butanol

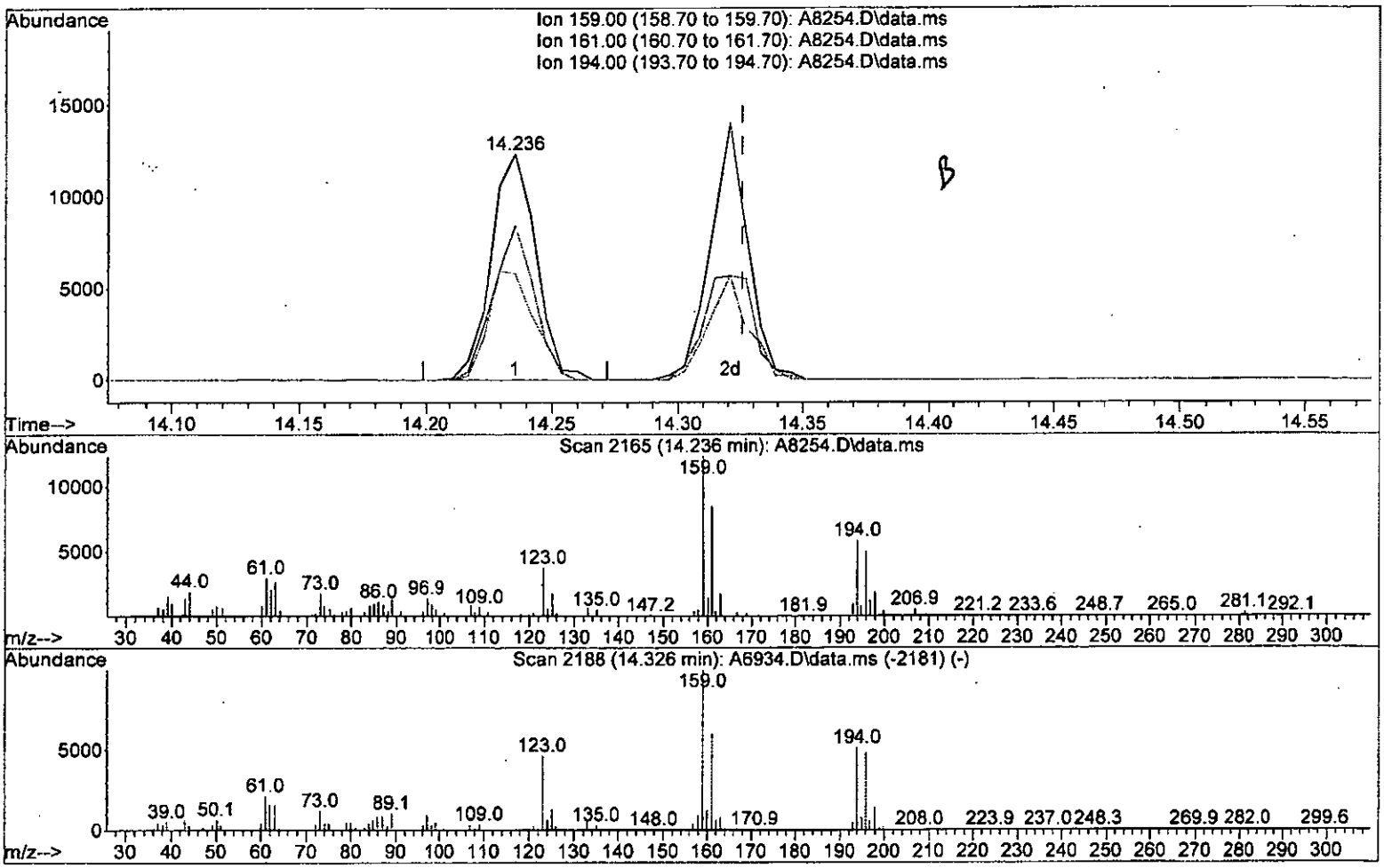
6.524min (+0.002) 75.39 ug/L m

response 13821

Ion	Exp%	Act%
56.10	100	100
43.10	54.10	46.33
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 17:46:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8254.D\data.ms

(119) 2,3,6-Trichlorotoluene

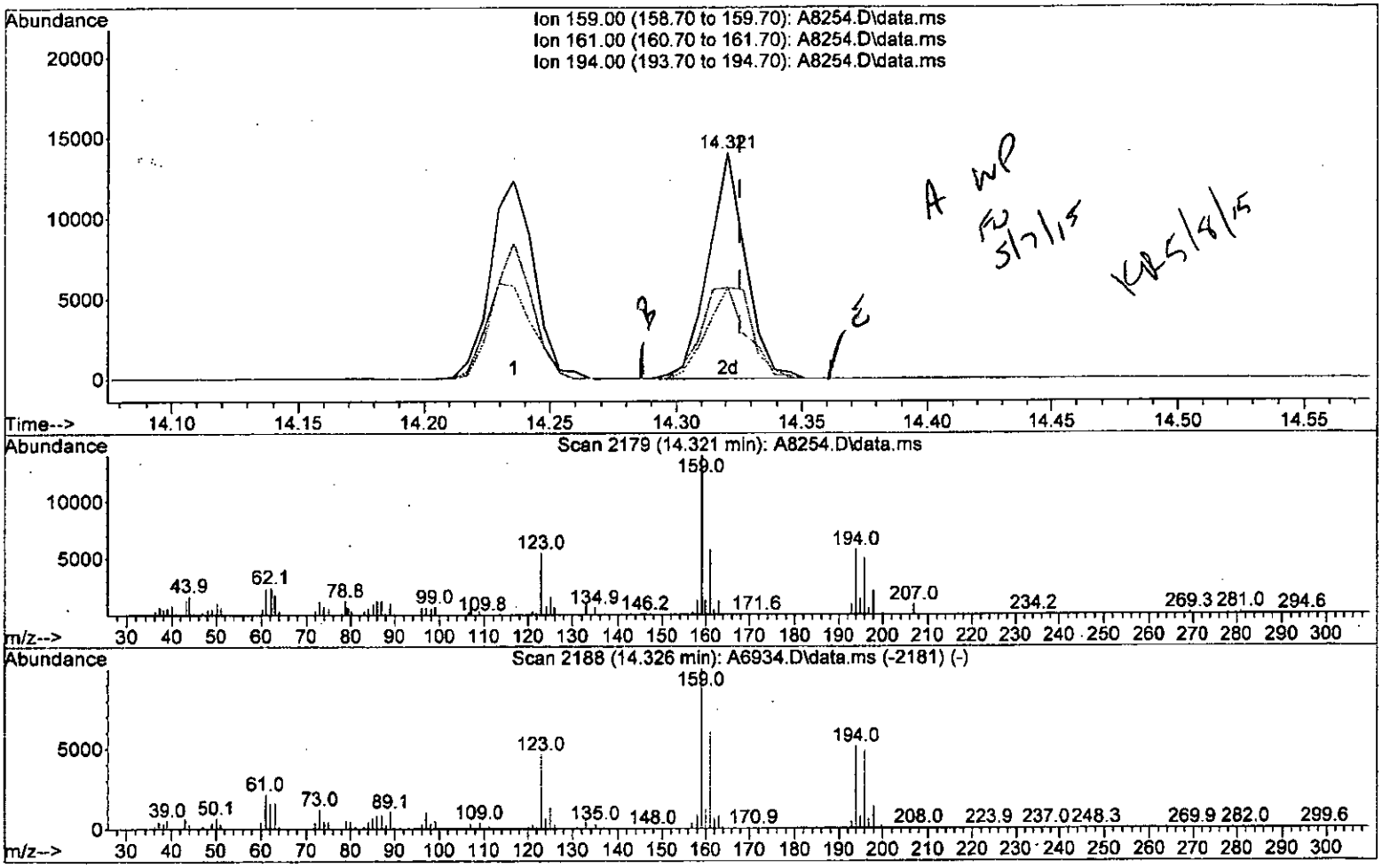
14.236min (-0.090) 2.91 ug/L

response 15003

Ion	Exp%	Act%
159.00	100	100
161.00	62.90	68.40
194.00	47.30	47.04
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 06 17:46:24 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



A WP 5/7/15 KRS 5/8/15

TIC: A8254.D\data.ms

(119) 2,3,6-Trichlorotoluene

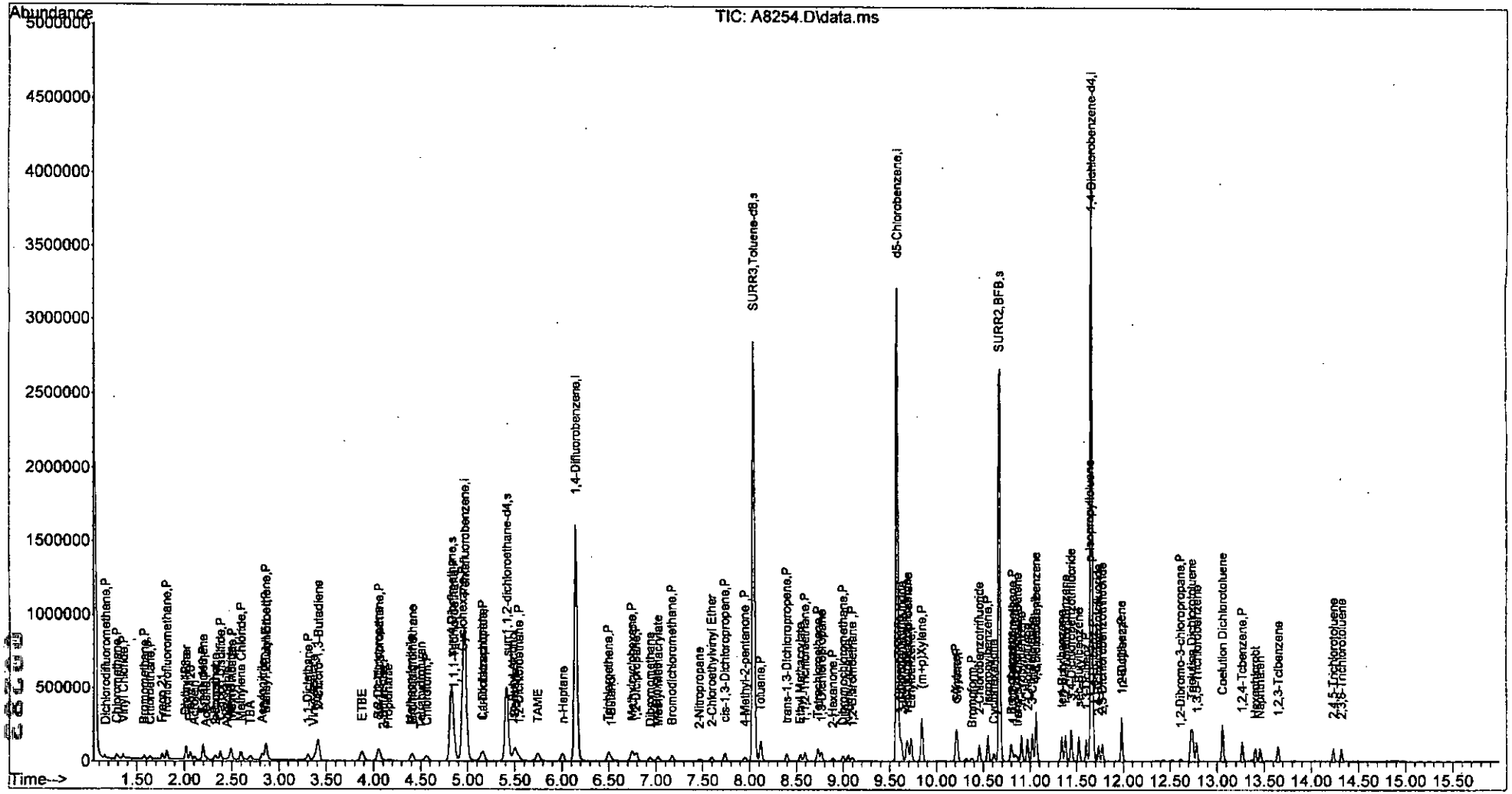
14.321min (-0.005) 2.82 ug/L m

response 14537

Ion	Exp%	Act%
159.00	100	100
161.00	62.90	40.29#
194.00	47.30	40.70
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8254.D
Acq On : 6 May 2015 5:31 pm
Operator : F. NAEGLER
Sample : 2.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 10:04:32 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 10:06:25 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FW 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.963	168	944649	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.146	114	1442159	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1372786	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	788682	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.829	113	530386	61.53	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 123.06%#				
46) surr1,1,2-dichloroetha...	5.414	65	554683	61.81	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 123.62%#				
64) SURR3,Toluene-d8	8.042	98	2032177	61.39	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 122.78%#				
69) SURR2,BFB	10.675	95	823867	56.74	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 113.48%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	42816	4.77	ug/L		94
3) Chloromethane	1.281	50	79703	7.10	ug/L		96
4) Vinyl Chloride	1.348	62	62336	5.96	ug/L		99
5) Bromomethane	1.573	94	24949	6.91	ug/L		99
6) Chloroethane	1.634	64	29665	4.96	ug/L		98
7) Freon 21	1.762	67	69908	4.29	ug/L		96
8) Trichlorofluoromethane	1.811	101	63110	4.88	ug/L		98
9) Diethyl Ether	2.012	59	38554	5.69	ug/L	#	76
10) Freon 123a	2.012	67	47703	4.68	ug/L		94
11) Freon 123	2.061	83	52186	4.63	ug/L		78
12) Acrolein	2.104	56	34662	35.13	ug/L		98
13) 1,1-Diclethene	2.195	96	34402	4.76	ug/L	#	86
14) Freon 113	2.195	101	35544	4.47	ug/L		100
15) Acetone	2.226	43	27737	12.45	ug/L		94
16) 2-Propanol	2.329	45	44141	108.16	ug/L		98
17) Iodomethane	2.317	142	43357	8.93	ug/L		97
18) Carbon Disulfide	2.378	76	123656	4.67	ug/L		99
19) Acetonitrile	2.445	40	8979	29.00	ug/L	#	79
20) Allyl Chloride	2.488	76	22045	5.15	ug/L	#	1
21) Methyl Acetate	2.500	43	32284	6.48	ug/L		85
22) Methylene Chloride	2.591	84	39719	4.95	ug/L	#	61
23) TBA	2.689	59	60589	98.23	ug/L		69
24) Acrylonitrile	2.817	53	72037	31.50	ug/L		100
25) Methyl-t-Butyl Ether	2.860	73	95828	4.50	ug/L		93
26) trans-1,2-Dichloroethene	2.860	96	38713	4.71	ug/L	#	75
27) 1,1-Diclethane	3.311	63	84133	5.50	ug/L		99
28) Vinyl Acetate	3.378	86	7260	4.99	ug/L	#	86
29) DIPE	3.408	45	234359	7.06	ug/L	#	74
30) 2-Chloro-1,3-Butadiene	3.414	53	102447	5.77	ug/L		87
31) ETBE	3.878	59	158569	5.64	ug/L		90
32) 2,2-Dichloropropane	4.048	77	55311	4.62	ug/L		92
33) cis-1,2-Dichloroethene	4.048	96	45803	5.00	ug/L		95
34) 2-Butanone	4.091	43	21441	7.02	ug/L		90
35) Propionitrile	4.164	54	26775	32.30	ug/L		98

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 10:06:25 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) Bromochloromethane	4.408	130	27821	5.42 ug/L #	76
37) Methacrylonitrile	4.414	67	12307	5.04 ug/L #	53
38) Tetrahydrofuran	4.500	42	10975	5.47 ug/L #	68
39) Chloroform	4.567	83	76762	5.31 ug/L	97
40) 1,1,1-Trichloroethane	4.847	97	62411	4.71 ug/L	94
42) Cyclohexane	4.939	41	62445	5.66 ug/L	100
44) Carbontetrachloride	5.164	121	16174	4.12 ug/L #	70
45) 1,1-Dichloropropene	5.158	75	57667	4.96 ug/L	94
47) Benzene	5.499	78	175029	4.98 ug/L	84
48) 1,2-Dichloroethane	5.542	62	62635	5.34 ug/L	93
49) Iso-Butyl Alcohol	5.487	43	31482m	99.24 ug/L	
50) TAME	5.743	73	98007	4.34 ug/L	84
51) n-Heptane	6.005	43	73628	6.07 ug/L	79
52) 1-Butanol	6.511	56	31288m	172.79 ug/L	
53) Trichloroethene	6.493	130	48764	5.13 ug/L	90
54) Methylcyclohexane	6.743	55	66506	5.07 ug/L #	84
55) 1,2-Diclpropane	6.792	63	50353	5.37 ug/L	92
56) Dibromomethane	6.938	93	24221	5.14 ug/L	93
57) 1,4-Dioxane	7.011	88	4952m	81.52 ug/L	
58) Methyl Methacrylate	7.017	69	20099	4.41 ug/L #	68
59) Bromodichloromethane	7.170	83	52190	4.45 ug/L	98
60) 2-Nitropropane	7.462	41	11179	5.71 ug/L #	78
61) 2-Chloroethylvinyl Ether	7.590	63	23716	5.31 ug/L	95
62) cis-1,3-Dichloropropene	7.737	75	59199	4.23 ug/L	91
63) 4-Methyl-2-pentanone	7.950	43	44357	6.19 ug/L	80
65) Toluene	8.121	91	191788	5.14 ug/L	97
66) trans-1,3-Dichloropropene	8.395	75	48075	3.96 ug/L	99
67) Ethyl Methacrylate	8.542	69	36869	3.87 ug/L #	58
68) 1,1,2-Trichloroethane	8.590	97	35588	5.12 ug/L	96
71) Tetrachloroethene	8.730	164	40801	5.36 ug/L	93
72) 2-Hexanone	8.889	43	27444	5.57 ug/L	79
73) 1,3-Dichloropropane	8.767	76	55787	5.17 ug/L #	74
74) Dibromochloromethane	8.999	129	37395	4.36 ug/L	94
75) N-Butyl Acetate	9.054	43	62654	5.09 ug/L	96
76) 1,2-Dibromoethane	9.096	107	31746	4.87 ug/L	94
77) 3-Chlorobenzotrifluoride	9.627	180	70077	4.77 ug/L	92
78) Chlorobenzene	9.602	112	133132	5.29 ug/L	96
79) 4-Chlorobenzotrifluoride	9.682	180	62001	4.64 ug/L	91
80) 1,1,1,2-Tetrachloroethane	9.694	131	40925	4.34 ug/L	90
81) Ethylbenzene	9.730	106	67383	5.03 ug/L	98
82) (m+p)Xylene	9.840	106	167944	10.38 ug/L #	84
83) o-Xylene	10.206	106	80757	4.99 ug/L	90
84) Styrene	10.224	104	137136	4.92 ug/L	93
85) Bromoform	10.377	173	19461	3.68 ug/L	92
86) 2-Chlorobenzotrifluoride	10.456	180	67404	4.68 ug/L	91
87) Isopropylbenzene	10.547	105	206894	5.22 ug/L	98
88) Cyclohexanone	10.614	55	41925	79.56 ug/L	84
89) trans-1,4-Dichloro-2-B...	10.864	53	13552	5.02 ug/L #	61
91) 1,1,2,2-Tetrachloroethane	10.809	83	40208	5.24 ug/L	99
92) Bromobenzene	10.797	156	56580	5.25 ug/L #	89
93) 1,2,3-Trichloropropane	10.840	110	12243	5.74 ug/L	93

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

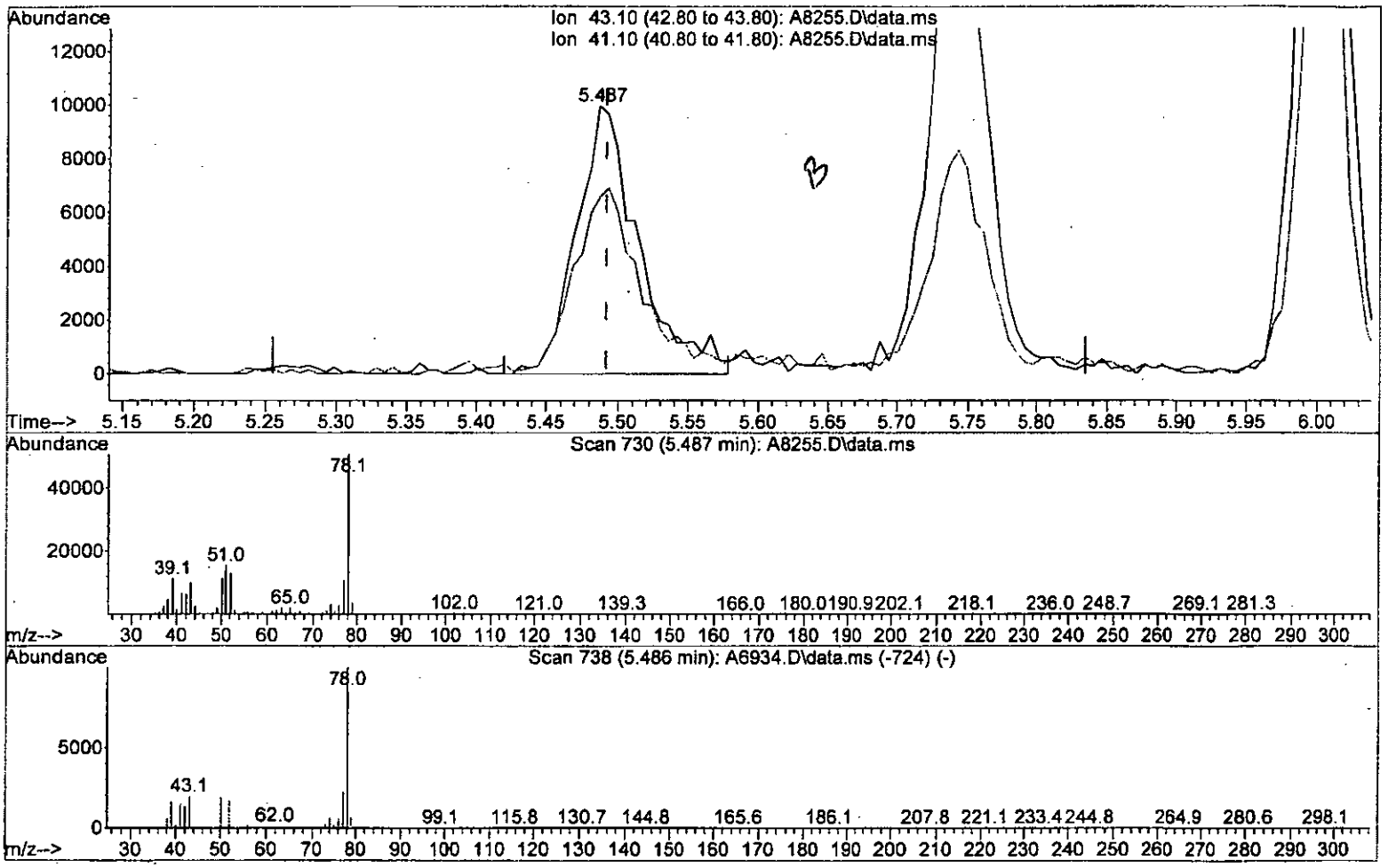
Quant Time: May 07 10:06:25 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	n-Propylbenzene	10.907	91	242434	5.53	ug/L	98
95)	2-Chlorotoluene	10.974	91	149052	5.37	ug/L	97
96)	3-Chlorotoluene	11.023	91	159230	5.37	ug/L	99
97)	4-Chlorotoluene	11.065	91	175792	5.33	ug/L	99
98)	1,3,5-Trimethylbenzene	11.065	105	178462	5.43	ug/L	96
99)	tert-Butylbenzene	11.340	119	155008	5.45	ug/L	96
100)	1,2,4-Trimethylbenzene	11.376	105	185213	5.45	ug/L	100
101)	3,4-Dichlorobenzotrifl...	11.443	214	49222	4.63	ug/L	92
102)	sec-Butylbenzene	11.523	105	212342	5.46	ug/L	97
103)	p-Isopropyltoluene	11.645	119	187325	5.47	ug/L	97
104)	1,3-Dclbenz	11.602	146	116771	5.50	ug/L	95
105)	1,4-Dclbenz	11.681	146	121409	5.54	ug/L	98
106)	2,4-Dichlorobenzotrifl...	11.736	214	46537	4.74	ug/L	97
107)	2,5-Dichlorobenzotrifl...	11.773	214	51117	4.70	ug/L	97
108)	n-Butylbenzene	11.980	91	163509	5.39	ug/L	97
109)	1,2-Dclbenz	11.980	146	107304	5.43	ug/L	97
110)	1,2-Dibromo-3-chloropr...	12.608	157	6663	4.36	ug/L	98
111)	Trielution Dichlorotol...	12.730	125	279552	16.00	ug/L	99
112)	1,3,5-Trichlorobenzene	12.785	180	77506	5.25	ug/L	98
113)	Coelution Dichlorotoluene	13.059	125	200965	11.07	ug/L	94
114)	1,2,4-Tcbenzene	13.266	180	65548	5.28	ug/L	97
115)	Hexachlorobt	13.406	225	27851	5.04	ug/L	90
116)	Naphthalen	13.461	128	126659	5.79	ug/L	96
117)	1,2,3-Tclbenzene	13.650	180	55908	6.04	ug/L	100
118)	2,4,5-Trichlorotoluene	14.236	159	37945	6.30	ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	33372	6.49	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 09:28:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8255.D\data.ms

(49) Iso-Butyl Alcohol

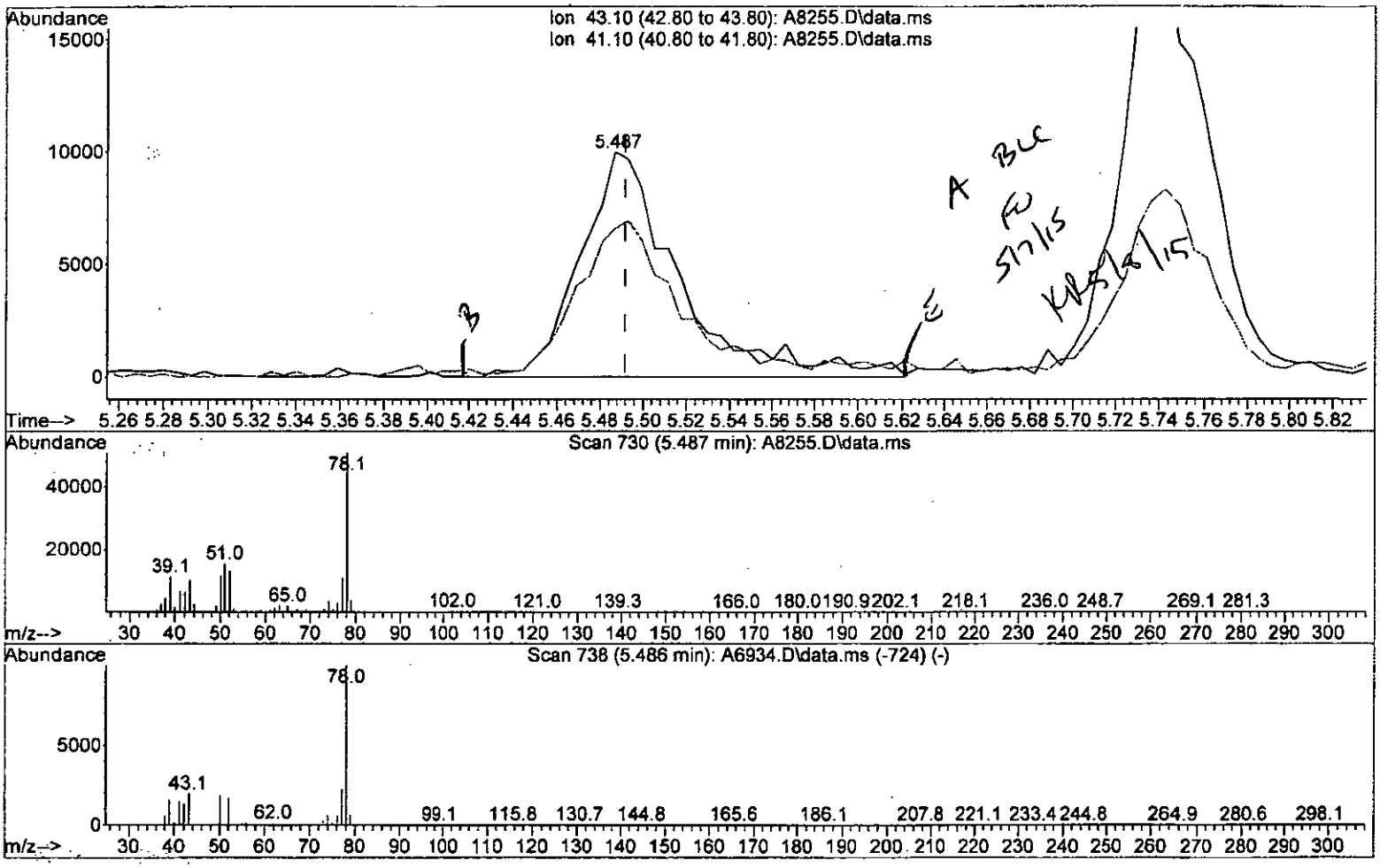
5.487min (-0.005) 95.24 ug/L

response 30215

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	65.95
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 09:28:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8255.D\data.ms

(49) Iso-Butyl Alcohol

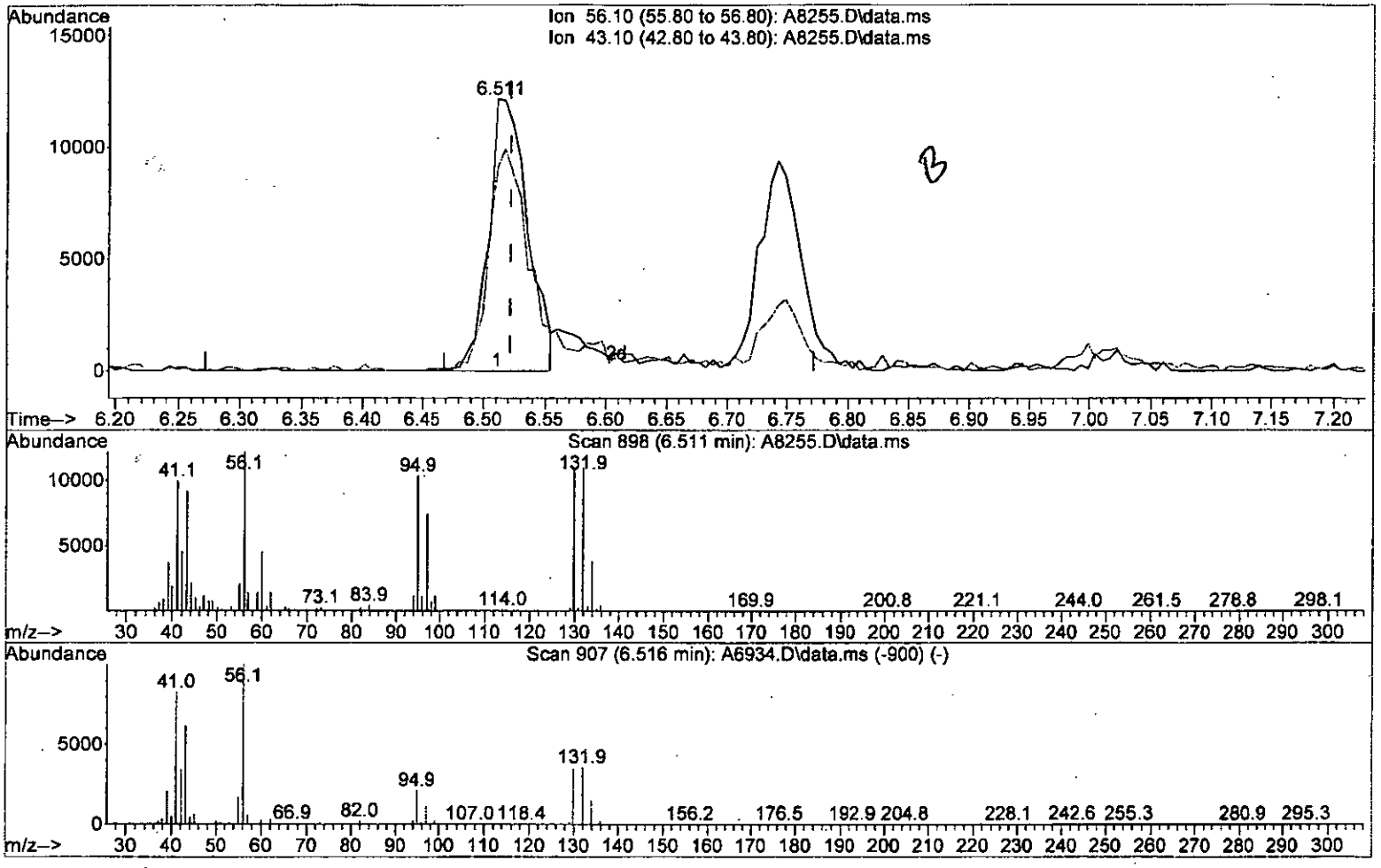
5.487min (-0.005) 99.24 ug/L m

response 31482

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	65.95
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 09:28:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8255.D\data.ms

(52) 1-Butanol

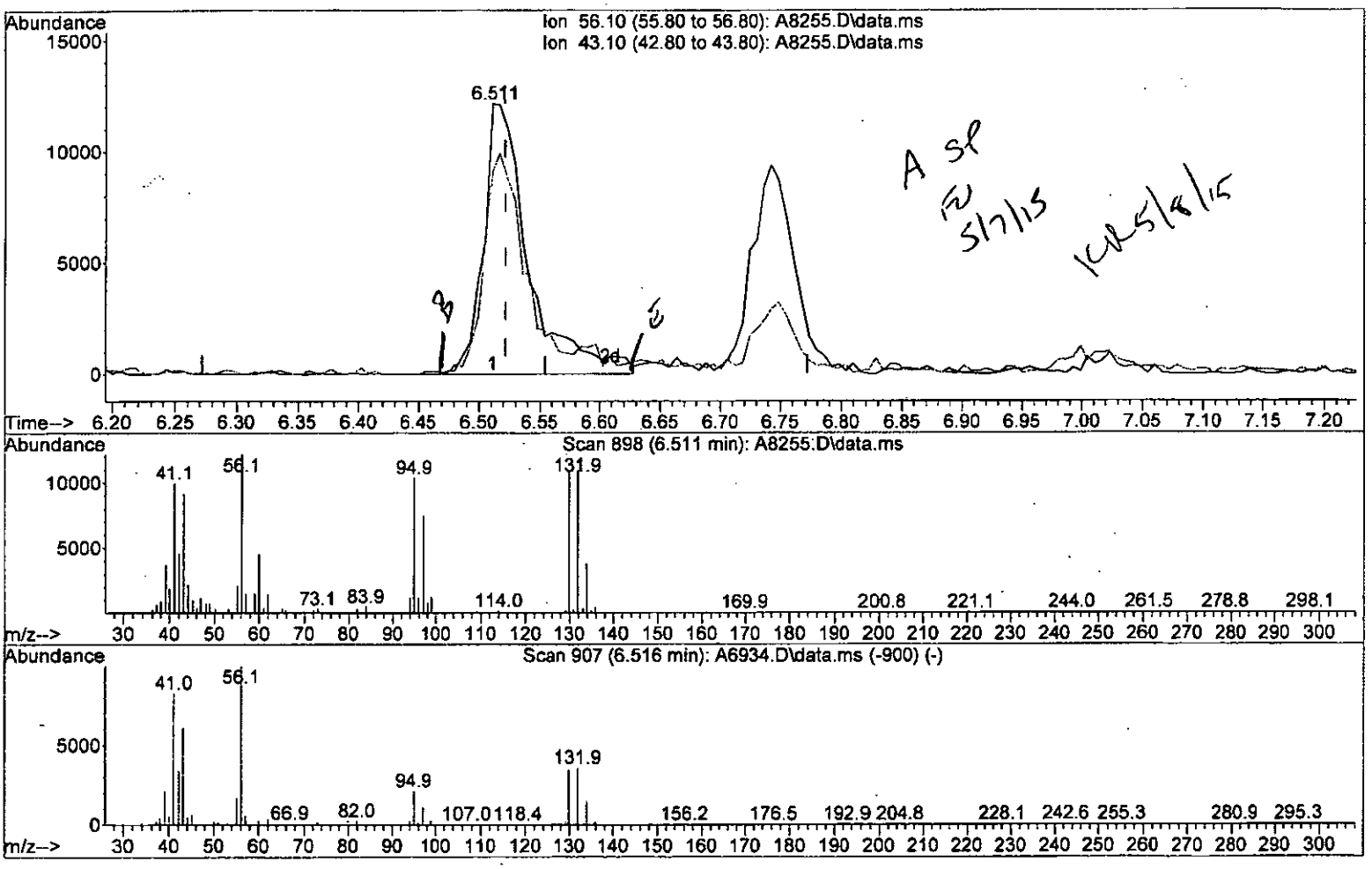
6.511min (-0.011) 147.01 ug/L

response 26620

Ion	Exp%	Act%
56.10	100	100
43.10	54.10	75.12#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 09:28:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8255.D\data.ms

(52) 1-Butanol

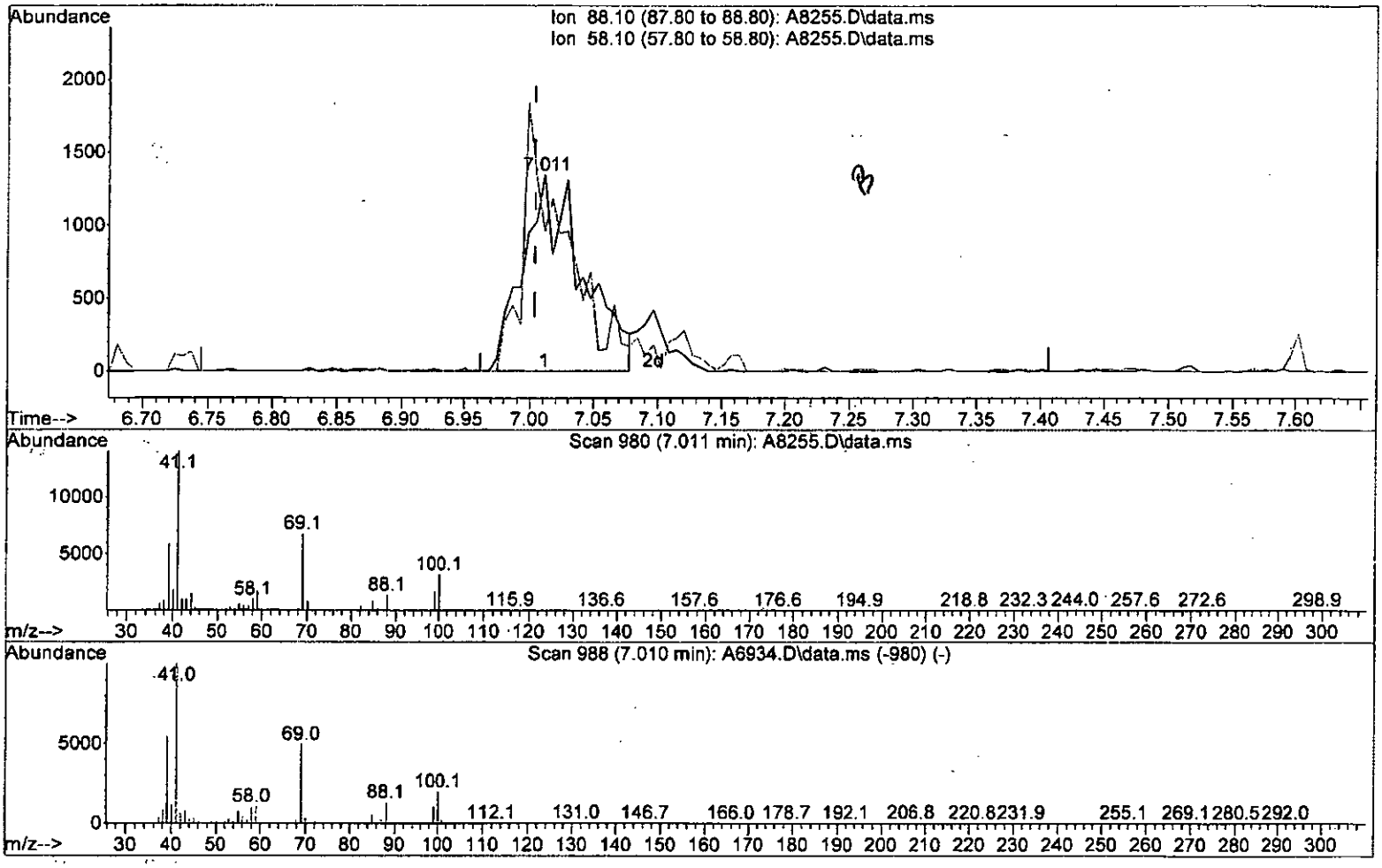
6.511min (-0.011) 172.79 ug/L m

response 31288

Ion	Exp%	Act%
56.10	100	100
43.10	54.10	75.12#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 18:16:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8255.D\data.ms

(57) 1,4-Dioxane

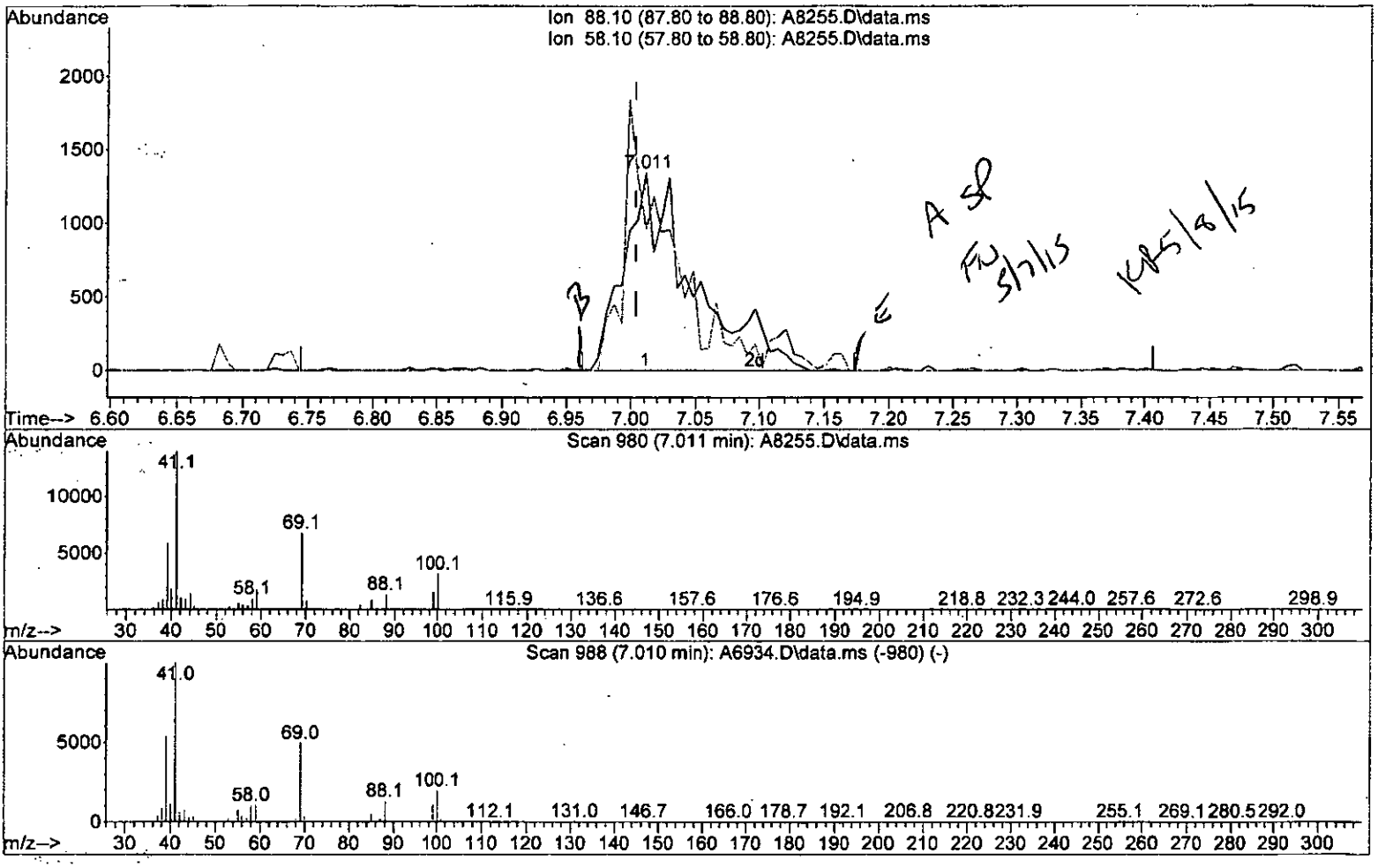
7.011min (+0.007) 70.92 ug/L

response 4308

Ion	Exp%	Act%
88.10	100	100
58.10	61.10	71.55
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 06 18:16:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8255.D\data.ms

(57) 1,4-Dioxane

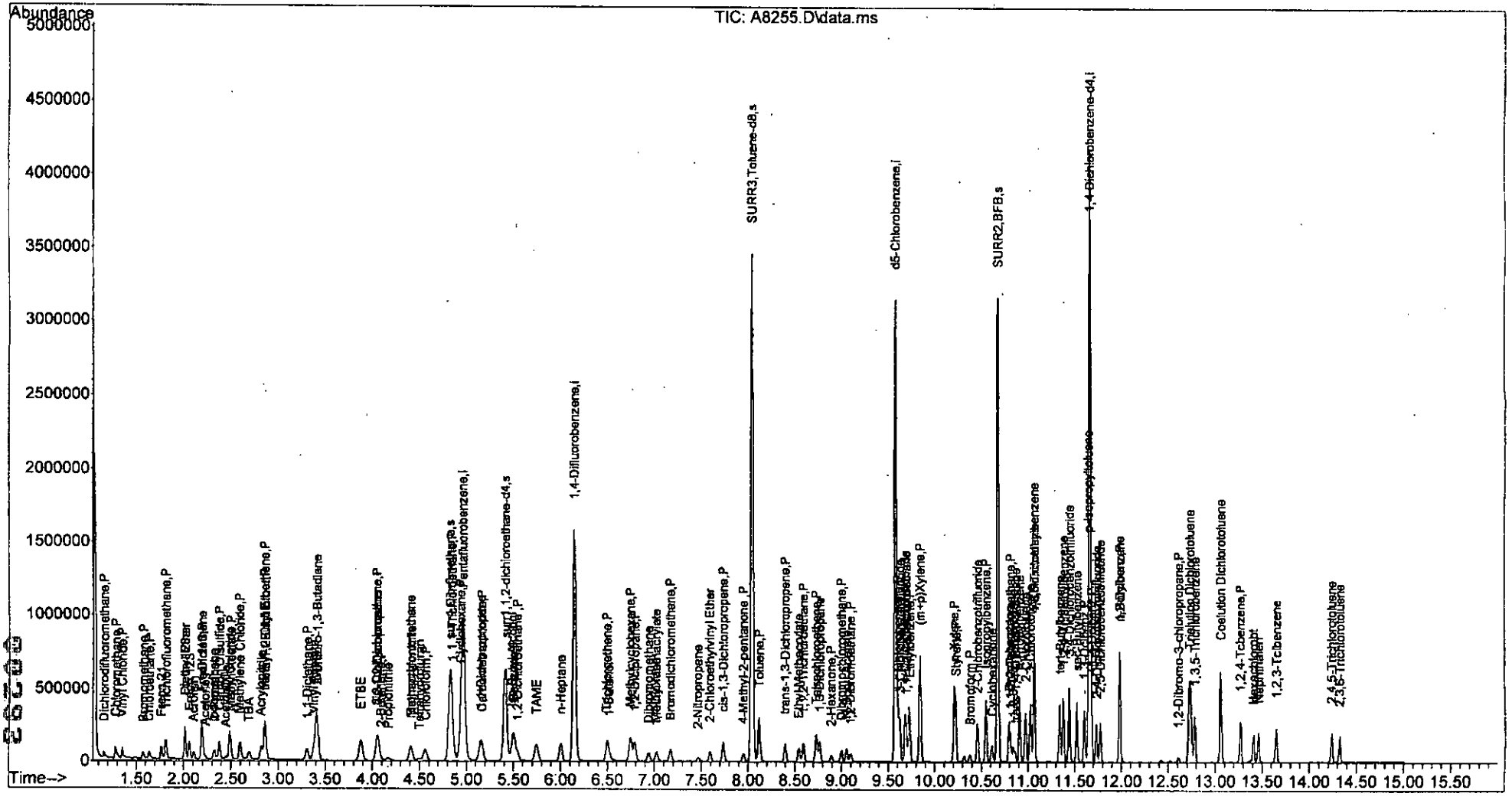
7.011min (+0.007) 81.52 ug/L m

response 4952

Ion	Exp%	Act%
88.10	100	100
58.10	61.10	71.55
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8255.D
Acq On : 6 May 2015 6:01 pm
Operator : F. NAEGLER
Sample : 5.0 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 10:06:25 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 10:53:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FP 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	949389	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.146	114	1466574	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1380271	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	796836	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.829	113	622912	71.06	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 142.12%#				
46) surr1,1,2-dichloroetha...	5.414	65	641733	70.32	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 140.64%#				
64) SURR3,Toluene-d8	8.041	98	2382430	70.77	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 141.54%#				
69) SURR2,BFB	10.675	95	949418	64.30	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 128.60%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	211640m	23.48	ug/L		
3) Chloromethane	1.281	50	347073	30.75	ug/L		94
4) Vinyl Chloride	1.354	62	247604	23.55	ug/L		99
5) Bromomethane	1.573	94	97912	26.98	ug/L		99
6) Chloroethane	1.640	64	119128	19.81	ug/L		95
7) Freon 21	1.762	67	297818	18.17	ug/L		97
8) Trichlorofluoromethane	1.811	101	248148	19.09	ug/L		99
9) Diethyl Ether	2.012	59	151358	22.23	ug/L	#	78
10) Freon 123a	2.012	67	177210	17.32	ug/L		87
11) Freon 123	2.061	83	194771	17.21	ug/L		79
12) Acrolein	2.110	56	127938	129.01	ug/L		93
13) 1,1-Diclethene	2.195	96	133151	18.33	ug/L	#	85
14) Freon 113	2.195	101	137613	17.23	ug/L		100
15) Acetone	2.226	43	51133m	22.84	ug/L		
16) 2-Propanol	2.329	45	179860	438.53	ug/L		91
17) Iodomethane	2.323	142	173700	35.60	ug/L		96
18) Carbon Disulfide	2.378	76	385992	14.49	ug/L		97
19) Acetonitrile	2.451	40	42141	135.42	ug/L		96
20) Allyl Chloride	2.488	76	82915	19.27	ug/L	#	6
21) Methyl Acetate	2.500	43	123610	24.69	ug/L		85
22) Methylene Chloride	2.597	84	162416	20.13	ug/L	#	66
23) TBA	2.695	59	238962	385.49	ug/L		77
24) Acrylonitrile	2.817	53	311911	135.69	ug/L		95
25) Methyl-t-Butyl Ether	2.866	73	382890	17.89	ug/L		88
26) trans-1,2-Dichloroethene	2.860	96	147726	17.88	ug/L	#	78
27) 1,1-Diclethane	3.305	63	331462	21.54	ug/L		98
28) Vinyl Acetate	3.378	86	22187	15.19	ug/L	#	65
29) DIPE	3.408	45	994988	29.81	ug/L	#	74
30) 2-Chloro-1,3-Butadiene	3.420	53	319679	17.91	ug/L		87
31) ETBE	3.878	59	663727	23.51	ug/L		91
32) 2,2-Dichloropropane	4.048	77	207998	17.27	ug/L		96
33) cis-1,2-Dichloroethene	4.054	96	178533	19.40	ug/L		87
34) 2-Butanone	4.091	43	79408	25.87	ug/L		90
35) Propionitrile	4.164	54	103289	123.97	ug/L		99

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 10:53:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	109885	21.31	ug/L	#	64
37) Methacrylonitrile	4.402	67	48951	19.96	ug/L	#	37
38) Tetrahydrofuran	4.499	42	50942	25.25	ug/L		71
39) Chloroform	4.560	83	295285	20.33	ug/L		96
40) 1,1,1-Trichloroethane	4.859	97	244637	18.35	ug/L		98
42) Cyclohexane	4.951	41	239227	21.33	ug/L		88
44) Carbontetrachloride	5.158	121	62294	15.61	ug/L		88
45) 1,1-Dichloropropene	5.158	75	214541	18.14	ug/L		94
47) Benzene	5.499	78	677106	18.96	ug/L		81
48) 1,2-Dichloroethane	5.536	62	238618	20.01	ug/L		92
49) Iso-Butyl Alcohol	5.487	43	128448m	398.15	ug/L		
50) TAME	5.743	73	418073	18.21	ug/L		82
51) n-Heptane	6.005	43	294038	23.85	ug/L	#	80
52) 1-Butanol	6.517	56	142059	771.46	ug/L		81
53) Trichloroethene	6.493	130	189140	19.58	ug/L		96
54) Methylcyclohexane	6.749	55	258967	19.40	ug/L	#	82
55) 1,2-Diclpropane	6.792	63	200360	21.03	ug/L		96
56) Dibromomethane	6.938	93	89458	18.66	ug/L		97
57) 1,4-Dioxane	6.999	88	19903m	322.20	ug/L		
58) Methyl Methacrylate	7.023	69	78190	16.86	ug/L	#	54
59) Bromodichloromethane	7.176	83	208922	17.51	ug/L		97
60) 2-Nitropropane	7.468	41	43942	22.06	ug/L		94
61) 2-Chloroethylvinyl Ether	7.596	63	83051	18.29	ug/L		89
62) cis-1,3-Dichloropropene	7.737	75	242732	17.04	ug/L		99
63) 4-Methyl-2-pentanone	7.950	43	160039	21.95	ug/L		87
65) Toluene	8.121	91	737900	19.44	ug/L		97
66) trans-1,3-Dichloropropene	8.401	75	201254	16.28	ug/L		98
67) Ethyl Methacrylate	8.541	69	158071	16.32	ug/L	#	50
68) 1,1,2-Trichloroethane	8.590	97	135540	19.18	ug/L		98
71) Tetrachloroethene	8.730	164	144677	18.90	ug/L		98
72) 2-Hexanone	8.895	43	107205	21.65	ug/L		85
73) 1,3-Dichloropropane	8.767	76	225024	20.73	ug/L	#	74
74) Dibromochloromethane	8.999	129	152966	17.75	ug/L		100
75) N-Butyl Acetate	9.053	43	276336	22.31	ug/L		91
76) 1,2-Dibromoethane	9.096	107	130210	19.85	ug/L		98
77) 3-Chlorobenzotrifluoride	9.627	180	267273	18.11	ug/L		96
78) Chlorobenzene	9.602	112	510129	20.18	ug/L		98
79) 4-Chlorobenzotrifluoride	9.681	180	236714	17.63	ug/L		94
80) 1,1,1,2-Tetrachloroethane	9.694	131	166805	17.59	ug/L		98
81) Ethylbenzene	9.730	106	258558	19.21	ug/L		92
82) (m+p)Xylene	9.840	106	641688	39.45	ug/L		87
83) o-Xylene	10.206	106	314735	19.33	ug/L		99
84) Styrene	10.218	104	555696	19.84	ug/L		99
85) Bromoform	10.376	173	82515	15.51	ug/L		97
86) 2-Chlorobenzotrifluoride	10.456	180	253343	17.48	ug/L		89
87) Isopropylbenzene	10.547	105	815131	20.44	ug/L		99
88) Cyclohexanone	10.614	55	155493	293.49	ug/L		94
89) trans-1,4-Dichloro-2-B...	10.858	53	52745	19.42	ug/L	#	76
91) 1,1,2,2-Tetrachloroethane	10.815	83	163661	21.11	ug/L		94
92) Bromobenzene	10.797	156	217956	20.03	ug/L		93
93) 1,2,3-Trichloropropane	10.840	110	45674	21.19	ug/L		97

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

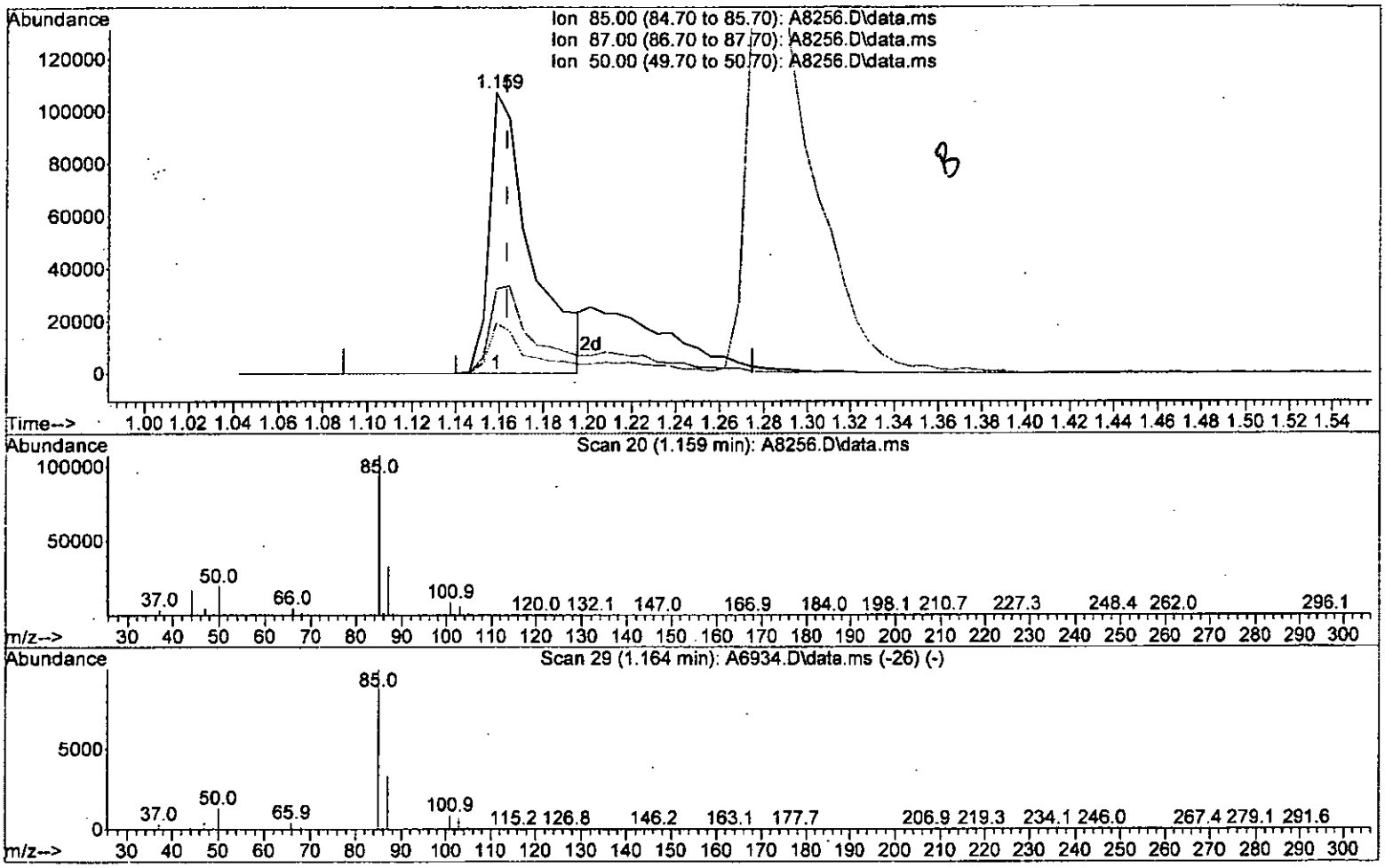
Quant Time: May 07 10:53:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
94)	n-Propylbenzene	10.907	91	944830	21.35 ug/L	100
95)	2-Chlorotoluene	10.974	91	575592	20.53 ug/L	98
96)	3-Chlorotoluene	11.023	91	592655	19.79 ug/L	98
97)	4-Chlorotoluene	11.065	91	685064	20.57 ug/L	97
98)	1,3,5-Trimethylbenzene	11.065	105	694247	20.89 ug/L	98
99)	tert-Butylbenzene	11.340	119	582565	20.28 ug/L	97
100)	1,2,4-Trimethylbenzene	11.376	105	720085	20.96 ug/L	98
101)	3,4-Dichlorobenzotrifl...	11.443	214	189084	17.62 ug/L	92
102)	sec-Butylbenzene	11.523	105	826113	21.01 ug/L	98
103)	p-Isopropyltoluene	11.644	119	731296	21.14 ug/L	97
104)	1,3-Dclbenz	11.602	146	447665	20.89 ug/L	97
105)	1,4-Dclbenz	11.681	146	465009	21.01 ug/L	95
106)	2,4-Dichlorobenzotrifl...	11.736	214	171292	17.26 ug/L	95
107)	2,5-Dichlorobenzotrifl...	11.772	214	197062	17.93 ug/L	95
108)	n-Butylbenzene	11.980	91	636940	20.79 ug/L	98
109)	1,2-Dclbenz	11.986	146	421219	21.10 ug/L	98
110)	1,2-Dibromo-3-chloropr...	12.614	157	27476	17.79 ug/L	88
111)	Trielution Dichlorotol...	12.730	125	1095500	62.05 ug/L	98
112)	1,3,5-Trichlorobenzene	12.784	180	292570	19.62 ug/L	98
113)	Coelution Dichlorotoluene	13.059	125	786062	42.86 ug/L	94
114)	1,2,4-Tcbenzene	13.266	180	261015	20.80 ug/L	97
115)	Hexachlorobt	13.406	225	102022	18.28 ug/L	98
116)	Naphthalen	13.461	128	510532	23.11 ug/L	99
117)	1,2,3-Tclbenzene	13.650	180	213035	22.77 ug/L	98
118)	2,4,5-Trichlorotoluene	14.235	159	152513	25.04 ug/L	99
119)	2,3,6-Trichlorotoluene	14.321	159	133994	25.79 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 18:46:13 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(2) Dichlorodifluoromethane (P)

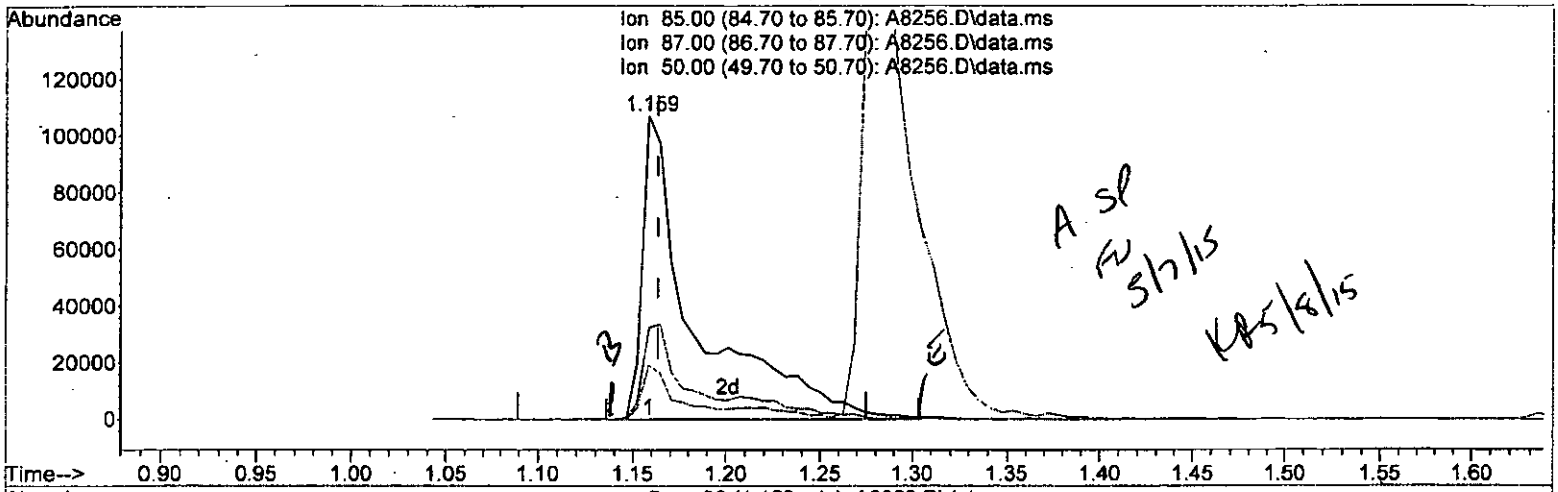
1.159min (-0.005) 15.93 ug/L

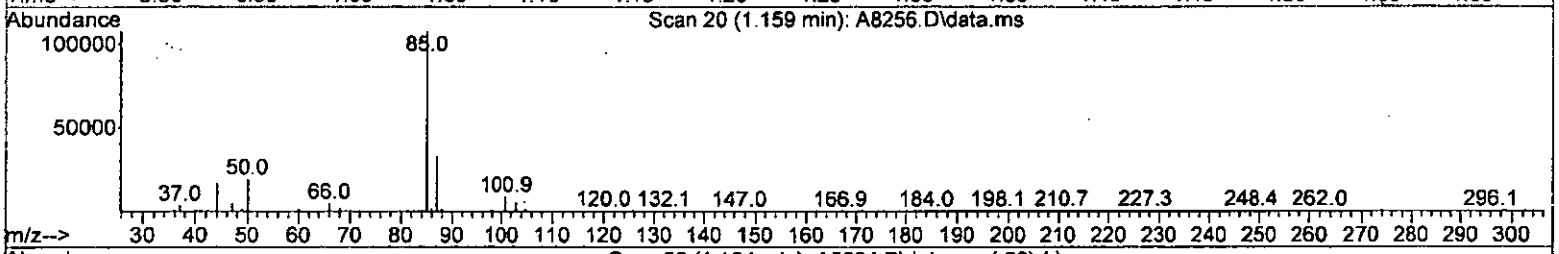
response 143545

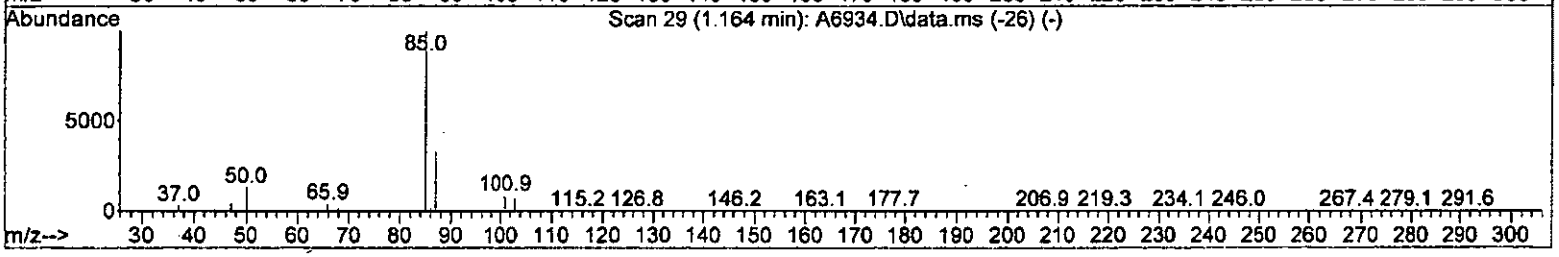
Ion	Exp%	Act%
85.00	100	100
87.00	31.50	30.22
50.00	15.00	17.84
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 18:46:13 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration







TIC: A8256.D\data.ms

(2) Dichlorodifluoromethane (P)

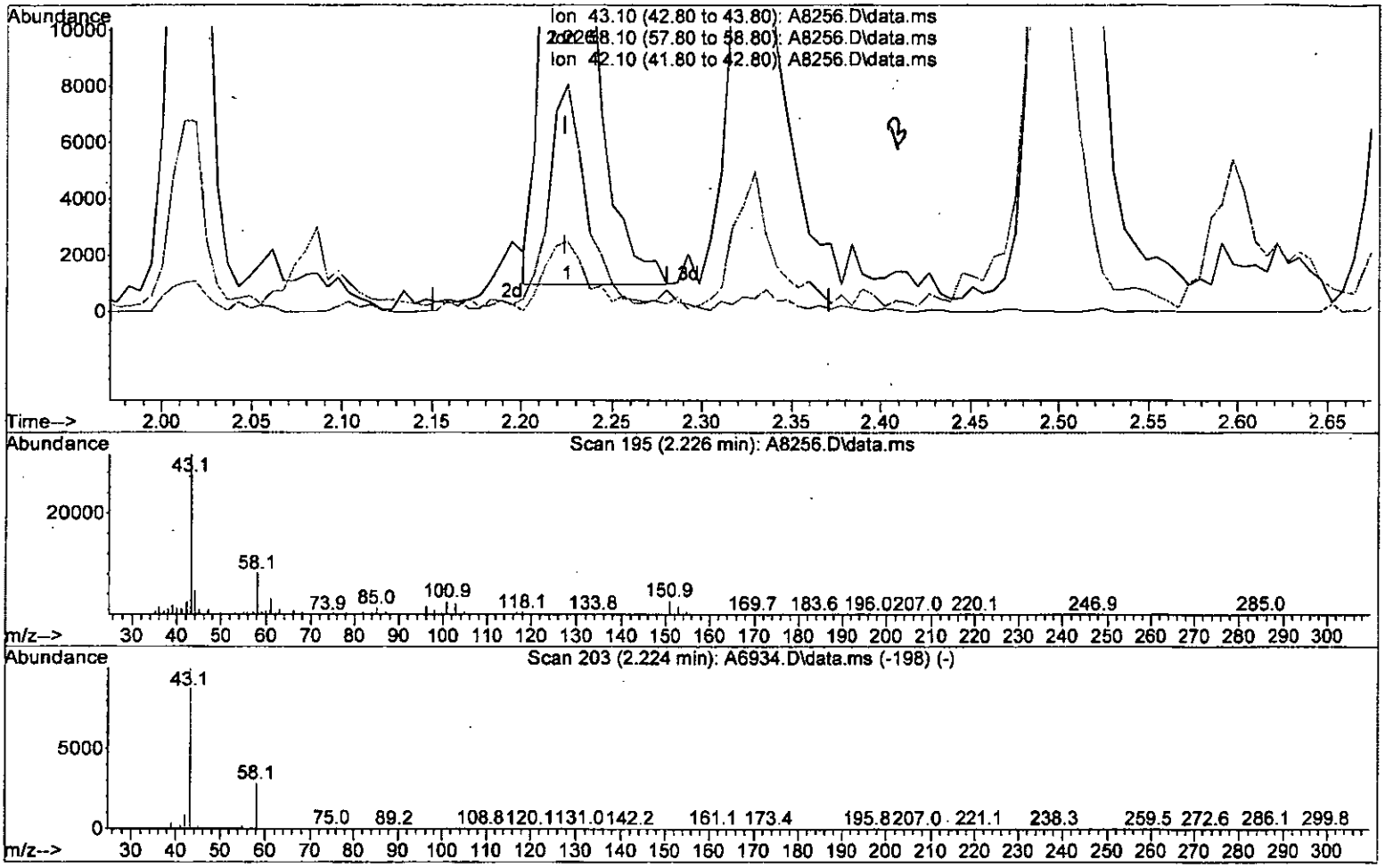
1.159min (-0.005) 23.48 ug/L m

response 211640

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	30.22
50.00	15.00	17.84
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 10:07:10 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(15) Acetone (P)

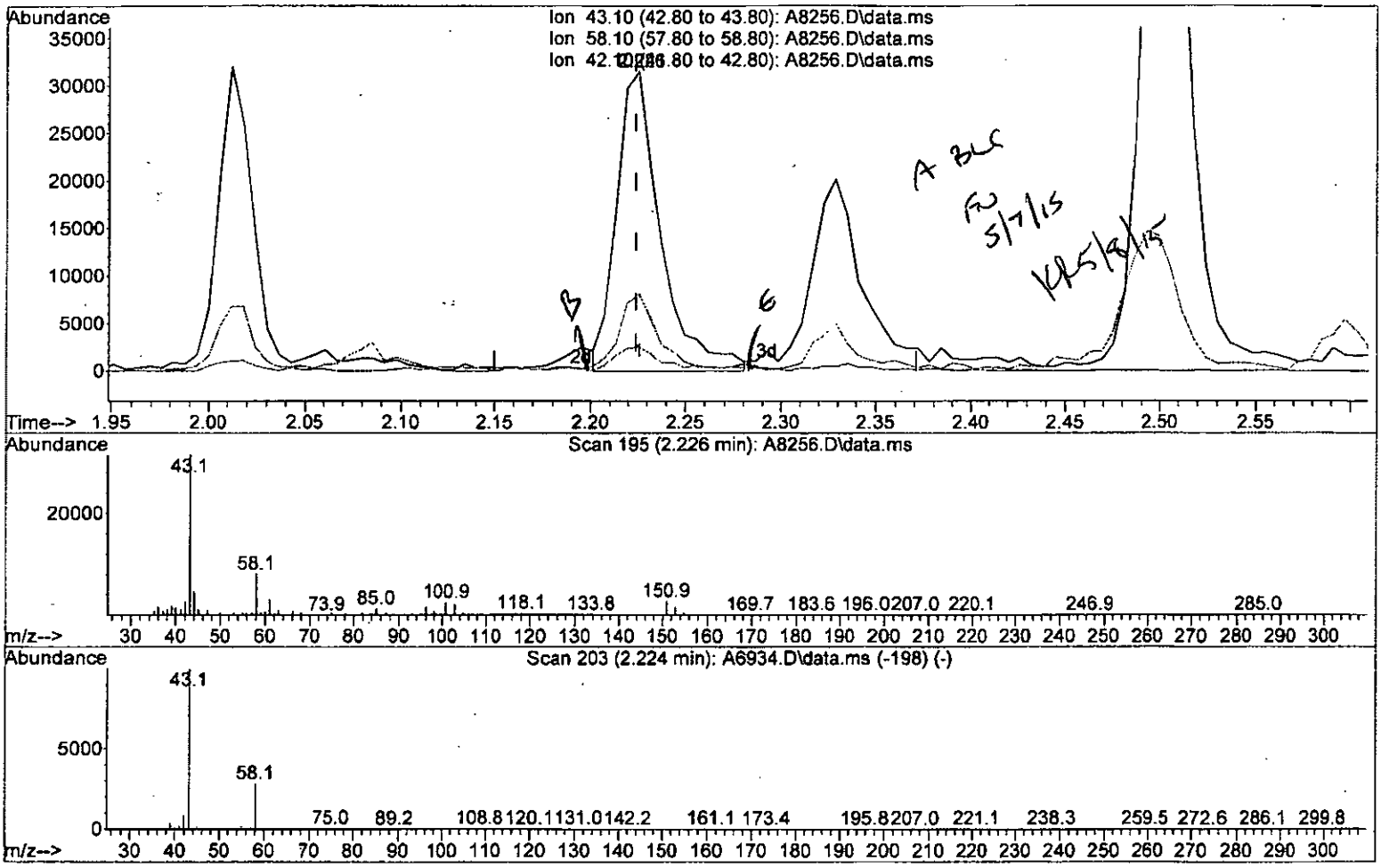
2.226min (+0.002) 20.78 ug/L

response 46524

Ion	Exp%	Act%
43.10	100	100
58.10	24.80	25.57
42.10	8.00	7.90
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 10:53:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(15) Acetone (P)

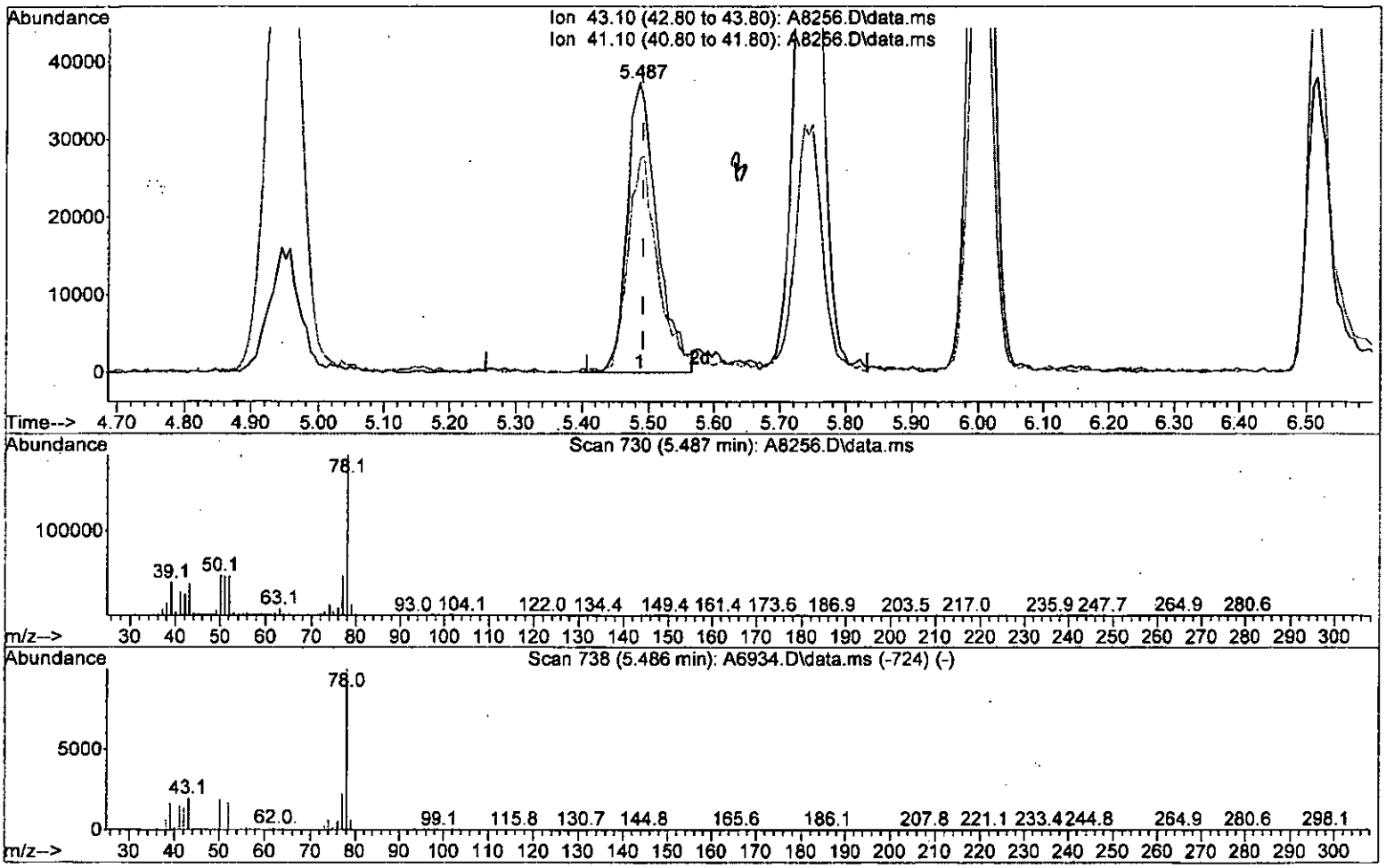
2.226min (+0.002) 22.84 ug/L m

response 51133

Ion	Exp%	Act%
43.10	100	100
58.10	24.80	25.57
42.10	8.00	7.90
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 09:37:20 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(49) Iso-Butyl Alcohol

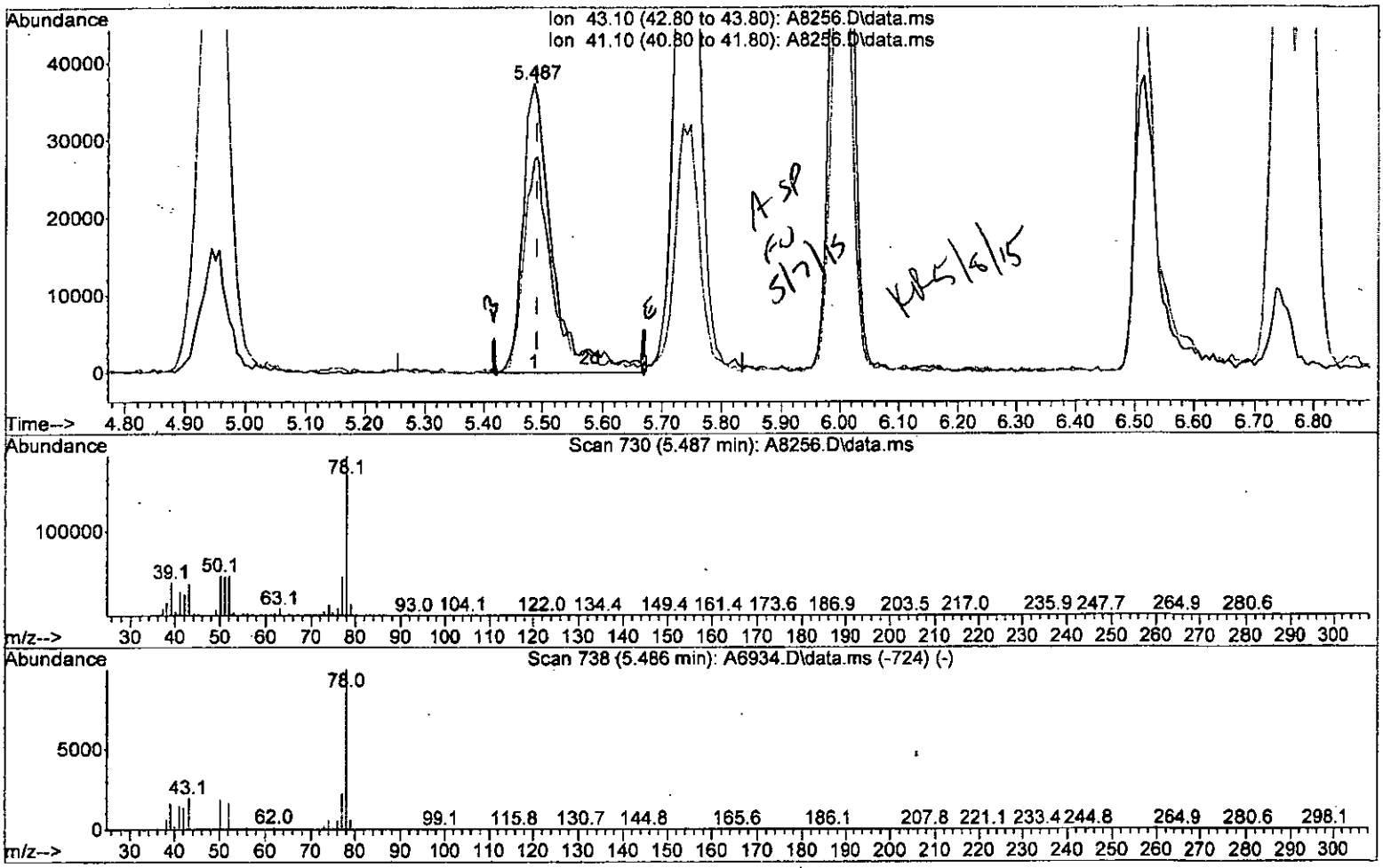
5.487min (-0.005) 362.84 ug/L

response 117055

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	73.44
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 09:37:20 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(49) Iso-Butyl Alcohol

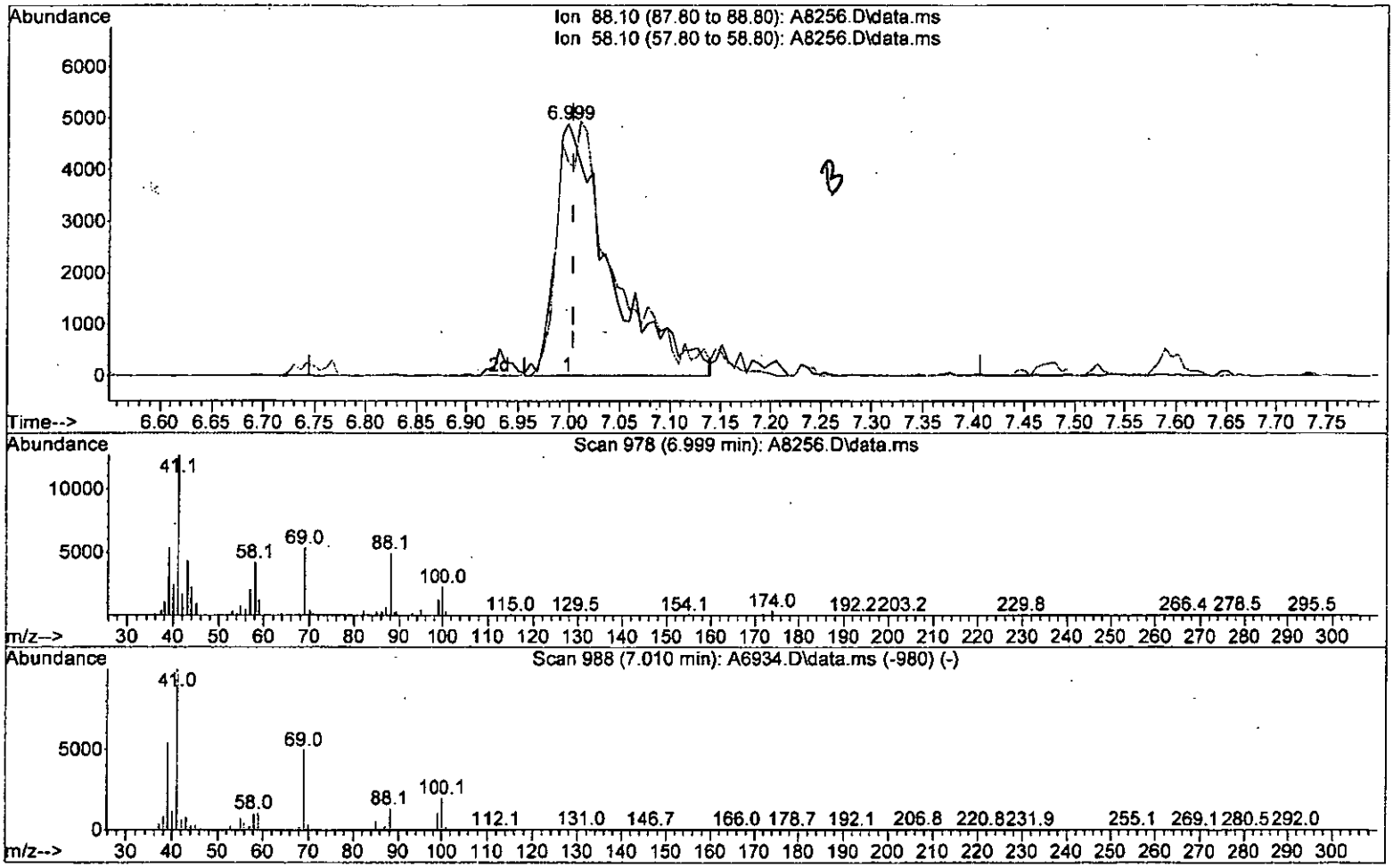
5.487min (-0.005) 398.15 ug/L m

response 128448

Ion	Exp%	Act%
43.10	100	100
41.10	80.50	73.44
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 18:46:13 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(57) 1,4-Dioxane

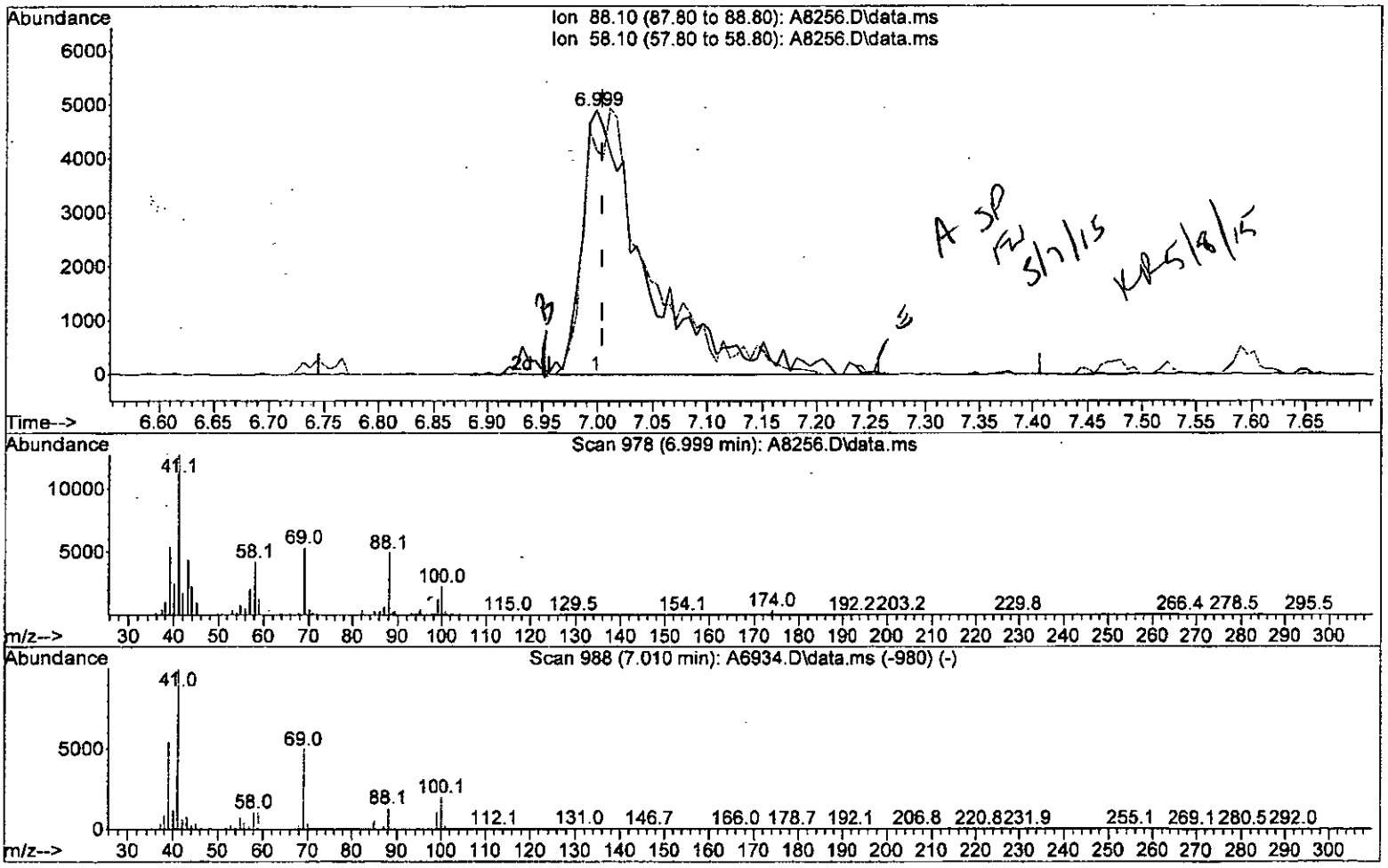
6.999min (-0.005) 300.43 ug/L

response 18558

Ion	Exp%	Act%
88.10	100	100
58.10	61.10	84.87#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 18:46:13 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8256.D\data.ms

(57) 1,4-Dioxane

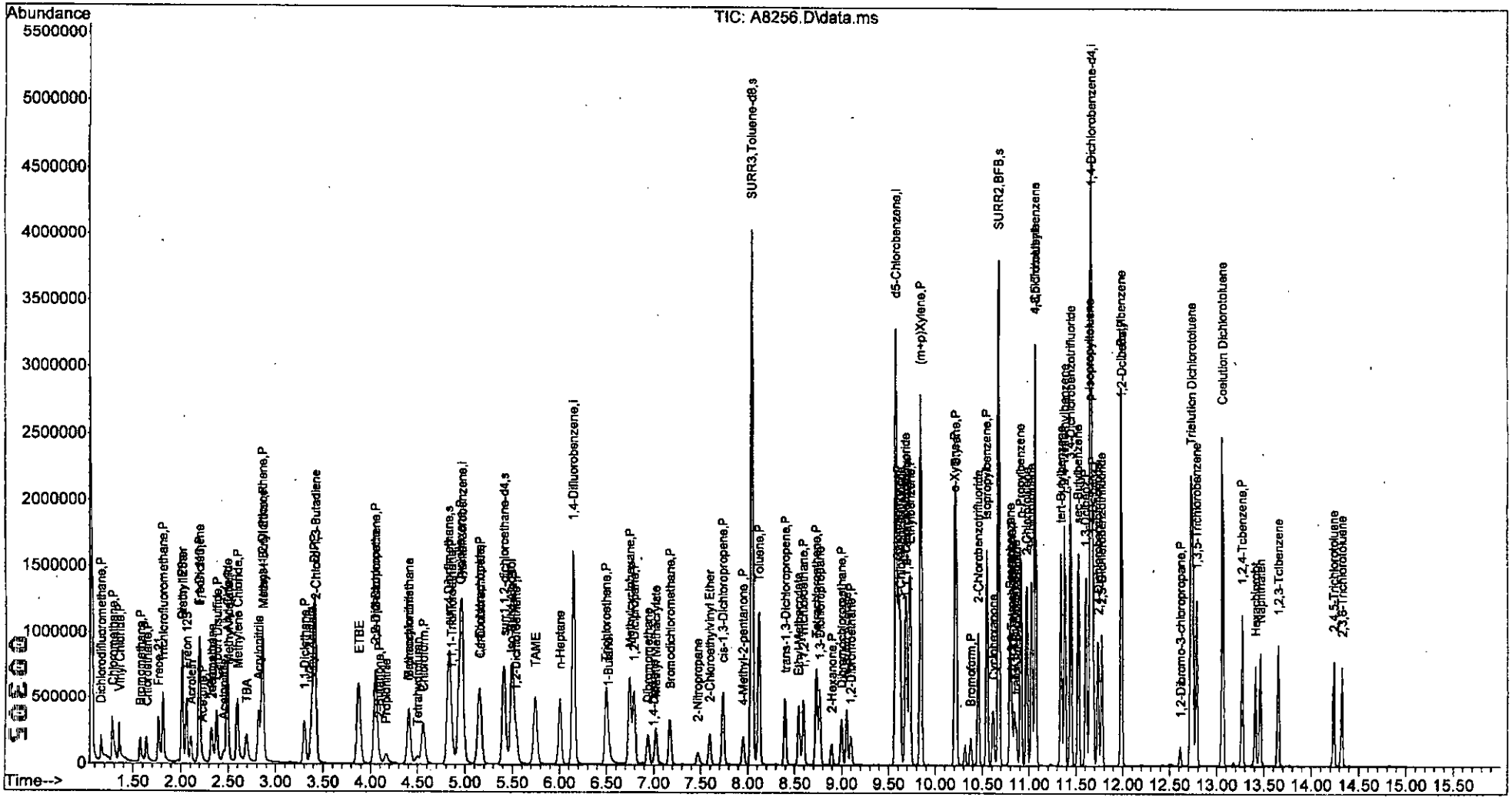
6.999min (-0.005) 322.20 ug/L m

response 19903

Ion	Exp%	Act%
88.10	100	100
58.10	61.10	84.87#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8256.D
Acq On : 6 May 2015 6:31 pm
Operator : F. NAEGLER
Sample : 20 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 07 10:53:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8257.D
Acq On : 6 May 2015 7:00 pm
Operator : F. NAEGLER
Sample : 50 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 09:38:34 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FN 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	960841	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1474627	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1395683	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	825795	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	445808	50.58	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 101.16%				
46) surr1,1,2-dichloroetha...	5.414	65	457316	49.84	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 99.68%				
64) SURR3,Toluene-d8	8.042	98	1724660	50.95	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 101.90%				
69) SURR2,BFB	10.675	95	707602	47.66	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 95.32%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	542694	59.49	ug/L		99
3) Chloromethane	1.281	50	922823	80.78	ug/L		98
4) Vinyl Chloride	1.348	62	668928	62.86	ug/L		99
5) Bromomethane	1.573	94	260661	70.97	ug/L		99
6) Chloroethane	1.634	64	315333	51.82	ug/L		93
7) Freon 21	1.762	67	843693	50.85	ug/L		97
8) Trichlorofluoromethane	1.811	101	648201	49.27	ug/L		100
9) Diethyl Ether	2.012	59	398346	57.81	ug/L	#	77
10) Freon 123a	2.012	67	502353	48.50	ug/L		92
11) Freon 123	2.061	83	536236m	46.82	ug/L		
12) Acrolein	2.110	56	367947	366.60	ug/L		99
13) 1,1-Diclethene	2.195	96	345280	46.96	ug/L	#	83
14) Freon 113	2.195	101	359534	44.48	ug/L		89
15) Acetone	2.226	43	134940	59.55	ug/L		100
16) 2-Propanol	2.329	45	520643	1254.29	ug/L		96
17) Iodomethane	2.317	142	551496	111.67	ug/L		100
18) Carbon Disulfide	2.378	76	1252938	46.49	ug/L		99
19) Acetonitrile	2.451	40	108935	345.89	ug/L		93
20) Allyl Chloride	2.488	76	234028	53.74	ug/L	#	3
21) Methyl Acetate	2.506	43	336714	66.45	ug/L		84
22) Methylene Chloride	2.597	84	411263	50.36	ug/L	#	64
23) TBA	2.695	59	621738	991.02	ug/L		72
24) Acrylonitrile	2.823	53	781656	336.00	ug/L		100
25) Methyl-t-Butyl Ether	2.866	73	987469	45.60	ug/L		87
26) trans-1,2-Dichloroethene	2.860	96	390743	46.74	ug/L	#	80
27) 1,1-Diclethane	3.305	63	889174	57.10	ug/L		97
28) Vinyl Acetate	3.378	86	69672	47.12	ug/L	#	70
29) DIPE	3.408	45	2563161	75.87	ug/L	#	73
30) 2-Chloro-1,3-Butadiene	3.414	53	1069646	59.21	ug/L		84
31) ETBE	3.878	59	1703085	59.61	ug/L		92
32) 2,2-Dichloropropane	4.055	77	568343	46.63	ug/L		96
33) cis-1,2-Dichloroethene	4.055	96	470846	50.57	ug/L		85
34) 2-Butanone	4.085	43	218256	70.25	ug/L		87
35) Propionitrile	4.164	54	280829	333.03	ug/L		98

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8257.D
Acq On : 6 May 2015 7:00 pm
Operator : F. NAEGLER
Sample : 50 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 09:38:34 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	294245	56.37	ug/L	#	65
37) Methacrylonitrile	4.408	67	130092	52.41	ug/L	#	39
38) Tetrahydrofuran	4.500	42	135387	66.30	ug/L		69
39) Chloroform	4.561	83	782743	53.24	ug/L		97
40) 1,1,1-Trichloroethane	4.853	97	668098	49.53	ug/L		95
42) Cyclohexane	4.945	41	701474	62.20	ug/L		89
44) Carbontetrachloride	5.152	121	181354	45.19	ug/L		88
45) 1,1-Dichloropropene	5.158	75	584610	49.17	ug/L		100
47) Benzene	5.499	78	1794490	49.97	ug/L		83
48) 1,2-Dichloroethane	5.542	62	637172	53.13	ug/L		93
49) Iso-Butyl Alcohol	5.493	43	350305	1079.92	ug/L		89
50) TAME	5.743	73	1114853	48.29	ug/L		84
51) n-Heptane	6.005	43	803009	64.77	ug/L		80
52) 1-Butanol	6.517	56	433223	2339.80	ug/L		79
53) Trichloroethene	6.493	130	502438	51.72	ug/L		96
54) Methylcyclohexane	6.743	55	755916	56.32	ug/L	#	78
55) 1,2-Diclpropane	6.792	63	526207	54.93	ug/L		99
56) Dibromomethane	6.938	93	229766	47.66	ug/L		95
57) 1,4-Dioxane	7.005	88	49467	796.43	ug/L	#	66
58) Methyl Methacrylate	7.023	69	218190	46.79	ug/L	#	55
59) Bromodichloromethane	7.170	83	568534	47.40	ug/L		99
60) 2-Nitropropane	7.468	41	119593	59.72	ug/L		95
61) 2-Chloroethylvinyl Ether	7.597	63	258798	56.67	ug/L		95
62) cis-1,3-Dichloropropene	7.737	75	670538	46.83	ug/L		94
63) 4-Methyl-2-pentanone	7.950	43	474591	64.73	ug/L		89
65) Toluene	8.121	91	1954321	51.20	ug/L		99
66) trans-1,3-Dichloropropene	8.395	75	558062	44.90	ug/L		98
67) Ethyl Methacrylate	8.541	69	440728	45.25	ug/L	#	47
68) 1,1,2-Trichloroethane	8.590	97	346286	48.73	ug/L		94
71) Tetrachloroethene	8.730	164	400072	51.68	ug/L		97
72) 2-Hexanone	8.895	43	317365	63.38	ug/L		88
73) 1,3-Dichloropropane	8.767	76	596500	54.35	ug/L	#	76
74) Dibromochloromethane	8.999	129	429176	49.26	ug/L		97
75) N-Butyl Acetate	9.054	43	801083	63.97	ug/L		92
76) 1,2-Dibromoethane	9.096	107	337254	50.85	ug/L		99
77) 3-Chlorobenzotrifluoride	9.627	180	766787	51.38	ug/L		100
78) Chlorobenzene	9.602	112	1374127	53.75	ug/L		99
79) 4-Chlorobenzotrifluoride	9.681	180	686990	50.60	ug/L		95
80) 1,1,1,2-Tetrachloroethane	9.694	131	477793	49.83	ug/L		98
81) Ethylbenzene	9.730	106	715996	52.60	ug/L		97
82) (m+p)Xylene	9.846	106	1794578	109.12	ug/L		88
83) o-Xylene	10.206	106	869537	52.82	ug/L		97
84) Styrene	10.224	104	1535906	54.23	ug/L		94
85) Bromoform	10.376	173	240520	44.72	ug/L		97
86) 2-Chlorobenzotrifluoride	10.456	180	759265	51.82	ug/L		92
87) Isopropylbenzene	10.547	105	2275630	56.44	ug/L		99
88) Cyclohexanone	10.614	55	424581	792.53	ug/L		94
89) trans-1,4-Dichloro-2-B...	10.864	53	147666	53.76	ug/L		82
91) 1,1,2,2-Tetrachloroethane	10.815	83	429830	53.49	ug/L		97
92) Bromobenzene	10.797	156	577687	51.24	ug/L		94
93) 1,2,3-Trichloropropane	10.840	110	115926	51.90	ug/L	#	86

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8257.D
Acq On : 6 May 2015 7:00 pm
Operator : F. NAEGLER
Sample : 50 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 8 Sample Multiplier: 1

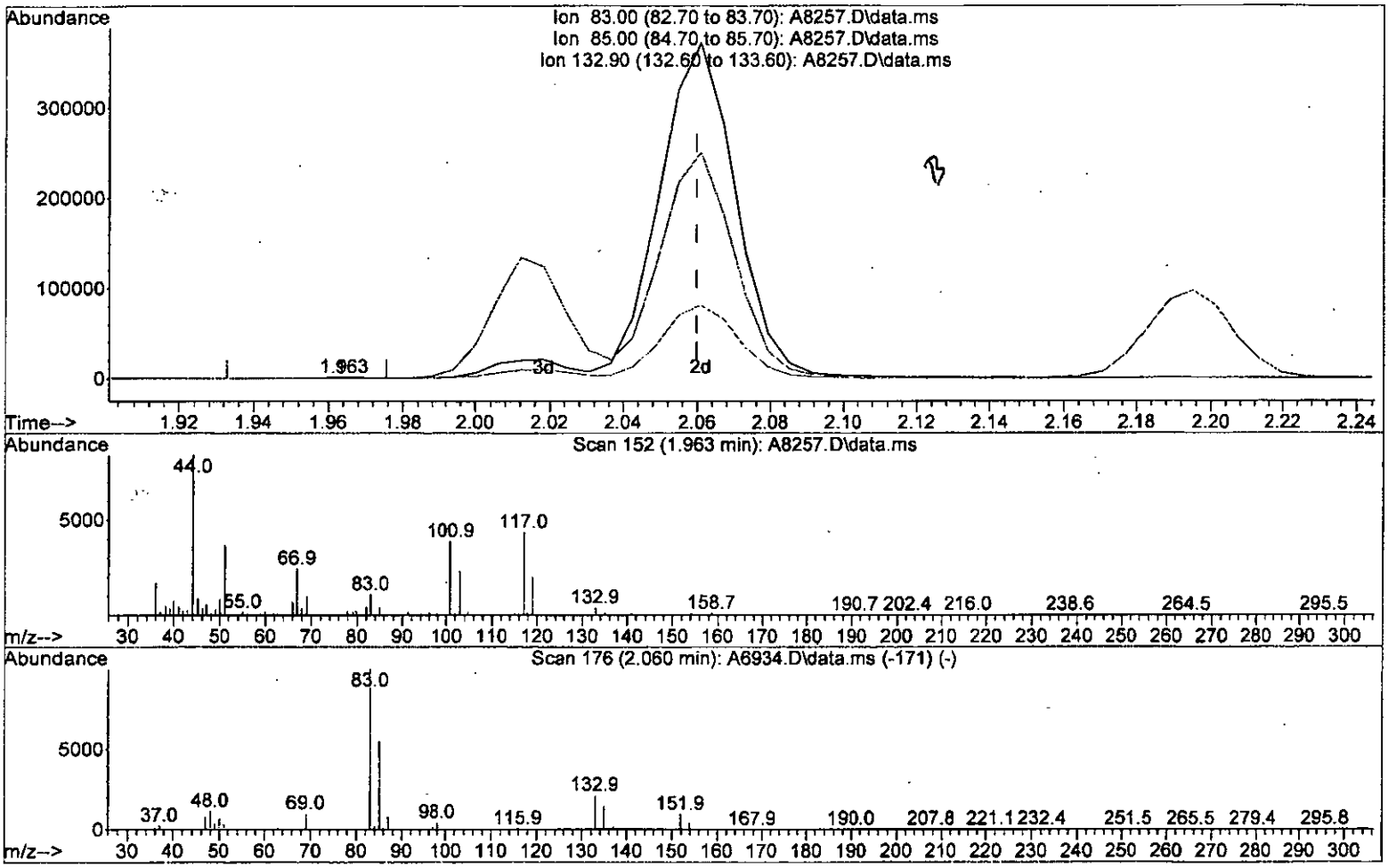
Quant Time: May 07 09:38:34 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
94)	n-Propylbenzene	10.907	91	2642021	57.60 ug/L	99
95)	2-Chlorotoluene	10.974	91	1572421	54.11 ug/L	97
96)	3-Chlorotoluene	11.023	91	1718062	55.36 ug/L	100
97)	4-Chlorotoluene	11.065	91	1917038	55.54 ug/L	98
98)	1,3,5-Trimethylbenzene	11.065	105	1969003	57.17 ug/L	98
99)	tert-Butylbenzene	11.340	119	1665603	55.95 ug/L	98
100)	1,2,4-Trimethylbenzene	11.376	105	1996535	56.07 ug/L	94
101)	3,4-Dichlorobenzotrifl...	11.443	214	569358	51.19 ug/L	99
102)	sec-Butylbenzene	11.523	105	2338709	57.40 ug/L	98
103)	p-Isopropyltoluene	11.645	119	2078708	57.99 ug/L	98
104)	1,3-Dclbenz	11.602	146	1227454	55.26 ug/L	98
105)	1,4-Dclbenz	11.681	146	1255049	54.71 ug/L	96
106)	2,4-Dichlorobenzotrifl...	11.736	214	521190	50.68 ug/L	97
107)	2,5-Dichlorobenzotrifl...	11.773	214	587231	51.56 ug/L	98
108)	n-Butylbenzene	11.980	91	1830273	57.63 ug/L	98
109)	1,2-Dclbenz	11.986	146	1130157	54.63 ug/L	99
110)	1,2-Dibromo-3-chloropr...	12.614	157	73246	45.75 ug/L	90
111)	Trielution Dichlorotol...	12.730	125	3221540	176.06 ug/L	97
112)	1,3,5-Trichlorobenzene	12.785	180	858028	55.52 ug/L	97
113)	Coelution Dichlorotoluene	13.059	125	2303453	121.19 ug/L	94
114)	1,2,4-Tcbenzene	13.266	180	730421	56.15 ug/L	95
115)	Hexachlorobt	13.406	225	291639	50.42 ug/L	97
116)	Naphthalen	13.461	128	1407968	61.51 ug/L	97
117)	1,2,3-Tclbenzene	13.650	180	604167	62.30 ug/L	99
118)	2,4,5-Trichlorotoluene	14.235	159	477102	75.60 ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	397177	73.76 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8257.D
Acq On : 6 May 2015 7:00 pm
Operator : F. NAEGLER
Sample : 50 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 19:16:05 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8257.D\data.ms

(11) Freon 123

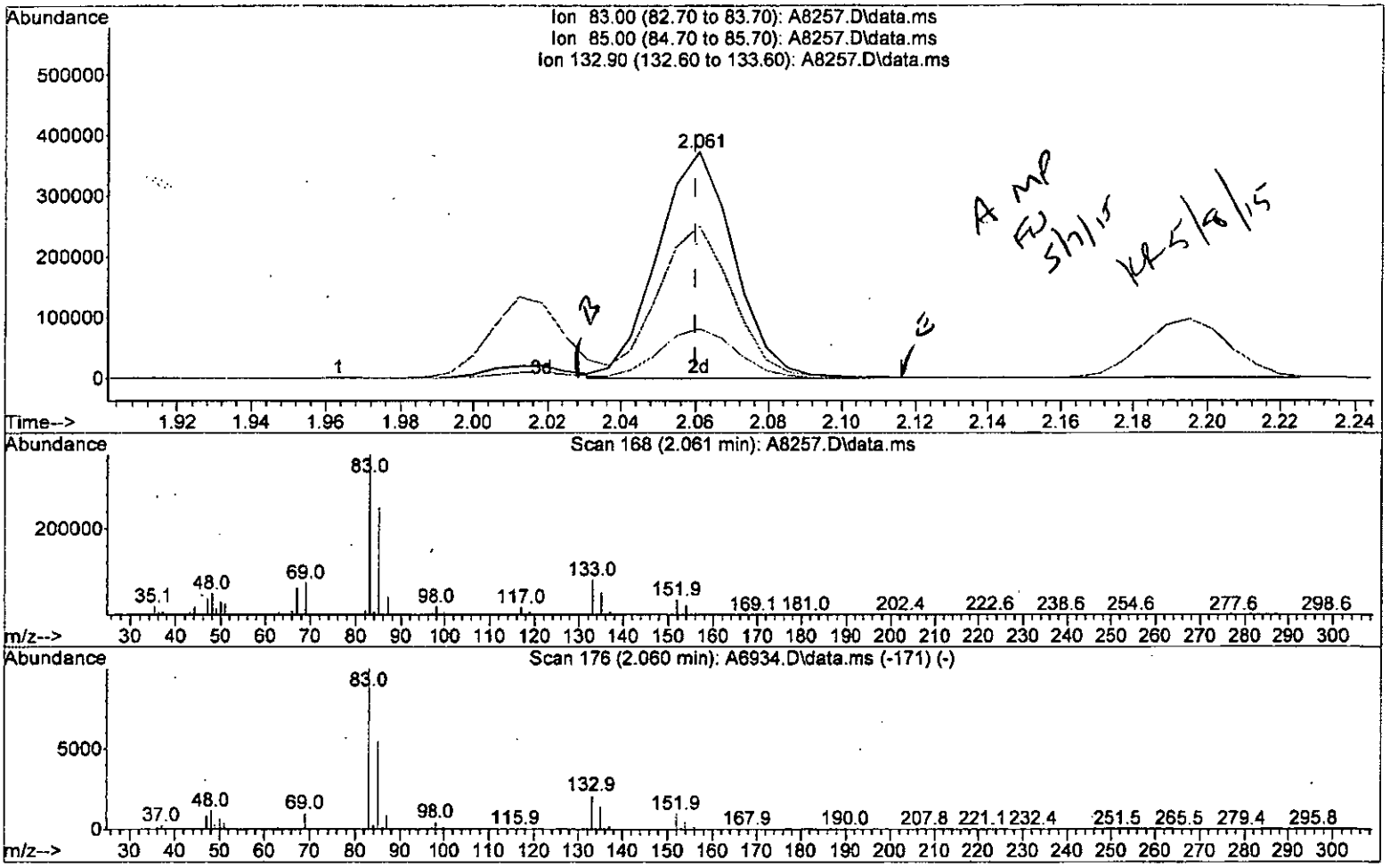
1.963min (-0.096) 0.07 ug/L

response 838

Ion	Exp%	Act%
83.00	100	100
85.00	47.30	35.85
132.90	19.90	35.75
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8257.D
Acq On : 6 May 2015 7:00 pm
Operator : F. NAEGLER
Sample : 50 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 19:16:05 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



TIC: A8257.D\data.ms

(11) Freon 123

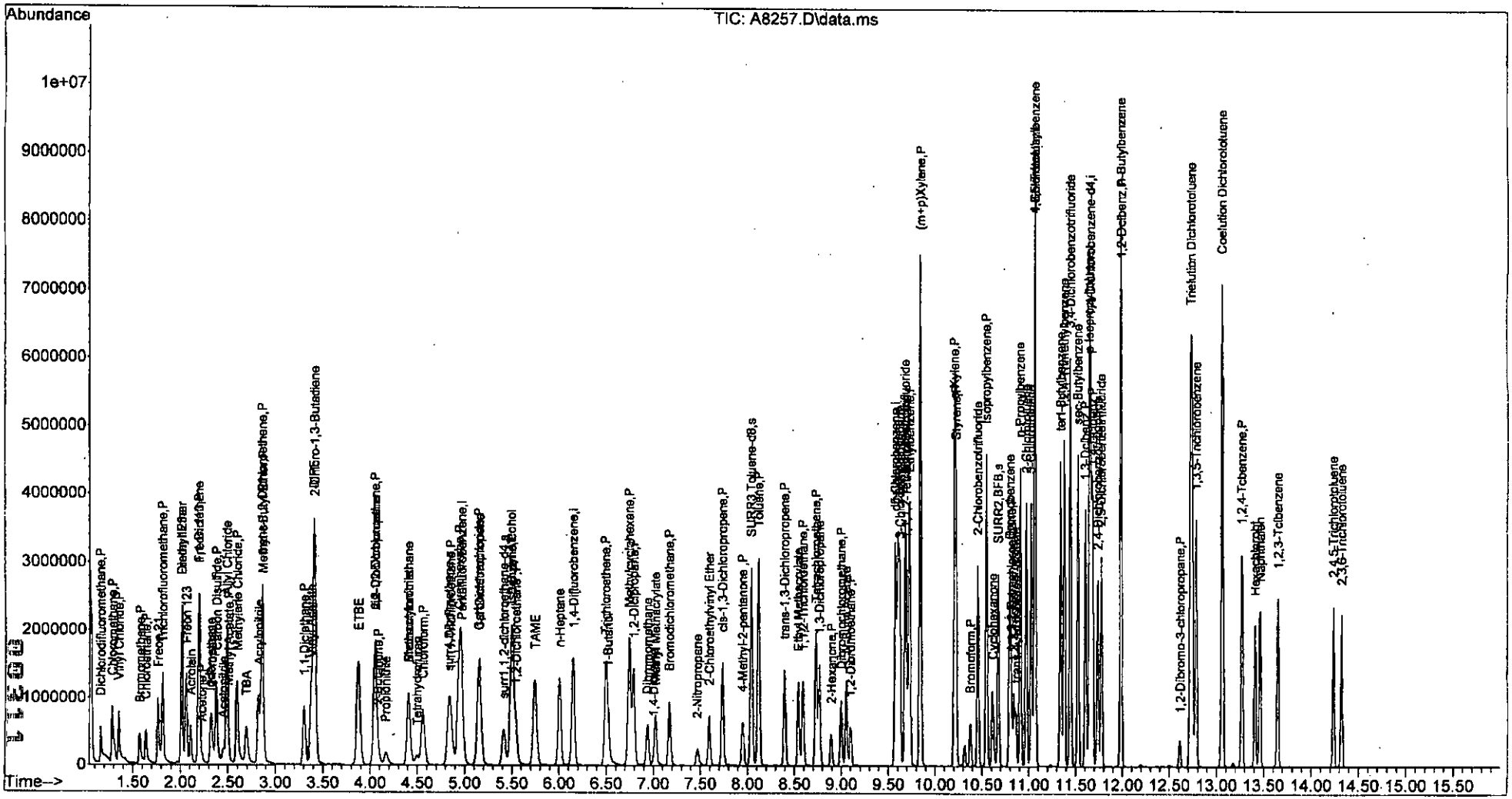
2.061min (+0.001) 46.82 ug/L m

response 536236

Ion	Exp%	Act%
83.00	100	100
85.00	47.30	67.36#
132.90	19.90	21.85
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8257.D
Acq On : 6 May 2015 7:00 pm
Operator : F. NAEGLER
Sample : 50 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 07 09:38:34 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8258.D
Acq On : 6 May 2015 7:30 pm
Operator : F. NAEGLER
Sample : 100 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 19:46:09 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FJ 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	1002892	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1529104	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1431577	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	874920	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	935871	102.40	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 204.80%#				
46) surr1,1,2-dichloroetha...	5.414	65	962503	101.16	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 202.32%#				
64) SURR3,Toluene-d8	8.042	98	3543305	100.95	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 201.90%#				
69) SURR2,BFB	10.675	95	1433466	93.11	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 186.22%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	1170997	122.99	ug/L		99
3) Chloromethane	1.281	50	2027080	170.01	ug/L		97
4) Vinyl Chloride	1.348	62	1446596	130.24	ug/L		98
5) Bromomethane	1.567	94	571894	149.18	ug/L		98
6) Chloroethane	1.634	64	688276	108.36	ug/L		94
7) Freon 21	1.762	67	1812854	104.68	ug/L		99
8) Trichlorofluoromethane	1.811	101	1322174	96.29	ug/L		100
9) Diethyl Ether	2.012	59	855640	118.97	ug/L	#	76
10) Freon 123a	2.012	67	1075780	99.51	ug/L		94
11) Freon 123	2.061	83	1160443	97.07	ug/L		78
12) Acrolein	2.110	56	798990	762.68	ug/L		100
13) 1,1-Diclethene	2.195	96	760929	99.15	ug/L	#	81
14) Freon 113	2.195	101	785504	93.11	ug/L		93
15) Acetone	2.226	43	299935	126.82	ug/L		97
16) 2-Propanol	2.329	45	1218176	2811.67	ug/L		96
17) Iodomethane	2.317	142	1151858	223.46	ug/L		98
18) Carbon Disulfide	2.378	76	2616485	93.01	ug/L		99
19) Acetonitrile	2.451	40	241016	733.19	ug/L		92
20) Allyl Chloride	2.488	76	515430	113.39	ug/L	#	1
21) Methyl Acetate	2.506	43	760945	143.88	ug/L		85
22) Methylene Chloride	2.598	84	878575	103.07	ug/L	#	64
23) TBA	2.695	59	1510682	2306.99	ug/L		75
24) Acrylonitrile	2.823	53	1755457	722.95	ug/L		100
25) Methyl-t-Butyl Ether	2.866	73	2211995	97.86	ug/L		87
26) trans-1,2-Dichloroethene	2.860	96	858528	98.39	ug/L	#	79
27) 1,1-Diclethane	3.305	63	1947500	119.82	ug/L		97
28) Vinyl Acetate	3.378	86	157131	101.81	ug/L	#	69
29) DIPE	3.408	45	5384516	152.70	ug/L	#	74
30) 2-Chloro-1,3-Butadiene	3.414	53	2243556	118.97	ug/L		87
31) ETBE	3.878	59	3678280	123.34	ug/L		92
32) 2,2-Dichloropropane	4.049	77	1276309	100.33	ug/L		98
33) cis-1,2-Dichloroethene	4.055	96	1044452	107.47	ug/L		88
34) 2-Butanone	4.091	43	470311	145.04	ug/L		87
35) Propionitrile	4.170	54	639758	726.87	ug/L		95

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8258.D
Acq On : 6 May 2015 7:30 pm
Operator : F. NAEGLER
Sample : 100 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 19:46:09 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	624266	114.59	ug/L	#	66
37) Methacrylonitrile	4.408	67	288180	111.23	ug/L	#	30
38) Tetrahydrofuran	4.500	42	307744	144.39	ug/L		74
39) Chloroform	4.561	83	1706919	111.22	ug/L		95
40) 1,1,1-Trichloroethane	4.853	97	1502035	106.68	ug/L		96
42) Cyclohexane	4.945	41	1541295	131.80	ug/L		90
44) Carbontetrachloride	5.152	121	411607	98.92	ug/L		87
45) 1,1-Dichloropropene	5.158	75	1291649	104.76	ug/L		98
47) Benzene	5.499	78	3974497	106.74	ug/L		83
48) 1,2-Dichloroethane	5.542	62	1382701	111.19	ug/L		92
49) Iso-Butyl Alcohol	5.493	43	896275	2664.59	ug/L		91
50) TAME	5.743	73	2417372	100.98	ug/L		83
51) n-Heptane	6.005	43	1779583	138.42	ug/L		80
52) 1-Butanol	6.518	56	1108884	5775.61	ug/L		85
53) Trichloroethene	6.499	130	1105475	109.74	ug/L		94
54) Methylcyclohexane	6.749	55	1705691	122.56	ug/L	#	78
55) 1,2-Diclpropane	6.792	63	1166706	117.46	ug/L		98
56) Dibromomethane	6.938	93	504545	100.93	ug/L		96
57) 1,4-Dioxane	6.999	88	125411	1947.20	ug/L	#	66
58) Methyl Methacrylate	7.024	69	492604	101.88	ug/L	#	53
59) Bromodichloromethane	7.176	83	1275926	102.58	ug/L		99
60) 2-Nitropropane	7.469	41	301188	145.04	ug/L		99
61) 2-Chloroethylvinyl Ether	7.597	63	565027	119.32	ug/L		92
62) cis-1,3-Dichloropropene	7.737	75	1505505	101.39	ug/L		94
63) 4-Methyl-2-pentanone	7.950	43	1051453	138.30	ug/L		89
65) Toluene	8.121	91	4325845	109.29	ug/L		99
66) trans-1,3-Dichloropropene	8.395	75	1293549	100.37	ug/L		99
67) Ethyl Methacrylate	8.542	69	1043549	103.32	ug/L	#	51
68) 1,1,2-Trichloroethane	8.590	97	765806	103.92	ug/L		95
71) Tetrachloroethene	8.731	164	883803	111.29	ug/L		97
72) 2-Hexanone	8.895	43	723072	140.78	ug/L		88
73) 1,3-Dichloropropane	8.767	76	1334784	118.57	ug/L	#	79
74) Dibromochloromethane	8.999	129	980972	109.77	ug/L		98
75) N-Butyl Acetate	9.054	43	1917720	149.30	ug/L		90
76) 1,2-Dibromoethane	9.096	107	763441	112.22	ug/L		97
77) 3-Chlorobenzotrifluoride	9.627	180	1632800	106.66	ug/L		99
78) Chlorobenzene	9.608	112	3021316	115.21	ug/L		99
79) 4-Chlorobenzotrifluoride	9.682	180	1470865	105.63	ug/L		95
80) 1,1,1,2-Tetrachloroethane	9.694	131	1098891	111.72	ug/L		98
81) Ethylbenzene	9.730	106	1602347	114.77	ug/L		91
82) (m+p)Xylene	9.846	106	3953656	234.38	ug/L		94
83) o-Xylene	10.206	106	1909357	113.07	ug/L		97
84) Styrene	10.224	104	3440328	118.43	ug/L		95
85) Bromoform	10.377	173	566565	102.69	ug/L		99
86) 2-Chlorobenzotrifluoride	10.456	180	1583710	105.38	ug/L		90
87) Isopropylbenzene	10.547	105	4877256	117.94	ug/L		99
88) Cyclohexanone	10.614	55	1078478	1962.63	ug/L		90
89) trans-1,4-Dichloro-2-B...	10.864	53	348904	123.85	ug/L		85
91) 1,1,2,2-Tetrachloroethane	10.815	83	960045	112.77	ug/L		100
92) Bromobenzene	10.797	156	1278255	107.01	ug/L		96
93) 1,2,3-Trichloropropane	10.840	110	258000	109.02	ug/L		90

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8258.D
Acq On : 6 May 2015 7:30 pm
Operator : F. NAEGLER
Sample : 100 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 9 Sample Multiplier: 1

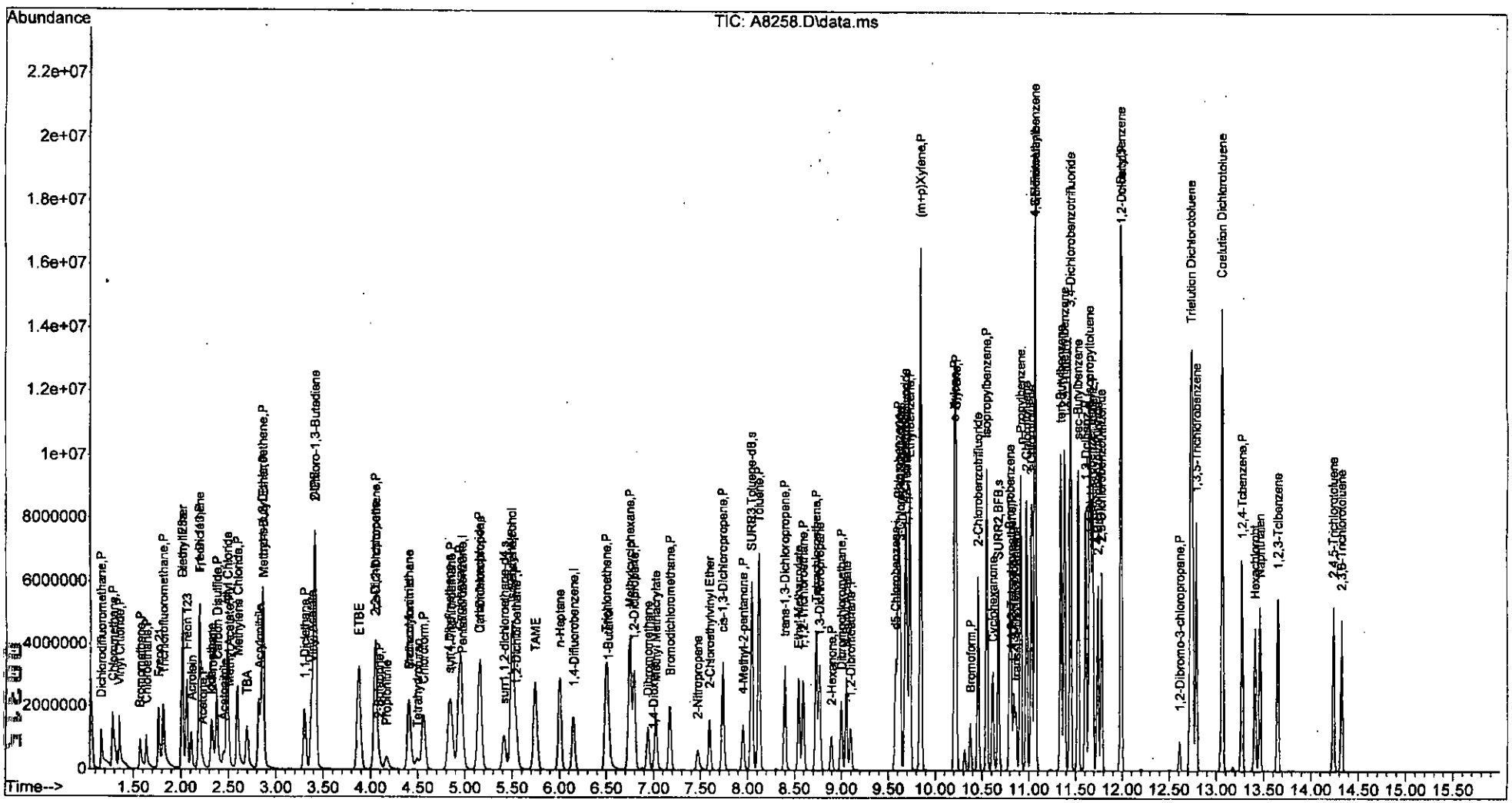
Quant Time: May 06 19:46:09 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	n-Propylbenzene	10.913	91	5599590	115.23	ug/L	96
95)	2-Chlorotoluene	10.974	91	3464812	112.54	ug/L	96
96)	3-Chlorotoluene	11.029	91	3557754	108.20	ug/L	98
97)	4-Chlorotoluene	11.065	91	4188130	114.52	ug/L	97
98)	1,3,5-Trimethylbenzene	11.065	105	4327793	118.61	ug/L	96
99)	tert-Butylbenzene	11.340	119	3682876	116.76	ug/L	96
100)	1,2,4-Trimethylbenzene	11.376	105	4345017	115.16	ug/L	93
101)	3,4-Dichlorobenzotrifl...	11.443	214	1215644	103.16	ug/L	99
102)	sec-Butylbenzene	11.523	105	5068885	117.42	ug/L	97
103)	p-Isopropyltoluene	11.645	119	4566663	120.23	ug/L	98
104)	1,3-Dclbenz	11.608	146	2703057	114.87	ug/L	96
105)	1,4-Dclbenz	11.681	146	2802374	115.31	ug/L	98
106)	2,4-Dichlorobenzotrifl...	11.736	214	1102461	101.19	ug/L	94
107)	2,5-Dichlorobenzotrifl...	11.773	214	1260535	104.45	ug/L	99
108)	n-Butylbenzene	11.980	91	4027174	119.69	ug/L	97
109)	1,2-Dclbenz	11.986	146	2515648	114.78	ug/L	99
110)	1,2-Dibromo-3-chloropr...	12.608	157	176229	103.89	ug/L	96
111)	Trielution Dichlorotol...	12.730	125	6697083	345.45	ug/L	97
112)	1,3,5-Trichlorobenzene	12.785	180	1796515	109.72	ug/L	97
113)	Coelution Dichlorotoluene	13.059	125	4727247	234.75	ug/L	97
114)	1,2,4-Tcbenzene	13.272	180	1616454	117.29	ug/L	99
115)	Hexachlorobt	13.406	225	639148	104.30	ug/L	96
116)	Naphthalen	13.461	128	3186215	131.37	ug/L	98
117)	1,2,3-Tclbenzene	13.650	180	1353828	131.76	ug/L	98
118)	2,4,5-Trichlorotoluene	14.236	159	1031149	154.21	ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	874896	153.36	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8258.D
Acq On : 6 May 2015 7:30 pm
Operator : F. NAEGLER
Sample : 100 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 19:46:09 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8259.D
Acq On : 6 May 2015 8:01 pm
Operator : F. NAEGLER
Sample : 150 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 20:16:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FW 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	1009160	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1527917	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1452484	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	904711	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	1200111	131.41	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 262.82%#				
46) surr1,1,2-dichloroetha...	5.414	65	1231936	129.58	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 259.16%#				
64) SURR3,Toluene-d8	8.048	98	4576583	130.50	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 261.00%#				
69) SURR2,BFB	10.675	95	1855663	120.62	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 241.24%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	1786447	186.46	ug/L		98
3) Chloromethane	1.281	50	3177944	264.87	ug/L		99
4) Vinyl Chloride	1.348	62	2252705	201.56	ug/L		98
5) Bromomethane	1.567	94	908503	235.52	ug/L		97
6) Chloroethane	1.634	64	1084321	169.64	ug/L		94
7) Freon 21	1.762	67	2925102	167.86	ug/L		99
8) Trichlorofluoromethane	1.811	101	2034067	147.22	ug/L		99
9) Diethyl Ether	2.012	59	1315009	181.71	ug/L	#	78
10) Freon 123a	2.012	67	1719301	158.05	ug/L		94
11) Freon 123	2.061	83	1895604	157.58	ug/L		81
12) Acrolein	2.104	56	1279238	1213.52	ug/L		97
13) 1,1-Diclethene	2.195	96	1203928	155.90	ug/L	#	83
14) Freon 113	2.195	101	1226763	144.51	ug/L		95
15) Acetone	2.226	43	468691	196.94	ug/L		99
16) 2-Propanol	2.329	45	1858429	4262.79	ug/L		99
17) Iodomethane	2.317	142	1831214	353.05	ug/L		100
18) Carbon Disulfide	2.378	76	4325552	152.81	ug/L		100
19) Acetonitrile	2.451	40	374528	1132.26	ug/L		91
20) Allyl Chloride	2.488	76	753727	164.79	ug/L	#	8
21) Methyl Acetate	2.500	43	1176117	221.00	ug/L		84
22) Methylene Chloride	2.597	84	1363973	159.02	ug/L	#	65
23) TBA	2.695	59	2293599	3480.84	ug/L		79
24) Acrylonitrile	2.823	53	2624337	1074.07	ug/L		100
25) Methyl-t-Butyl Ether	2.866	73	3362430	147.84	ug/L		86
26) trans-1,2-Dichloroethene	2.860	96	1306606	148.81	ug/L	#	83
27) 1,1-Diclethane	3.305	63	2820338	172.44	ug/L		97
28) Vinyl Acetate	3.372	86	237793	153.11	ug/L	#	60
29) DIPE	3.408	45	8215307	231.53	ug/L	#	76
30) 2-Chloro-1,3-Butadiene	3.414	53	3589769	189.18	ug/L		85
31) ETBE	3.878	59	5804457	193.42	ug/L		92
32) 2,2-Dichloropropane	4.055	77	1968821	153.81	ug/L		98
33) cis-1,2-Dichloroethene	4.055	96	1584403	162.01	ug/L	#	84
34) 2-Butanone	4.085	43	725587	222.37	ug/L		88
35) Propionitrile	4.164	54	960863	1084.92	ug/L		98

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8259.D
Acq On : 6 May 2015 8:01 pm
Operator : F. NAEGLER
Sample : 150 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 20:16:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	Bromochloromethane	4.414	130	936903	170.90	ug/L	#	68
37)	Methacrylonitrile	4.408	67	439761	168.69	ug/L	#	36
38)	Tetrahydrofuran	4.493	42	454854	212.08	ug/L		78
39)	Chloroform	4.561	83	2619580	169.63	ug/L		96
40)	1,1,1-Trichloroethane	4.853	97	2323370	163.99	ug/L		96
42)	Cyclohexane	4.951	41	2444273	209.18	ug/L		89
44)	Carbontetrachloride	5.152	121	644486	155.00	ug/L		89
45)	1,1-Dichloropropene	5.158	75	1996064	162.01	ug/L		97
47)	Benzene	5.505	78	6084111	163.52	ug/L		82
48)	1,2-Dichloroethane	5.542	62	2074189	166.93	ug/L		92
49)	Iso-Butyl Alcohol	5.493	43	1389052	4132.81	ug/L		91
50)	TAME	5.743	73	3838891	160.49	ug/L		83
51)	n-Heptane	6.005	43	2662886	207.29	ug/L		80
52)	1-Butanol	6.524	56	1763443	9192.02	ug/L		81
53)	Trichloroethene	6.499	130	1697630	168.66	ug/L		96
54)	Methylcyclohexane	6.749	55	2689190	193.37	ug/L	#	80
55)	1,2-Diclpropane	6.792	63	1792178	180.56	ug/L		95
56)	Dibromomethane	6.938	93	769454	154.05	ug/L		96
57)	1,4-Dioxane	7.005	88	183384	2849.53	ug/L	#	55
58)	Methyl Methacrylate	7.023	69	758886	157.07	ug/L	#	53
59)	Bromodichloromethane	7.176	83	1976932	159.06	ug/L		99
60)	2-Nitropropane	7.468	41	486615	234.52	ug/L		96
61)	2-Chloroethylvinyl Ether	7.596	63	907094	191.70	ug/L		90
62)	cis-1,3-Dichloropropene	7.737	75	2345878	158.11	ug/L		94
63)	4-Methyl-2-pentanone	7.950	43	1656330	218.04	ug/L		89
65)	Toluene	8.121	91	6525197	164.99	ug/L		96
66)	trans-1,3-Dichloropropene	8.395	75	2001751	155.45	ug/L		97
67)	Ethyl Methacrylate	8.548	69	1594019	157.95	ug/L	#	60
68)	1,1,2-Trichloroethane	8.590	97	1175655	159.67	ug/L		97
71)	Tetrachloroethene	8.730	164	1387175	172.17	ug/L		98
72)	2-Hexanone	8.895	43	1129957	216.83	ug/L		91
73)	1,3-Dichloropropane	8.767	76	2033498	178.04	ug/L	#	76
74)	Dibromochloromethane	8.999	129	1534485	169.23	ug/L		99
75)	N-Butyl Acetate	9.054	43	3007270	230.75	ug/L		92
76)	1,2-Dibromoethane	9.102	107	1153793	167.15	ug/L		99
77)	3-Chlorobenzotrifluoride	9.627	180	2596354	167.15	ug/L		98
78)	Chlorobenzene	9.608	112	4553857	171.15	ug/L		99
79)	4-Chlorobenzotrifluoride	9.681	180	2333461	165.16	ug/L		94
80)	1,1,1,2-Tetrachloroethane	9.694	131	1726404	173.00	ug/L		98
81)	Ethylbenzene	9.730	106	2502884	176.69	ug/L	#	73
82)	(m+p)Xylene	9.846	106	5892085	344.26	ug/L	#	77
83)	o-Xylene	10.212	106	2972551	173.50	ug/L	#	85
84)	Styrene	10.224	104	5153574	174.86	ug/L		98
85)	Bromoform	10.376	173	886332	158.34	ug/L		97
86)	2-Chlorobenzotrifluoride	10.462	180	2555808	167.62	ug/L		94
87)	Isopropylbenzene	10.553	105	7136921	170.10	ug/L		92
88)	Cyclohexanone	10.614	55	1668152	2992.03	ug/L		93
89)	trans-1,4-Dichloro-2-B...	10.864	53	531795	186.05	ug/L		85
91)	1,1,2,2-Tetrachloroethane	10.815	83	1485028	168.70	ug/L		98
92)	Bromobenzene	10.797	156	2005806	162.39	ug/L		96
93)	1,2,3-Trichloropropane	10.840	110	401794	164.18	ug/L		90

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8259.D
Acq On : 6 May 2015 8:01 pm
Operator : F. NAEGLER
Sample : 150 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 10 Sample Multiplier: 1

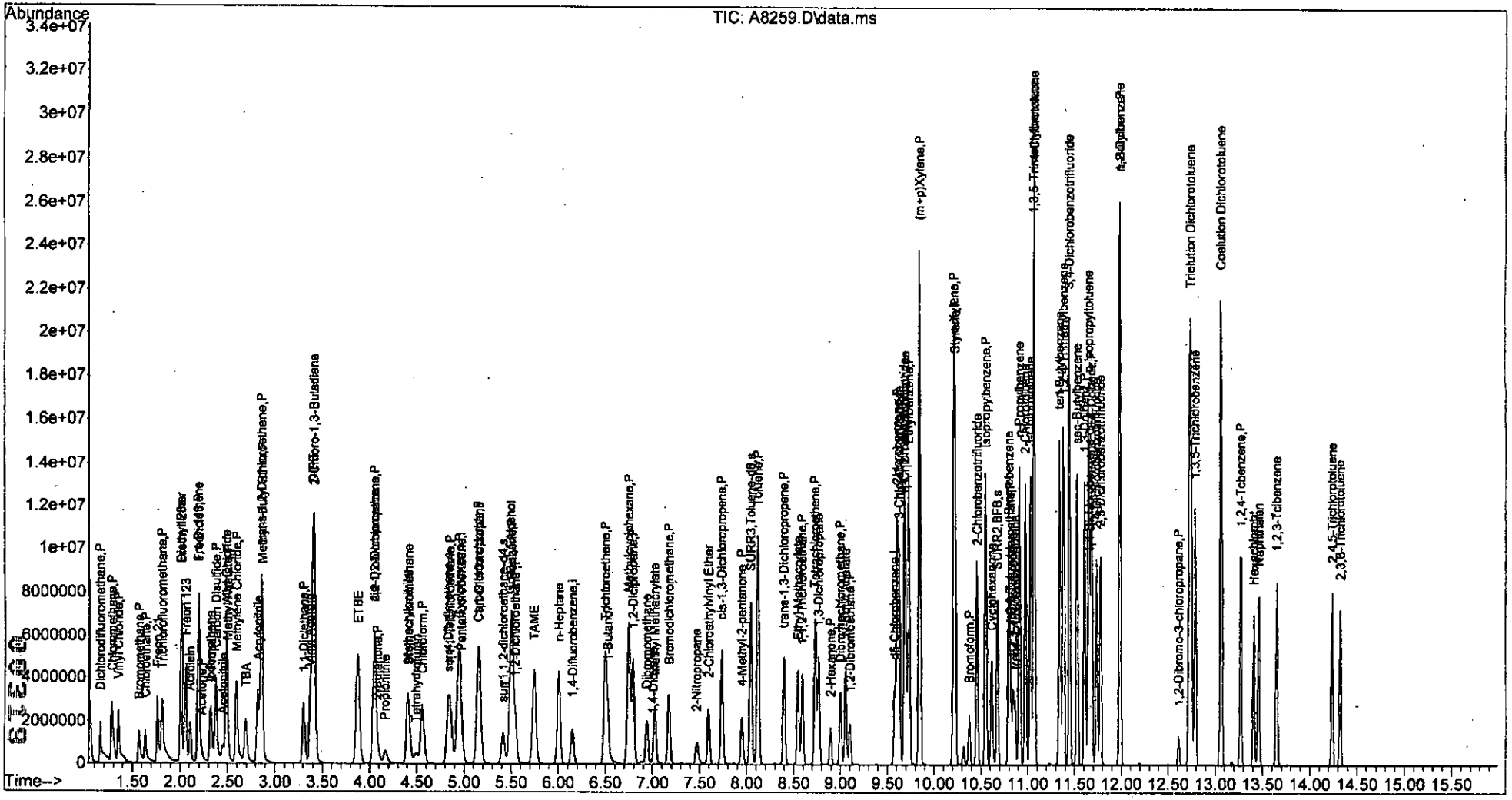
Quant Time: May 06 20:16:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
94)	n-Propylbenzene	10.913	91	7825633	155.73 ug/L	84
95)	2-Chlorotoluene	10.974	91	5317486	167.03 ug/L	95
96)	3-Chlorotoluene	11.029	91	5426001	159.59 ug/L	93
97)	4-Chlorotoluene	11.071	91	6230297	164.76 ug/L	89
98)	1,3,5-Trimethylbenzene	11.065	105	6334976	167.90 ug/L	90
99)	tert-Butylbenzene	11.340	119	5538374	169.80 ug/L	95
100)	1,2,4-Trimethylbenzene	11.382	105	6375653	163.42 ug/L	84
101)	3,4-Dichlorobenzotrifl...	11.443	214	1915898	157.23 ug/L	97
102)	sec-Butylbenzene	11.529	105	7202068	161.35 ug/L	88
103)	p-Isopropyltoluene	11.651	119	6574195	167.39 ug/L	92
104)	1,3-Dclbenz	11.608	146	4102427	168.60 ug/L	97
105)	1,4-Dclbenz	11.681	146	4245235	168.93 ug/L	98
106)	2,4-Dichlorobenzotrifl...	11.736	214	1756003	155.86 ug/L	97
107)	2,5-Dichlorobenzotrifl...	11.779	214	1992349	159.66 ug/L	99
108)	n-Butylbenzene	11.986	91	5818201	167.23 ug/L	90
109)	1,2-Dclbenz	11.986	146	3792536	167.34 ug/L	98
110)	1,2-Dibromo-3-chloropr...	12.608	157	270880	154.43 ug/L	98
111)	Trielution Dichlorotol...	12.736	125	9886849	493.19 ug/L	91
112)	1,3,5-Trichlorobenzene	12.785	180	2782118	164.31 ug/L	95
113)	Coelution Dichlorotoluene	13.059	125	6779952	325.60 ug/L	95
114)	1,2,4-Tcbenzene	13.272	180	2413038	169.33 ug/L	98
115)	Hexachlorobt	13.406	225	974219	153.74 ug/L	97
116)	Naphthalen	13.461	128	4661764	185.88 ug/L	99
117)	1,2,3-Tclbenzene	13.650	180	1987933	187.10 ug/L	98
118)	2,4,5-Trichlorotoluene	14.235	159	1590318	230.01 ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	1351709	229.13 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8259.D
Acq On : 6 May 2015 8:01 pm
Operator : F. NAEGLER
Sample : 150 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 20:16:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8260.D
Acq On : 6 May 2015 8:31 pm
Operator : F. NAEGLER
Sample : 200 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 20:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

FJ 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	1033793	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1542023	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1477018	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	925250	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	1571889	170.55	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 341.10%#				
46) surr1,1,2-dichloroetha...	5.414	65	1588711	165.57	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 331.14%#				
64) SURR3,Toluene-d8	8.048	98	5905134	166.84	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 333.68%#				
69) SURR2,BFB	10.675	95	2441626	157.26	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 314.52%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	2596947	264.60	ug/L		98
3) Chloromethane	1.281	50	4627354	376.48	ug/L		100
4) Vinyl Chloride	1.348	62	3251701	284.01	ug/L		98
5) Bromomethane	1.567	94	1292698	327.13	ug/L		98
6) Chloroethane	1.634	64	1542802	235.62	ug/L		94
7) Freon 21	1.762	67	4209980	235.84	ug/L		99
8) Trichlorofluoromethane	1.811	101	2936528	207.47	ug/L		99
9) Diethyl Ether	2.012	59	1853169	249.98	ug/L	#	78
10) Freon 123a	2.012	67	2219760	199.20	ug/L		94
11) Freon 123	2.061	83	2784810	225.98	ug/L	#	77
12) Acrolein	2.104	56	1818228	1683.72	ug/L		95
13) 1,1-Diclethene	2.195	96	1764152	223.00	ug/L	#	85
14) Freon 113	2.195	101	1784586	205.20	ug/L		92
15) Acetone	2.226	43	584919	239.92	ug/L		97
16) 2-Propanol	2.329	45	2576209	5768.40	ug/L		98
17) Iodomethane	2.317	142	2554924	480.84	ug/L		99
18) Carbon Disulfide	2.378	76	6208488	214.11	ug/L		99
19) Acetonitrile	2.451	40	568166	1676.73	ug/L		94
20) Allyl Chloride	2.488	76	1094618	233.61	ug/L	#	21
21) Methyl Acetate	2.500	43	1659296	304.36	ug/L		85
22) Methylene Chloride	2.597	84	1970916	224.31	ug/L	#	66
23) TBA	2.695	59	3219499	4769.60	ug/L		78
24) Acrylonitrile	2.823	53	3758849	1501.74	ug/L		99
25) Methyl-t-Butyl Ether	2.866	73	4760497	204.32	ug/L		86
26) trans-1,2-Dichloroethene	2.860	96	1885887	209.66	ug/L	#	83
27) 1,1-Diclethane	3.305	63	4130034	246.51	ug/L		99
28) Vinyl Acetate	3.378	86	357008	224.39	ug/L	#	73
29) DIPE	3.408	45	10934164	300.82	ug/L		81
30) 2-Chloro-1,3-Butadiene	3.414	53	5246957	269.93	ug/L		87
31) ETBE	3.878	59	8005245	260.40	ug/L		93
32) 2,2-Dichloropropane	4.054	77	2838469	216.47	ug/L		98
33) cis-1,2-Dichloroethene	4.054	96	2293409	228.92	ug/L		85
34) 2-Butanone	4.091	43	1062625	317.91	ug/L		86
35) Propionitrile	4.170	54	1367306	1507.05	ug/L		98

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8260.D
Acq On : 6 May 2015 8:31 pm
Operator : F. NAEGLER
Sample : 200 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 20:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.414	130	1310607	233.38	ug/L	#	70
37) Methacrylonitrile	4.408	67	634006	237.40	ug/L	#	38
38) Tetrahydrofuran	4.493	42	657862	299.43	ug/L		75
39) Chloroform	4.560	83	3782646	239.11	ug/L		97
40) 1,1,1-Trichloroethane	4.853	97	3403699	234.52	ug/L		96
42) Cyclohexane	4.951	41	3573785	303.05	ug/L		90
44) Carbontetrachloride	5.152	121	961734	229.19	ug/L		86
45) 1,1-Dichloropropene	5.164	75	2893587	232.71	ug/L		97
47) Benzene	5.505	78	8648567	230.32	ug/L		81
48) 1,2-Dichloroethane	5.542	62	2963151	236.29	ug/L		91
49) Iso-Butyl Alcohol	5.499	43	1994224	5879.09	ug/L		88
50) TAME	5.743	73	5334020	220.96	ug/L		84
51) n-Heptane	6.005	43	3905893	301.27	ug/L		81
52) 1-Butanol	6.523	56	2475910	12787.72	ug/L		83
53) Trichloroethene	6.499	130	2482834	244.41	ug/L		96
54) Methylcyclohexane	6.749	55	3962911	282.36	ug/L	#	80
55) 1,2-Diclpropane	6.792	63	2617447	261.30	ug/L		97
56) Dibromomethane	6.938	93	1116881	221.56	ug/L		99
57) 1,4-Dioxane	7.011	88	256383	3947.39	ug/L	#	63
58) Methyl Methacrylate	7.023	69	1088663	223.26	ug/L	#	54
59) Bromodichloromethane	7.176	83	2858117	227.85	ug/L		98
60) 2-Nitropropane	7.468	41	749376	357.86	ug/L		100
61) 2-Chloroethylvinyl Ether	7.596	63	1310497	274.42	ug/L		92
62) cis-1,3-Dichloropropene	7.737	75	3394969	226.73	ug/L		93
63) 4-Methyl-2-pentanone	7.950	43	2388412	311.53	ug/L		90
65) Toluene	8.121	91	8904581	223.09	ug/L		89
66) trans-1,3-Dichloropropene	8.401	75	2885060	221.99	ug/L		96
67) Ethyl Methacrylate	8.547	69	2309087	226.71	ug/L	#	58
68) 1,1,2-Trichloroethane	8.596	97	1683294	226.52	ug/L		98
71) Tetrachloroethene	8.730	164	2039787	248.96	ug/L		97
72) 2-Hexanone	8.895	43	1639634	309.41	ug/L		88
73) 1,3-Dichloropropane	8.767	76	2908209	250.39	ug/L	#	76
74) Dibromochloromethane	8.999	129	2236706	242.58	ug/L		100
75) N-Butyl Acetate	9.053	43	4231966	319.33	ug/L		93
76) 1,2-Dibromoethane	9.102	107	1686139	240.22	ug/L		98
77) 3-Chlorobenzotrifluoride	9.633	180	4008818	253.80	ug/L		99
78) Chlorobenzene	9.608	112	6357429	234.97	ug/L		93
79) 4-Chlorobenzotrifluoride	9.687	180	3639222	253.31	ug/L		96
80) 1,1,1,2-Tetrachloroethane	9.700	131	2575426	253.79	ug/L		97
81) Ethylbenzene	9.730	106	3673340	255.01	ug/L	#	54
82) (m+p)Xylene	9.852	106	8010966	460.28	ug/L	#	68
83) o-Xylene	10.212	106	4332661	248.68	ug/L	#	70
84) Styrene	10.224	104	7068638	235.85	ug/L		88
85) Bromoform	10.376	173	1341885	235.74	ug/L		97
86) 2-Chlorobenzotrifluoride	10.462	180	3954917	255.07	ug/L		91
87) Isopropylbenzene	10.553	105	9150508	214.47	ug/L		76
88) Cyclohexanone	10.614	55	2359487	4161.72	ug/L		92
89) trans-1,4-Dichloro-2-B...	10.864	53	789739	271.71	ug/L		83
91) 1,1,2,2-Tetrachloroethane	10.815	83	2162848	240.24	ug/L		98
92) Bromobenzene	10.797	156	2946914	233.29	ug/L		96
93) 1,2,3-Trichloropropane	10.846	110	579925	231.71	ug/L		89

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8260.D
Acq On : 6 May 2015 8:31 pm
Operator : F. NAEGLER
Sample : 200 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 11 Sample Multiplier: 1

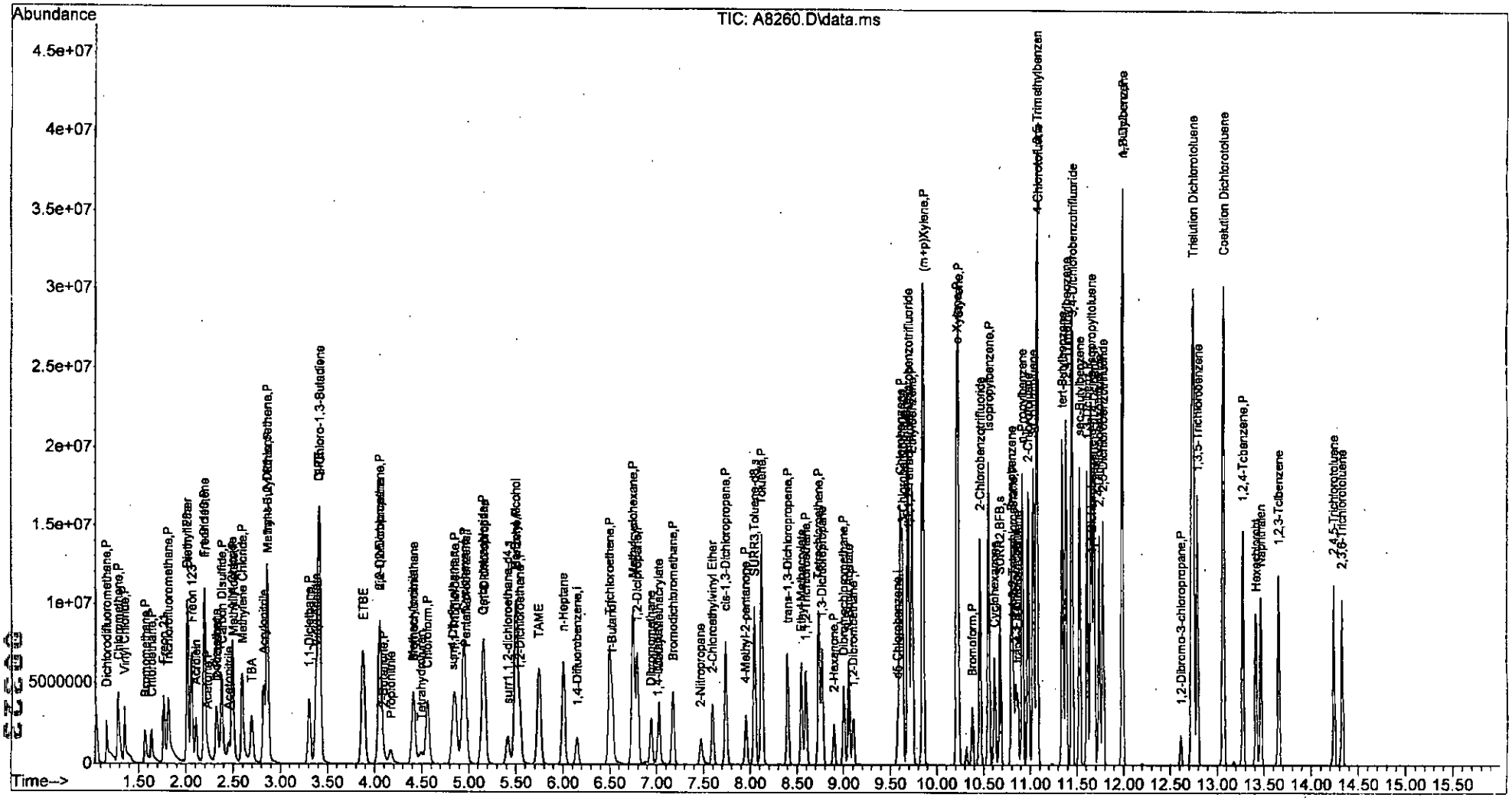
Quant Time: May 06 20:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
94)	n-Propylbenzene	10.913	91	9760167	189.92 ug/L	68
95)	2-Chlorotoluene	10.974	91	7213444	221.56 ug/L	89
96)	3-Chlorotoluene	11.029	91	7526097	216.44 ug/L	85
97)	4-Chlorotoluene	11.071	91	8126856	210.14 ug/L	75
98)	1,3,5-Trimethylbenzene	11.065	105	8223670	213.12 ug/L	79
99)	tert-Butylbenzene	11.340	119	7448863	223.31 ug/L	88
100)	1,2,4-Trimethylbenzene	11.382	105	8274806	207.39 ug/L #	67
101)	3,4-Dichlorobenzotrifl...	11.449	214	2929721	235.10 ug/L	99
102)	sec-Butylbenzene	11.529	105	9110126	199.56 ug/L	74
103)	p-Isopropyltoluene	11.650	119	8301847	206.69 ug/L	76
104)	1,3-Dclbenz	11.608	146	5759223	231.43 ug/L	91
105)	1,4-Dclbenz	11.681	146	5843694	227.37 ug/L	93
106)	2,4-Dichlorobenzotrifl...	11.736	214	2776970	241.01 ug/L	94
107)	2,5-Dichlorobenzotrifl...	11.779	214	2988447	234.17 ug/L	98
108)	n-Butylbenzene	11.986	91	7611408	213.91 ug/L	76
109)	1,2-Dclbenz	11.986	146	5262942	227.07 ug/L	93
110)	1,2-Dibromo-3-chloropr...	12.614	157	395697	220.58 ug/L	93
111)	Trielution Dichlorotol...	12.736	125	13131542	640.51 ug/L	79
112)	1,3,5-Trichlorobenzene	12.791	180	4139981	239.08 ug/L	97
113)	Coelution Dichlorotoluene	13.065	125	8835280	414.88 ug/L	81
114)	1,2,4-Tcbenzene	13.272	180	3424887	235.00 ug/L	98
115)	Hexachlorobt	13.412	225	1441514	222.44 ug/L	98
116)	Naphthalen	13.461	128	6236815	243.16 ug/L	97
117)	1,2,3-Tclbenzene	13.650	180	2830687	260.51 ug/L	98
118)	2,4,5-Trichlorotoluene	14.235	159	2355291	333.09 ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	1999677	331.45 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8260.D
Acq On : 6 May 2015 8:31 pm
Operator : F. NAEGLER
Sample : 200 PPB STD Inst : MSVOA10
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 20:46:17 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Wed May 06 16:24:30 2015
Response via : Initial Calibration



Initial Calibration Verification Summary Report

Calibration ID: RC1500051 5/6/15 **Instrument ID:** R-MS-10
Column Name: 1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
1,1,1,2-Tetrachloroethane	RC1500051-10	T	Average RF	50	48.38	ppm	-3.2	<=30
1,1,1-Trichloroethane (TCA)	RC1500051-10	T	Average RF	50	47.05	ppm	-5.9	<=30
1,1,2,2-Tetrachloroethane	RC1500051-10	T	Average RF	50	50.19	ppm	0.4	<=30
1,1,2-Trichloroethane	RC1500051-10	T	Average RF	50	47.31	ppm	-5.4	<=30
1,1,2-Trichlorotrifluoroethane	RC1500051-10	T	Average RF	50	45.15	ppm	-9.7	<=30
1,1-Dichloroethane (1,1-DCA)	RC1500051-10	T	Average RF	50	47.43	ppm	-5.1	<=30
1,1-Dichloroethene (1,1-DCE)	RC1500051-10	T	Average RF	50	44.09	ppm	-11.8	<=30
1,1-Dichloropropene	RC1500051-10	T	Average RF	50	45.00	ppm	-10.0	<=30
1,2,3-Trichlorobenzene	RC1500051-10	T	Average RF	50	50.33	ppm	0.7	<=30
1,2,3-Trichloropropane	RC1500051-10	T	Average RF	50	47.51	ppm	-5.0	<=30
1,2,4-Trichlorobenzene	RC1500051-10	T	Average RF	50	50.90	ppm	1.8	<=30
1,2,4-Trimethylbenzene	RC1500051-10	T	Average RF	50	51.06	ppm	2.1	<=30
1,2-Dibromo-3-chloropropane (DBCP)	RC1500051-10	T	Average RF	50	52.03	ppm	4.1	<=30
1,2-Dibromoethane	RC1500051-10	T	Average RF	50	49.54	ppm	-0.9	<=30
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123	RC1500051-10	T	Average RF	50	57.99	ppm	16.0	<=30
1,2-Dichlorobenzene	RC1500051-10	T	Average RF	50	48.99	ppm	-2.0	<=30
1,2-Dichloroethane	RC1500051-10	T	Average RF	50	48.06	ppm	-3.9	<=30
1,2-Dichloropropane	RC1500051-10	T	Average RF	50	46.99	ppm	-6.0	<=30
1,3,5-Trichlorobenzene	RC1500051-10	T	Average RF	50	51.51	ppm	3.0	<=30
1,3,5-Trimethylbenzene	RC1500051-10	T	Average RF	50	51.57	ppm	3.1	<=30
1,3-Dichlorobenzene	RC1500051-10	T	Average RF	50	48.00	ppm	-4.0	<=30
1,3-Dichloropropane	RC1500051-10	T	Average RF	50	48.00	ppm	-4.0	<=30
1,4-Dichlorobenzene	RC1500051-10	T	Average RF	50	47.06	ppm	-5.9	<=30
1,4-Dioxane	RC1500051-10	T	Average RF	1000	1031	ppm	3.1	<=30
1-Butanol	RC1500051-10	T	Quadratic	2500	2721	ppm	8.8	<=30
1-Chloro-4-(trifluoromethyl)benzene	RC1500051-10	T	Average RF	50	50.21	ppm	0.4	<=30
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123	RC1500051-10	T	Average RF	50	53.27	ppm	6.5	<=30
2,2-Dichloropropane	RC1500051-10	T	Average RF	50	42.40	ppm	-15.2	<=30
2,3,6-Trichlorotoluene	RC1500051-10	T	Average RF	50	56.34	ppm	12.7	<=30
2,4,5-Trichlorotoluene	RC1500051-10	T	Average RF	50	56.10	ppm	12.2	<=30
2,4-, 2,5-, and 2,6-Dichlorotoluene Coelution	RC1500051-10	T	Average RF	150	164.1	ppm	9.4	<=30
2,4-Dichlorobenzotrifluoride	RC1500051-10	T	Average RF	50	49.76	ppm	-0.5	<=30
2,5-Dichlorobenzotrifluoride	RC1500051-10	T	Average RF	50	49.01	ppm	-2.0	<=30
2-Butanone (MEK)	RC1500051-10	T	Average RF	50	50.05	ppm	0.1	<=30
2-Chloro-1,3-butadiene	RC1500051-10	T	Average RF	50	48.56	ppm	-2.9	<=30
2-Chlorobenzotrifluoride	RC1500051-10	T	Average RF	50	50.77	ppm	1.5	<=30
2-Chloroethyl Vinyl Ether	RC1500051-10	T	Average RF	50	54.20	ppm	8.4	<=30
2-Chlorotoluene	RC1500051-10	T	Average RF	50	48.43	ppm	-3.1	<=30
2-Hexanone	RC1500051-10	T	Average RF	50	54.50	ppm	9.0	<=30
2-Methyl-1-propanol	RC1500051-10	T	Average RF	1000	985.5	ppm	-1.5	<=30
2-Methyl-2-propanol	RC1500051-10	T	Average RF	1000	1035	ppm	3.5	<=30
2-Nitropropane	RC1500051-10	T	Average RF	100	95.59	ppm	-4.4	<=30
2-Propanol	RC1500051-10	T	Average RF	1000	1131	ppm	13.1	<=30
3,4- and 2,3-Dichlorotoluene Coelution	RC1500051-10	T	Average RF	100	110.2	ppm	10.2	<=30
3,4-Dichlorobenzotrifluoride	RC1500051-10	T	Average RF	50	49.67	ppm	-0.7	<=30
3-Chloro-1-propene	RC1500051-10	T	Average RF	50	43.36	ppm	-13.3	<=30
3-Chlorobenzotrifluoride	RC1500051-10	T	Average RF	50	49.27	ppm	-1.5	<=30
3-Chlorotoluene	RC1500051-10	T	Average RF	50	51.60	ppm	3.2	<=30
4-Chlorotoluene	RC1500051-10	T	Average RF	50	49.44	ppm	-1.1	<=30
4-Isopropyltoluene	RC1500051-10	T	Average RF	50	53.05	ppm	6.1	<=30
4-Methyl-2-pentanone	RC1500051-10	T	Average RF	50	53.26	ppm	6.5	<=30

Initial Calibration Verification Summary Report

Calibration ID: RC1500051 **Instrument ID:** R-MS-10
Column Name: 1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Acetone	RC1500051-10	T	Quadratic	50	49.38	ppm	-1.2	<=30
Acetonitrile	RC1500051-10	T	Average RF	250	235.1	ppm	-6.0	<=30
Acrolein	RC1500051-10	T	Average RF	100	87.24	ppm	-12.8	<=30
Acrylonitrile	RC1500051-10	T	Average RF	250	249.2	ppm	-0.3	<=30
Benzene	RC1500051-10	T	Average RF	50	46.25	ppm	-7.5	<=30
Bromobenzene	RC1500051-10	T	Average RF	50	46.75	ppm	-6.5	<=30
Bromochloromethane	RC1500051-10	T	Average RF	50	46.97	ppm	-6.1	<=30
Bromodichloromethane	RC1500051-10	T	Average RF	50	48.88	ppm	-2.2	<=30
Bromoform	RC1500051-10	T	Average RF	50	52.79	ppm	5.6	<=30
Bromomethane	RC1500051-10	T	Average RF	50	42.37	ppm	-15.3	<=30
Carbon Disulfide	RC1500051-10	T	Average RF	50	47.97	ppm	-4.1	<=30
Carbon Tetrachloride	RC1500051-10	T	Average RF	50	48.07	ppm	-3.9	<=30
Chlorobenzene	RC1500051-10	T	Average RF	50	47.61	ppm	-4.8	<=30
Chloroethane	RC1500051-10	T	Average RF	50	44.08	ppm	-11.8	<=30
Chloroform	RC1500051-10	T	Average RF	50	46.74	ppm	-6.5	<=30
Chloromethane	RC1500051-10	T	Average RF	50	46.93	ppm	-6.1	<=30
Cyclohexane	RC1500051-10	T	Average RF	50	52.35	ppm	4.7	<=30
Cyclohexanone	RC1500051-10	T	Average RF	1000	971.7	ppm	-2.8	<=30
Dibromochloromethane	RC1500051-10	T	Average RF	50	50.66	ppm	1.3	<=30
Dibromomethane	RC1500051-10	T	Average RF	50	47.26	ppm	-5.5	<=30
Dichlorodifluoromethane (CFC 12)	RC1500051-10	T	Average RF	50	49.23	ppm	-1.5	<=30
Dichlorofluoromethane (CFC 21)	RC1500051-10	T	Average RF	50	61.34	ppm	22.7	<=30
Dichloromethane	RC1500051-10	T	Average RF	50	44.30	ppm	-11.4	<=30
Diethyl Ether	RC1500051-10	T	Average RF	50	50.90	ppm	1.8	<=30
Diisopropyl Ether	RC1500051-10	T	Average RF	50	43.96	ppm	-12.1	<=30
Ethyl Methacrylate	RC1500051-10	T	Average RF	50	55.68	ppm	11.4	<=30
Ethyl tert-Butyl Ether	RC1500051-10	T	Average RF	50	43.58	ppm	-12.8	<=30
Ethylbenzene	RC1500051-10	T	Average RF	50	44.23	ppm	-11.5	<=30
Hexachlorobutadiene	RC1500051-10	T	Average RF	50	47.93	ppm	-4.1	<=30
Iodomethane	RC1500051-10	T	Average RF	50	49.88	ppm	-0.2	<=30
Isopropylbenzene (Cumene)	RC1500051-10	T	Average RF	50	51.70	ppm	3.4	<=30
Methacrylonitrile	RC1500051-10	T	Average RF	50	47.98	ppm	-4.0	<=30
Methyl Acetate	RC1500051-10	T	Average RF	50	53.33	ppm	6.7	<=30
Methyl Methacrylate	RC1500051-10	T	Average RF	50	53.55	ppm	7.1	<=30
Methyl tert-Butyl Ether	RC1500051-10	T	Average RF	50	47.27	ppm	-5.5	<=30
Methylcyclohexane	RC1500051-10	T	Average RF	50	53.44	ppm	6.9	<=30
Naphthalene	RC1500051-10	T	Average RF	50	53.54	ppm	7.1	<=30
Propionitrile	RC1500051-10	T	Average RF	250	252.0	ppm	0.8	<=30
Styrene	RC1500051-10	T	Average RF	50	50.09	ppm	0.2	<=30
Tetrachloroethene (PCE)	RC1500051-10	T	Average RF	50	46.03	ppm	-7.9	<=30
Tetrahydrofuran (THF)	RC1500051-10	T	Average RF	50	51.44	ppm	2.9	<=30
Toluene	RC1500051-10	T	Average RF	50	46.91	ppm	-6.2	<=30
Trichloroethene (TCE)	RC1500051-10	T	Average RF	50	47.62	ppm	-4.8	<=30
Trichlorofluoromethane (CFC 11)	RC1500051-10	T	Average RF	50	45.60	ppm	-8.8	<=30
Vinyl Acetate	RC1500051-10	T	Average RF	50	47.17	ppm	-5.7	<=30
Vinyl Chloride	RC1500051-10	T	Average RF	50	44.72	ppm	-10.6	<=30
cis-1,2-Dichloroethene	RC1500051-10	T	Average RF	50	47.10	ppm	-5.8	<=30
cis-1,3-Dichloropropene	RC1500051-10	T	Average RF	50	48.73	ppm	-2.5	<=30
m,p-Xylenes	RC1500051-10	T	Average RF	100	98.63	ppm	-1.4	<=30
n-Butyl Acetate	RC1500051-10	T	Average RF	50	61.41	ppm	22.8	<=30
n-Butylbenzene	RC1500051-10	T	Average RF	50	51.87	ppm	3.7	<=30

Initial Calibration Verification Summary Report

Calibration ID:	RC1500051	**Instrument ID:**	R-MS-10
		Column Name:	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
n-Heptane	RC1500051-10	T	Average RF	50	47.78	ppm	-4.4	<=30
n-Propylbenzene	RC1500051-10	T	Average RF	50	51.16	ppm	2.3	<=30
o-Xylene	RC1500051-10	T	Average RF	50	47.88	ppm	-4.2	<=30
sec-Butylbenzene	RC1500051-10	T	Average RF	50	51.84	ppm	3.7	<=30
tert-Amyl Methyl Ether	RC1500051-10	T	Average RF	50	47.39	ppm	-5.2	<=30
tert-Butylbenzene	RC1500051-10	T	Average RF	50	49.87	ppm	-0.3	<=30
trans-1,2-Dichloroethene	RC1500051-10	T	Average RF	50	45.68	ppm	-8.6	<=30
trans-1,3-Dichloropropene	RC1500051-10	T	Average RF	50	48.71	ppm	-2.6	<=30
trans-1,4-Dichloro-2-butene	RC1500051-10	T	Average RF	50	47.68	ppm	-4.6	<=30
1,2-Dichloroethane-d4	RC1500051-10	S	Average RF	50	49.49	ppm	-1.0	<=30
4-Bromofluorobenzene	RC1500051-10	S	Average RF	50	49.30	ppm	-1.4	<=30
Dibromofluoromethane	RC1500051-10	S	Average RF	50	48.97	ppm	-2.1	<=30
Toluene-d8	RC1500051-10	S	Average RF	50	49.17	ppm	-1.7	<=30

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8264.D
Acq On : 6 May 2015 10:31 pm
Operator : F. NAEGLER
Sample : 50 PPB ICV Inst : MSVOA10
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 07 12:50:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 12:42:58 2015
Response via : Initial Calibration

FV 5/7/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	964887	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1466598	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1395022	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	830453	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.835	113	448198	48.97	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.94%				
46) surr1,1,2-dichloroetha...	5.414	65	465450	49.49	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 98.98%				
64) SURR3,Toluene-d8	8.042	98	1715688	49.17	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 98.34%				
69) SURR2,BFB	10.675	95	699041	49.30	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 98.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	493297	49.23	ug/L		95
3) Chloromethane	1.281	50	860704	46.93	ug/L		98
4) Vinyl Chloride	1.354	62	597495	44.72	ug/L		98
5) Bromomethane	1.573	94	234160	42.37	ug/L		100
6) Chloroethane	1.634	64	289178	44.08	ug/L		92
7) Freon 21	1.762	67	983186	61.34	ug/L		100
8) Trichlorofluoromethane	1.811	101	588120	45.60	ug/L		99
9) Diethyl Ether	2.012	59	395387	50.90	ug/L	#	73
10) Freon 123a	2.012	67	567472	57.99	ug/L		92
11) Freon 123	2.061	83	576765m	53.27	ug/L		
12) Acrolein	2.110	56	127291	87.24	ug/L		96
13) 1,1-Diclethene	2.195	96	313421	44.09	ug/L	#	74
14) Freon 113	2.195	101	335780	45.15	ug/L		91
15) Acetone	2.226	43	140055	49.38	ug/L		95
16) 2-Propanol	2.329	45	572285	1131.26	ug/L		95
17) Iodomethane	2.317	142	525112	49.88	ug/L		100
18) Carbon Disulfide	2.378	76	1224816	47.97	ug/L		100
19) Acetonitrile	2.451	40	104564	235.09	ug/L		94
20) Allyl Chloride	2.488	76	200552	43.36	ug/L	#	1
21) Methyl Acetate	2.506	43	374781	53.33	ug/L		88
22) Methylene Chloride	2.598	84	386375	44.30	ug/L	#	61
23) TBA	2.695	59	670974	1035.45	ug/L		70
24) Acrylonitrile	2.823	53	777411	249.21	ug/L		99
25) Methyl-t-Butyl Ether	2.866	73	960968	47.27	ug/L		87
26) trans-1,2-Dichloroethene	2.860	96	365476	45.68	ug/L	#	81
27) 1,1-Diclethane	3.305	63	847286	47.43	ug/L		97
28) Vinyl Acetate	3.378	86	67954	47.17	ug/L	#	59
29) DIPE	3.408	45	2152810	43.96	ug/L	#	75
30) 2-Chloro-1,3-Butadiene	3.414	53	1008822	48.56	ug/L		87
31) ETBE	3.878	59	1457433	43.58	ug/L		94
32) 2,2-Dichloropropane	4.048	77	489461	42.40	ug/L		95
33) cis-1,2-Dichloroethene	4.055	96	451658	47.10	ug/L		89
34) 2-Butanone	4.091	43	227176	50.05	ug/L		83
35) Propionitrile	4.170	54	283864	251.98	ug/L		100

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8264.D
Acq On : 6 May 2015 10:31 pm
Operator : F. NAEGLER
Sample : 50 PPB ICV Inst : MSVOA10
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 07 12:50:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 12:42:58 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	276971	46.97	ug/L	#	62
37) Methacrylonitrile	4.402	67	127709	47.98	ug/L	#	47
38) Tetrahydrofuran	4.500	42	144344	51.44	ug/L		73
39) Chloroform	4.561	83	742729	46.74	ug/L		97
40) 1,1,1-Trichloroethane	4.859	97	635972	47.05	ug/L		98
42) Cyclohexane	4.951	41	729970	52.35	ug/L		91
44) Carbontetrachloride	5.152	121	174192	48.07	ug/L	#	79
45) 1,1-Dichloropropene	5.164	75	533526	45.00	ug/L		98
47) Benzene	5.499	78	1699820	46.25	ug/L		81
48) 1,2-Dichloroethane	5.542	62	609873	48.06	ug/L		91
49) Iso-Butyl Alcohol	5.493	43	375670	985.45	ug/L		90
50) TAME	5.743	73	1003942	47.39	ug/L		81
51) n-Heptane	6.005	43	763548	47.78	ug/L		80
52) 1-Butanol	6.517	56	464894	2720.72	ug/L		78
53) Trichloroethene	6.493	130	483640	47.62	ug/L		98
54) Methylcyclohexane	6.749	55	802656	53.44	ug/L	#	79
55) 1,2-Diclpropane	6.792	63	509222	46.99	ug/L		98
56) Dibromomethane	6.938	93	225247	47.26	ug/L		94
57) 1,4-Dioxane	7.005	88	55748	1031.00	ug/L	#	39
58) Methyl Methacrylate	7.023	69	228564	53.55	ug/L	#	46
59) Bromodichloromethane	7.176	83	558068	48.88	ug/L		98
60) 2-Nitropropane	7.469	41	119531	95.59	ug/L		99
61) 2-Chloroethylvinyl Ether	7.597	63	274633	54.20	ug/L		89
62) cis-1,3-Dichloropropene	7.737	75	630579	48.73	ug/L		94
63) 4-Methyl-2-pentanone	7.950	43	494232	53.26	ug/L		89
65) Toluene	8.121	91	1862053	46.91	ug/L		96
66) trans-1,3-Dichloropropene	8.395	75	525358	48.71	ug/L		94
67) Ethyl Methacrylate	8.541	69	473293	55.68	ug/L	#	54
68) 1,1,2-Trichloroethane	8.590	97	334812	47.31	ug/L		97
71) Tetrachloroethene	8.730	164	385916	46.03	ug/L		98
72) 2-Hexanone	8.895	43	342991	54.50	ug/L		90
73) 1,3-Dichloropropane	8.767	76	585086	48.00	ug/L	#	76
74) Dibromochloromethane	8.999	129	421433	50.66	ug/L		98
75) N-Butyl Acetate	9.054	43	928296	61.41	ug/L		92
76) 1,2-Dibromoethane	9.102	107	336530	49.54	ug/L		94
77) 3-Chlorobenzotrifluoride	9.627	180	752265	49.27	ug/L		98
78) Chlorobenzene	9.602	112	1305968	47.61	ug/L		100
79) 4-Chlorobenzotrifluoride	9.681	180	674732	50.21	ug/L		94
80) 1,1,1,2-Tetrachloroethane	9.694	131	454385	48.38	ug/L		98
81) Ethylbenzene	9.730	106	636306	44.23	ug/L		97
82) (m+p)Xylene	9.846	106	1707075	98.63	ug/L		89
83) o-Xylene	10.206	106	822160	47.88	ug/L		97
84) Styrene	10.224	104	1456462	50.09	ug/L		95
85) Bromoform	10.376	173	239160	52.79	ug/L		96
86) 2-Chlorobenzotrifluoride	10.456	180	733880	50.77	ug/L		91
87) Isopropylbenzene	10.547	105	2181133	51.70	ug/L		97
88) Cyclohexanone	10.614	55	436658	971.70	ug/L		92
89) trans-1,4-Dichloro-2-B...	10.864	53	145130	47.68	ug/L		82
91) 1,1,2,2-Tetrachloroethane	10.815	83	425696	50.19	ug/L		98
92) Bromobenzene	10.797	156	562372	46.75	ug/L		93
93) 1,2,3-Trichloropropane	10.840	110	118605	47.51	ug/L		95

00328

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8264.D
Acq On : 6 May 2015 10:31 pm
Operator : F. NAEGLER
Sample : 50 PPB ICV Inst : MSVOA10
Misc :
ALS Vial : 15 Sample Multiplier: 1

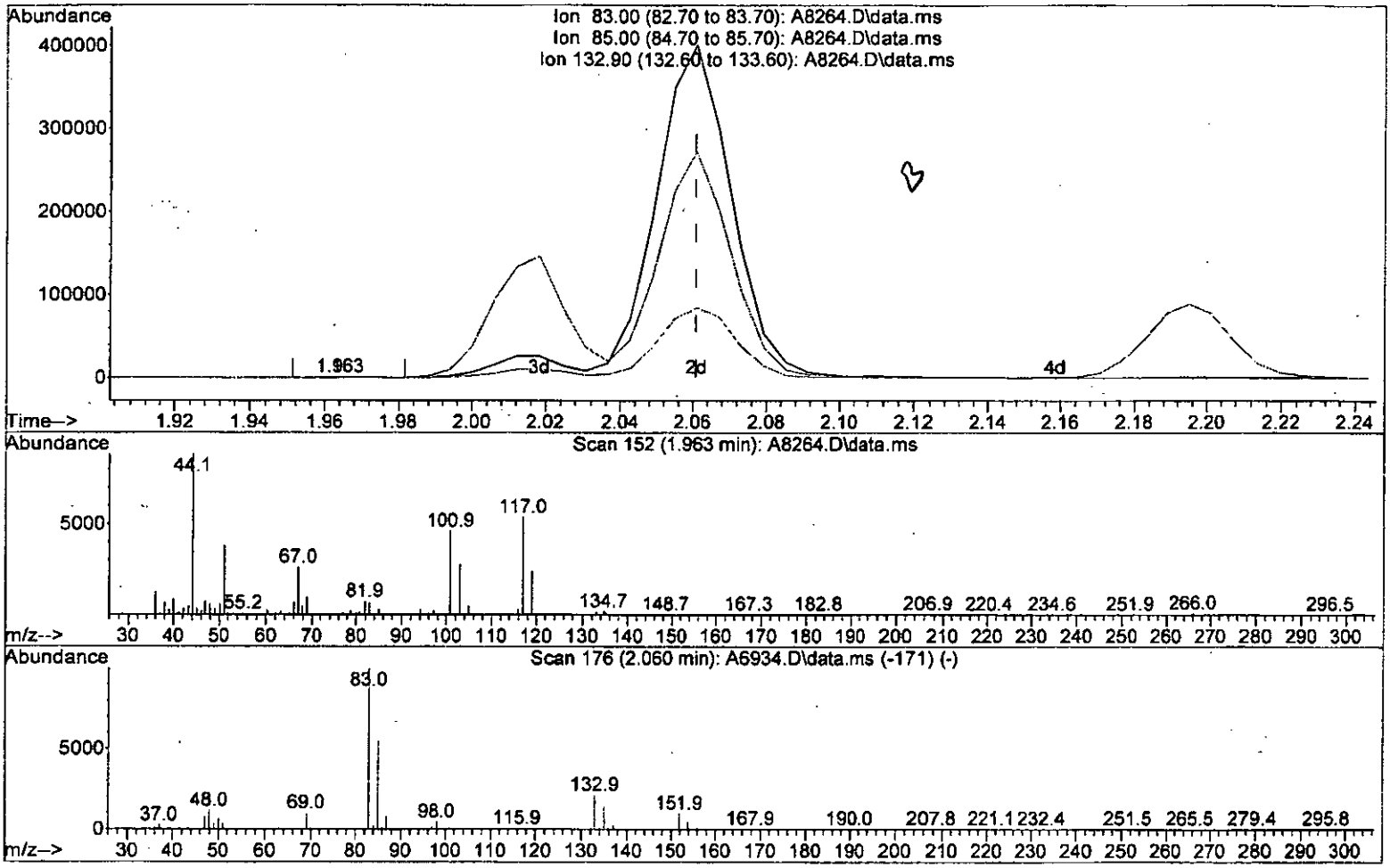
Quant Time: May 07 12:50:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 12:42:58 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	n-Propylbenzene	10.907	91	2524105	51.16	ug/L	99
95)	2-Chlorotoluene	10.974	91	1498082	48.43	ug/L	96
96)	3-Chlorotoluene	11.023	91	1685588	51.60	ug/L	98
97)	4-Chlorotoluene	11.065	91	1823198	49.44	ug/L	97
98)	1,3,5-Trimethylbenzene	11.065	105	1900259	51.57	ug/L	97
99)	tert-Butylbenzene	11.340	119	1595457	49.87	ug/L	98
100)	1,2,4-Trimethylbenzene	11.376	105	1921358	51.06	ug/L	97
101)	3,4-Dichlorobenzotrifl...	11.443	214	543741	49.67	ug/L	98
102)	sec-Butylbenzene	11.523	105	2251473	51.84	ug/L	98
103)	p-Isopropyltoluene	11.645	119	2053039	53.05	ug/L	98
104)	1,3-Dclbenz	11.602	146	1175279	48.00	ug/L	98
105)	1,4-Dclbenz	11.681	146	1207885	47.06	ug/L	99
106)	2,4-Dichlorobenzotrifl...	11.736	214	510995	49.76	ug/L	98
107)	2,5-Dichlorobenzotrifl...	11.773	214	570516	49.01	ug/L	99
108)	n-Butylbenzene	11.980	91	1772584	51.87	ug/L	97
109)	1,2-Dclbenz	11.986	146	1108674	48.99	ug/L	98
110)	1,2-Dibromo-3-chloropr...	12.608	157	80734	52.03	ug/L	98
111)	Trielution Dichlorotol...	12.730	125	3183376	164.09	ug/L	97
112)	1,3,5-Trichlorobenzene	12.785	180	853627	51.51	ug/L	98
113)	Coelution Dichlorotoluene	13.059	125	2284520	110.23	ug/L	95
114)	1,2,4-Tcbenzene	13.266	180	725726	50.90	ug/L	98
115)	Hexachlorobt	13.406	225	282932	47.93	ug/L	94
116)	Naphthalen	13.461	128	1430660	53.54	ug/L	97
117)	1,2,3-Tclbenzene	13.650	180	590964	50.33	ug/L	97
118)	2,4,5-Trichlorotoluene	14.235	159	485723	56.10	ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	426315	56.34	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8264.D
Acq On : 6 May 2015 10:31 pm
Operator : F. NAEGLER
Sample : 50 PPB ICV Inst : MSVOA10
Misc :
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Quant Time: May 07 12:50:00 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 12:42:58 2015
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TIC: A8264.D\data.ms

(11) Freon 123

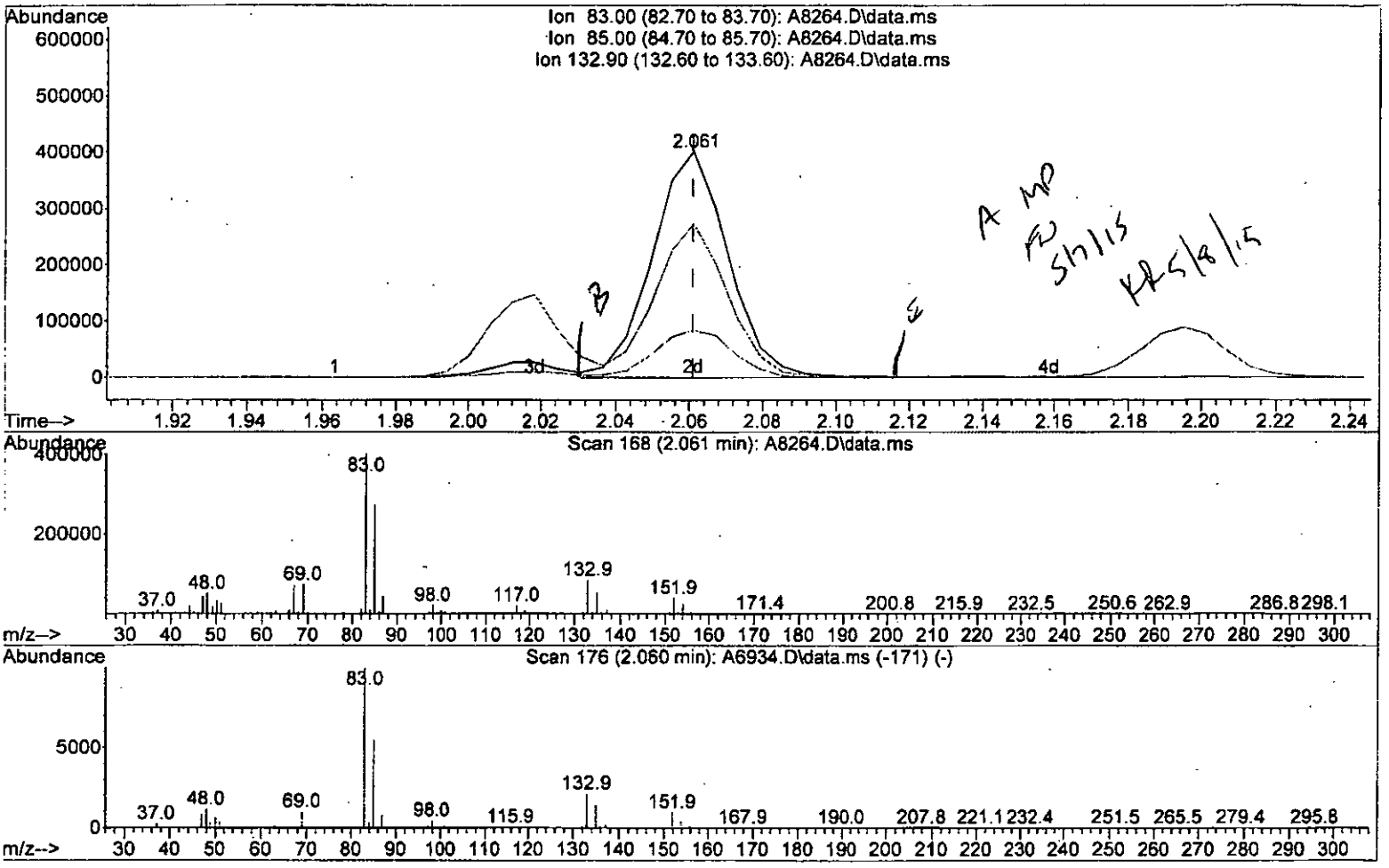
1.963min (-0.097) 0.07 ug/L

response 809

Ion	Exp%	Act%
83.00	100	100
85.00	47.30	48.99
132.90	19.90	23.88
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8264.D
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Misc :
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Quant Time: May 07 12:50:00 2015
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TIC: A8264.D\data.ms

(11) Freon 123

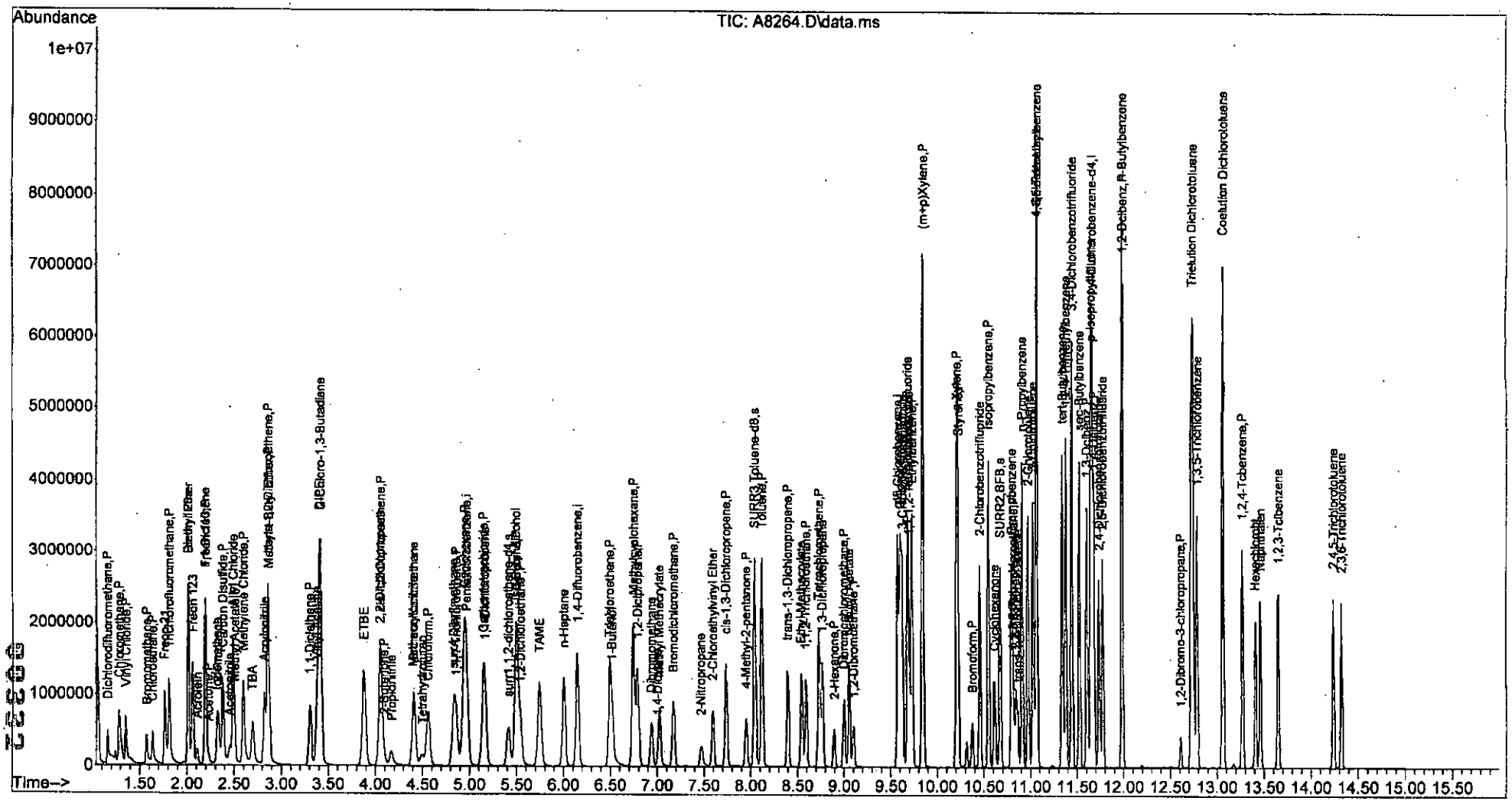
2.061min (+0.000) 53.27 ug/L m

response 576765

Ion	Exp%	Act%
83.00	100	100
85.00	47.30	67.95#
132.90	19.90	20.99
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8264.D
Acq On : 6 May 2015 10:31 pm
Operator : F. NAEGLER
Sample : 50 PPB ICV Inst : MSVOA10
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 07 12:50:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 12:42:58 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FJ 6/29/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
1	i	Pentafluorobenzene	1.0000	1.0000	0.0	123	0.00	
2	P	Dichlorodifluoromethane	0.5192	0.5597	-7.8	122	0.00	
3	P	Chloromethane	0.9504	0.7673	19.3	98	0.00	
4	P	Vinyl Chloride	0.6923	0.6661	3.8	117	0.00	
5	P	Bromomethane	0.2864	0.1733	39.5#	78	0.00	①
6	P	Chloroethane	0.3399	0.3467	-2.0	130	0.00	
7		Freon 21	0.8305	0.8717	-5.0	122	0.00	
8	P	Trichlorofluoromethane	0.6683	0.7263	-8.7	132	0.00	
9		Diethyl Ether	0.4025	0.3708	7.9	110	0.00	
10		Freon 123a	0.5071	0.5199	-2.5	122	0.00	
11		Freon 123	0.5610	0.5820	-3.7	128	0.00	
12		Acrolein	0.0756	0.0193	36.24 ~~74.5#~~	31#	0.00	NT
13		1,1-Diclethene	0.3684	0.4101	-11.3	140	0.00	
14	P	Freon 113	0.3854	0.4607	-19.5	151	0.00	
15	P	Acetone	0.1691	0.1234	17.2 ~~27.0#~~	108	0.00	
16		2-Propanol	0.0262	0.0207	21.0#	94	0.00	NT
17		Iodomethane	0.5455	0.4058	25.6#	87	0.00	②
18	P	Carbon Disulfide	1.3232	1.4769	-11.6	139	0.00	
19		Acetonitrile	0.0230	0.0205	10.9	111	0.00	
20		Allyl Chloride	0.2397	0.2443	-1.9	123	0.00	
21	P	Methyl Acetate	0.3642	0.2991	17.9	105	0.00	
22	P	Methylene Chloride	0.4520	0.4666	-3.2	134	0.00	
23		TBA	0.0336	0.0254	24.4#	96	-0.01	NT
24		Acrylonitrile	0.1616	0.1415	12.4	107	0.00	
25	P	Methyl-t-Butyl Ether	1.0534	0.9369	11.1	112	0.00	
26	P	trans-1,2-Dichloroethene	0.4146	0.4595	-10.8	139	0.00	
27	P	1,1-Diclethane	0.9257	0.9082	1.9	120	0.00	
28		Vinyl Acetate	0.0747	0.0677	9.4	114	0.00	
29		DIPE	2.5377	2.4080	5.1	111	0.00	
30		2-Chloro-1,3-Butadiene	1.0766	1.1557	-7.3	127	0.00	
31		ETBE	1.7332	1.5125	12.7	105	0.00	
32		2,2-Dichloropropane	0.5982	0.6185	-3.4	128	0.00	
33	P	cis-1,2-Dichloroethene	0.4970	0.4883	1.8	122	0.00	
34	P	2-Butanone	0.2352	0.1986	15.6	107	-0.01	
35		Propionitrile	0.0584	0.0477	18.3	100	-0.01	
36		Bromochloromethane	0.3056	0.2927	4.2	117	0.00	
37		Methacrylonitrile	0.1379	0.1115	19.1	101	0.00	
38		Tetrahydrofuran	0.1454	0.1126	22.6#	98	0.00	NT
39	P	Chloroform	0.8234	0.7888	4.2	119	0.00	
40	P	1,1,1-Trichloroethane	0.7004	0.7003	0.0	124	0.00	
41	i	1,4-Difluorobenzene	1.0000	1.0000	0.0	121	0.00	
42	P	Cyclohexane	0.4754	0.4503	5.3	114	0.00	
43	s	surr4,Dibrflmethane	0.3120	0.3092	0.9	123	0.00	
44	P	Carbontetrachloride	0.1235	0.1328	-7.5	130	0.00	
45		1,1-Dichloropropene	0.4042	0.4008	0.8	122	0.00	
46	s	surr1,1,2-dichloroethane-d4	0.3206	0.2960	7.7	115	0.00	

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
47	P	Benzene	1.2531	1.2154	3.0	120	0.00	
48	P	1,2-Dichloroethane	0.4326	0.3907	9.7	109	0.00	
49		Iso-Butyl Alcohol	0.0130	0.0102	21.5#	104	-0.03	NT
50		TAME	0.7222	0.6513	9.8	104	0.00	
51		n-Heptane	0.5448	0.5950	-9.2	132	0.00	
52		1-Butanol	0.0058	0.0054	5.8 ~~6.9~~	110	-0.02	
53	P	Trichloroethene	0.3463	0.3376	2.5	119	0.00	
54	P	Methylcyclohexane	0.5121	0.5126	-0.1	121	0.00	
55	P	1,2-Diclpropane	0.3694	0.3462	6.3	117	0.00	
56		Dibromomethane	0.1625	0.1485	8.6	115	0.00	
57		1,4-Dioxane	0.0018	0.0018	0.0	127	-0.01	
58		Methyl Methacrylate	0.1455	0.1236	15.1	101	0.00	
59	P	Bromodichloromethane	0.3893	0.3778	3.0	118	0.00	
60		2-Nitropropane	0.0426	0.0471	-10.6	140	0.00	
61		2-Chloroethylvinyl Ether	0.1728	0.1549	10.4	106	0.00	
62	P	cis-1,3-Dichloropropene	0.4412	0.4371	0.9	116	0.00	
63	P	4-Methyl-2-pentanone	0.3164	0.2687	15.1	101	0.00	
64	s	SURR3,Toluene-d8	1.1896	1.1440	3.8	118	0.00	
65	P	Toluene	1.3531	1.3285	1.8	121	0.00	
66	P	trans-1,3-Dichloropropene	0.3677	0.3468	5.7	110	0.00	
67		Ethyl Methacrylate	0.2898	0.2609	10.0	105	0.00	
68	P	1,1,2-Trichloroethane	0.2413	0.2167	10.2	111	0.00	
69	s	SURR2,BFB	0.4834	0.4408	8.8	111	0.00	
70	i	d5-Chlorobenzene	1.0000	1.0000	0.0	116	0.00	
71	P	Tetrachloroethene	0.3005	0.2933	2.4	119	0.00	
72	P	2-Hexanone	0.2256	0.2014	10.7	103	0.00	
73		1,3-Dichloropropane	0.4369	0.4087	6.5	111	0.00	
74	P	Dibromochloromethane	0.2981	0.3083	-3.4	117	0.00	
75		N-Butyl Acetate	0.5418	0.4805	11.3	97	0.00	
76	P	1,2-Dibromoethane	0.2435	0.2370	2.7	114	0.00	
77		3-Chlorobenzotrifluoride	0.5472	0.5808	-6.1	123	0.00	
78	P	Chlorobenzene	0.9831	0.9911	-0.8	117	0.00	
79		4-Chlorobenzotrifluoride	0.4816	0.5163	-7.2	122	0.00	
80		1,1,1,2-Tetrachloroethane	0.3366	0.3504	-4.1	119	0.00	
81	P	Ethylbenzene	0.5157	0.5321	-3.2	121	0.00	
82	P	(m+p)Xylene	0.6204	0.6561	-5.8	119	0.00	
83	P	o-Xylene	0.6155	0.6330	-2.8	118	0.00	
84	P	Styrene	1.0423	1.0983	-5.4	116	0.00	
85	P	Bromoform	0.1624	0.1744	-7.4	118	0.00	
86		2-Chlorobenzotrifluoride	0.5181	0.5524	-6.6	118	0.00	
87	P	Isopropylbenzene	1.5120	1.6553	-9.5	118	0.00	
88		Cyclohexanone	0.0161	0.0153	5.0	117	0.00	
89		trans-1,4-Dichloro-2-Butene	0.1091	0.0884	19.0	97	0.00	
90	i	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	112	0.00	
91	P	1,1,2,2-Tetrachloroethane	0.5106	0.4902	4.0	106	0.00	

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
92		Bromobenzene	0.7243	0.7280	-0.5	117	0.00
93		1,2,3-Trichloropropane	0.1503	0.1356	9.8	109	0.00
94		n-Propylbenzene	2.9707	3.4068	-14.7	120	0.00
95		2-Chlorotoluene	1.8626	1.9857	-6.6	117	0.00
96		3-Chlorotoluene	1.9669	2.1340	-8.5	115	0.00
97		4-Chlorotoluene	2.2203	2.3806	-7.2	115	0.00
98		1,3,5-Trimethylbenzene	2.2186	2.4889	-12.2	117	0.00
99		tert-Butylbenzene	1.9260	2.1264	-10.4	119	0.00
100		1,2,4-Trimethylbenzene	2.2658	2.4870	-9.8	116	0.00
101		3,4-Dichlorobenzotrifluorid	0.6591	0.7496	-13.7	122	0.00
102		sec-Butylbenzene	2.6151	3.0573	-16.9	121	0.00
103		p-Isopropyltoluene	2.3299	2.6850	-15.2	120	0.00
104	P	1,3-Dclbenz	1.4741	1.5200	-3.1	115	0.00
105	P	1,4-Dclbenz	1.5453	1.5626	-1.1	116	0.00
106		2,4-Dichlorobenzotrifluorid	0.6183	0.6878	-11.2	123	0.00
107		2,5-Dichlorobenzotrifluorid	0.7008	0.7803	-11.3	123	0.00
108		n-Butylbenzene	2.0576	2.3963	-16.5	122	0.00
109	P	1,2-Dclbenz	1.3624	1.3984	-2.6	115	0.00
110	P	1,2-Dibromo-3-chloropropane	0.0934	0.0875	6.3	111	0.00
111		Trielution Dichlorotoluene	1.1680	1.3650	-16.9	118	0.00
112		1,3,5-Trichlorobenzene	0.9978	1.1109	-11.3	120	0.00
113		Coelution Dichlorotoluene	1.2478	1.3971	-12.0	113	0.00
114	P	1,2,4-Tcbenzene	0.8584	0.8677	-1.1	110	0.00
115		Hexachlorobt	0.3554	0.3831	-7.8	122	0.00
116		Naphthalen	1.6087	1.5039	6.5	99	0.00
117		1,2,3-Tclbenzene	0.7069	0.6492	8.2	100	0.00
118		2,4,5-Trichlorotoluene	0.5213	0.4674	10.3	91	0.00
119		2,3,6-Trichlorotoluene	0.4556	0.4075	10.6	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : I:\ACQUDATA\MSVOA10\DATA\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FN 6/29/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	1178418	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.146	114	1777719	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1625156	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	928744	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.829	113	549686	49.55	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.10%				
46) surr1,1,2-dichloroetha...	5.414	65	526121	46.15	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 92.30%				
64) SURR3,Toluene-d8	8.042	98	2033683	48.08	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 96.16%				
69) SURR2,BFB	10.675	95	783558	45.59	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 91.18%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	659594	53.90	ug/L		98
3) Chloromethane	1.281	50	904186	40.37	ug/L		99
4) Vinyl Chloride	1.348	62	784895	48.10	ug/L		95
5) Bromomethane	1.567	94	204165	30.25	ug/L		96
6) Chloroethane	1.634	64	408561	51.00	ug/L		93
7) Freon 21	1.762	67	1027264	52.48	ug/L		98
8) Trichlorofluoromethane	1.811	101	855878	54.34	ug/L		98
9) Diethyl Ether	2.012	59	437008	46.06	ug/L	#	80
10) Freon 123a	2.012	67	612712	51.27	ug/L		99
11) Freon 123	2.055	83	685863	51.87	ug/L		80
12) Acrolein	2.104	56	113612	63.76	ug/L		91
13) 1,1-Diclethene	2.189	96	483317	55.67	ug/L		90
14) Freon 113	2.189	101	542944	59.78	ug/L		91
15) Acetone	2.220	43	145365	41.38	ug/L		96
16) 2-Propanol	2.323	45	488711	791.00	ug/L		97
17) Iodomethane	2.317	142	478164	37.19	ug/L		97
18) Carbon Disulfide	2.378	76	1740451	55.81	ug/L		100
19) Acetonitrile	2.451	40	120835	222.45	ug/L		90
20) Allyl Chloride	2.488	76	287943	50.98	ug/L	#	32
21) Methyl Acetate	2.500	43	352408	41.06	ug/L		89
22) Methylene Chloride	2.591	84	549835	51.62	ug/L	#	73
23) TBA	2.683	59	599383	757.36	ug/L		67
24) Acrylonitrile	2.817	53	833881	218.88	ug/L		100
25) Methyl-t-Butyl Ether	2.860	73	1104086	44.47	ug/L		86
26) trans-1,2-Dichloroethene	2.854	96	541451	55.41	ug/L		90
27) 1,1-Diclethane	3.305	63	1070255	49.06	ug/L		98
28) Vinyl Acetate	3.372	86	79730	45.32	ug/L	#	81
29) DIPE	3.402	45	2837640	47.45	ug/L	#	73
30) 2-Chloro-1,3-Butadiene	3.414	53	1361903	53.67	ug/L		94
31) ETBE	3.872	59	1782407	43.64	ug/L		96
32) 2,2-Dichloropropane	4.048	77	728909	51.70	ug/L		98
33) cis-1,2-Dichloroethene	4.048	96	575375	49.13	ug/L		95
34) 2-Butanone	4.079	43	233994	42.21	ug/L		85
35) Propionitrile	4.158	54	280892	204.16	ug/L		95

Data Path : I:\ACQUDATA\MSVOA10\DATA\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	344898	47.89	ug/L	#	75
37) Methacrylonitrile	4.402	67	131368	40.41	ug/L	#	42
38) Tetrahydrofuran	4.487	42	132723	38.73	ug/L		72
39) Chloroform	4.555	83	929580	47.90	ug/L		99
40) 1,1,1-Trichloroethane	4.853	97	825233	49.99	ug/L		95
42) Cyclohexane	4.945	41	800444	47.36	ug/L		91
44) Carbontetrachloride	5.152	121	236090	53.75	ug/L		89
45) 1,1-Dichloropropene	5.158	75	712530	49.58	ug/L		96
47) Benzene	5.499	78	2160638	48.50	ug/L		87
48) 1,2-Dichloroethane	5.536	62	694537	45.16	ug/L		92
49) Iso-Butyl Alcohol	5.469	43	362834	785.21	ug/L		86
50) TAME	5.737	73	1157780	45.09	ug/L		85
51) n-Heptane	6.005	43	1057767	54.61	ug/L		83
52) 1-Butanol	6.505	56	476359	2354.00	ug/L		82
53) Trichloroethene	6.493	130	600242	48.76	ug/L		95
54) Methylcyclohexane	6.743	55	911179	50.05	ug/L	#	84
55) 1,2-Diclpropane	6.792	63	615433	46.86	ug/L		92
56) Dibromomethane	6.938	93	263913	45.68	ug/L		94
57) 1,4-Dioxane	6.999	88	62636	955.66	ug/L	#	67
58) Methyl Methacrylate	7.024	69	219671	42.46	ug/L	#	63
59) Bromodichloromethane	7.170	83	671598	48.53	ug/L		98
60) 2-Nitropropane	7.462	41	167382	110.43	ug/L		93
61) 2-Chloroethylvinyl Ether	7.590	63	275444	44.85	ug/L		95
62) cis-1,3-Dichloropropene	7.737	75	776967	49.53	ug/L		94
63) 4-Methyl-2-pentanone	7.944	43	477665	42.46	ug/L		87
65) Toluene	8.121	91	2361682	49.09	ug/L		99
66) trans-1,3-Dichloropropene	8.395	75	616453	47.15	ug/L		96
67) Ethyl Methacrylate	8.542	69	463732	45.01	ug/L	#	58
68) 1,1,2-Trichloroethane	8.590	97	385145	44.90	ug/L		99
71) Tetrachloroethene	8.731	164	476644	48.80	ug/L		95
72) 2-Hexanone	8.889	43	327285	44.64	ug/L		90
73) 1,3-Dichloropropane	8.767	76	664258	46.78	ug/L	#	78
74) Dibromochloromethane	8.999	129	501052	51.70	ug/L		100
75) N-Butyl Acetate	9.054	43	780888	44.35	ug/L		92
76) 1,2-Dibromoethane	9.096	107	385130	48.66	ug/L		91
77) 3-Chlorobenzotrifluoride	9.627	180	943852	53.06	ug/L		98
78) Chlorobenzene	9.608	112	1610722	50.41	ug/L		95
79) 4-Chlorobenzotrifluoride	9.682	180	839049	53.60	ug/L		95
80) 1,1,1,2-Tetrachloroethane	9.694	131	569517	52.05	ug/L		98
81) Ethylbenzene	9.730	106	864773	51.59	ug/L		95
82) (m+p)Xylene	9.846	106	2132562	105.76	ug/L		94
83) o-Xylene	10.206	106	1028733	51.42	ug/L		95
84) Styrene	10.224	104	1784874	52.69	ug/L		95
85) Bromoform	10.377	173	283433	53.71	ug/L		99
86) 2-Chlorobenzotrifluoride	10.456	180	897713	53.31	ug/L		93
87) Isopropylbenzene	10.547	105	2690134	54.74	ug/L		99
88) Cyclohexanone	10.608	55	496260	947.95	ug/L		89
89) trans-1,4-Dichloro-2-B...	10.864	53	143722	40.54	ug/L		81
91) 1,1,2,2-Tetrachloroethane	10.809	83	455301	48.00	ug/L		97
92) Bromobenzene	10.797	156	676116	50.26	ug/L		91
93) 1,2,3-Trichloropropane	10.840	110	125902	45.09	ug/L		89

Data Path : I:\ACQUDATA\MSVOA10\DATA\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

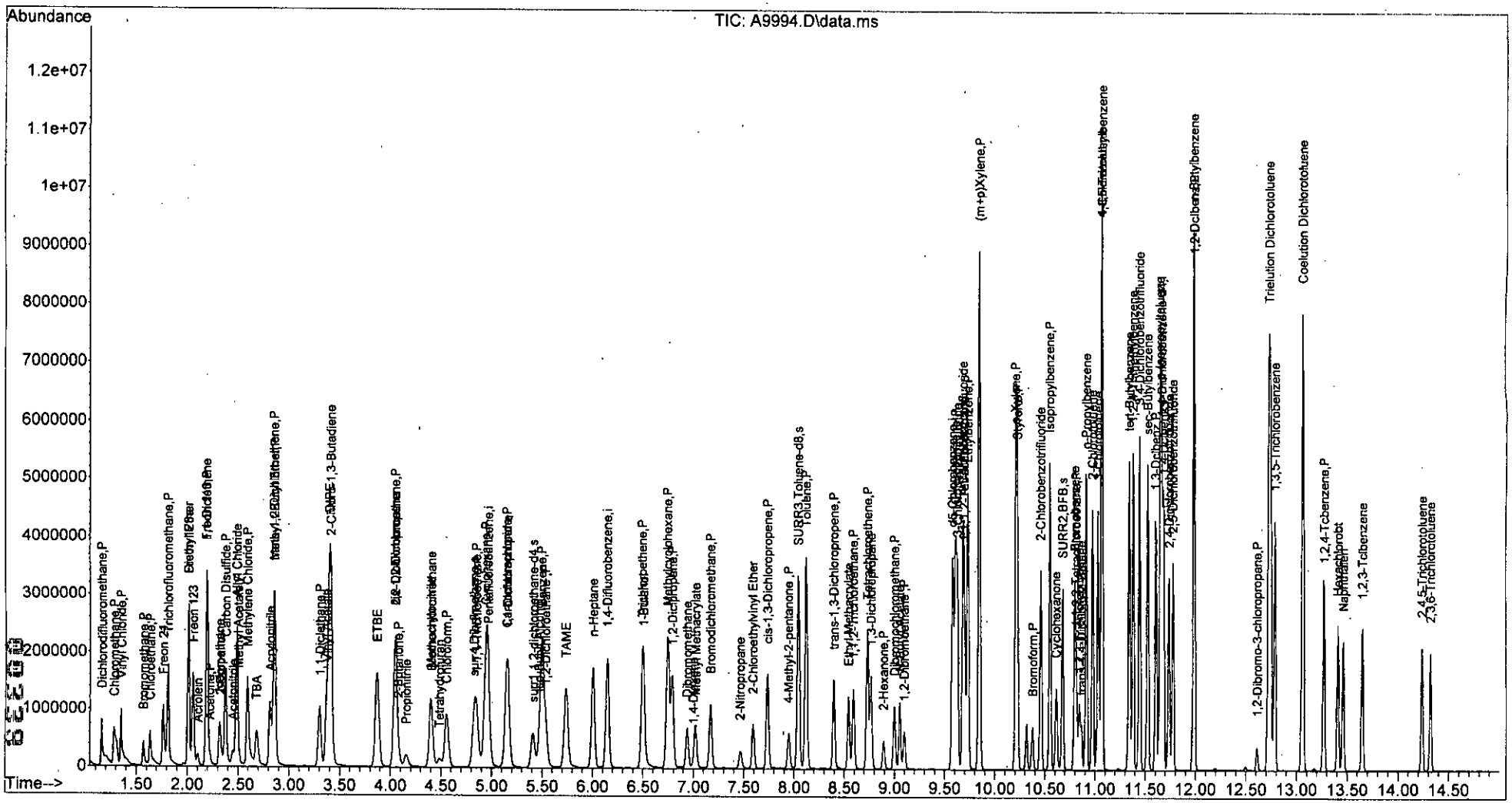
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	n-Propylbenzene	10.913	91	3164034	57.34	ug/L	98
95)	2-Chlorotoluene	10.974	91	1844209	53.31	ug/L	97
96)	3-Chlorotoluene	11.029	91	1981966	54.25	ug/L	96
97)	4-Chlorotoluene	11.065	91	2210969	53.61	ug/L	97
98)	1,3,5-Trimethylbenzene	11.065	105	2311597	56.09	ug/L	97
99)	tert-Butylbenzene	11.340	119	1974846	55.20	ug/L	97
100)	1,2,4-Trimethylbenzene	11.376	105	2309767	54.88	ug/L	95
101)	3,4-Dichlorobenzotrifl...	11.443	214	696207	56.87	ug/L	99
102)	sec-Butylbenzene	11.523	105	2839444	58.45	ug/L	97
103)	p-Isopropyltoluene	11.645	119	2493678	57.62	ug/L	98
104)	1,3-Dclbenz	11.602	146	1411667	51.56	ug/L	97
105)	1,4-Dclbenz	11.681	146	1451246	50.56	ug/L	97
106)	2,4-Dichlorobenzotrifl...	11.736	214	638767	55.62	ug/L	97
107)	2,5-Dichlorobenzotrifl...	11.773	214	724718	55.67	ug/L	97
108)	n-Butylbenzene	11.980	91	2225591	58.23	ug/L	96
109)	1,2-Dclbenz	11.986	146	1298782	51.32	ug/L	98
110)	1,2-Dibromo-3-chloropr...	12.608	157	81233	46.81	ug/L	94
111)	Trielution Dichlorotol...	12.730	125	3803124	175.29	ug/L	97
112)	1,3,5-Trichlorobenzene	12.785	180	1031768	55.67	ug/L	98
113)	Coelution Dichlorotoluene	13.059	125	2595109	111.97	ug/L	97
114)	1,2,4-Tcbenzene	13.272	180	805841	50.54	ug/L	99
115)	Hexachlorobt	13.406	225	355774	53.89	ug/L	97
116)	Naphthalen	13.461	128	1396737	46.74	ug/L	97
117)	1,2,3-Tclbenzene	13.650	180	602923	45.92	ug/L	98
118)	2,4,5-Trichlorotoluene	14.236	159	434138	44.83	ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	378479	44.72	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : I:\ACQUDATA\MSVOA10\DATA\062915\
Data File : A9994.D
Acq On : 29 Jun 2015 10:19 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 29 10:33:26 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0002.D
Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:43:08 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FJ 6/30/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
1	i	Pentafluorobenzene	1.0000	1.0000	0.0	114	0.00	
2	P	Dichlorodifluoromethane	0.5192	0.5919	-14.0	120	0.00	
3	P	Chloromethane	0.9504	0.7990	15.9	95	0.00	
4	P	Vinyl Chloride	0.6923	0.6834	1.3	112	0.00	
5	P	Bromomethane	0.2864	0.2348	18.0	99	0.00	
6	P	Chloroethane	0.3399	0.3622	-6.6	126	0.00	
7		Freon 21	0.8305	0.8738	-5.2	114	0.00	
8	P	Trichlorofluoromethane	0.6683	0.7365	-10.2	125	0.00	
9		Diethyl Ether	0.4025	0.3999	0.6	110	0.00	
10		Freon 123a	0.5071	0.5189	-2.3	113	0.00	
11		Freon 123	0.5610	0.5617	-0.1	115	0.00	
12		Acrolein	0.0756	0.0193	36.12 ~~74.5#~~	29#	0.00	(1)
13		1,1-Diclethene	0.3684	0.4256	-15.5	135	0.00	
14	P	Freon 113	0.3854	0.4544	-17.9	139	0.00	
15	P	Acetone	0.1691	0.1432	2.7 ~~15.3~~	116	0.00	
16		2-Propanol	0.0262	0.0225	14.1	95	0.00	
17		Iodomethane	0.5455	0.3799	30.4#	76	0.00	(2)
18	P	Carbon Disulfide	1.3232	1.4773	-11.6	129	0.00	
19		Acetonitrile	0.0230	0.0233	-1.3	117	0.00	
20		Allyl Chloride	0.2397	0.2604	-8.6	122	0.00	
21	P	Methyl Acetate	0.3642	0.3165	13.1	103	0.00	
22	P	Methylene Chloride	0.4520	0.4808	-6.4	128	0.00	
23		TBA	0.0336	0.0302	10.1	107	-0.01	
24		Acrylonitrile	0.1616	0.1539	4.8	108	0.00	
25	P	Methyl-t-Butyl Ether	1.0534	1.0189	3.3	113	-0.01	
26	P	trans-1,2-Dichloroethene	0.4146	0.4762	-14.9	134	0.00	
27	P	1,1-Diclethane	0.9257	0.9401	-1.6	116	0.00	
28		Vinyl Acetate	0.0747	0.0694	7.1	109	0.00	
29		DIPE	2.5377	2.4085	5.1	103	-0.01	
30		2-Chloro-1,3-Butadiene	1.0766	1.1481	-6.6	118	0.00	
31		ETBE	1.7332	1.5308	11.7	99	0.00	
32		2,2-Dichloropropane	0.5982	0.6353	-6.2	123	0.00	
33	P	cis-1,2-Dichloroethene	0.4970	0.4994	-0.5	116	0.00	
34	P	2-Butanone	0.2352	0.2138	9.1	107	-0.01	
35		Propionitrile	0.0584	0.0553	5.3	108	-0.01	
36		Bromochloromethane	0.3056	0.3091	-1.1	115	0.00	
37		Methacrylonitrile	0.1379	0.1265	8.3	107	0.00	
38		Tetrahydrofuran	0.1454	0.1302	10.5	105	-0.01	
39	P	Chloroform	0.8234	0.8276	-0.5	116	0.00	
40	P	1,1,1-Trichloroethane	0.7004	0.7194	-2.7	118	0.00	
41	i	1,4-Difluorobenzene	1.0000	1.0000	0.0	112	0.00	
42	P	Cyclohexane	0.4754	0.4516	5.0	107	0.00	
43	s	surr4,Dibrflmethane	0.3120	0.3047	2.3	113	-0.01	
44	P	Carbontetrachloride	0.1235	0.1348	-9.1	123	0.00	
45		1,1-Dichloropropene	0.4042	0.4109	-1.7	116	0.00	
46	s	surr1,1,2-dichloroethane-d4	0.3206	0.2971	7.3	108	0.00	

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Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:43:08 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
47	P	Benzene	1.2531	1.2482	0.4	115	0.00	
48	P	1,2-Dichloroethane	0.4326	0.4111	5.0	107	0.00	
49		Iso-Butyl Alcohol	0.0130	0.0120	7.7	113	-0.02	
50		TAME	0.7222	0.6584	8.8	98	0.00	
51		n-Heptane	0.5448	0.6132	-12.6	126	0.00	
52		1-Butanol	0.0058	0.0059	~~-1.7~~ -2.7	113	-0.02	
53	P	Trichloroethene	0.3463	0.3498	-1.0	115	0.00	
54	P	Methylcyclohexane	0.5121	0.5143	-0.4	113	0.00	
55	P	1,2-Diclpropane	0.3694	0.3577	3.2	113	0.00	
56		Dibromomethane	0.1625	0.1520	6.5	110	0.00	
57		1,4-Dioxane	0.0018	0.0020	-11.1	133	-0.02	
58		Methyl Methacrylate	0.1455	0.1373	5.6	104	0.00	
59	P	Bromodichloromethane	0.3893	0.3884	0.2	113	0.00	
60		2-Nitropropane	0.0426	0.0513	-20.4#	142	0.00	NT
61		2-Chloroethylvinyl Ether	0.1728	0.1571	9.1	100	0.00	
62	P	cis-1,3-Dichloropropene	0.4412	0.4402	0.2	109	0.00	
63	P	4-Methyl-2-pentanone	0.3164	0.2865	9.5	100	0.00	
64	s	SURR3,Toluene-d8	1.1896	1.1476	3.5	110	0.00	
65	P	Toluene	1.3531	1.3502	0.2	114	0.00	
66	P	trans-1,3-Dichloropropene	0.3677	0.3579	2.7	106	0.00	
67		Ethyl Methacrylate	0.2898	0.2841	2.0	107	0.00	
68	P	1,1,2-Trichloroethane	0.2413	0.2248	6.8	107	0.00	
69	s	SURR2,BFB	0.4834	0.4454	7.9	104	0.00	
70	i	d5-Chlorobenzene	1.0000	1.0000	0.0	108	0.00	
71	P	Tetrachloroethene	0.3005	0.3009	-0.1	113	0.00	
72	P	2-Hexanone	0.2256	0.2212	2.0	105	0.00	
73		1,3-Dichloropropane	0.4369	0.4309	1.4	109	0.00	
74	P	Dibromochloromethane	0.2981	0.3167	-6.2	111	0.00	
75		N-Butyl Acetate	0.5418	0.5211	3.8	98	0.00	
76	P	1,2-Dibromoethane	0.2435	0.2482	-1.9	111	0.00	
77		3-Chlorobenzotrifluoride	0.5472	0.5858	-7.1	115	0.00	
78	P	Chlorobenzene	0.9831	1.0330	-5.1	113	0.00	
79		4-Chlorobenzotrifluoride	0.4816	0.5289	-9.8	116	0.00	
80		1,1,1,2-Tetrachloroethane	0.3366	0.3663	-8.8	115	0.00	
81	P	Ethylbenzene	0.5157	0.5485	-6.4	115	0.00	
82	P	(m+p)Xylene	0.6204	0.6729	-8.5	113	0.00	
83	P	o-Xylene	0.6155	0.6544	-6.3	113	0.00	
84	P	Styrene	1.0423	1.1299	-8.4	111	0.00	
85	P	Bromoform	0.1624	0.1761	-8.4	110	0.00	
86		2-Chlorobenzotrifluoride	0.5181	0.5732	-10.6	114	0.00	
87	P	Isopropylbenzene	1.5120	1.7006	-12.5	112	0.00	
88		Cyclohexanone	0.0161	0.0344	-113.7#	244#	0.00	NT
89		trans-1,4-Dichloro-2-Butene	0.1091	0.0698	36.0#	71	0.00	(3)
90	i	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	105	0.00	
91	P	1,1,2,2-Tetrachloroethane	0.5106	0.5325	-4.3	108	0.00	

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Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
92		Bromobenzene	0.7243	0.7396	-2.1	111	0.00
93		1,2,3-Trichloropropane	0.1503	0.1430	4.9	107	0.00
94		n-Propylbenzene	2.9707	3.4888	-17.4	115	0.00
95		2-Chlorotoluene	1.8626	2.0274	-8.8	112	0.00
96		3-Chlorotoluene	1.9669	2.1447	-9.0	108	0.00
97		4-Chlorotoluene	2.2203	2.4538	-10.5	111	0.00
98		1,3,5-Trimethylbenzene	2.2186	2.5737	-16.0	113	0.00
99		tert-Butylbenzene	1.9260	2.1794	-13.2	114	0.00
100		1,2,4-Trimethylbenzene	2.2658	2.5796	-13.8	112	0.00
101		3,4-Dichlorobenzotrifluorid	0.6591	0.7652	-16.1	117	0.00
102		sec-Butylbenzene	2.6151	3.1261	-19.5	116	0.00
103		p-Isopropyltoluene	2.3299	2.7735	-19.0	116	0.00
104	P	1,3-Dclbenz	1.4741	1.5547	-5.5	110	0.00
105	P	1,4-Dclbenz	1.5453	1.6166	-4.6	112	0.00
106		2,4-Dichlorobenzotrifluorid	0.6183	0.6895	-11.5	115	0.00
107		2,5-Dichlorobenzotrifluorid	0.7008	0.7778	-11.0	115	0.00
108		n-Butylbenzene	2.0576	2.4181	-17.5	115	0.00
109	P	1,2-Dclbenz	1.3624	1.4406	-5.7	111	0.00
110	P	1,2-Dibromo-3-chloropropane	0.0934	0.0935	-0.1	111	0.00
111		Trielution Dichlorotoluene	1.1680	1.3716	-17.4	111	0.00
112		1,3,5-Trichlorobenzene	0.9978	1.1089	-11.1	112	0.00
113		Coelution Dichlorotoluene	1.2478	1.4193	-13.7	107	0.00
114	P	1,2,4-Tcbenzene	0.8584	0.9209	-7.3	109	0.00
115		Hexachlorobt	0.3554	0.3868	-8.8	115	0.00
116		Naphthalen	1.6087	1.6305	-1.4	101	0.00
117		1,2,3-Tclbenzene	0.7069	0.6857	3.0	99	0.00
118		2,4,5-Trichlorotoluene	0.5213	0.4810	7.7	88	0.00
119		2,3,6-Trichlorotoluene	0.4556	0.4187	8.1	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

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FJ 6/30/15

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1096917	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.145	114	1655393	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1505383	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	867949	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.823	113	504414	48.83	ug/L	-0.01
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.66%			
46) surr1,1,2-dichloroetha...	5.408	65	491873	46.33	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 92.66%			
64) SURR3,Toluene-d8	8.041	98	1899717	48.24	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 96.48%			
69) SURR2,BFB	10.675	95	737293	46.06	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 92.12%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.159	85	649256m	57.00	ug/L	
3) Chloromethane	1.281	50	876433	42.03	ug/L	98
4) Vinyl Chloride	1.348	62	749629	49.36	ug/L	96
5) Bromomethane	1.567	94	257515	40.98	ug/L	99
6) Chloroethane	1.634	64	397297	53.28	ug/L	96
7) Freon 21	1.762	67	958494	52.61	ug/L	99
8) Trichlorofluoromethane	1.811	101	807872	55.10	ug/L	98
9) Diethyl Ether	2.012	59	438696	49.68	ug/L #	81
10) Freon 123a	2.012	67	569184	51.17	ug/L	98
11) Freon 123	2.055	83	616155	50.06	ug/L	84
12) Acrolein	2.104	56	105966	63.88	ug/L	87
13) 1,1-Diclethene	2.189	96	466815	57.76	ug/L #	87
14) Freon 113	2.189	101	498405	58.95	ug/L	92
15) Acetone	2.219	43	157081	48.66	ug/L	99
16) 2-Propanol	2.323	45	494408	859.68	ug/L	95
17) Iodomethane	2.317	142	416674	34.82	ug/L	100
18) Carbon Disulfide	2.372	76	1620442	55.82	ug/L	98
19) Acetonitrile	2.445	40	127743	252.64	ug/L	98
20) Allyl Chloride	2.488	76	285667	54.33	ug/L #	30
21) Methyl Acetate	2.500	43	347186	43.46	ug/L	88
22) Methylene Chloride	2.591	84	527424	53.19	ug/L #	74
23) TBA	2.683	59	662253	898.98	ug/L	71
24) Acrylonitrile	2.817	53	843863	237.96	ug/L	100
25) Methyl-t-Butyl Ether	2.853	73	1117659	48.36	ug/L	90
26) trans-1,2-Dichloroethene	2.860	96	522374	57.43	ug/L	96
27) 1,1-Diclethane	3.298	63	1031259	50.78	ug/L	97
28) Vinyl Acetate	3.372	86	76175	46.51	ug/L #	73
29) DIPE	3.396	45	2641955	47.46	ug/L #	78
30) 2-Chloro-1,3-Butadiene	3.414	53	1259380	53.32	ug/L	89
31) ETBE	3.872	59	1679196	44.16	ug/L	94
32) 2,2-Dichloropropane	4.048	77	696819	53.10	ug/L	96
33) cis-1,2-Dichloroethene	4.048	96	547797	50.25	ug/L	88
34) 2-Butanone	4.079	43	234507	45.44	ug/L	92
35) Propionitrile	4.158	54	303468	236.96	ug/L	95

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Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	339027	50.57	ug/L	#	71
37) Methacrylonitrile	4.402	67	138748	45.86	ug/L	#	43
38) Tetrahydrofuran	4.481	42	142813	44.77	ug/L		72
39) Chloroform	4.554	83	907845	50.25	ug/L		97
40) 1,1,1-Trichloroethane	4.853	97	789120	51.35	ug/L		95
42) Cyclohexane	4.951	41	747629	47.50	ug/L		87
44) Carbontetrachloride	5.152	121	223218	54.58	ug/L		85
45) 1,1-Dichloropropene	5.158	75	680274	50.84	ug/L		98
47) Benzene	5.499	78	2066270	49.80	ug/L		84
48) 1,2-Dichloroethane	5.536	62	680519	47.51	ug/L		91
49) Iso-Butyl Alcohol	5.475	43	396655	921.83	ug/L		91
50) TAME	5.737	73	1089977	45.58	ug/L		86
51) n-Heptane	6.005	43	1015131	56.28	ug/L		83
52) 1-Butanol	6.505	56	490179	2566.31	ug/L		82
53) Trichloroethene	6.493	130	579048	50.51	ug/L		95
54) Methylcyclohexane	6.743	55	851381m	50.22	ug/L		
55) 1,2-Diclpropane	6.792	63	592099	48.41	ug/L		95
56) Dibromomethane	6.938	93	251663	46.78	ug/L		98
57) 1,4-Dioxane	6.993	88	65681	1076.17	ug/L		77
58) Methyl Methacrylate	7.017	69	227360	47.19	ug/L	#	60
59) Bromodichloromethane	7.170	83	642879	49.88	ug/L		96
60) 2-Nitropropane	7.462	41	169894	120.37	ug/L		94
61) 2-Chloroethylvinyl Ether	7.590	63	260054	45.47	ug/L		95
62) cis-1,3-Dichloropropene	7.737	75	728782	49.89	ug/L		92
63) 4-Methyl-2-pentanone	7.944	43	474296	45.28	ug/L		89
65) Toluene	8.121	91	2235097	49.89	ug/L		97
66) trans-1,3-Dichloropropene	8.395	75	592419	48.66	ug/L		96
67) Ethyl Methacrylate	8.541	69	470330	49.02	ug/L	#	58
68) 1,1,2-Trichloroethane	8.590	97	372097	46.59	ug/L		97
71) Tetrachloroethene	8.730	164	452912	50.06	ug/L		96
72) 2-Hexanone	8.889	43	332959	49.03	ug/L		92
73) 1,3-Dichloropropane	8.767	76	648654	49.31	ug/L	#	78
74) Dibromochloromethane	8.999	129	476821	53.12	ug/L		100
75) N-Butyl Acetate	9.053	43	784490	48.10	ug/L		93
76) 1,2-Dibromoethane	9.096	107	373601	50.96	ug/L		96
77) 3-Chlorobenzotrifluoride	9.627	180	881851	53.52	ug/L		98
78) Chlorobenzene	9.602	112	1555104	52.54	ug/L		97
79) 4-Chlorobenzotrifluoride	9.681	180	796200	54.91	ug/L		98
80) 1,1,1,2-Tetrachloroethane	9.694	131	551473	54.41	ug/L		98
81) Ethylbenzene	9.730	106	825707	53.18	ug/L	#	90
82) (m+p)Xylene	9.846	106	2025814	108.46	ug/L		94
83) o-Xylene	10.206	106	985094	53.16	ug/L		92
84) Styrene	10.224	104	1700981	54.21	ug/L		94
85) Bromoform	10.376	173	265095	54.23	ug/L		99
86) 2-Chlorobenzotrifluoride	10.456	180	862827	55.32	ug/L		93
87) Isopropylbenzene	10.547	105	2560022	56.24	ug/L		99
88) Cyclohexanone	10.614	55	1037007	2138.49	ug/L		98
89) trans-1,4-Dichloro-2-B...	10.864	53	105042	31.98	ug/L		93
91) 1,1,2,2-Tetrachloroethane	10.815	83	462208	52.14	ug/L		97
92) Bromobenzene	10.797	156	641906	51.06	ug/L		91
93) 1,2,3-Trichloropropane	10.840	110	124133	47.57	ug/L	#	89

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Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

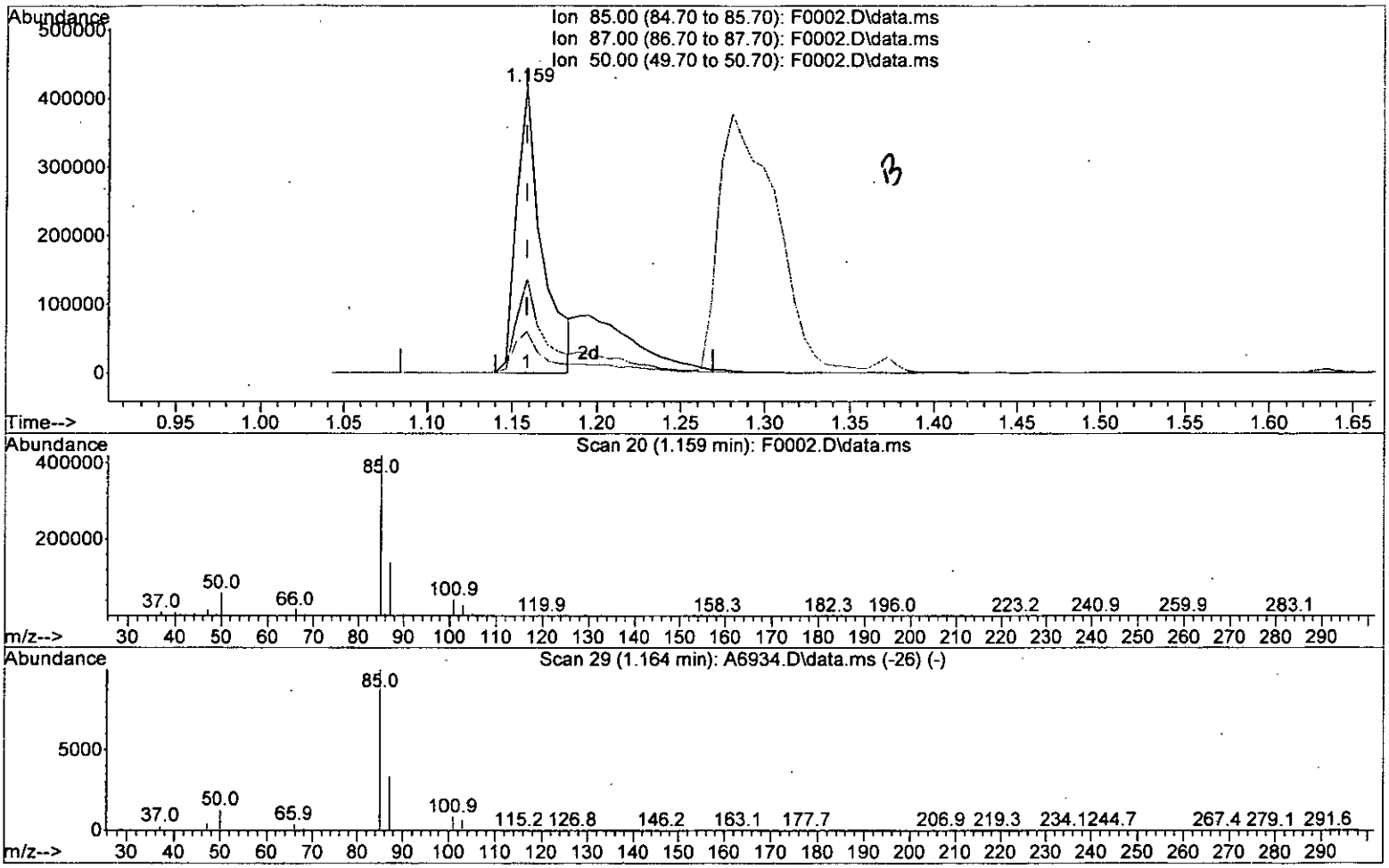
Quant Time: Jun 30 11:43:08 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	n-Propylbenzene	10.907	91	3028120	58.72	ug/L	99
95)	2-Chlorotoluene	10.974	91	1759721	54.43	ug/L	94
96)	3-Chlorotoluene	11.029	91	1861476	54.52	ug/L	95
97)	4-Chlorotoluene	11.065	91	2129814	55.26	ug/L	98
98)	1,3,5-Trimethylbenzene	11.065	105	2233871	58.00	ug/L	96
99)	tert-Butylbenzene	11.340	119	1891565	56.58	ug/L	97
100)	1,2,4-Trimethylbenzene	11.376	105	2238979	56.93	ug/L	95
101)	3,4-Dichlorobenzotrifl...	11.443	214	664144	58.05	ug/L	98
102)	sec-Butylbenzene	11.522	105	2713303	59.77	ug/L	97
103)	p-Isopropyltoluene	11.644	119	2407252	59.52	ug/L	96
104)	1,3-Dclbenz	11.602	146	1349431	52.74	ug/L	97
105)	1,4-Dclbenz	11.681	146	1403095	52.31	ug/L	96
106)	2,4-Dichlorobenzotrifl...	11.736	214	598446	55.76	ug/L	99
107)	2,5-Dichlorobenzotrifl...	11.772	214	675056	55.49	ug/L	98
108)	n-Butylbenzene	11.980	91	2098791	58.76	ug/L	98
109)	1,2-Dclbenz	11.986	146	1250382	52.87	ug/L	99
110)	1,2-Dibromo-3-chloropr...	12.614	157	81151	50.04	ug/L	93
111)	Trielution Dichlorotol...	12.730	125	3571479	176.14	ug/L	96
112)	1,3,5-Trichlorobenzene	12.784	180	962505	55.57	ug/L	96
113)	Coelution Dichlorotoluene	13.059	125	2463768	113.75	ug/L	96
114)	1,2,4-Tcbenzene	13.272	180	799317	53.64	ug/L	96
115)	Hexachlorobt	13.406	225	335721	54.41	ug/L	99
116)	Naphthalen	13.461	128	1415174	50.68	ug/L	99
117)	1,2,3-Tclbenzene	13.650	180	595172	48.50	ug/L	99
118)	2,4,5-Trichlorotoluene	14.235	159	417501	46.13	ug/L	99
119)	2,3,6-Trichlorotoluene	14.321	159	363400	45.95	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0002.D
Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:39:44 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0002.D\data.ms

(2) Dichlorodifluoromethane (P)

1.159min (-0.000) 38.26 ug/L

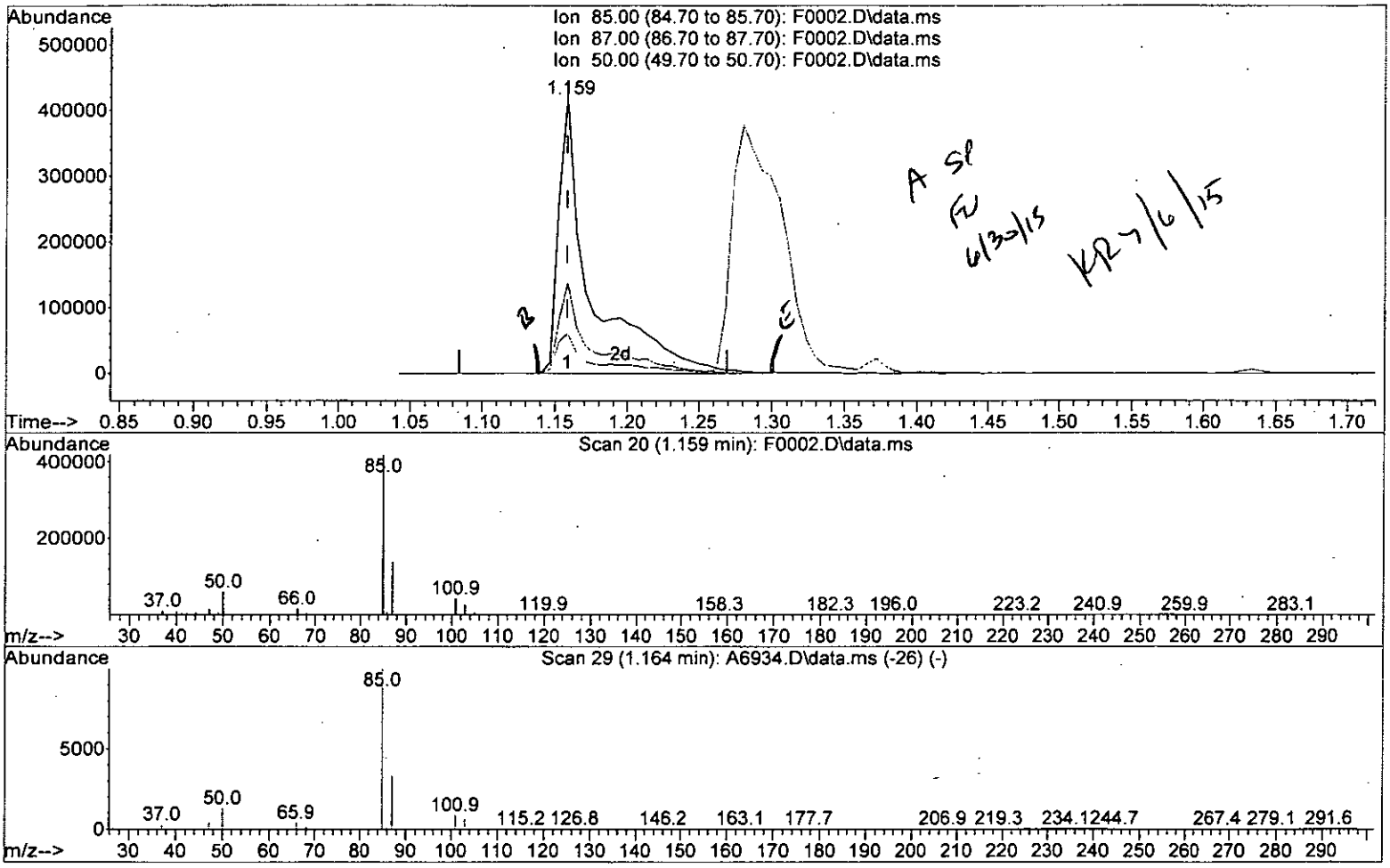
response 435809

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	32.81
50.00	15.00	14.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0002.D
Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:39:44 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0002.D\data.ms

(2) Dichlorodifluoromethane (P)

1.159min (-0.000) 57.00 ug/L m

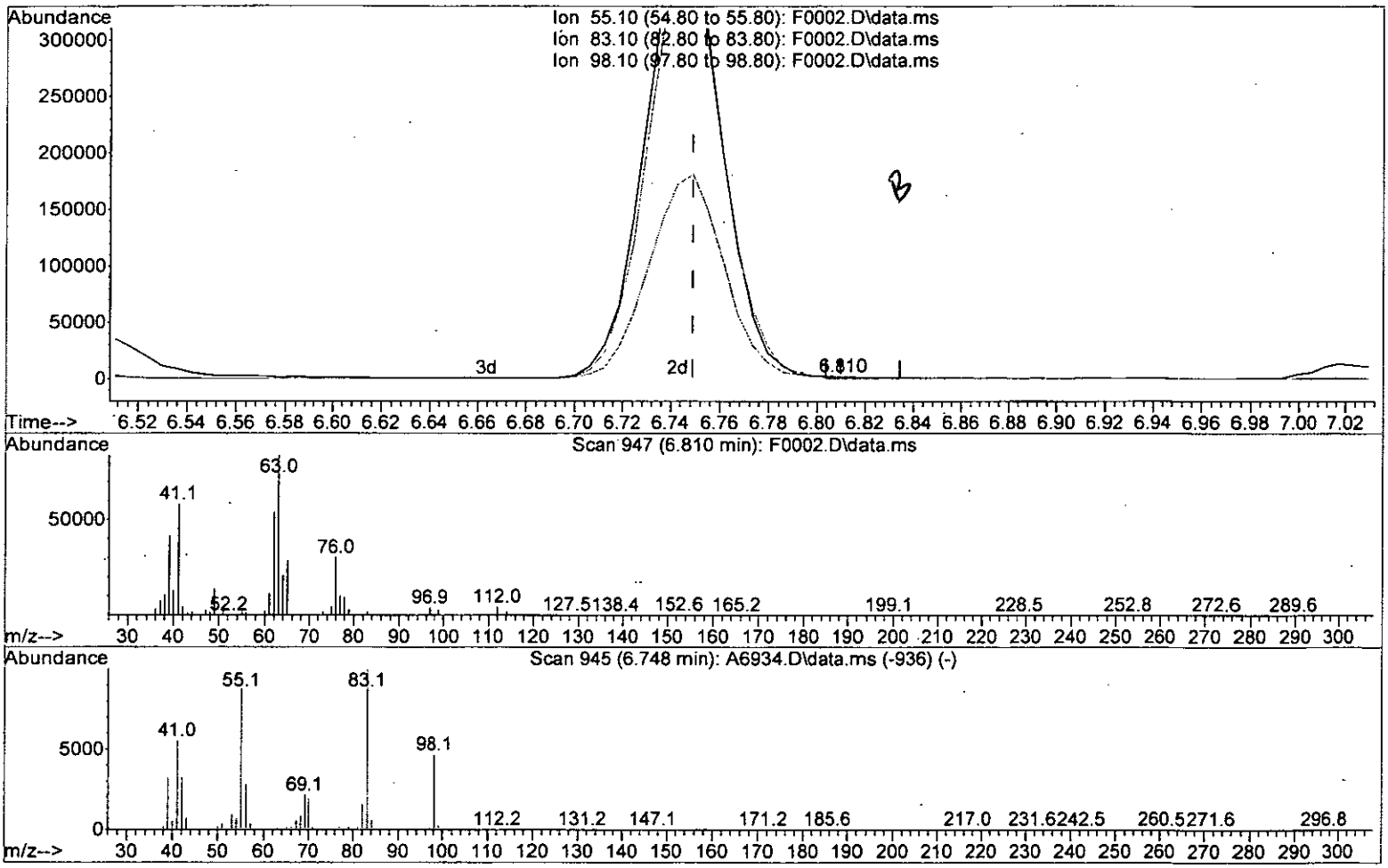
response 649256

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	32.81
50.00	15.00	14.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0002.D
Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:39:44 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0002.D\data.ms

(54) Methylcyclohexane (P)

6.810min (+0.061) 0.08 ug/L

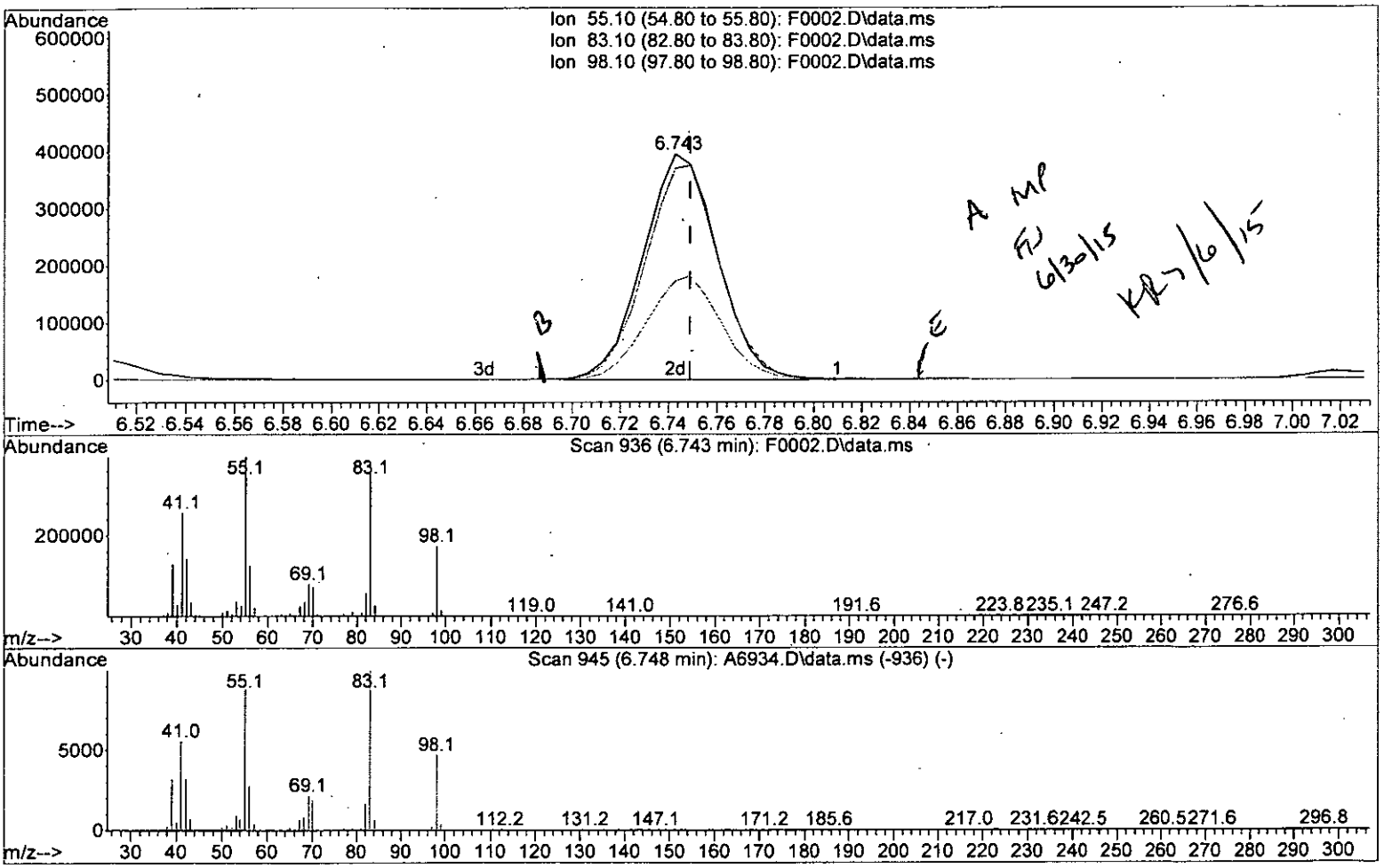
response 1438

Ion	Exp%	Act%
55.10	100	100
83.10	118.00	100.57
98.10	52.10	37.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0002.D
Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:39:44 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0002.D\data.ms

(54) Methylcyclohexane (P)

6.743min (-0.006) 50.22 ug/L m

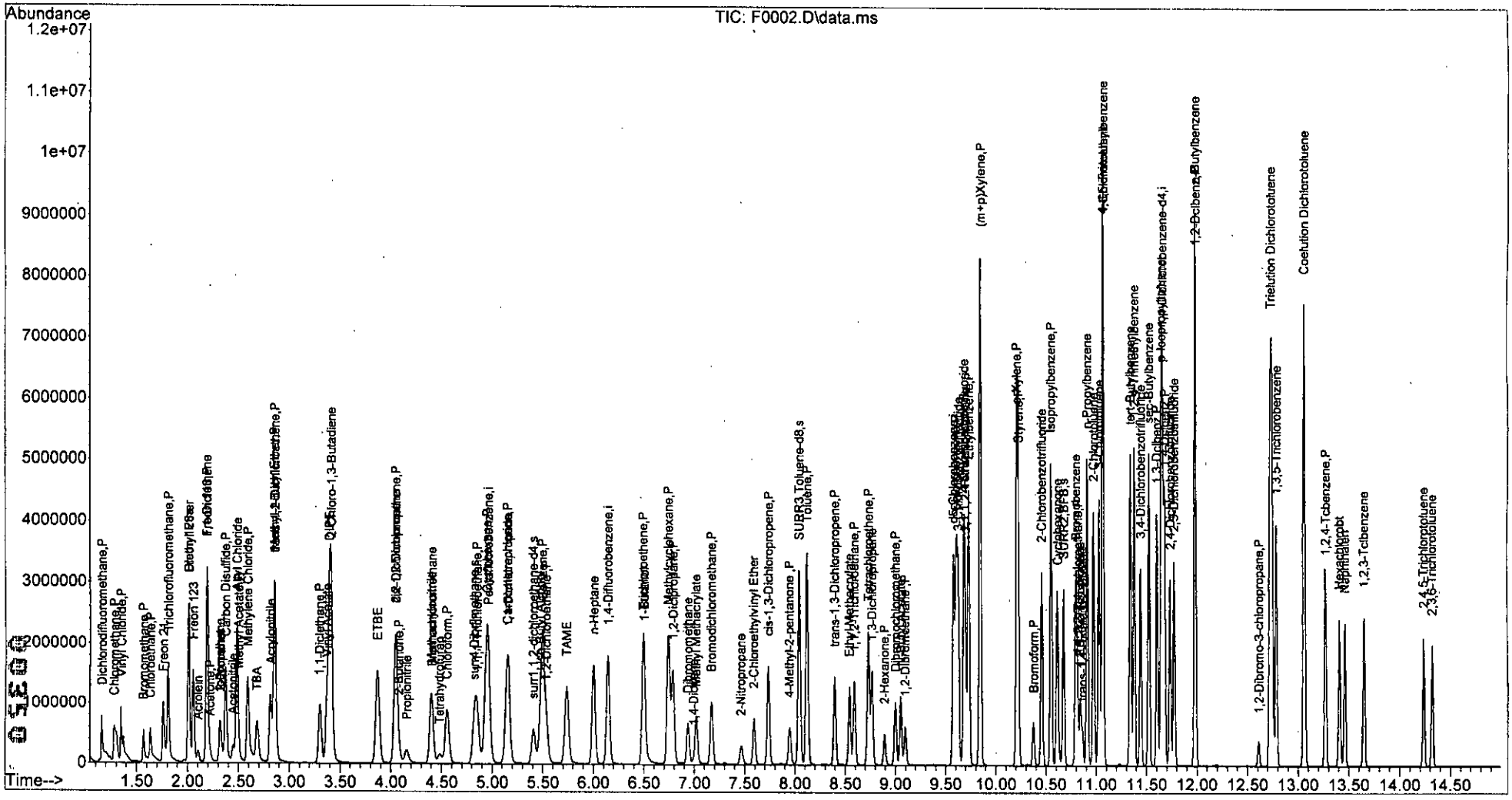
response 851381

Ion	Exp%	Act%
55.10	100	100
83.10	118.00	93.65#
98.10	52.10	43.58
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0002.D
Acq On : 30 Jun 2015 11:25 am
Operator : F. Naegler
Sample : CCV Inst : MSVOA10
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 30 11:43:08 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



ALS Environmental

VOLATILE ORGANICS
RAW QC DATA

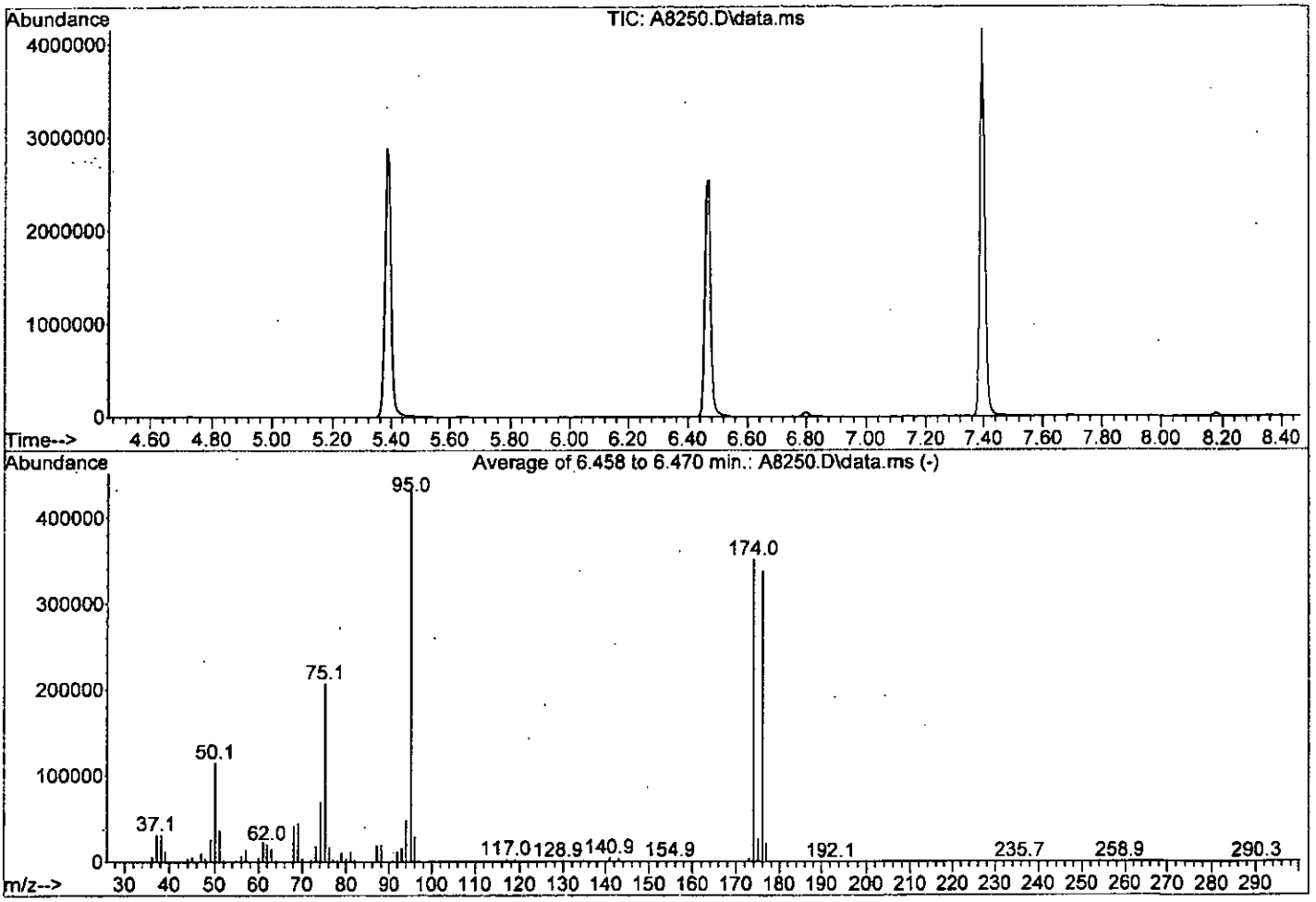
ALS Environmental - Rochester, NY
1565 Jefferson Rd, Bldg. 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Data Path : I:\ACQUDATA\msvoa10\data\050615\
Data File : A8250.D
Acq On : 6 May 2015 3:32 pm
Operator : F. NAEGLER
Sample : TUNE Inst : MSVOA10
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

FW 5/7/15

Method : I:\ACQUDATA\MSVOA10\METHODS\T050615.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



AutoFind: Scans 389, 390, 391; Background Corrected with Scan 384

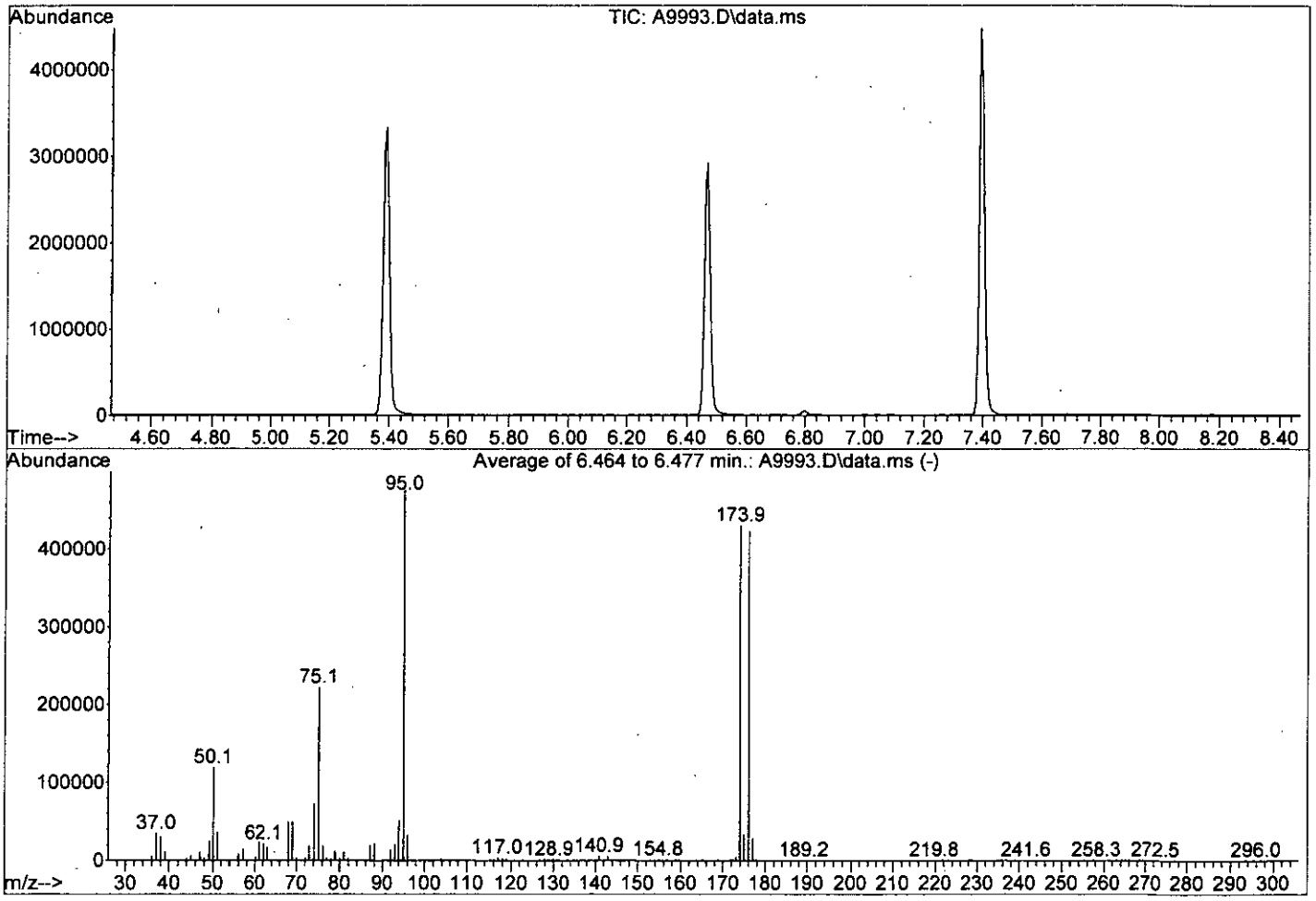
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.7	114707	PASS
75	95	30	60	48.1	206805	PASS
95	95	100	100	100.0	430315	PASS
96	95	5	9	6.8	29200	PASS
173	174	0.00	2	1.0	3466	PASS
174	95	50	120	81.6	351083	PASS
175	174	5	9	7.4	25806	PASS
176	174	95	101	96.1	337237	PASS
177	176	5	9	6.4	21447	PASS

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9993.D
Acq On : 29 Jun 2015 9:48 am
Operator : F. Naegler
Sample : TUNE Inst : MSVOA10
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

FV 6/29/15

Method : I:\ACQUDATA\MSVOA10\METHODS\T050615.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



AutoFind: Scans 390, 391, 392; Background Corrected with Scan 384

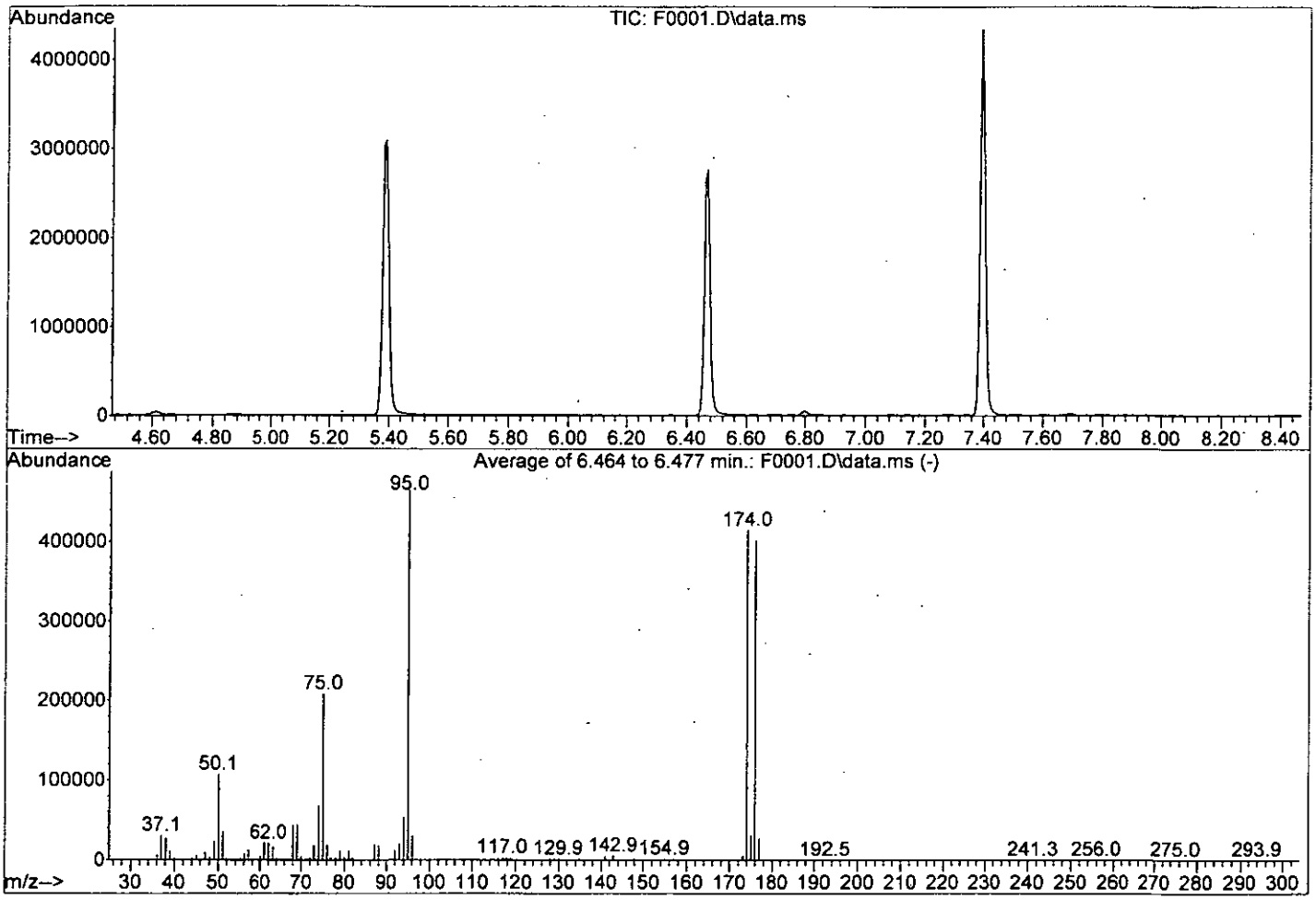
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.9	118715	PASS
75	95	30	60	46.6	221547	PASS
95	95	100	100	100.0	475861	PASS
96	95	5	9	6.7	32093	PASS
173	174	0.00	2	1.0	4399	PASS
174	95	50	120	90.4	430187	PASS
175	174	5	9	7.8	33347	PASS
176	174	95	101	98.3	423061	PASS
177	176	5	9	6.6	27763	PASS

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0001.D
Acq On : 30 Jun 2015 11:00 am
Operator : F. Naegler
Sample : TUNE Inst : MSVOA10
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

Method : I:\ACQUDATA\MSVOA10\METHODS\T050615.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006

FJ 6/30/15



AutoFind: Scans 390, 391, 392; Background Corrected with Scan 384

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	106923	PASS
75	95	30	60	44.8	208064	PASS
95	95	100	100	100.0	464427	PASS
96	95	5	9	6.5	30019	PASS
173	174	0.00	2	1.1	4745	PASS
174	95	50	120	89.2	414336	PASS
175	174	5	9	7.3	30312	PASS
176	174	95	101	96.7	400683	PASS
177	176	5	9	6.6	26515	PASS

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/29/15 11:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507370-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9997.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/29/15 11:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507370-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9997.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	87	85-122	6/29/15 11:46	
Dibromofluoromethane	98	89-119	6/29/15 11:46	
Toluene-d8	96	87-121	6/29/15 11:46	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9997.D
Acq On : 29 Jun 2015 11:46 am
Operator : F. Naegler
Sample : MBLK Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 13:35:53 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1126928	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.152	114	1722824	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1577902	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.657	152	872525	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	528618	49.17	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 98.34%			
46) surr1,1,2-dichloroetha...	5.414	65	534891	48.41	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 96.82%			
64) SURR3,Toluene-d8	8.042	98	1975372	48.19	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 96.38%			
69) SURR2,BFB	10.675	95	727913	43.70	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 87.40%			
Target Compounds						Qvalue
15) Acetone	2.226	43	1266	Below Cal	#	58
88) Cyclohexanone	10.614	55	1410	2.77	ug/L #	71
111) Trielution Dichlorotol...	12.736	125	7327	0.36	ug/L	93
113) Coelution Dichlorotoluene	13.059	125	5222	0.24	ug/L	96
115) Hexachlorobt	13.406	225	1486	0.24	ug/L #	61
117) 1,2,3-Tclbenzene	13.650	180	2536	0.21	ug/L #	71
118) 2,4,5-Trichlorotoluene	14.236	159	3554	0.39	ug/L	89
119) 2,3,6-Trichlorotoluene	14.315	159	3801	0.48	ug/L	84

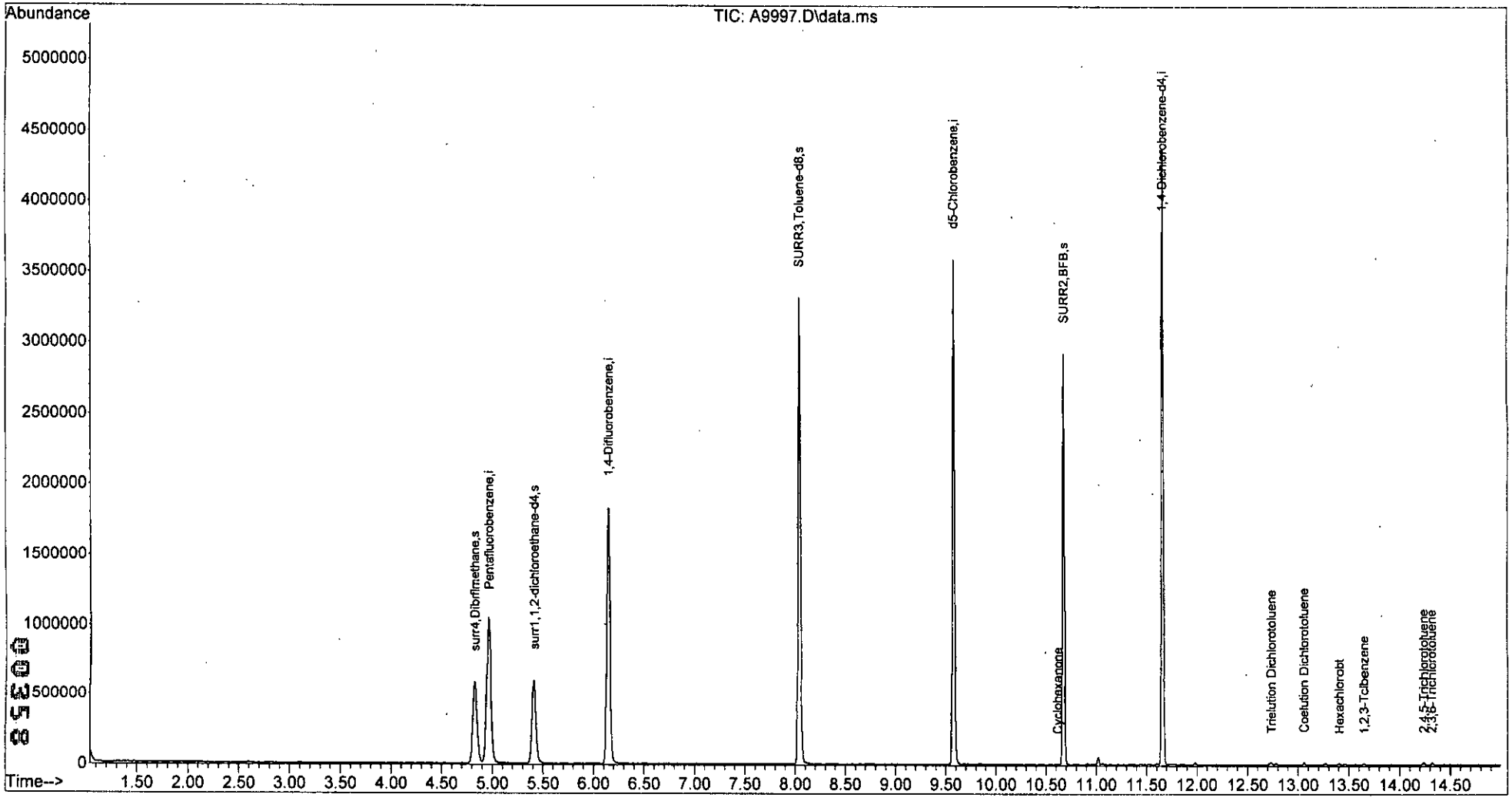
(#) = qualifier out of range (m) = manual integration (+) = signals summed

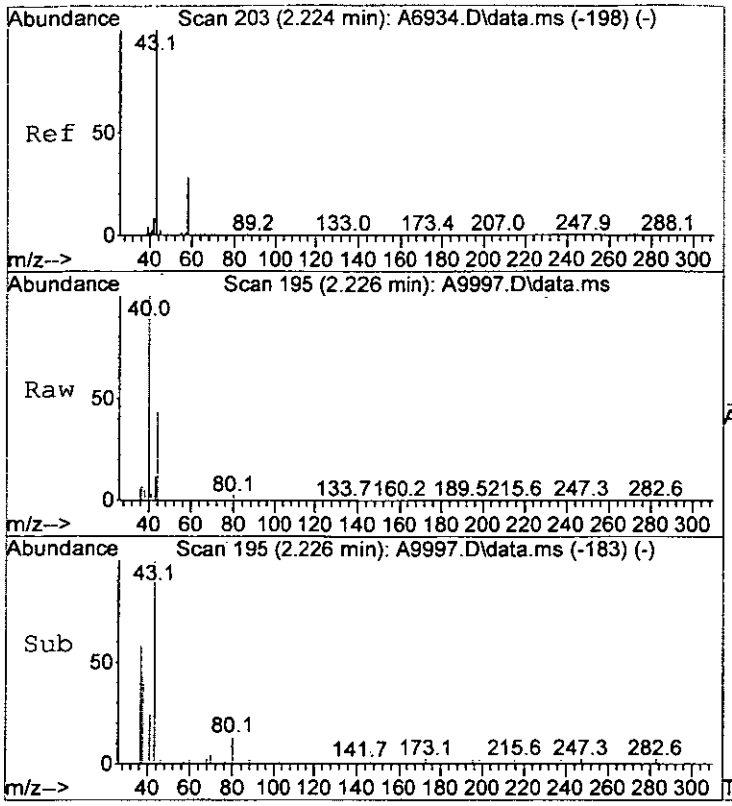
FJ 7/2/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9997.D
Acq On : 29 Jun 2015 11:46 am
Operator : F. Naegler
Sample : MBLK Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 13:35:53 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

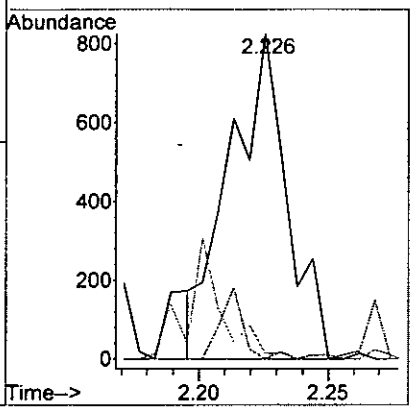


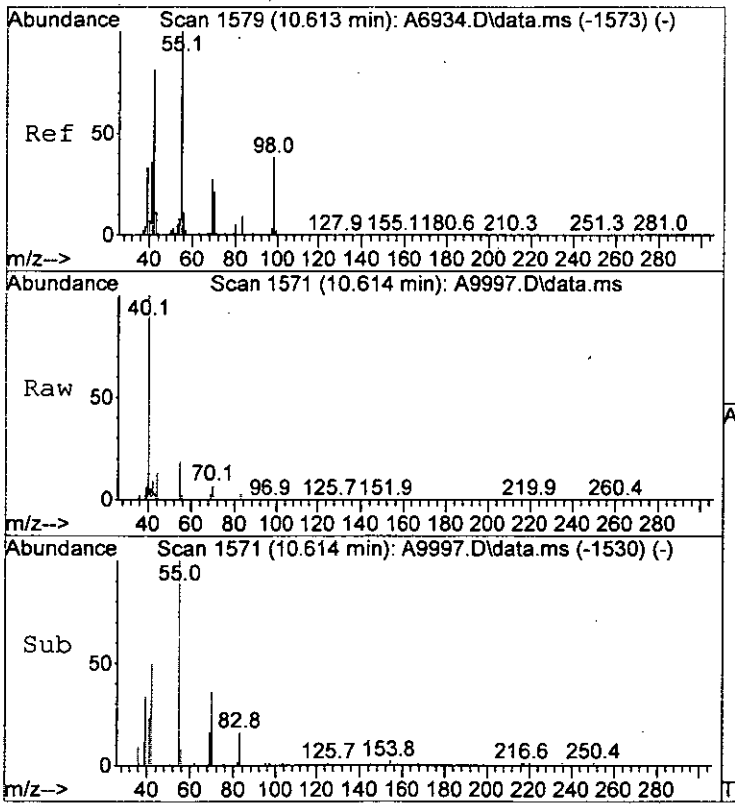


#15
Acetone
Concen: Below Cal
RT: 2.226 min Scan# 195
Delta R.T. 0.001 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion: 43 Resp: 1266

Ion	Ratio	Lower	Upper
43	100		
58	0.0	4.8	44.8#
42	1.8	0.0	28.0

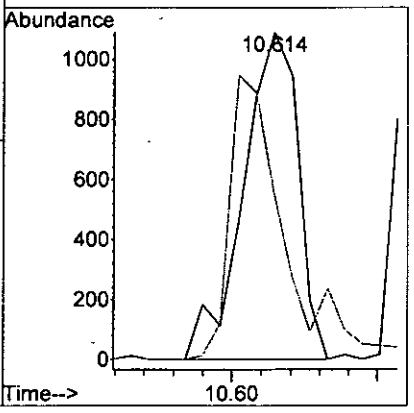


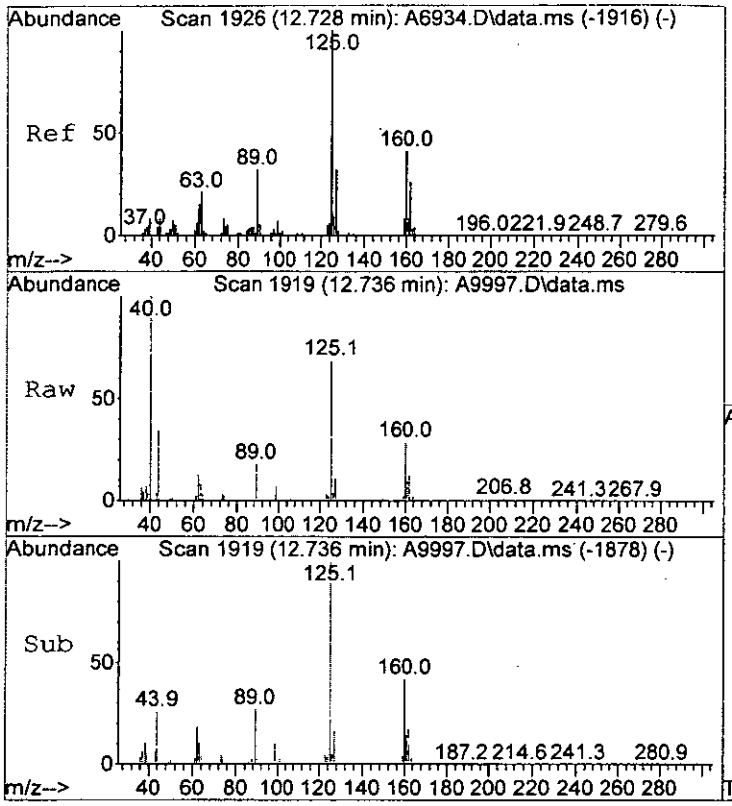


#88
Cyclohexanone
Concen: 2.77 ug/L
RT: 10.614 min Scan# 1571
Delta R.T. 0.000 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion: 55 Resp: 1410

Ion	Ratio	Lower	Upper
55	100		
42	50.3	55.2	95.2#

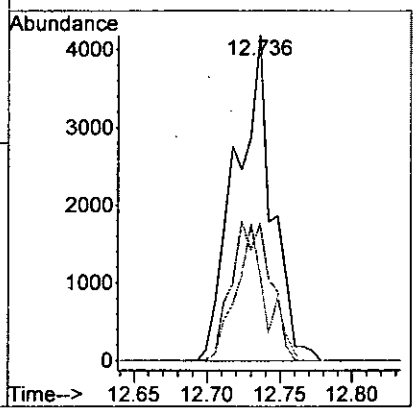


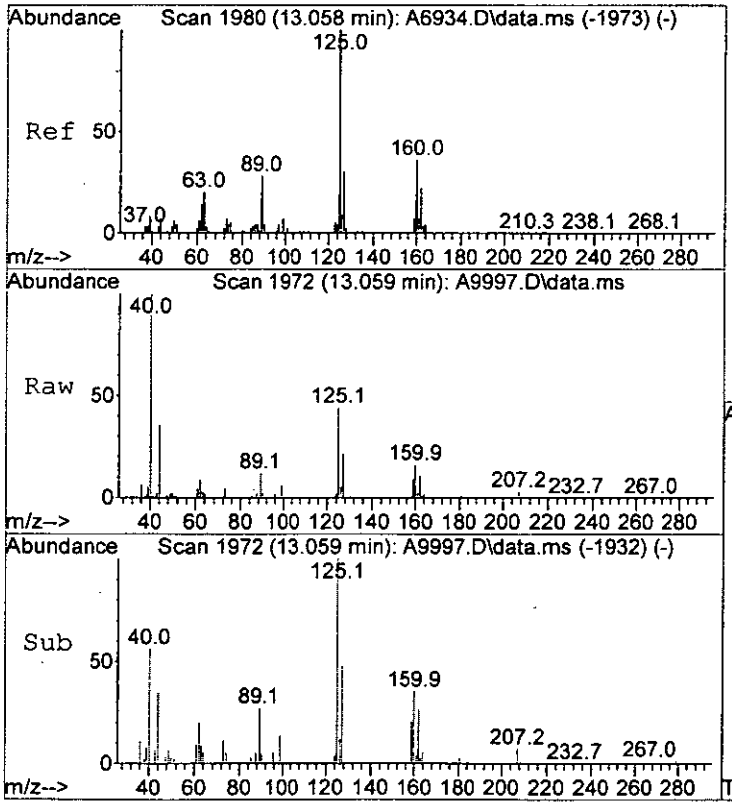


#111
Trielution Dichlorotoluene
Concen: 0.36 ug/L
RT: 12.736 min Scan# 1919
Delta R.T. 0.000 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion:125 Resp: 7327

Ion	Ratio	Lower	Upper
125	100		
160	42.1	21.1	61.1
89	26.8	14.2	54.2

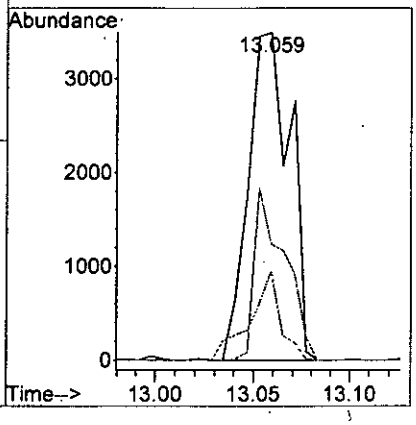


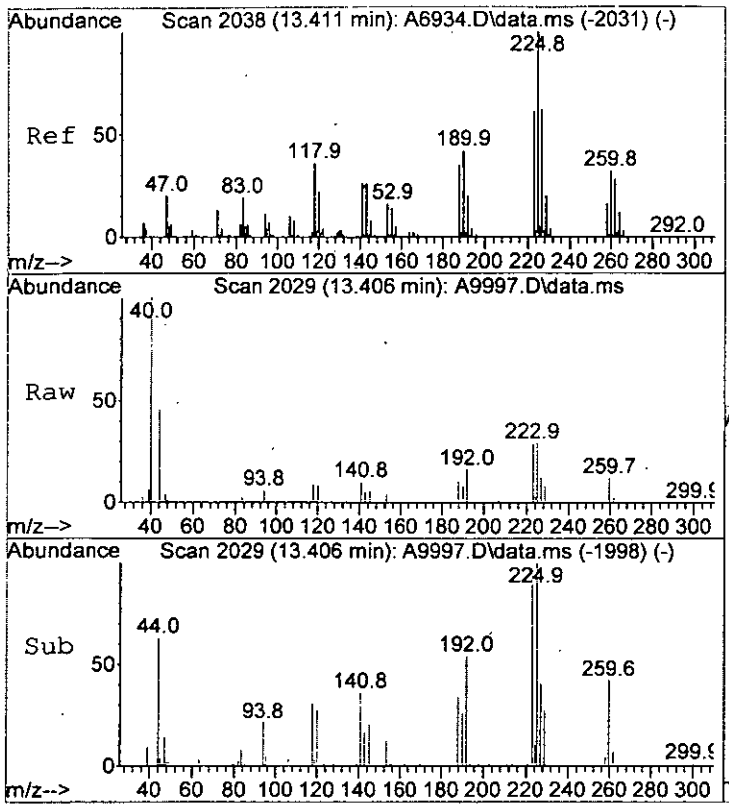


#113
Coelution Dichlorotoluene
Concen: 0.24 ug/L
RT: 13.059 min Scan# 1972
Delta R.T. -0.006 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion:125 Resp: 5222

Ion	Ratio	Lower	Upper
125	100		
160	35.4	19.7	59.7
89	27.2	7.0	47.0

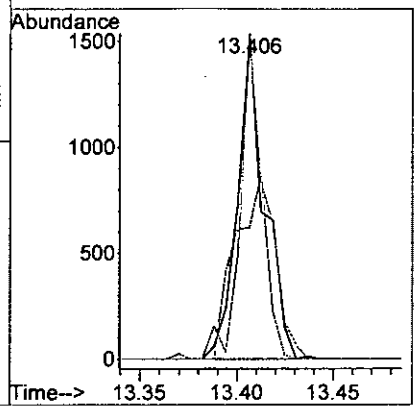


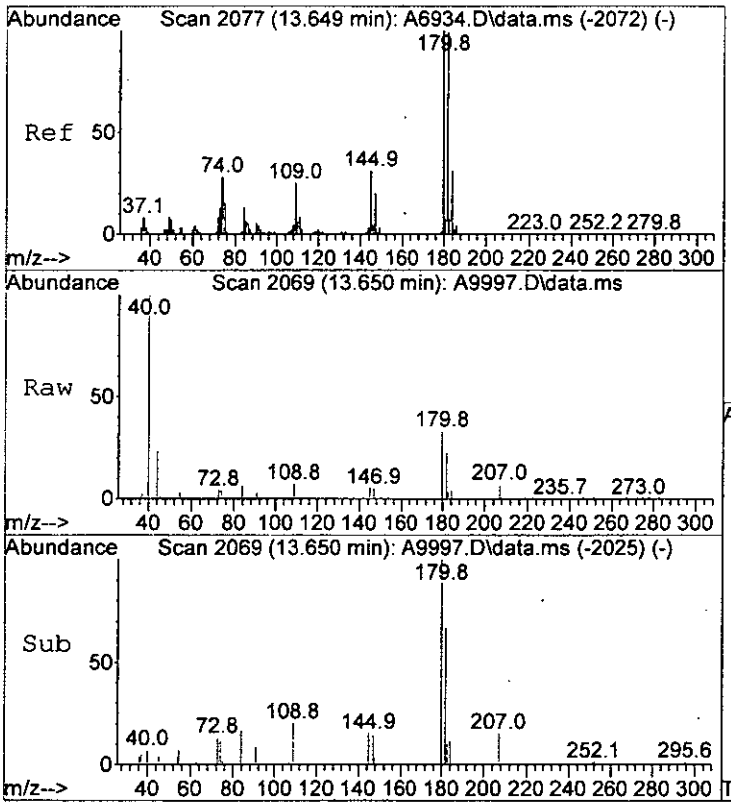


#115
Hexachlorobt
Concen: 0.24 ug/L
RT: 13.406 min Scan# 2029
Delta R.T. -0.006 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion:225 Resp: 1486

Ion	Ratio	Lower	Upper
225	100		
223	97.8	40.4	80.4#
227	40.4	42.0	82.0#

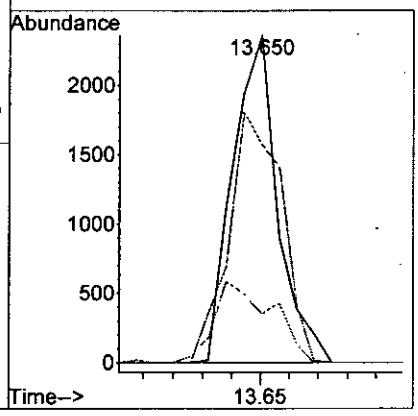


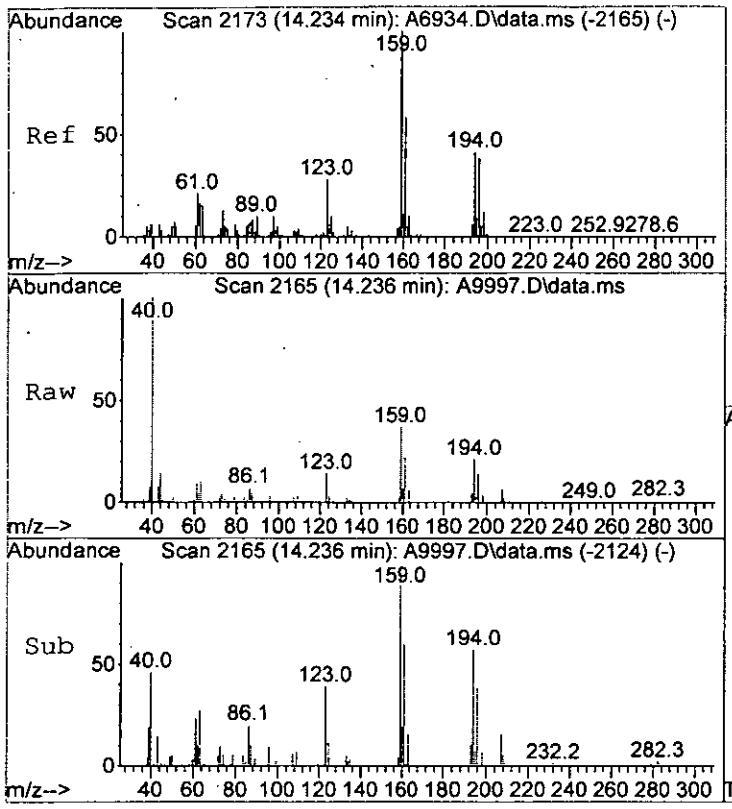


#117
1,2,3-Tclbenzene
Concen: 0.21 ug/L
RT: 13.650 min Scan# 2069
Delta R.T. 0.000 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion:180 Resp: 2536

Ion	Ratio	Lower	Upper
180	100		
182	66.7	75.7	115.7#
145	14.8	9.6	49.6

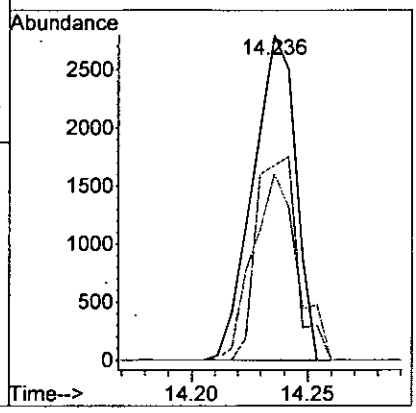


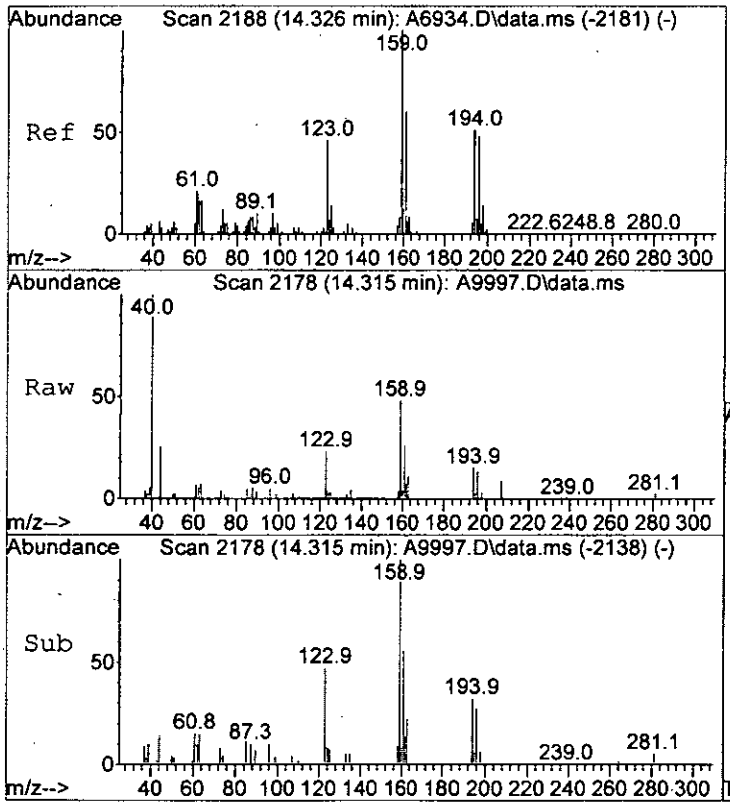


#118
2,4,5-Trichlorotoluene
Concen: 0.39 ug/L
RT: 14.236 min Scan# 2165
Delta R.T. 0.000 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion:159 Resp: 3554

Ion	Ratio	Lower	Upper
159	100		
161	59.9	42.0	82.0
194	57.4	23.5	63.5

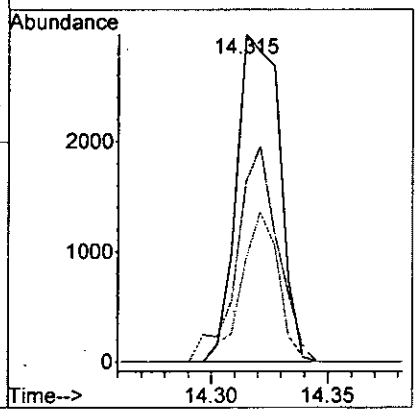




#119
2,3,6-Trichlorotoluene
Concen: 0.48 ug/L
RT: 14.315 min Scan# 2178
Delta R.T. -0.006 min
Lab File: A9997.D
Acq: 29 Jun 2015 11:46 am

Tgt Ion:159 Resp: 3801

Ion	Ratio	Lower	Upper
159	100		
161	54.8	42.9	82.9
194	31.5	27.3	67.3



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/30/15 12:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507371-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane	5.0	U	5.0	
75-35-4	1,1-Dichloroethene	5.0	U	5.0	
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	5.0	
106-93-4	1,2-Dibromoethane	5.0	U	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	
67-64-1	Acetone	10	U	10	
107-13-1	Acrylonitrile	100	U	100	
71-43-2	Benzene	5.0	U	5.0	
74-97-5	Bromochloromethane	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
74-95-3	Dibromomethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
74-88-4	Iodomethane	10	U	10	
100-42-5	Styrene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/30/15 12:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1507371-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene	5.0	U	5.0	
75-69-4	Trichlorofluoromethane	5.0	U	5.0	
108-05-4	Vinyl Acetate	10	U	10	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	87	85-122	6/30/15 12:56	
Dibromofluoromethane	98	89-119	6/30/15 12:56	
Toluene-d8	95	87-121	6/30/15 12:56	

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0005.D
Acq On : 30 Jun 2015 12:56 pm
Operator : F. Naegler
Sample : MBLK Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 05 16:21:14 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.963	168	1071974	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.145	114	1681231	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1520830	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	829262	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	512043	48.80	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.60%			
46) surr1,1,2-dichloroetha...	5.408	65	511491	47.44	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 94.88%			
64) SURR3,Toluene-d8	8.041	98	1901318	47.53	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.06%			
69) SURR2,BFB	10.675	95	706695	43.47	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 86.94%			
Target Compounds						Qvalue
15) Acetone	2.225	43	1978	Below Cal	#	36
88) Cyclohexanone	10.608	55	1796	3.67	ug/L #	63
111) Trielution Dichlorotol...	12.742	125	6397	0.33	ug/L	85
113) Coelution Dichlorotoluene	13.059	125	5114	0.25	ug/L	85
115) Hexachlorobt	13.406	225	1409	0.24	ug/L	79
117) 1,2,3-Tclbenzene	13.650	180	2665	0.23	ug/L	97
118) 2,4,5-Trichlorotoluene	14.235	159	4256	0.49	ug/L	87
119) 2,3,6-Trichlorotoluene	14.235	159	4256	0.56	ug/L	84

LT (WP)

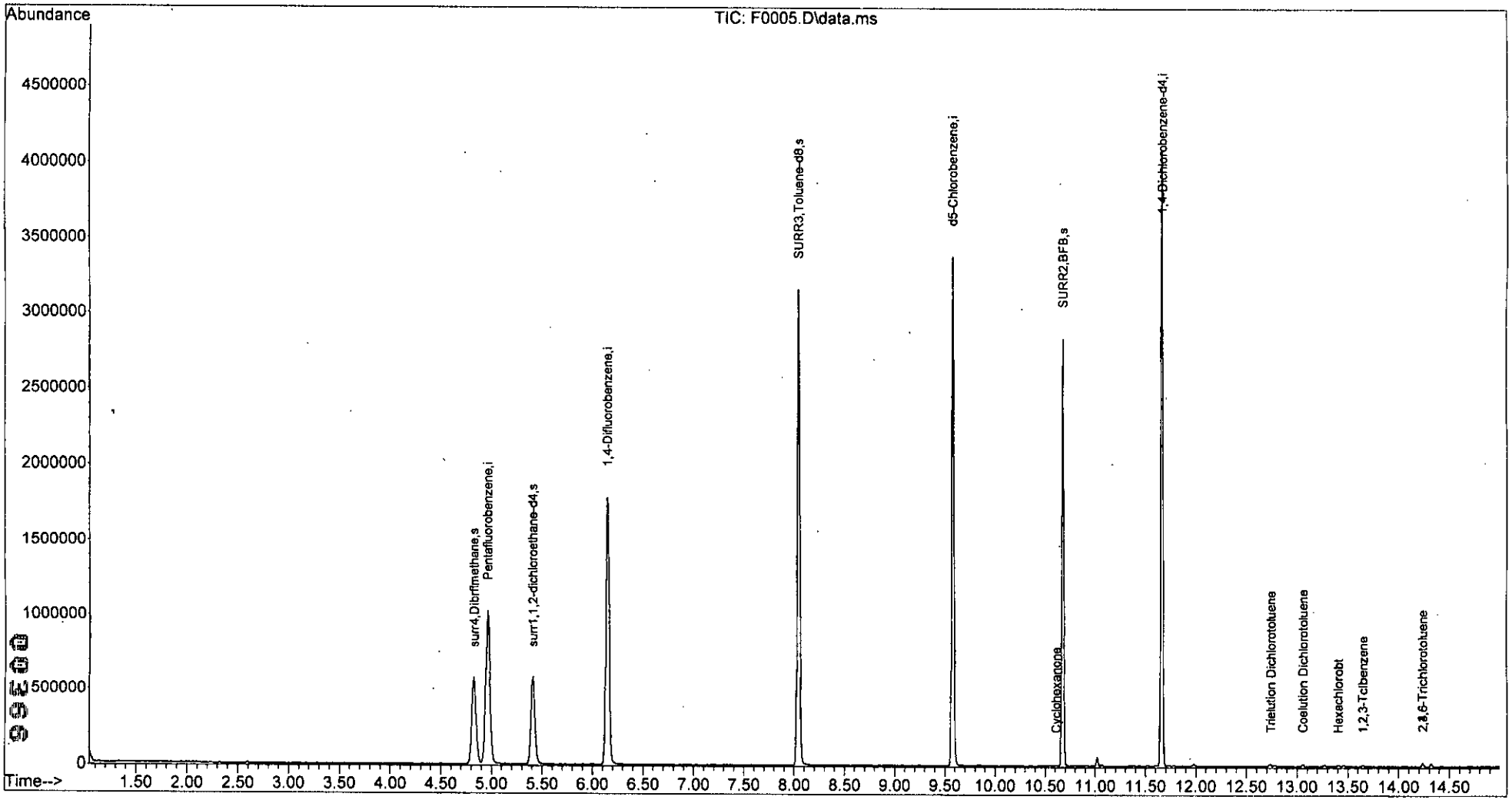
(#) = qualifier out of range (m) = manual integration (+) = signals summed

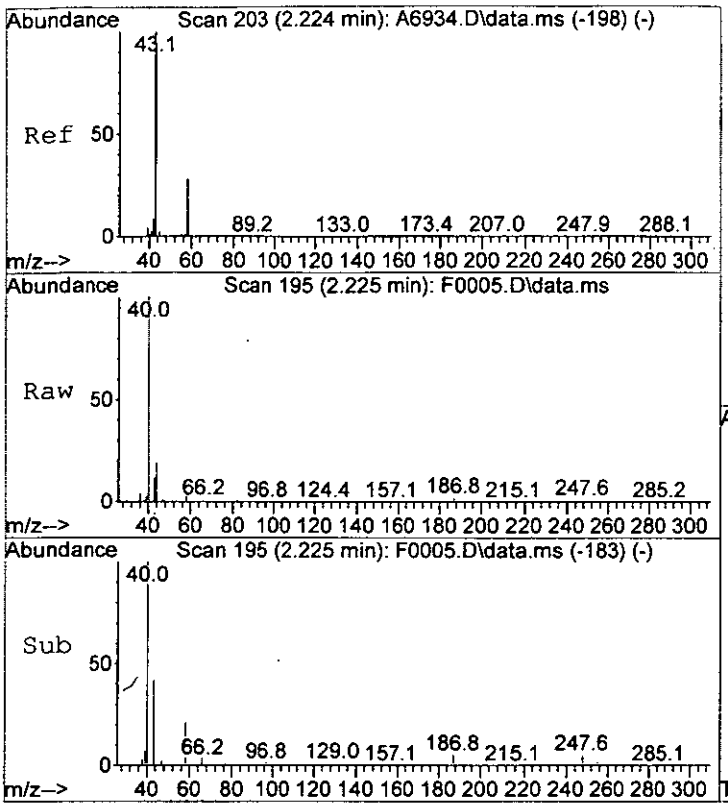
FN
7/5/15

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0005.D
Acq On : 30 Jun 2015 12:56 pm
Operator : F. Naegler
Sample : MBLK Inst : MSVOA10
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 05 16:21:14 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

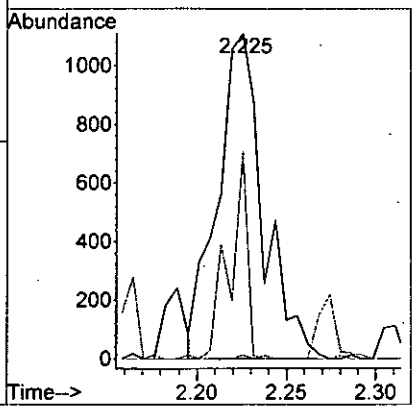


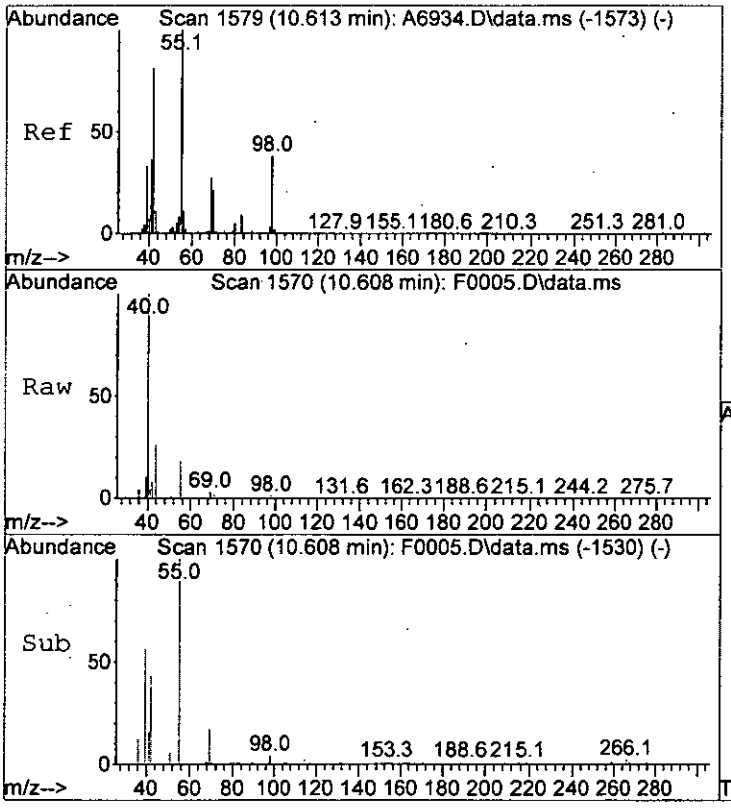


#15
Acetone
Concen: Below Cal
RT: 2.225 min Scan# 195
Delta R.T. 0.000 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion: 43 Resp: 1978

Ion	Ratio	Lower	Upper
43	100		
58	63.8	4.8	44.8#
42	1.1	0.0	28.0

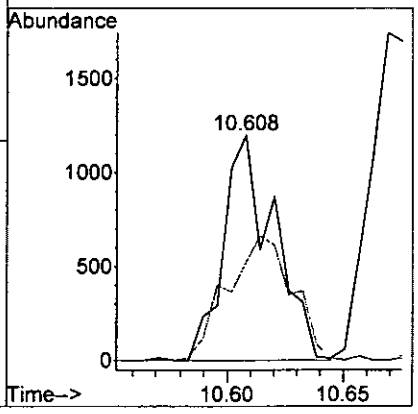


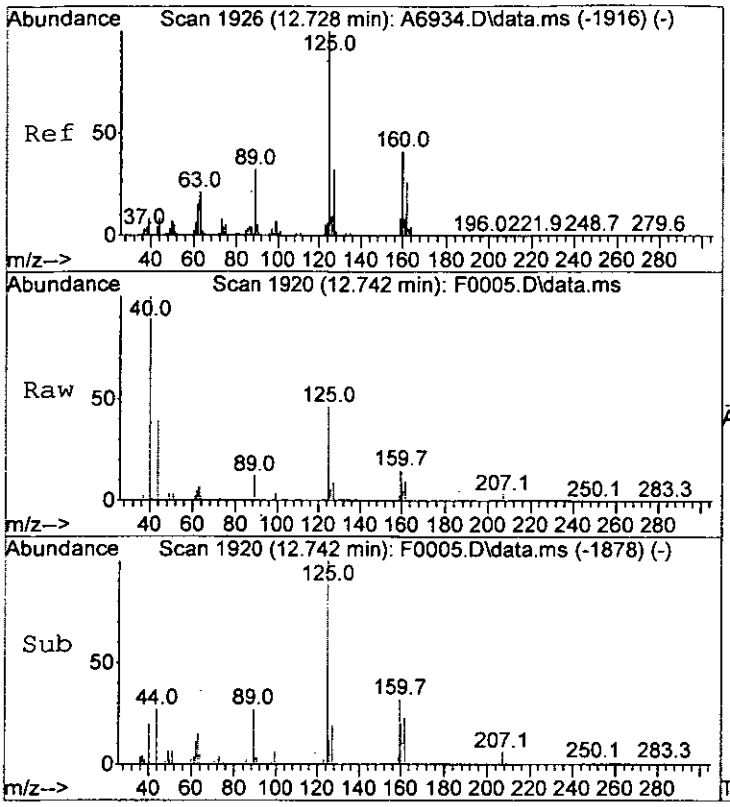


#88
Cyclohexanone
Concen: 3.67 ug/L
RT: 10.608 min Scan# 1570
Delta R.T. -0.006 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion: 55 Resp: 1796

Ion	Ratio	Lower	Upper
55	100		
42	43.4	55.2	95.2#

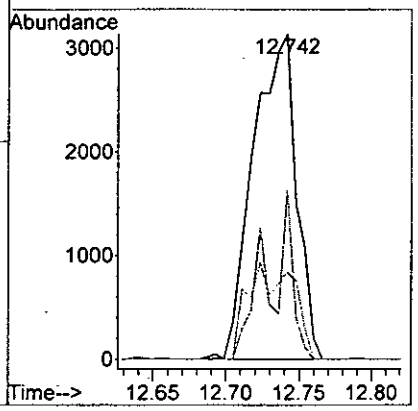


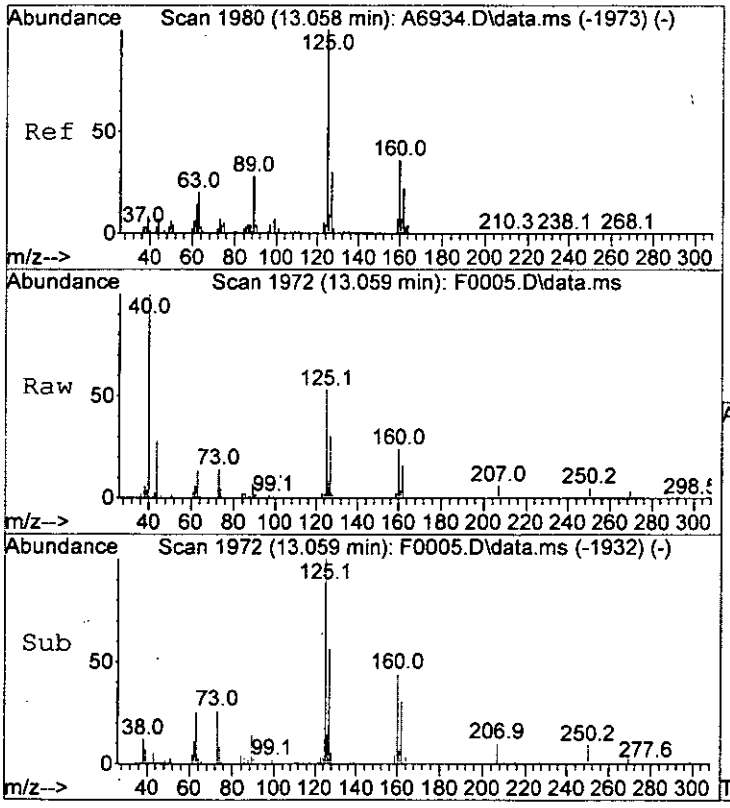


#111
Trielution Dichlorotoluene
Concen: 0.33 ug/L
RT: 12.742 min Scan# 1920
Delta R.T. 0.006 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion:125 Resp: 6397

Ion	Ratio	Lower	Upper
125	100		
160	52.1	21.1	61.1
89	27.0	14.2	54.2

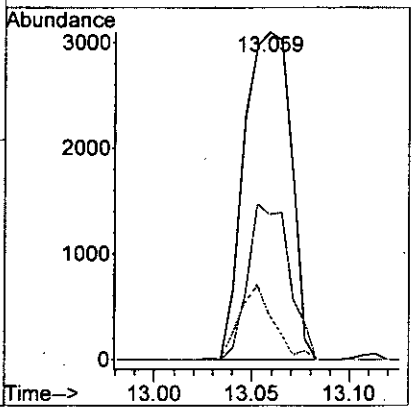


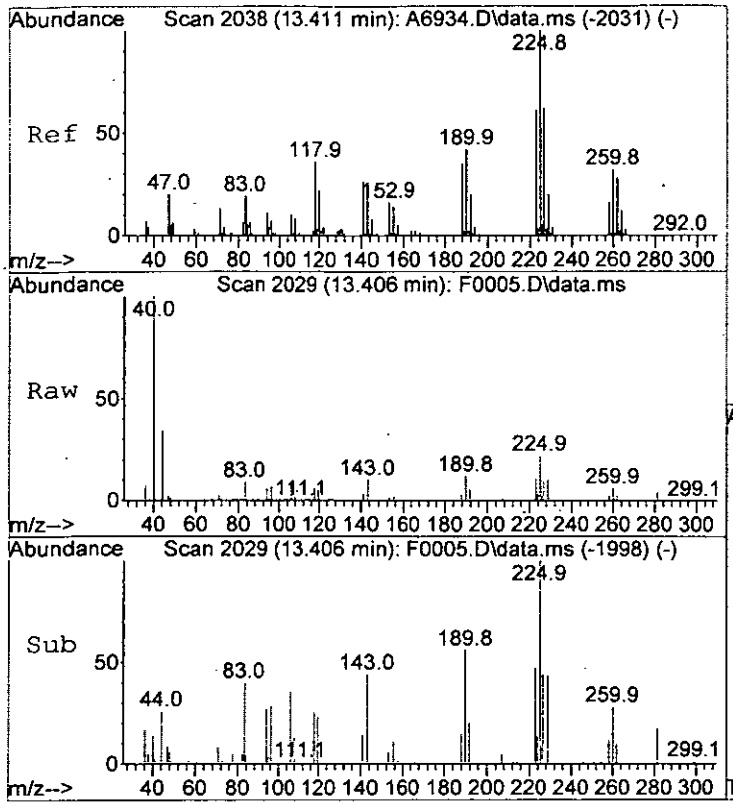


#113
Coelution Dichlorotoluene
Concen: 0.25 ug/L
RT: 13.059 min Scan# 1972
Delta R.T. -0.006 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion:125 Resp: 5114

Ion	Ratio	Lower	Upper
125	100		
160	44.3	19.7	59.7
89	13.5	7.0	47.0

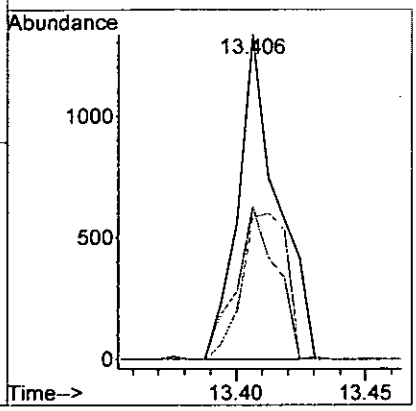


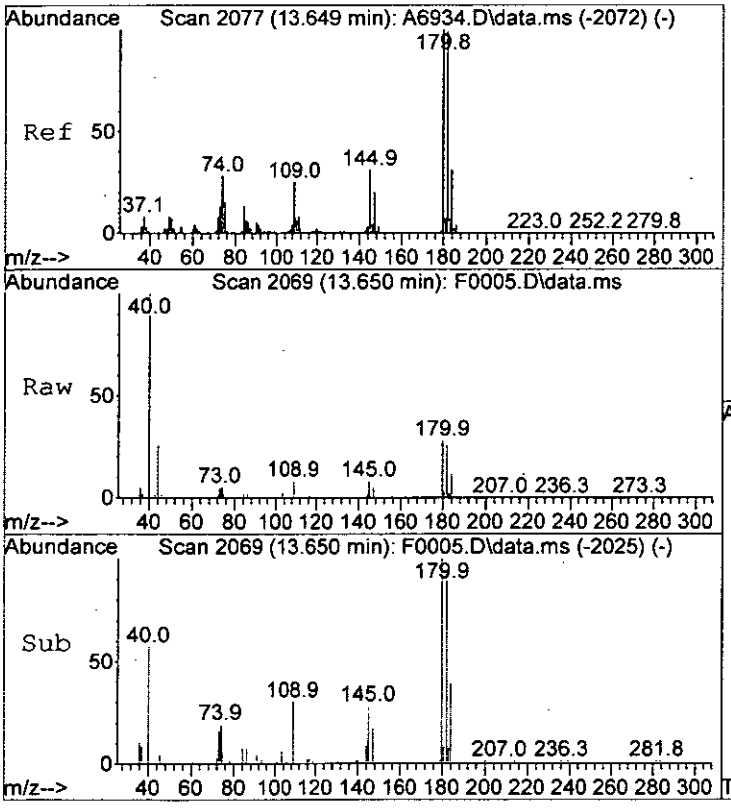


#115
Hexachlorobt
Concen: 0.24 ug/L
RT: 13.406 min Scan# 2029
Delta R.T. -0.006 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion:225 Resp: 1409

Ion	Ratio	Lower	Upper
225	100		
223	47.1	40.4	80.4
227	43.7	42.0	82.0

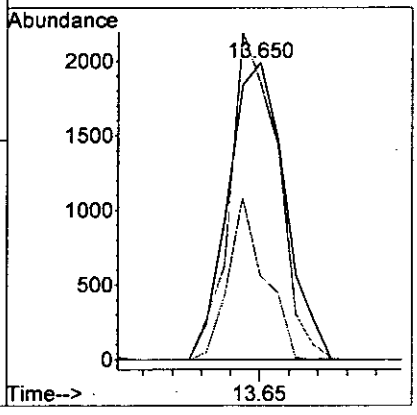


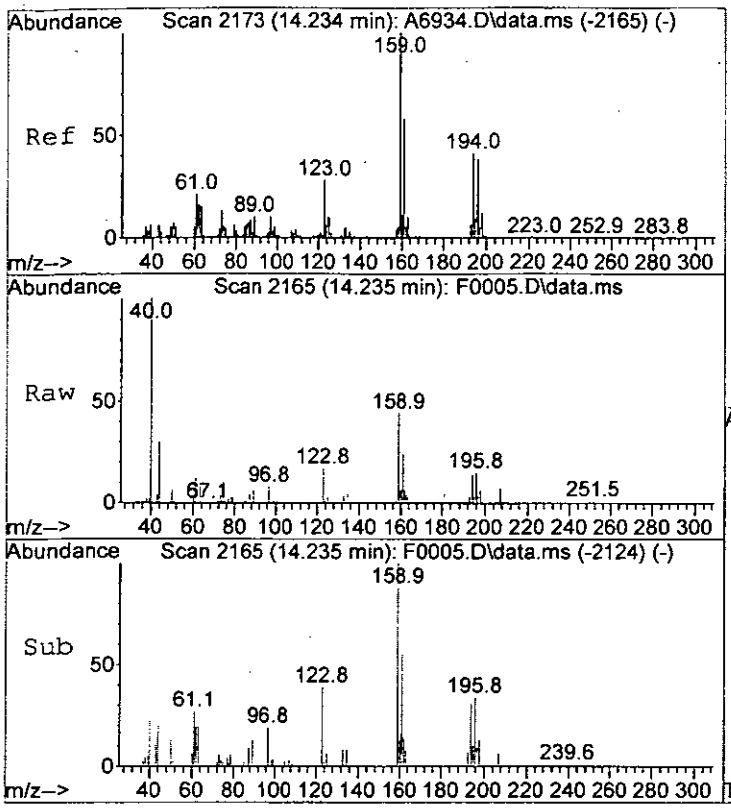


#117
1,2,3-Tclbenzene
Concen: 0.23 ug/L
RT: 13.650 min Scan# 2069
Delta R.T. 0.000 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion:180 Resp: 2665

Ion	Ratio	Lower	Upper
180	100		
182	92.9	75.7	115.7
145	28.1	9.6	49.6

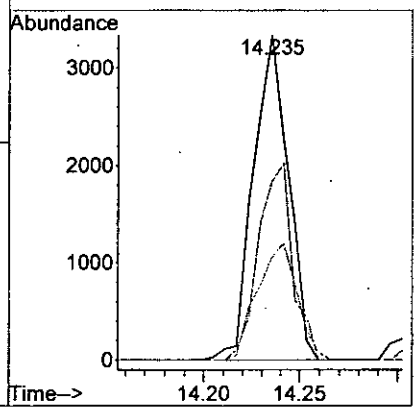


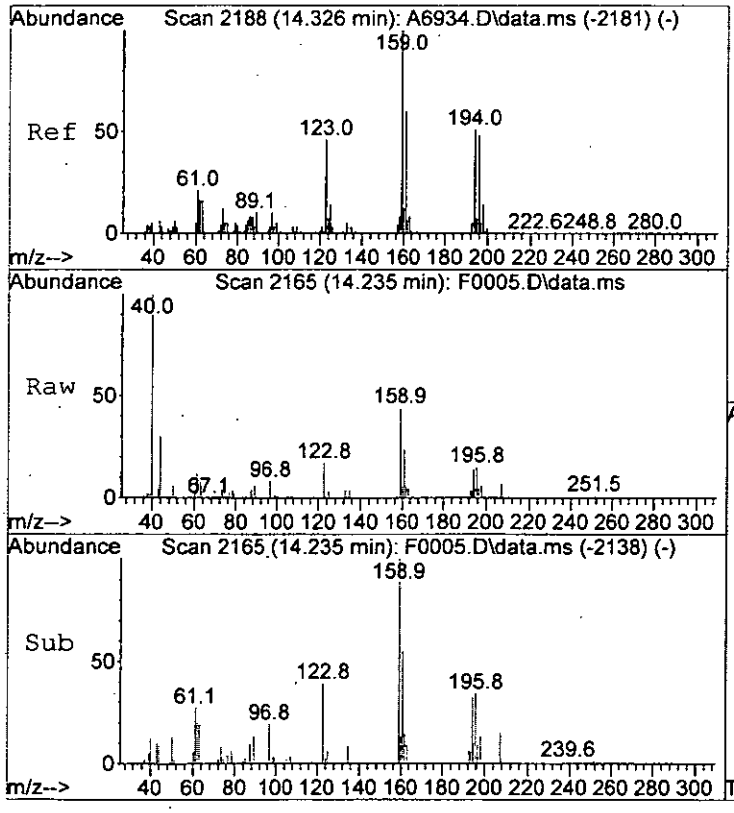


#118
2,4,5-Trichlorotoluene
Concen: 0.49 ug/L
RT: 14.235 min Scan# 2165
Delta R.T. 0.000 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion:159 Resp: 4256

Ion	Ratio	Lower	Upper
159	100		
161	54.9	42.0	82.0
194	31.6	23.5	63.5

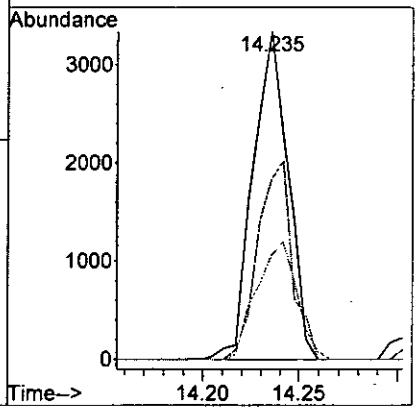




#119
2,3,6-Trichlorotoluene
Concen: 0.56 ug/L
RT: 14.235 min Scan# 2165
Delta R.T. -0.085 min
Lab File: F0005.D
Acq: 30 Jun 2015 12:56 pm

Tgt Ion:159 Resp: 4256

Ion	Ratio	Lower	Upper
159	100		
161	54.9	42.9	82.9
194	31.6	27.3	67.3



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/29/15 10:49
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ1507370-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9995.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	**20.6**		5.0	
71-55-6	1,1,1-Trichloroethane	**19.5**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	**20.0**		5.0	
79-00-5	1,1,2-Trichloroethane	**17.8**		5.0	
75-34-3	1,1-Dichloroethane	**19.0**		5.0	
75-35-4	1,1-Dichloroethene	**21.1**		5.0	
96-18-4	1,2,3-Trichloropropane	**18.6**		5.0	
96-12-8	1,2-Dibromo-3-chloropropane	**20.0**		5.0	
106-93-4	1,2-Dibromoethane	**20.3**		5.0	
95-50-1	1,2-Dichlorobenzene	**20.5**		5.0	
107-06-2	1,2-Dichloroethane	**18.1**		5.0	
78-87-5	1,2-Dichloropropane	**19.0**		5.0	
106-46-7	1,4-Dichlorobenzene	**19.8**		5.0	
78-93-3	2-Butanone (MEK)	**18.2**		10	
591-78-6	2-Hexanone	**19.6**		10	
108-10-1	4-Methyl-2-pentanone (MIBK)	**18.5**		10	
67-64-1	Acetone	**14.6**		10	
107-13-1	Acrylonitrile	**92.2**	J	100	
71-43-2	Benzene	**18.5**		5.0	
74-97-5	Bromochloromethane	**19.3**		5.0	
75-27-4	Bromodichloromethane	**19.1**		5.0	
75-25-2	Bromoform	**21.4**		5.0	
74-83-9	Bromomethane	**11.4**		5.0	
75-15-0	Carbon Disulfide	**19.8**		10	
56-23-5	Carbon Tetrachloride	**19.7**		5.0	
108-90-7	Chlorobenzene	**20.4**		5.0	
75-00-3	Chloroethane	**18.8**		5.0	
67-66-3	Chloroform	**18.8**		5.0	
74-87-3	Chloromethane	**19.0**		5.0	
124-48-1	Dibromochloromethane	**21.2**		5.0	
74-95-3	Dibromomethane	**18.3**		5.0	
75-09-2	Methylene Chloride	**20.5**		5.0	
100-41-4	Ethylbenzene	**18.4**		5.0	
74-88-4	Iodomethane	**12.2**		10	
100-42-5	Styrene	**20.1**		5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/29/15 10:49
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ1507370-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\A9995.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	**19.3**		5.0	
108-88-3	Toluene	**18.7**		5.0	
79-01-6	Trichloroethene	**19.0**		5.0	
75-69-4	Trichlorofluoromethane	**20.4**		5.0	
108-05-4	Vinyl Acetate	**18.9**		10	
75-01-4	Vinyl Chloride	**18.8**		5.0	
156-59-2	cis-1,2-Dichloroethene	**19.1**		5.0	
10061-01-5	cis-1,3-Dichloropropene	**18.4**		5.0	
179601-23-1	m,p-Xylenes	**41.1**		5.0	
95-47-6	o-Xylene	**20.0**		5.0	
156-60-5	trans-1,2-Dichloroethene	**21.2**		5.0	
10061-02-6	trans-1,3-Dichloropropene	**18.9**		5.0	
110-57-6	trans-1,4-Dichloro-2-butene	**17.2**		5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 10:49	
Dibromofluoromethane	97	89-119	6/29/15 10:49	
Toluene-d8	95	87-121	6/29/15 10:49	

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9995.D
Acq On : 29 Jun 2015 10:49 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 29 11:04:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FV 6/29/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	1171393	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.152	114	1783430	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1587697	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	927044	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.823	113	540451	48.56	ug/L		-0.01
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.12%				
46) surr1,1,2-dichloroetha...	5.408	65	540189	47.23	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 94.46%				
64) SURR3,Toluene-d8	8.041	98	2020555	47.62	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.24%				
69) SURR2,BFB	10.675	95	775561	44.98	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.96%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	276137	22.70	ug/L		98
3) Chloromethane	1.281	50	423778	19.03	ug/L		98
4) Vinyl Chloride	1.348	62	304795	18.79	ug/L		100
5) Bromomethane	1.567	94	76634	11.42	ug/L		96
6) Chloroethane	1.634	64	149581	18.78	ug/L		94
7) Freon 21	1.762	67	446609	22.95	ug/L		98
8) Trichlorofluoromethane	1.811	101	320025	20.44	ug/L		96
9) Diethyl Ether	2.012	59	184824	19.60	ug/L	#	80
10) Freon 123a	2.012	67	262027	22.06	ug/L		94
12) Acrolein	2.104	56	29810	16.83	ug/L		100
13) 1,1-Diclethene	2.195	96	181908	21.08	ug/L		92
14) Freon 113	2.195	101	191698	21.23	ug/L		82
15) Acetone	2.219	43	60610	14.59	ug/L		94
16) 2-Propanol	2.323	45	213279	347.27	ug/L		93
17) Iodomethane	2.317	142	155744	12.19	ug/L		95
18) Carbon Disulfide	2.378	76	612564	19.76	ug/L		99
19) Acetonitrile	2.451	40	57397	106.30	ug/L	#	84
20) Allyl Chloride	2.488	76	96302	17.15	ug/L	#	28
21) Methyl Acetate	2.500	43	139293	16.33	ug/L		88
22) Methylene Chloride	2.597	84	217525	20.54	ug/L	#	82
23) TBA	2.683	59	280673	356.78	ug/L		64
24) Acrylonitrile	2.817	53	348989	92.15	ug/L		95
25) Methyl-t-Butyl Ether	2.860	73	454673	18.42	ug/L		87
26) trans-1,2-Dichloroethene	2.860	96	206097	21.22	ug/L		88
27) 1,1-Diclethane	3.305	63	412869	19.04	ug/L		99
28) Vinyl Acetate	3.366	86	33030	18.89	ug/L		97
29) DIPE	3.402	45	993395m	16.71	ug/L		
30) 2-Chloro-1,3-Butadiene	3.414	53	415527	16.47	ug/L		85
31) ETBE	3.872	59	645298	15.89	ug/L		92
32) 2,2-Dichloropropane	4.048	77	272873	19.47	ug/L		92
33) cis-1,2-Dichloroethene	4.054	96	221808	19.05	ug/L		98
34) 2-Butanone	4.079	43	100541	18.24	ug/L		89
35) Propionitrile	4.158	54	130411	95.36	ug/L		92
36) Bromochloromethane	4.408	130	137959	19.27	ug/L	#	72

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9995.D
Acq On : 29 Jun 2015 10:49 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 29 11:04:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Methacrylonitrile	4.402	67	54032	16.72	ug/L	#	43
38) Tetrahydrofuran	4.487	42	54823	16.09	ug/L	#	66
39) Chloroform	4.560	83	361802	18.75	ug/L		94
40) 1,1,1-Trichloroethane	4.853	97	320548	19.53	ug/L		94
42) Cyclohexane	4.945	41	306700	18.09	ug/L		86
44) Carbontetrachloride	5.152	121	86972	19.74	ug/L		83
45) 1,1-Dichloropropene	5.164	75	258248	17.91	ug/L		99
47) Benzene	5.499	78	827558	18.52	ug/L		85
48) 1,2-Dichloroethane	5.536	62	279188	18.09	ug/L		92
49) Iso-Butyl Alcohol	5.475	43	167523	361.38	ug/L		92
50) TAME	5.743	73	436811	16.96	ug/L		89
51) n-Heptane	6.005	43	398318	20.50	ug/L		83
52) 1-Butanol	6.505	56	207481	1113.50	ug/L		83
53) Trichloroethene	6.499	130	234969	19.02	ug/L		92
54) Methylcyclohexane	6.743	55	344565	18.87	ug/L		84
55) 1,2-Diclpropane	6.792	63	249929	18.97	ug/L		95
56) Dibromomethane	6.938	93	106178	18.32	ug/L		99
57) 1,4-Dioxane	7.005	88	28178	428.54	ug/L	#	74
58) Methyl Methacrylate	7.023	69	95381	18.38	ug/L	#	61
59) Bromodichloromethane	7.170	83	265388	19.11	ug/L		97
60) 2-Nitropropane	7.462	41	70610	46.43	ug/L		93
61) 2-Chloroethylvinyl Ether	7.596	63	118142	19.17	ug/L		97
62) cis-1,3-Dichloropropene	7.737	75	290070	18.43	ug/L		92
63) 4-Methyl-2-pentanone	7.950	43	209177	18.54	ug/L		91
65) Toluene	8.121	91	900851	18.66	ug/L		94
66) trans-1,3-Dichloropropene	8.395	75	248057	18.91	ug/L		98
67) Ethyl Methacrylate	8.541	69	192418	18.62	ug/L	#	54
68) 1,1,2-Trichloroethane	8.590	97	152902	17.77	ug/L		95
71) Tetrachloroethene	8.730	164	183862	19.27	ug/L		96
72) 2-Hexanone	8.895	43	140131	19.57	ug/L		92
73) 1,3-Dichloropropane	8.767	76	268864	19.38	ug/L	#	79
74) Dibromochloromethane	8.999	129	201051	21.24	ug/L		98
75) N-Butyl Acetate	9.053	43	316418	18.39	ug/L		93
76) 1,2-Dibromoethane	9.096	107	157029	20.31	ug/L		85
77) 3-Chlorobenzotrifluoride	9.627	180	340622	19.60	ug/L		99
78) Chlorobenzene	9.608	112	636100	20.38	ug/L		94
79) 4-Chlorobenzotrifluoride	9.681	180	310302	20.29	ug/L		96
80) 1,1,1,2-Tetrachloroethane	9.694	131	220601	20.64	ug/L		98
81) Ethylbenzene	9.730	106	300500	18.35	ug/L	#	87
82) (m+p)Xylene	9.846	106	808994	41.07	ug/L		90
83) o-Xylene	10.206	106	390480	19.98	ug/L		92
84) Styrene	10.224	104	665891	20.12	ug/L		95
85) Bromoform	10.376	173	110306	21.40	ug/L		92
86) 2-Chlorobenzotrifluoride	10.456	180	332013	20.18	ug/L		94
87) Isopropylbenzene	10.547	105	991004	20.64	ug/L		100
88) Cyclohexanone	10.608	55	239761	468.80	ug/L		97
89) trans-1,4-Dichloro-2-B...	10.864	53	59404	17.15	ug/L		86
91) 1,1,2,2-Tetrachloroethane	10.809	83	189329	20.00	ug/L		99
92) Bromobenzene	10.797	156	268688	20.01	ug/L		95
93) 1,2,3-Trichloropropane	10.840	110	51717	18.56	ug/L	#	85
94) n-Propylbenzene	10.907	91	1171433	21.27	ug/L		98

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9995.D
Acq On : 29 Jun 2015 10:49 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

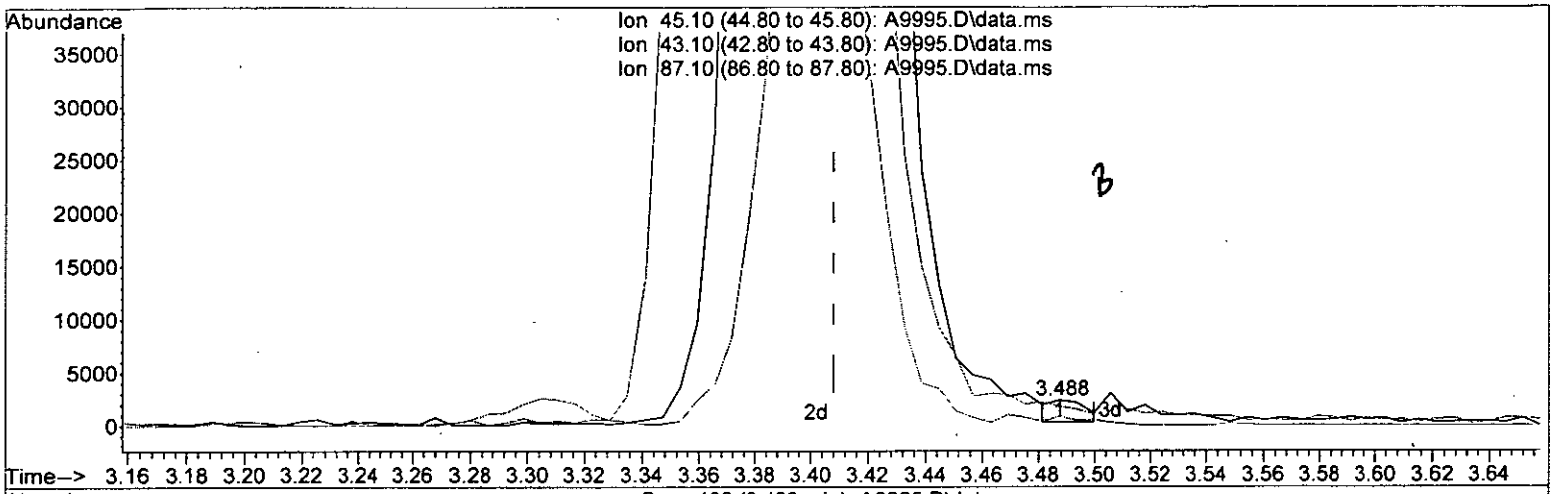
Quant Time: Jun 29 11:04:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

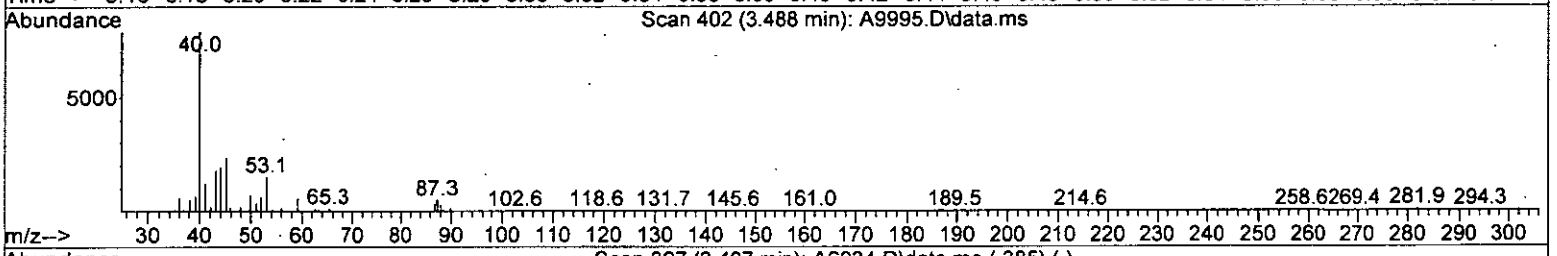
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	2-Chlorotoluene	10.974	91	700393	20.28	ug/L	96
96)	3-Chlorotoluene	11.023	91	745804	20.45	ug/L	98
97)	4-Chlorotoluene	11.065	91	831151	20.19	ug/L	96
98)	1,3,5-Trimethylbenzene	11.065	105	868322	21.11	ug/L	96
99)	tert-Butylbenzene	11.340	119	729562	20.43	ug/L	98
100)	1,2,4-Trimethylbenzene	11.376	105	878411	20.91	ug/L	98
101)	3,4-Dichlorobenzotrifl...	11.443	214	251333	20.57	ug/L	98
102)	sec-Butylbenzene	11.523	105	1046614	21.59	ug/L	99
103)	p-Isopropyltoluene	11.644	119	946969	21.92	ug/L	97
104)	1,3-Dclbenz	11.602	146	543868	19.90	ug/L	99
105)	1,4-Dclbenz	11.681	146	568252	19.83	ug/L	96
106)	2,4-Dichlorobenzotrifl...	11.736	214	227236	19.82	ug/L	93
107)	2,5-Dichlorobenzotrifl...	11.779	214	261547	20.13	ug/L	92
108)	n-Butylbenzene	11.980	91	817800	21.44	ug/L	96
109)	1,2-Dclbenz	11.986	146	516732	20.46	ug/L	98
110)	1,2-Dibromo-3-chloropr...	12.614	157	34613	19.98	ug/L	91
111)	Trielution Dichlorotol...	12.730	125	1423828	65.75	ug/L	95
112)	1,3,5-Trichlorobenzene	12.784	180	392445	21.21	ug/L	94
113)	Coelution Dichlorotoluene	13.059	125	1001099	43.27	ug/L	94
114)	1,2,4-Tcbenzene	13.266	180	343723	21.60	ug/L	98
115)	Hexachlorobt	13.406	225	148648	22.56	ug/L	97
116)	Naphthalen	13.461	128	615286	20.63	ug/L	98
117)	1,2,3-Tclbenzene	13.650	180	268980	20.52	ug/L	100
118)	2,4,5-Trichlorotoluene	14.235	159	211558	21.89	ug/L	96
119)	2,3,6-Trichlorotoluene	14.321	159	190532	22.56	ug/L	98

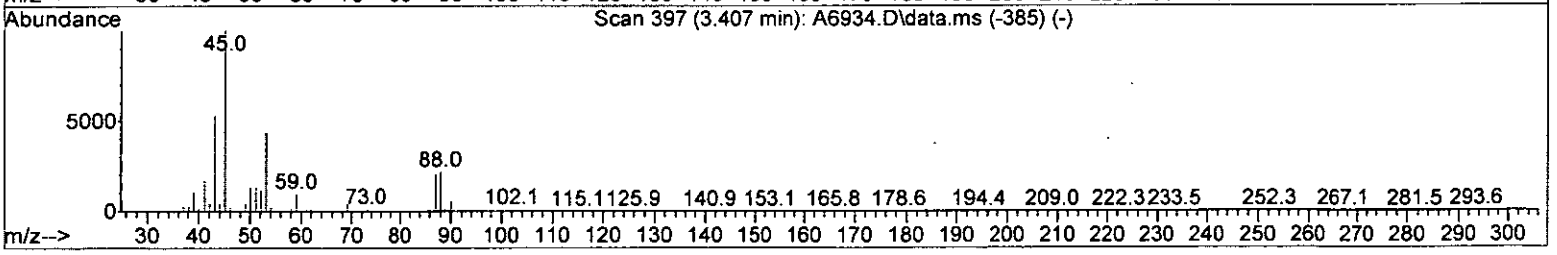
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9995.D
Acq On : 29 Jun 2015 10:49 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 29 11:03:45 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: A9995.D\data.ms

(29) DIPE

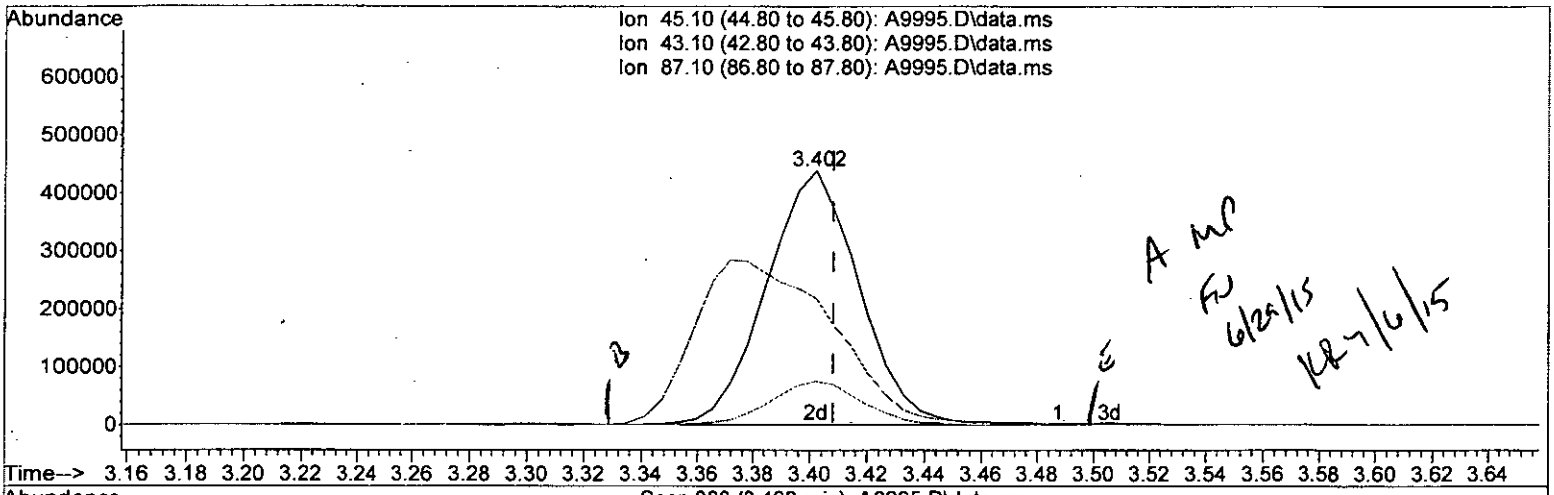
3.488min (+0.079) 0.03 ug/L

response 1754

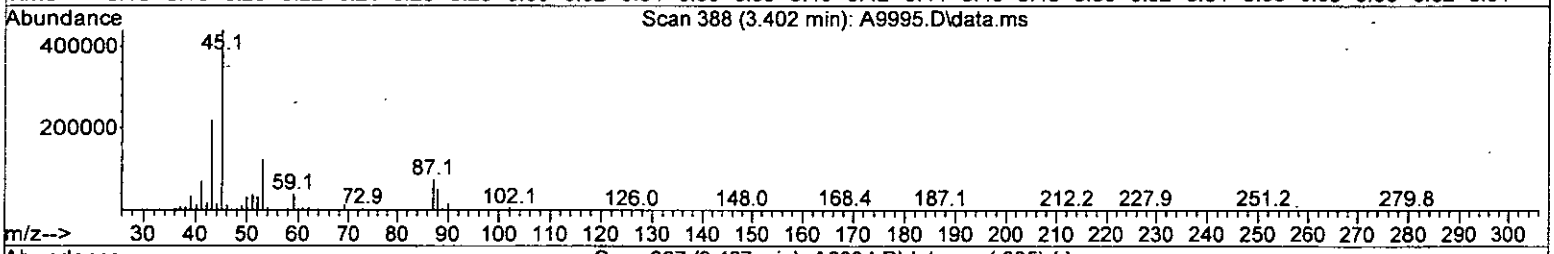
Ion	Exp%	Act%
45.10	100	100
43.10	74.80	75.69
87.10	21.90	34.03
0.00	0.00	0.00

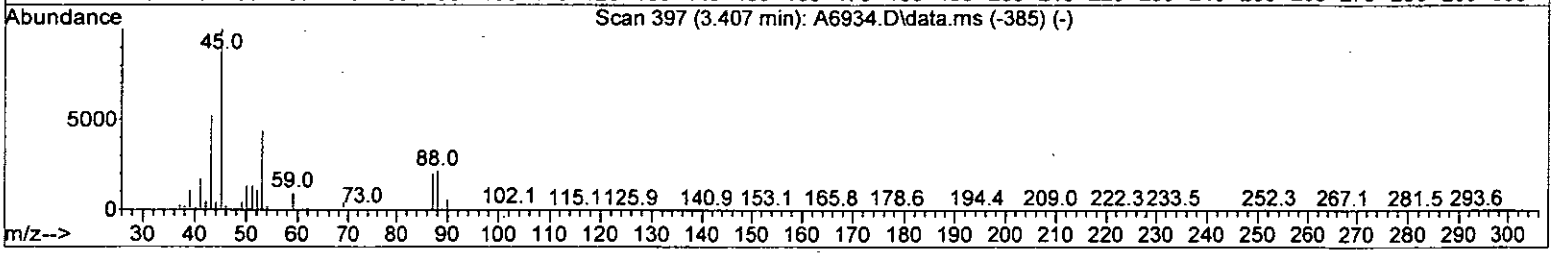
Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9995.D
Acq On : 29 Jun 2015 10:49 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 29 11:03:45 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



A MS
FN 6/29/15
KL 7/6/15





TIC: A9995.D\data.ms

(29) DIPE

3.402min (-0.006) 16.71 ug/L m

response 993395

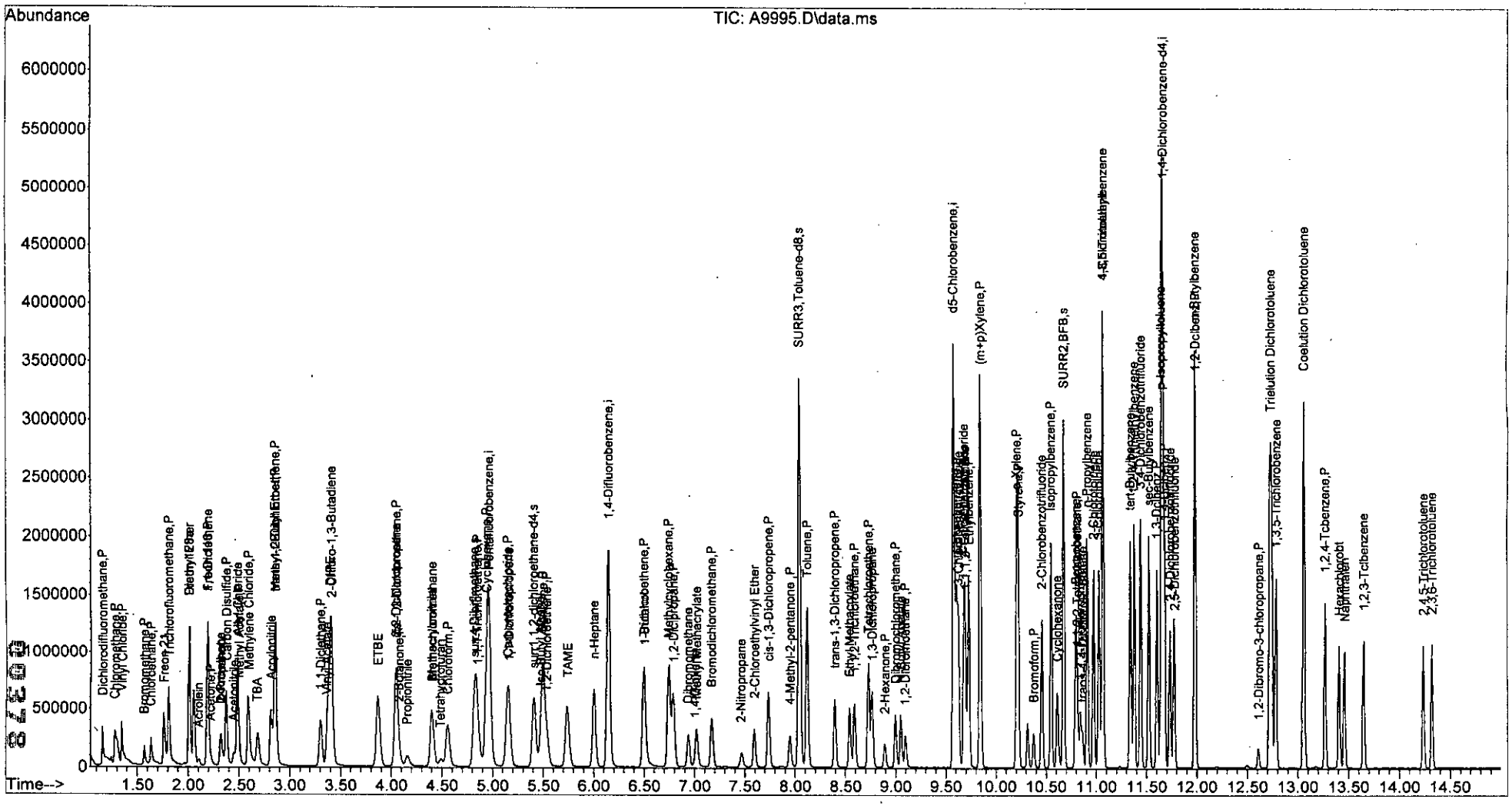
Ion	Exp%	Act%
45.10	100	100
43.10	74.80	49.66#
87.10	21.90	17.02
0.00	0.00	0.00

0037

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : A9995.D
Acq On : 29 Jun 2015 10:49 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 29 11:04:28 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/30/15 11:59
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ1507371-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	**19.4**		5.0	
71-55-6	1,1,1-Trichloroethane	**17.4**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	**19.5**		5.0	
79-00-5	1,1,2-Trichloroethane	**17.9**		5.0	
75-34-3	1,1-Dichloroethane	**18.2**		5.0	
75-35-4	1,1-Dichloroethene	**18.8**		5.0	
96-18-4	1,2,3-Trichloropropane	**17.8**		5.0	
96-12-8	1,2-Dibromo-3-chloropropane	**17.7**		5.0	
106-93-4	1,2-Dibromoethane	**19.3**		5.0	
95-50-1	1,2-Dichlorobenzene	**19.4**		5.0	
107-06-2	1,2-Dichloroethane	**18.1**		5.0	
78-87-5	1,2-Dichloropropane	**18.2**		5.0	
106-46-7	1,4-Dichlorobenzene	**19.2**		5.0	
78-93-3	2-Butanone (MEK)	**18.1**		10	
591-78-6	2-Hexanone	**19.1**		10	
108-10-1	4-Methyl-2-pentanone (MIBK)	**18.5**		10	
67-64-1	Acetone	**14.2**		10	
107-13-1	Acrylonitrile	**91.2**	J	100	
71-43-2	Benzene	**17.6**		5.0	
74-97-5	Bromochloromethane	**19.6**		5.0	
75-27-4	Bromodichloromethane	**18.6**		5.0	
75-25-2	Bromoform	**19.8**		5.0	
74-83-9	Bromomethane	**13.6**		5.0	
75-15-0	Carbon Disulfide	**20.4**		10	
56-23-5	Carbon Tetrachloride	**17.1**		5.0	
108-90-7	Chlorobenzene	**19.2**		5.0	
75-00-3	Chloroethane	**18.4**		5.0	
67-66-3	Chloroform	**18.0**		5.0	
74-87-3	Chloromethane	**17.5**		5.0	
124-48-1	Dibromochloromethane	**20.3**		5.0	
74-95-3	Dibromomethane	**19.0**		5.0	
75-09-2	Methylene Chloride	**20.1**		5.0	
100-41-4	Ethylbenzene	**16.5**		5.0	
74-88-4	Iodomethane	**11.5**		10	
100-42-5	Styrene	**19.4**		5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/30/15 11:59
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ1507371-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451196
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\063015\F0003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	**17.5**		5.0	
108-88-3	Toluene	**17.0**		5.0	
79-01-6	Trichloroethene	**17.5**		5.0	
75-69-4	Trichlorofluoromethane	**17.7**		5.0	
108-05-4	Vinyl Acetate	**19.0**		10	
75-01-4	Vinyl Chloride	**17.5**		5.0	
156-59-2	cis-1,2-Dichloroethene	**18.8**		5.0	
10061-01-5	cis-1,3-Dichloropropene	**18.0**		5.0	
179601-23-1	m,p-Xylenes	**37.2**		5.0	
95-47-6	o-Xylene	**18.7**		5.0	
156-60-5	trans-1,2-Dichloroethene	**20.1**		5.0	
10061-02-6	trans-1,3-Dichloropropene	**18.0**		5.0	
110-57-6	trans-1,4-Dichloro-2-butene	**11.3**		5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/30/15 11:59	
Dibromofluoromethane	98	89-119	6/30/15 11:59	
Toluene-d8	96	87-121	6/30/15 11:59	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 13:17:30 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FW 6/30/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.963	168	1101299	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.146	114	1674879	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1516429	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	874490	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.829	113	510008	48.79	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.58%				
46) surr1,1,2-dichloroetha...	5.408	65	497955	46.36	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 92.72%				
64) SURR3,Toluene-d8	8.042	98	1905855	47.83	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 95.66%				
69) SURR2,BFB	10.675	95	729197	45.03	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 90.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	242385m	21.20	ug/L		
3) Chloromethane	1.281	50	365454	17.46	ug/L		99
4) Vinyl Chloride	1.348	62	266236	17.46	ug/L		92
5) Bromomethane	1.567	94	85724m	13.59	ug/L		
6) Chloroethane	1.634	64	137393	18.35	ug/L		97
7) Freon 21	1.762	67	419282	22.92	ug/L		94
8) Trichlorofluoromethane	1.811	101	259992	17.66	ug/L		98
9) Diethyl Ether	2.006	59	169491	19.12	ug/L		81
10) Freon 123a	2.012	67	246396	22.06	ug/L		98
11) Freon 123	2.055	83	258209	20.90	ug/L		79
12) Acrolein	2.104	56	26777	16.08	ug/L		97
13) 1,1-Diclethene	2.189	96	152307	18.77	ug/L	#	84
14) Freon 113	2.195	101	157058	18.50	ug/L		93
15) Acetone	2.220	43	55775	14.18	ug/L		97
16) 2-Propanol	2.323	45	193263	334.71	ug/L		91
17) Iodomethane	2.317	142	137680	11.46	ug/L		99
18) Carbon Disulfide	2.372	76	593248	20.36	ug/L		99
19) Acetonitrile	2.445	40	52364	103.15	ug/L		93
20) Allyl Chloride	2.488	76	87185	16.52	ug/L	#	12
21) Methyl Acetate	2.500	43	134021	16.71	ug/L		91
22) Methylene Chloride	2.591	84	200135	20.10	ug/L	#	74
23) TBA	2.683	59	241509	326.53	ug/L		65
24) Acrylonitrile	2.817	53	324681	91.19	ug/L		97
25) Methyl-t-Butyl Ether	2.860	73	429082	18.49	ug/L		85
26) trans-1,2-Dichloroethene	2.860	96	183175	20.06	ug/L		99
27) 1,1-Diclethane	3.305	63	371481	18.22	ug/L		96
28) Vinyl Acetate	3.366	86	31239	19.00	ug/L	#	89
29) DIPE	3.402	45	966037m	17.28	ug/L		
30) 2-Chloro-1,3-Butadiene	3.414	53	409925	17.29	ug/L		89
31) ETBE	3.866	59	611296	16.01	ug/L		93
32) 2,2-Dichloropropane	4.048	77	240414	18.25	ug/L		95
33) cis-1,2-Dichloroethene	4.055	96	206012	18.82	ug/L		94
34) 2-Butanone	4.079	43	93521	18.05	ug/L		84
35) Propionitrile	4.158	54	108501	84.39	ug/L		100

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 13:17:30 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	131955	19.60	ug/L	#	79
37) Methacrylonitrile	4.402	67	54280	17.87	ug/L	#	39
38) Tetrahydrofuran	4.481	42	55431	17.31	ug/L	#	63
39) Chloroform	4.561	83	326773	18.02	ug/L		98
40) 1,1,1-Trichloroethane	4.847	97	268117	17.38	ug/L		94
42) Cyclohexane	4.951	41	281500	17.68	ug/L		93
44) Carbontetrachloride	5.152	121	70865	17.12	ug/L		86
45) 1,1-Dichloropropene	5.158	75	219824	16.24	ug/L		94
47) Benzene	5.499	78	740461	17.64	ug/L		84
48) 1,2-Dichloroethane	5.536	62	261871	18.07	ug/L		93
49) Iso-Butyl Alcohol	5.475	43	151468	347.92	ug/L		85
50) TAME	5.737	73	409162	16.91	ug/L		89
51) n-Heptane	5.999	43	337990	18.52	ug/L		79
52) 1-Butanol	6.505	56	183606	1054.05	ug/L		81
53) Trichloroethene	6.493	130	203491	17.54	ug/L		96
54) Methylcyclohexane	6.743	55	326050	19.01	ug/L	#	77
55) 1,2-Diclpropane	6.792	63	225025	18.18	ug/L		97
56) Dibromomethane	6.938	93	103314	18.98	ug/L		99
57) 1,4-Dioxane	6.999	88	26337m	426.51	ug/L		
58) Methyl Methacrylate	7.017	69	90746	18.62	ug/L	#	56
59) Bromodichloromethane	7.170	83	241941	18.55	ug/L		97
60) 2-Nitropropane	7.462	41	62979	44.10	ug/L		98
61) 2-Chloroethylvinyl Ether	7.590	63	104435	18.05	ug/L		92
62) cis-1,3-Dichloropropene	7.737	75	265610	17.97	ug/L		97
63) 4-Methyl-2-pentanone	7.944	43	196459	18.54	ug/L		89
65) Toluene	8.121	91	771675	17.02	ug/L		98
66) trans-1,3-Dichloropropene	8.395	75	222151	18.04	ug/L		99
67) Ethyl Methacrylate	8.541	69	182329	18.78	ug/L	#	56
68) 1,1,2-Trichloroethane	8.590	97	144558	17.89	ug/L		92
71) Tetrachloroethene	8.730	164	159515	17.50	ug/L		96
72) 2-Hexanone	8.889	43	130942	19.14	ug/L		94
73) 1,3-Dichloropropane	8.767	76	257614	19.44	ug/L		84
74) Dibromochloromethane	8.999	129	183388	20.28	ug/L		97
75) N-Butyl Acetate	9.054	43	294736	17.94	ug/L		90
76) 1,2-Dibromoethane	9.096	107	142614	19.31	ug/L		94
77) 3-Chlorobenzotrifluoride	9.627	180	292383	17.62	ug/L		95
78) Chlorobenzene	9.602	112	570959	19.15	ug/L		99
79) 4-Chlorobenzotrifluoride	9.681	180	259399	17.76	ug/L		97
80) 1,1,1,2-Tetrachloroethane	9.694	131	197687	19.36	ug/L		97
81) Ethylbenzene	9.730	106	258007	16.50	ug/L		99
82) (m+p)Xylene	9.846	106	699431	37.17	ug/L		92
83) o-Xylene	10.206	106	348410	18.66	ug/L		99
84) Styrene	10.218	104	613145	19.40	ug/L		98
85) Bromoform	10.376	173	97339	19.77	ug/L		98
86) 2-Chlorobenzotrifluoride	10.456	180	284521	18.11	ug/L		92
87) Isopropylbenzene	10.547	105	847739	18.49	ug/L		99
88) Cyclohexanone	10.608	55	456847	935.24	ug/L		93
89) trans-1,4-Dichloro-2-B...	10.864	53	37373	11.30	ug/L		78
91) 1,1,2,2-Tetrachloroethane	10.815	83	173973	19.48	ug/L		95
92) Bromobenzene	10.797	156	240971	19.02	ug/L		90
93) 1,2,3-Trichloropropane	10.840	110	46811	17.81	ug/L	#	84

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

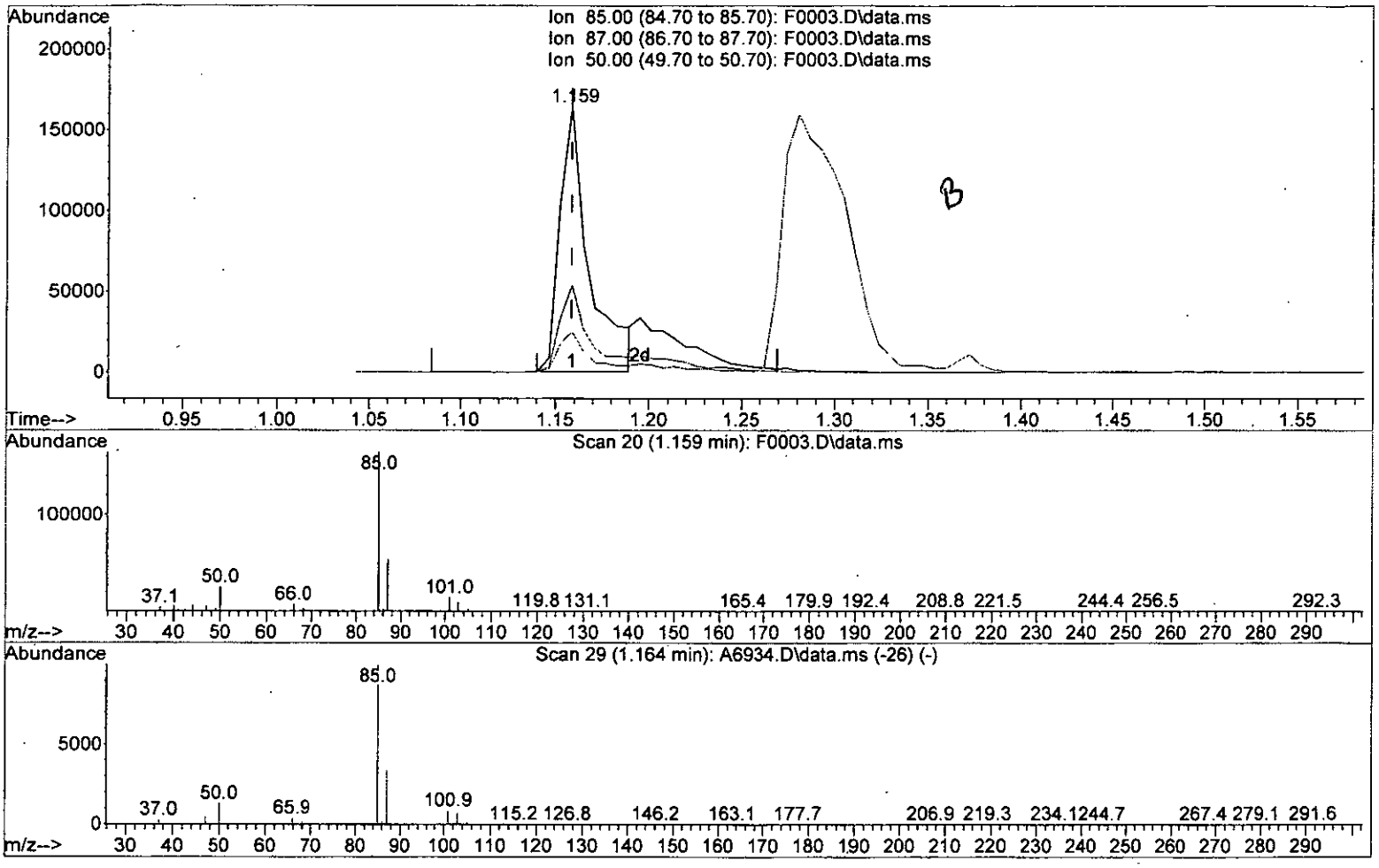
Quant Time: Jun 30 13:17:30 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94)	n-Propylbenzene	10.907	91	987681	19.01	ug/L	99
95)	2-Chlorotoluene	10.974	91	612252	18.79	ug/L	95
96)	3-Chlorotoluene	11.023	91	647547	18.82	ug/L	99
97)	4-Chlorotoluene	11.065	91	746718	19.23	ug/L	97
98)	1,3,5-Trimethylbenzene	11.065	105	747566	19.27	ug/L	98
99)	tert-Butylbenzene	11.340	119	619896	18.40	ug/L	97
100)	1,2,4-Trimethylbenzene	11.376	105	770231	19.44	ug/L	96
101)	3,4-Dichlorobenzotrifl...	11.443	214	218681	18.97	ug/L	99
102)	sec-Butylbenzene	11.523	105	888125	19.42	ug/L	99
103)	p-Isopropyltoluene	11.645	119	817148	20.05	ug/L	98
104)	1,3-Dclbenz	11.602	146	492041	19.09	ug/L	97
105)	1,4-Dclbenz	11.681	146	518110	19.17	ug/L	95
106)	2,4-Dichlorobenzotrifl...	11.736	214	201389	18.62	ug/L	99
107)	2,5-Dichlorobenzotrifl...	11.773	214	224405	18.31	ug/L	99
108)	n-Butylbenzene	11.980	91	690283	19.18	ug/L	97
109)	1,2-Dclbenz	11.986	146	461826	19.38	ug/L	98
110)	1,2-Dibromo-3-chloropr...	12.614	157	28890	17.68	ug/L	89
111)	Trielution Dichlorotol...	12.724	125	1236923	60.55	ug/L	93
112)	1,3,5-Trichlorobenzene	12.785	180	344471	19.74	ug/L	99
113)	Coelution Dichlorotoluene	13.059	125	887640	40.67	ug/L	93
114)	1,2,4-Tcbenzene	13.266	180	298159	19.86	ug/L	96
115)	Hexachlorobt	13.406	225	126636	20.37	ug/L	96
116)	Naphthalen	13.461	128	542913	19.30	ug/L	98
117)	1,2,3-Tclbenzene	13.650	180	232320	18.79	ug/L	97
118)	2,4,5-Trichlorotoluene	14.235	159	182754	20.04	ug/L	94
119)	2,3,6-Trichlorotoluene	14.321	159	162376	20.38	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0003.D\data.ms

(2) Dichlorodifluoromethane (P)

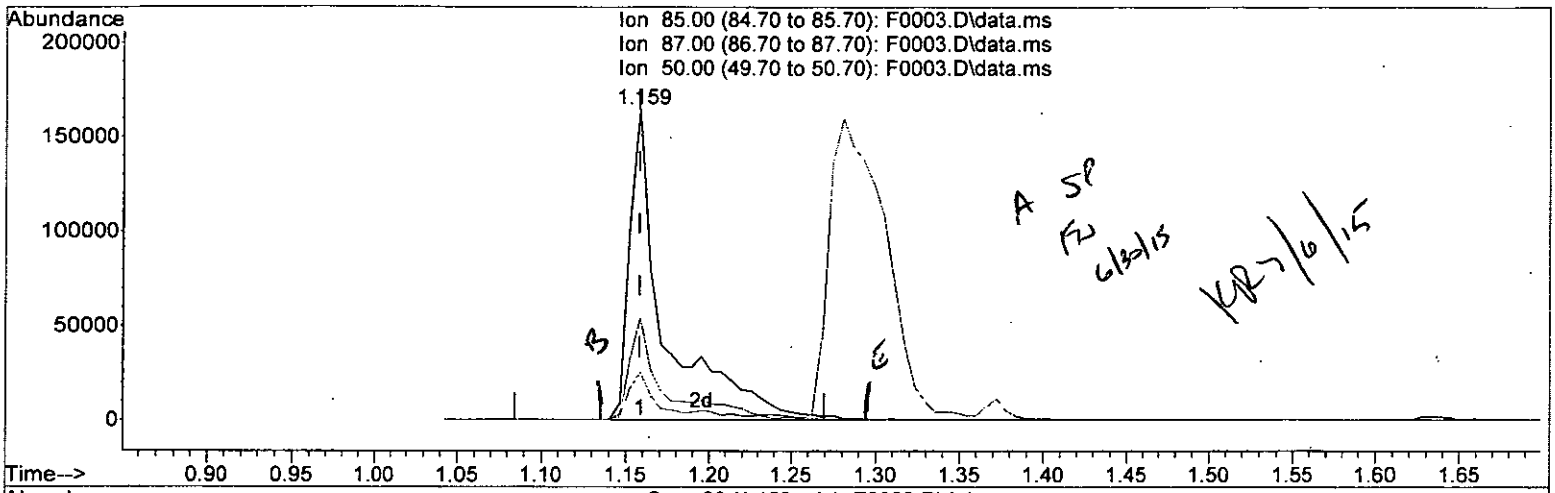
1.159min (+0.000) 15.49 ug/L

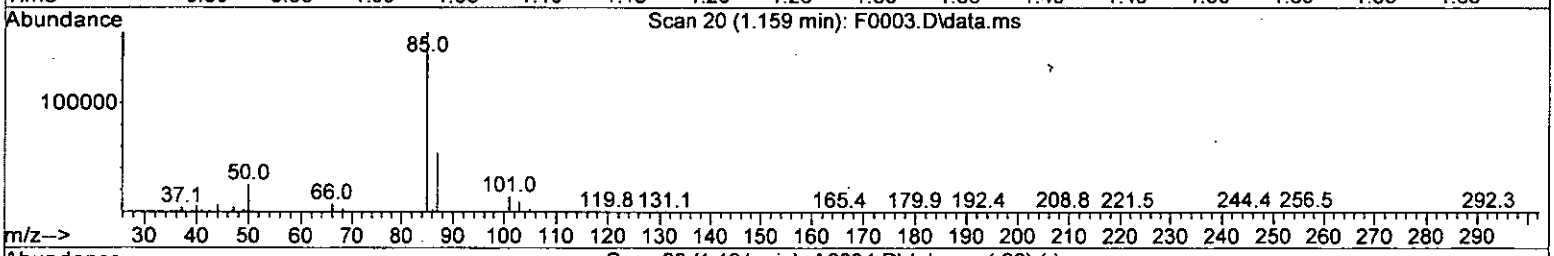
response 177124

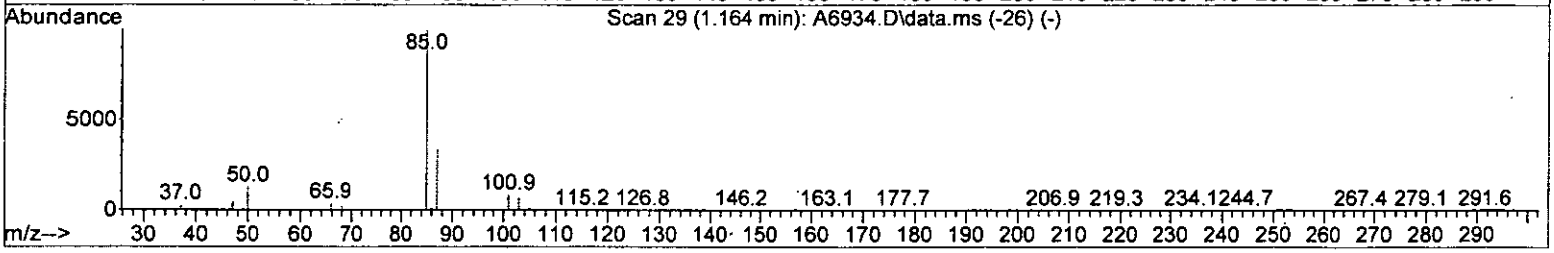
Ion	Exp%	Act%
85.00	100	100
87.00	31.50	32.71
50.00	15.00	15.24
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
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Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
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TIC: F0003.D\data.ms

(2) Dichlorodifluoromethane (P)

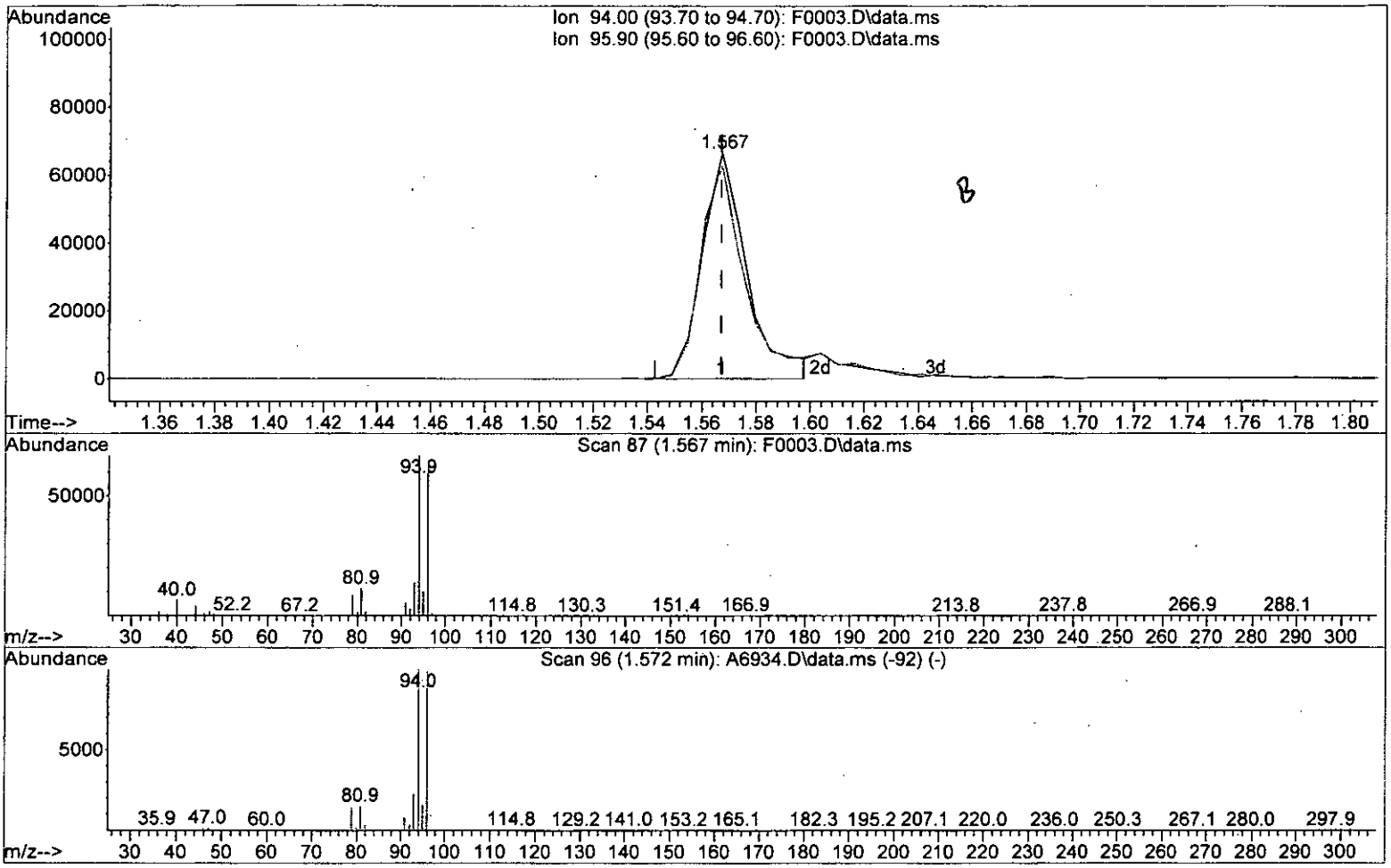
1.159min (+0.000) 21.20 ug/L m

response 242385

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	32.71
50.00	15.00	15.24
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
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Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0003.D\data.ms

(5) Bromomethane (P)

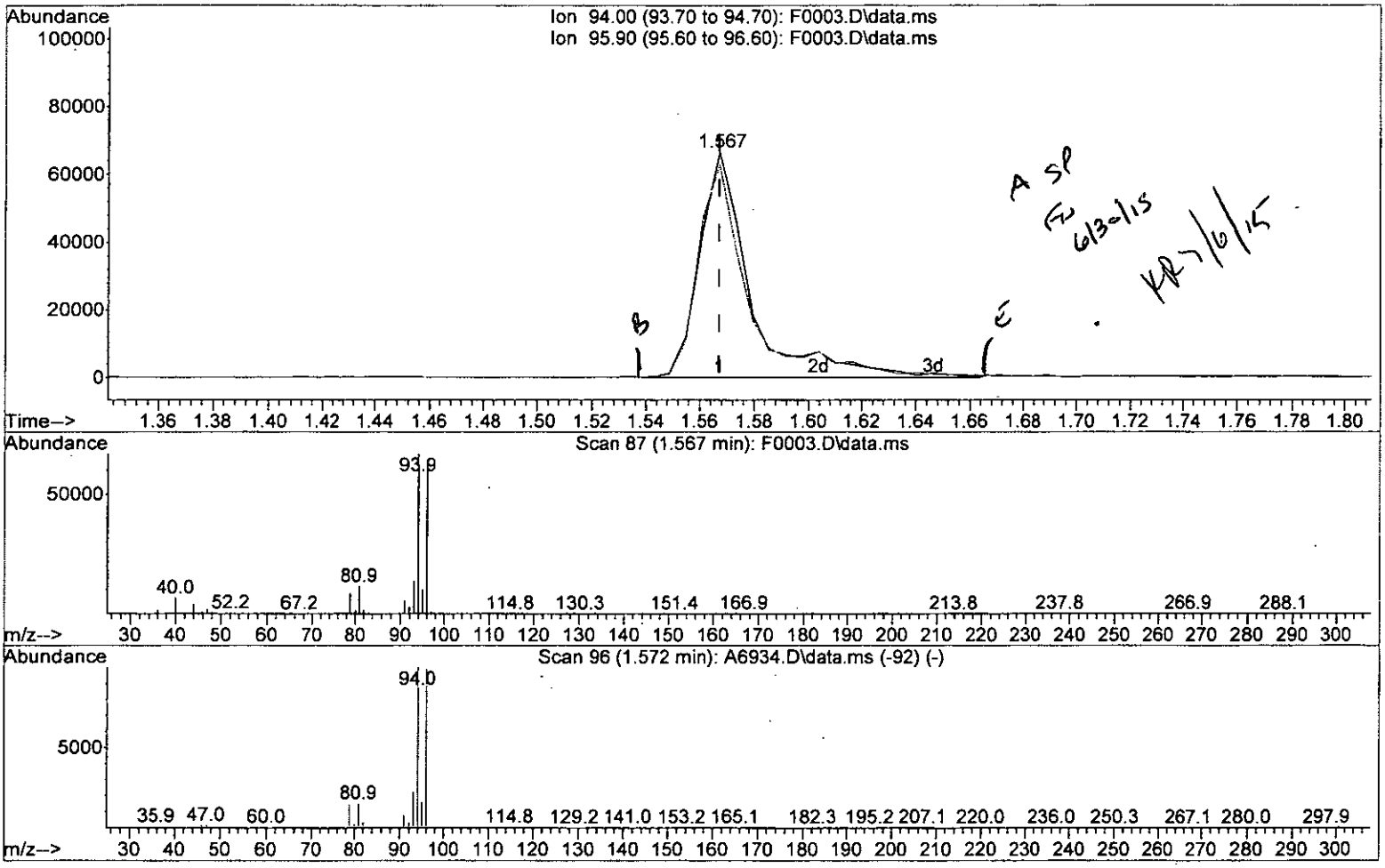
1.567min (+0.000) 12.03 ug/L

response 75920

Ion	Exp%	Act%
94.00	100	100
95.90	91.60	94.21
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
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Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0003.D\data.ms

(5) Bromomethane (P)

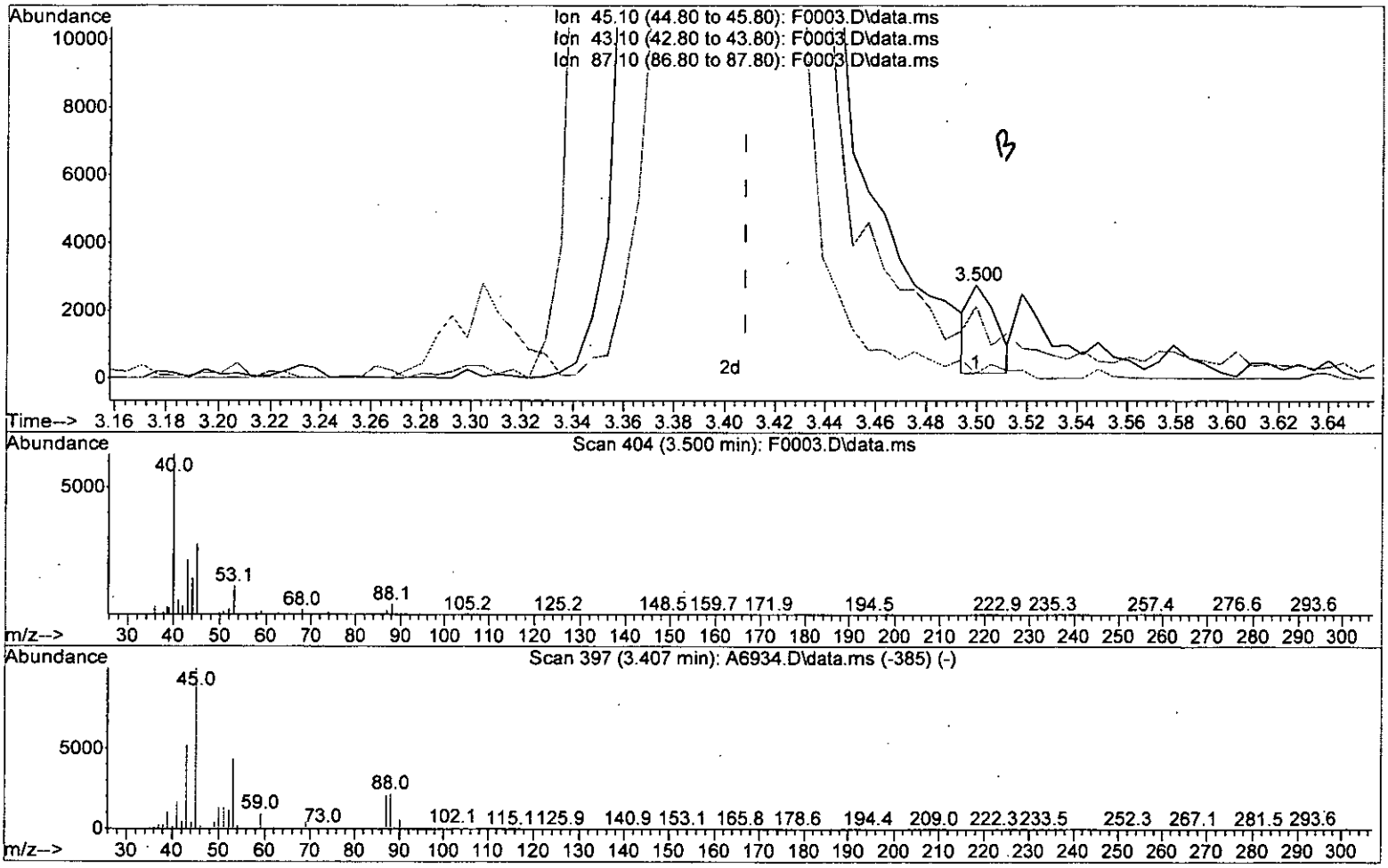
1.567min (+0.000) 13.59 ug/L m

response 85724

Ion	Exp%	Act%
94.00	100	100
95.90	91.60	94.21
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0003.D\data.ms

(29) DIPE

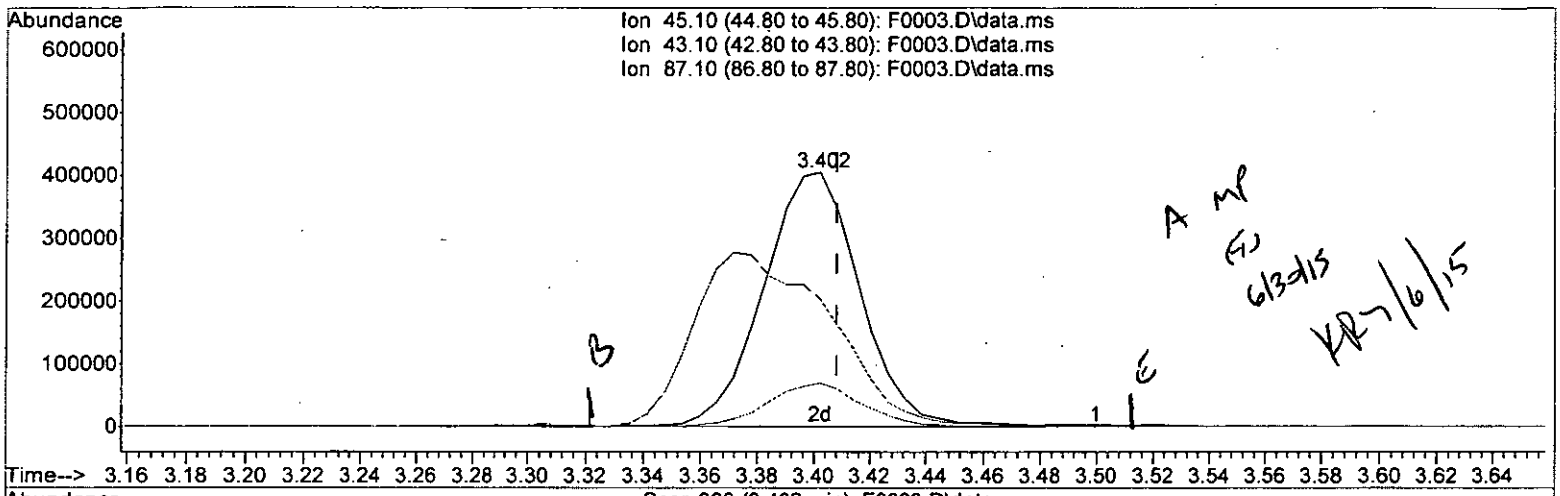
3.500min (+0.092) 0.04 ug/L

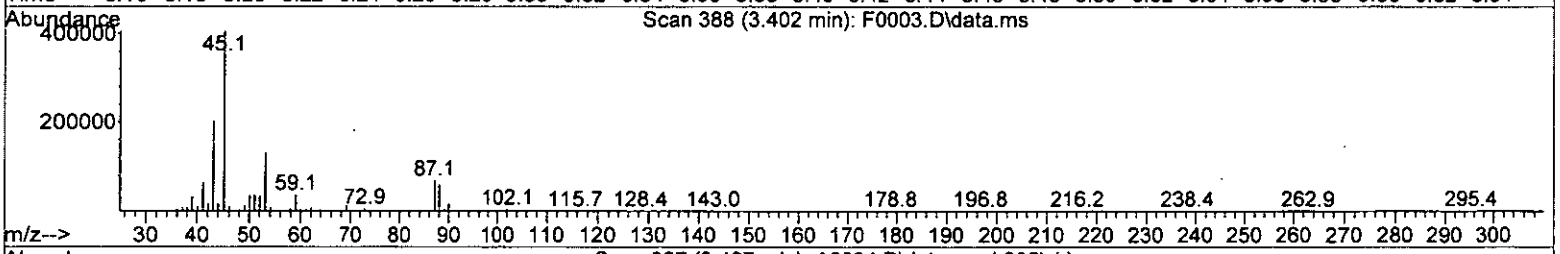
response 1957

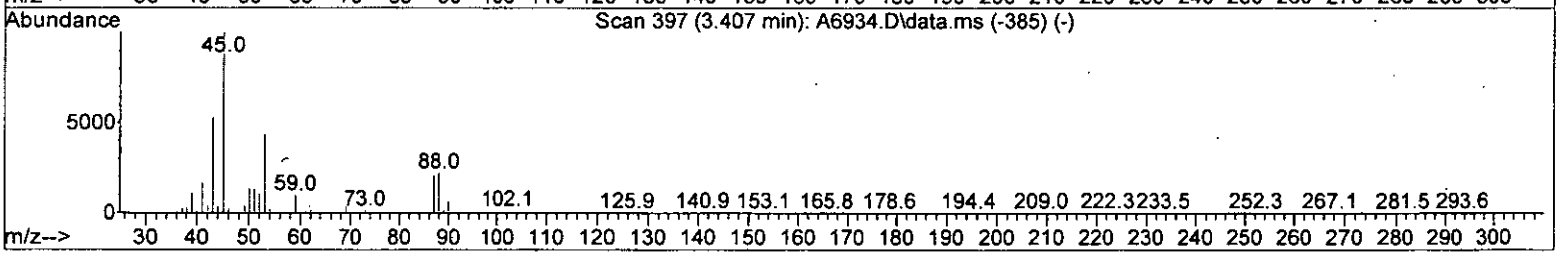
Ion	Exp%	Act%
45.10	100	100
43.10	74.80	77.52
87.10	21.90	5.73
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: F0003.D\data.ms

(29) DIPE

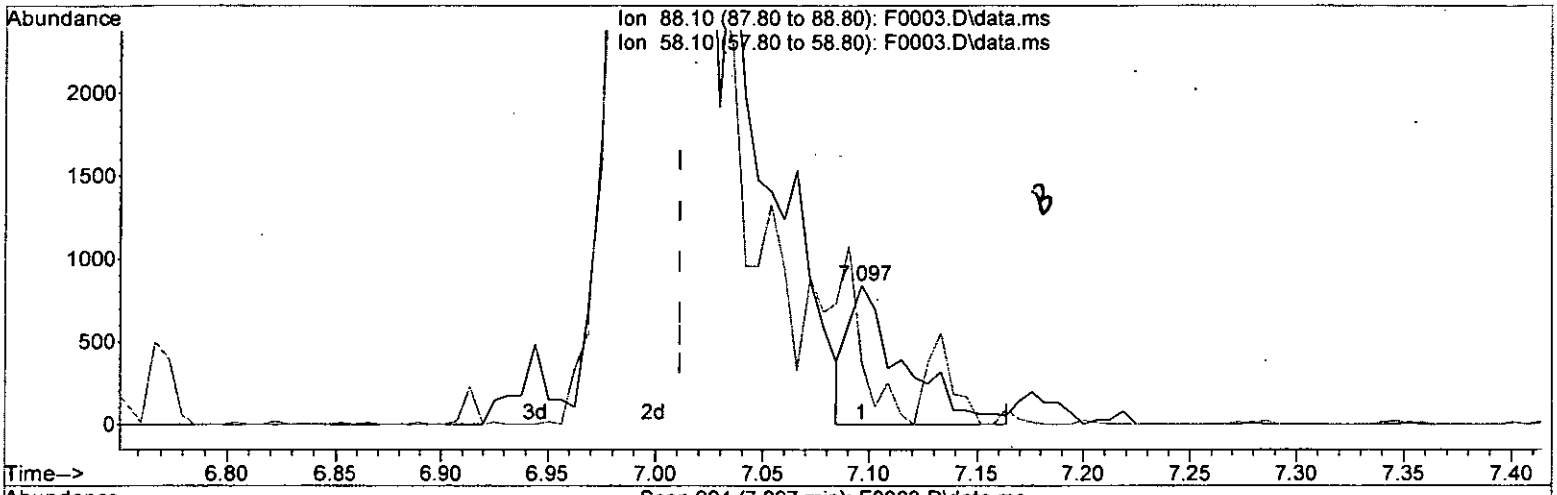
3.402min (-0.006) 17.28 ug/L m

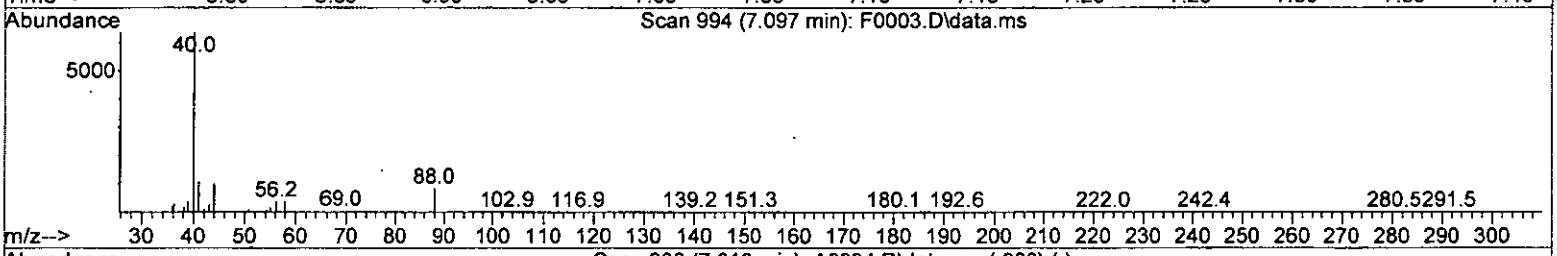
response 966037

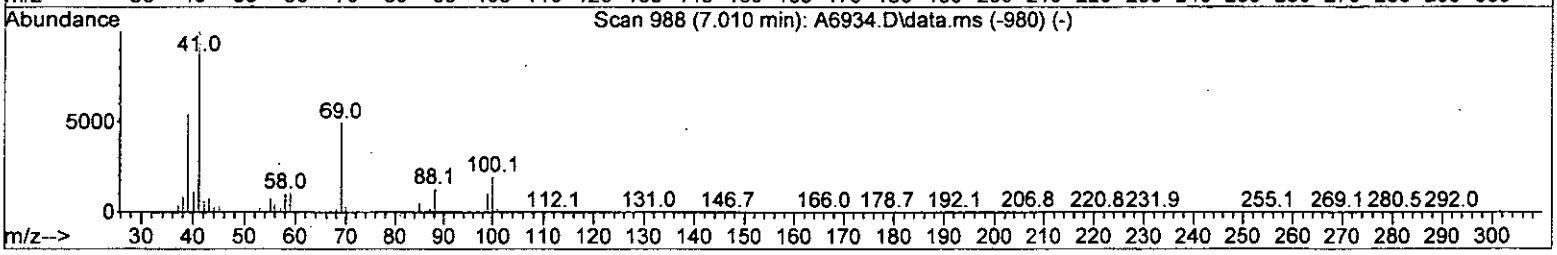
Ion	Exp%	Act%
45.10	100	100
43.10	74.80	50.01#
87.10	21.90	17.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: F0003.D\data.ms

(57) 1,4-Dioxane

7.097min (+0.085) 24.00 ug/L

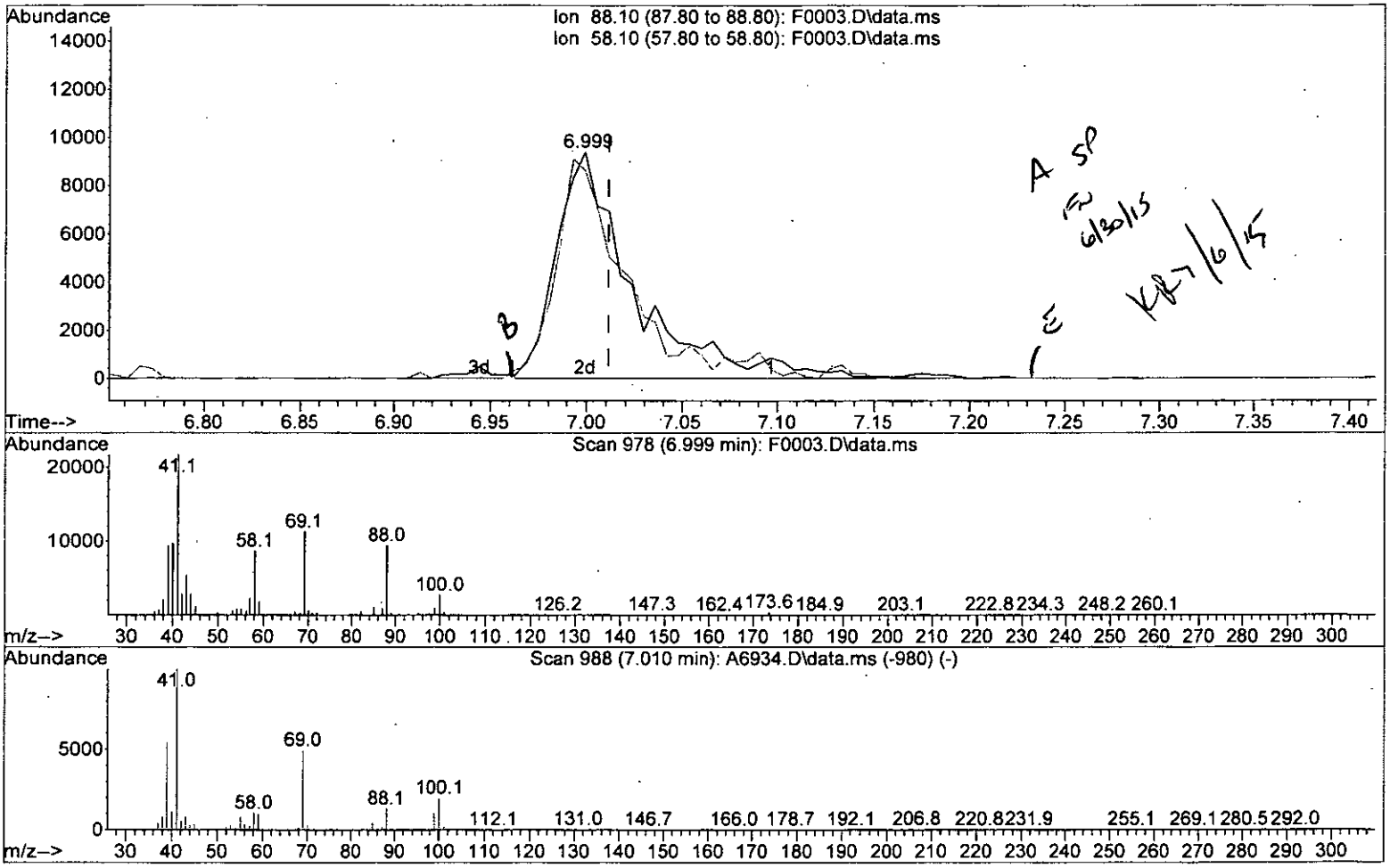
response 1482

Ion	Exp%	Act%
88.10	100	100
58.10	61.10	44.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 12:13:39 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: F0003.D\data.ms

(57) 1,4-Dioxane

6.999min (-0.012) 426.51 ug/L m

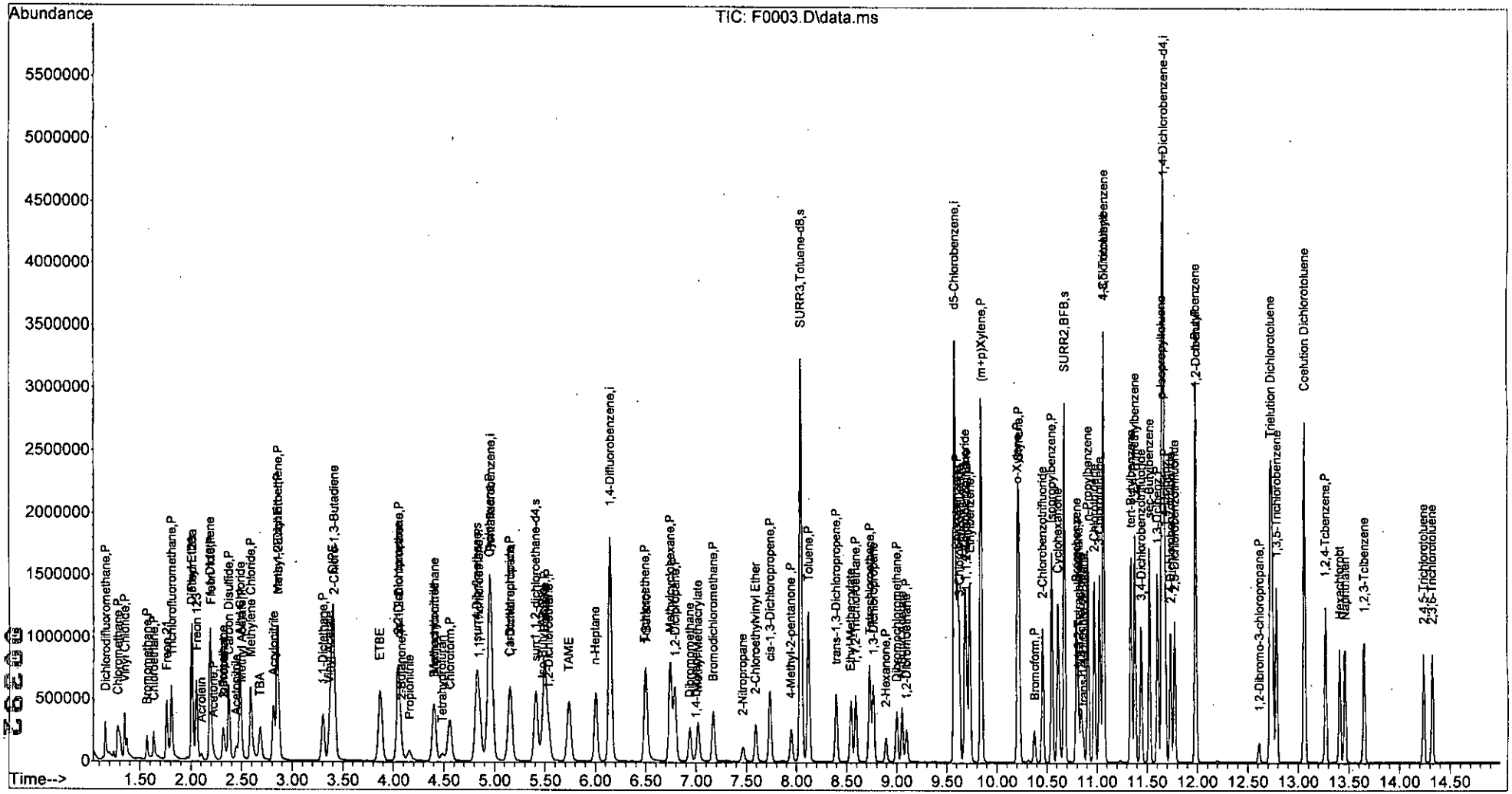
response 26337

Ion	Exp%	Act%
88.10	100	100
58.10	61.10	91.86#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\063015\
Data File : F0003.D
Acq On : 30 Jun 2015 11:59 am
Operator : F. Naegler
Sample : LCS Inst : MSVOA10
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 30 13:17:30 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 20:40
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	RQ1507370-05	**Basis:**	NA
Run Type:	Matrix Spike		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0016.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	**54.0**		5.0	
71-55-6	1,1,1-Trichloroethane	**51.6**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	**51.8**		5.0	
79-00-5	1,1,2-Trichloroethane	**46.6**		5.0	
75-34-3	1,1-Dichloroethane	**50.5**		5.0	
75-35-4	1,1-Dichloroethene	**56.5**		5.0	
96-18-4	1,2,3-Trichloropropane	**49.3**		5.0	
96-12-8	1,2-Dibromo-3-chloropropane	**50.0**		5.0	
106-93-4	1,2-Dibromoethane	**51.0**		5.0	
95-50-1	1,2-Dichlorobenzene	**51.5**		5.0	
107-06-2	1,2-Dichloroethane	**47.9**		5.0	
78-87-5	1,2-Dichloropropane	**49.7**		5.0	
106-46-7	1,4-Dichlorobenzene	**49.9**		5.0	
78-93-3	2-Butanone (MEK)	**42.9**		10	
591-78-6	2-Hexanone	**48.2**		10	
108-10-1	4-Methyl-2-pentanone (MIBK)	**45.1**		10	
67-64-1	Acetone	**43.3**		10	
107-13-1	Acrylonitrile	**240**		100	
71-43-2	Benzene	**50.3**		5.0	
74-97-5	Bromochloromethane	**50.0**		5.0	
75-27-4	Bromodichloromethane	**51.3**		5.0	
75-25-2	Bromoform	**54.4**		5.0	
74-83-9	Bromomethane	**30.0**		5.0	
75-15-0	Carbon Disulfide	**51.3**		10	
56-23-5	Carbon Tetrachloride	**53.5**		5.0	
108-90-7	Chlorobenzene	**52.2**		5.0	
75-00-3	Chloroethane	**53.8**		5.0	
67-66-3	Chloroform	**49.9**		5.0	
74-87-3	Chloromethane	**51.5**		5.0	
124-48-1	Dibromochloromethane	**54.3**		5.0	
74-95-3	Dibromomethane	**49.7**		5.0	
75-09-2	Methylene Chloride	**53.2**		5.0	
100-41-4	Ethylbenzene	**46.6**		5.0	
74-88-4	Iodomethane	**30.1**		10	
100-42-5	Styrene	**31.6**		5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 20:40
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	RQ1507370-05	**Basis:**	NA
Run Type:	Matrix Spike		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0016.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	**50.5**		5.0	
108-88-3	Toluene	**47.1**		5.0	
79-01-6	Trichloroethene	**51.2**		5.0	
75-69-4	Trichlorofluoromethane	**54.8**		5.0	
108-05-4	Vinyl Acetate	**32.9**		10	
75-01-4	Vinyl Chloride	**51.6**		5.0	
156-59-2	cis-1,2-Dichloroethene	**50.8**		5.0	
10061-01-5	cis-1,3-Dichloropropene	**47.7**		5.0	
179601-23-1	m,p-Xylenes	**92.9**		5.0	
95-47-6	o-Xylene	**45.5**		5.0	
156-60-5	trans-1,2-Dichloroethene	**56.6**		5.0	
10061-02-6	trans-1,3-Dichloropropene	**47.5**		5.0	
110-57-6	trans-1,4-Dichloro-2-butene	**38.4**		5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	92	85-122	6/29/15 20:40	
Dibromofluoromethane	100	89-119	6/29/15 20:40	
Toluene-d8	92	87-121	6/29/15 20:40	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 05 15:44:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FJ 7/5/15

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.969	168	1163049	50.00	ug/L	0.00
41) 1,4-Difluorobenzene	6.145	114	1751245	50.00	ug/L	0.00
70) d5-Chlorobenzene	9.578	117	1580893	50.00	ug/L	0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	940183	50.00	ug/L	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	4.829	113	545940	49.95	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.90%			
46) surr1,1,2-dichloroetha...	5.408	65	545892	48.61	ug/L	0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 97.22%			
64) SURR3,Toluene-d8	8.041	98	1922320	46.14	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 92.28%			
69) SURR2,BFB	10.675	95	775415	45.79	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 91.58%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.159	85	740656m	61.33	ug/L	
3) Chloromethane	1.281	50	1139077	51.52	ug/L	99
4) Vinyl Chloride	1.348	62	830681	51.58	ug/L	97
5) Bromomethane	1.567	94	199702m	29.98	ug/L	
6) Chloroethane	1.634	64	425610	53.83	ug/L	93
7) Freon 21	1.762	67	1002824	51.91	ug/L	98
8) Trichlorofluoromethane	1.811	101	851521	54.78	ug/L	99
9) Diethyl Ether	2.012	59	475345	50.77	ug/L #	80
10) Freon 123a	2.012	67	591033	50.11	ug/L	94
11) Freon 123	2.055	83	602176	46.14	ug/L	80
12) Acrolein	2.104	56	60379	34.33	ug/L	93
13) 1,1-Diclethene	2.189	96	484109	56.50	ug/L #	85
14) Freon 113	2.189	101	516150	57.58	ug/L	97
15) Acetone	2.219	43	149593	43.32	ug/L	98
16) 2-Propanol	2.323	45	441526	724.07	ug/L	90
17) Iodomethane	2.317	142	382367	30.13	ug/L	98
18) Carbon Disulfide	2.378	76	1580289	51.34	ug/L	99
19) Acetonitrile	2.445	40	126413	235.79	ug/L	99
20) Allyl Chloride	2.488	76	272073	48.80	ug/L #	31
21) Methyl Acetate	2.500	43	300135	35.43	ug/L	88
22) Methylene Chloride	2.591	84	558960	53.17	ug/L #	71
23) TBA	2.683	59	694444	889.08	ug/L	64
24) Acrylonitrile	2.817	53	902671	240.07	ug/L	97
25) Methyl-t-Butyl Ether	2.860	73	1165246	47.56	ug/L	86
26) trans-1,2-Dichloroethene	2.860	96	545722	56.58	ug/L	93
27) 1,1-Diclethane	3.305	63	1088049	50.53	ug/L	99
28) Vinyl Acetate	3.372	86	57069	32.87	ug/L #	34
29) DIPE	3.402	45	2608883	44.20	ug/L #	73
30) 2-Chloro-1,3-Butadiene	3.414	53	905532	36.16	ug/L	91
31) ETBE	3.872	59	1617184	40.11	ug/L	93
32) 2,2-Dichloropropane	4.048	77	611815	43.97	ug/L	97
33) cis-1,2-Dichloroethene	4.054	96	587579	50.83	ug/L	95
34) 2-Butanone	4.079	43	234878	42.93	ug/L	93
35) Propionitrile	4.158	54	317943	234.15	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 05 15:44:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.402	130	355548	50.02	ug/L	#	74
37) Methacrylonitrile	4.396	67	146129	45.55	ug/L	#	41
38) Tetrahydrofuran	4.487	42	158841	46.97	ug/L		76
39) Chloroform	4.560	83	956192	49.92	ug/L		96
40) 1,1,1-Trichloroethane	4.853	97	840471	51.58	ug/L		96
42) Cyclohexane	4.951	41	680317	40.86	ug/L		90
44) Carbontetrachloride	5.158	121	231650	53.54	ug/L		81
45) 1,1-Dichloropropene	5.158	75	685339	48.41	ug/L		96
47) Benzene	5.499	78	2205362	50.25	ug/L		86
48) 1,2-Dichloroethane	5.536	62	724961	47.85	ug/L		90
49) Iso-Butyl Alcohol	5.469	43	411260	903.46	ug/L		93
50) TAME	5.743	73	1097619	43.39	ug/L		86
51) n-Heptane	6.005	43	916917	48.05	ug/L		81
52) 1-Butanol	6.511	56	519521	2570.39	ug/L		89
53) Trichloroethene	6.493	130	620348	51.15	ug/L		95
54) Methylcyclohexane	6.743	55	737373	41.11	ug/L	#	81
55) 1,2-Diclpropane	6.792	63	643214	49.71	ug/L		99
56) Dibromomethane	6.938	93	282929	49.71	ug/L		95
57) 1,4-Dioxane	6.993	88	73133	1132.68	ug/L	#	66
58) Methyl Methacrylate	7.023	69	232585	45.63	ug/L	#	56
59) Bromodichloromethane	7.170	83	700007	51.34	ug/L		99
60) 2-Nitropropane	7.462	41	183244	122.72	ug/L		98
62) cis-1,3-Dichloropropene	7.737	75	736485	47.66	ug/L		93
63) 4-Methyl-2-pentanone	7.944	43	499438	45.07	ug/L		89
65) Toluene	8.121	91	2232699	47.11	ug/L		98
66) trans-1,3-Dichloropropene	8.395	75	611366	47.47	ug/L		98
67) Ethyl Methacrylate	8.541	69	470238	46.33	ug/L	#	58
68) 1,1,2-Trichloroethane	8.590	97	393945	46.62	ug/L		97
71) Tetrachloroethene	8.730	164	479623	50.48	ug/L		98
72) 2-Hexanone	8.889	43	343474	48.16	ug/L		83
73) 1,3-Dichloropropane	8.767	76	698926	50.60	ug/L	#	81
74) Dibromochloromethane	8.999	129	512077	54.32	ug/L		98
75) N-Butyl Acetate	9.053	43	683487	39.90	ug/L		93
76) 1,2-Dibromoethane	9.096	107	392663	51.00	ug/L		98
77) 3-Chlorobenzotrifluoride	9.627	180	847686	48.99	ug/L		98
78) Chlorobenzene	9.608	112	1623916	52.24	ug/L		95
79) 4-Chlorobenzotrifluoride	9.681	180	744755	48.91	ug/L		94
80) 1,1,1,2-Tetrachloroethane	9.694	131	574904	54.02	ug/L		96
81) Ethylbenzene	9.730	106	759396	46.57	ug/L		97
82) (m+p)Xylene	9.846	106	1823065	92.94	ug/L		89
83) o-Xylene	10.206	106	885453	45.50	ug/L		97
84) Styrene	10.224	104	1042636	31.64	ug/L		96
85) Bromoform	10.376	173	279165	54.38	ug/L		96
86) 2-Chlorobenzotrifluoride	10.456	180	825882	50.42	ug/L		92
87) Isopropylbenzene	10.547	105	2588686	54.15	ug/L		98
88) Cyclohexanone	10.608	55	292835	575.03	ug/L		88
89) trans-1,4-Dichloro-2-B...	10.864	53	132351	38.37	ug/L		90
91) 1,1,2,2-Tetrachloroethane	10.815	83	497538	51.82	ug/L		96
92) Bromobenzene	10.797	156	676239	49.65	ug/L		94
93) 1,2,3-Trichloropropane	10.840	110	139469	49.34	ug/L		92
94) n-Propylbenzene	10.907	91	3017468	54.02	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 05 15:44:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

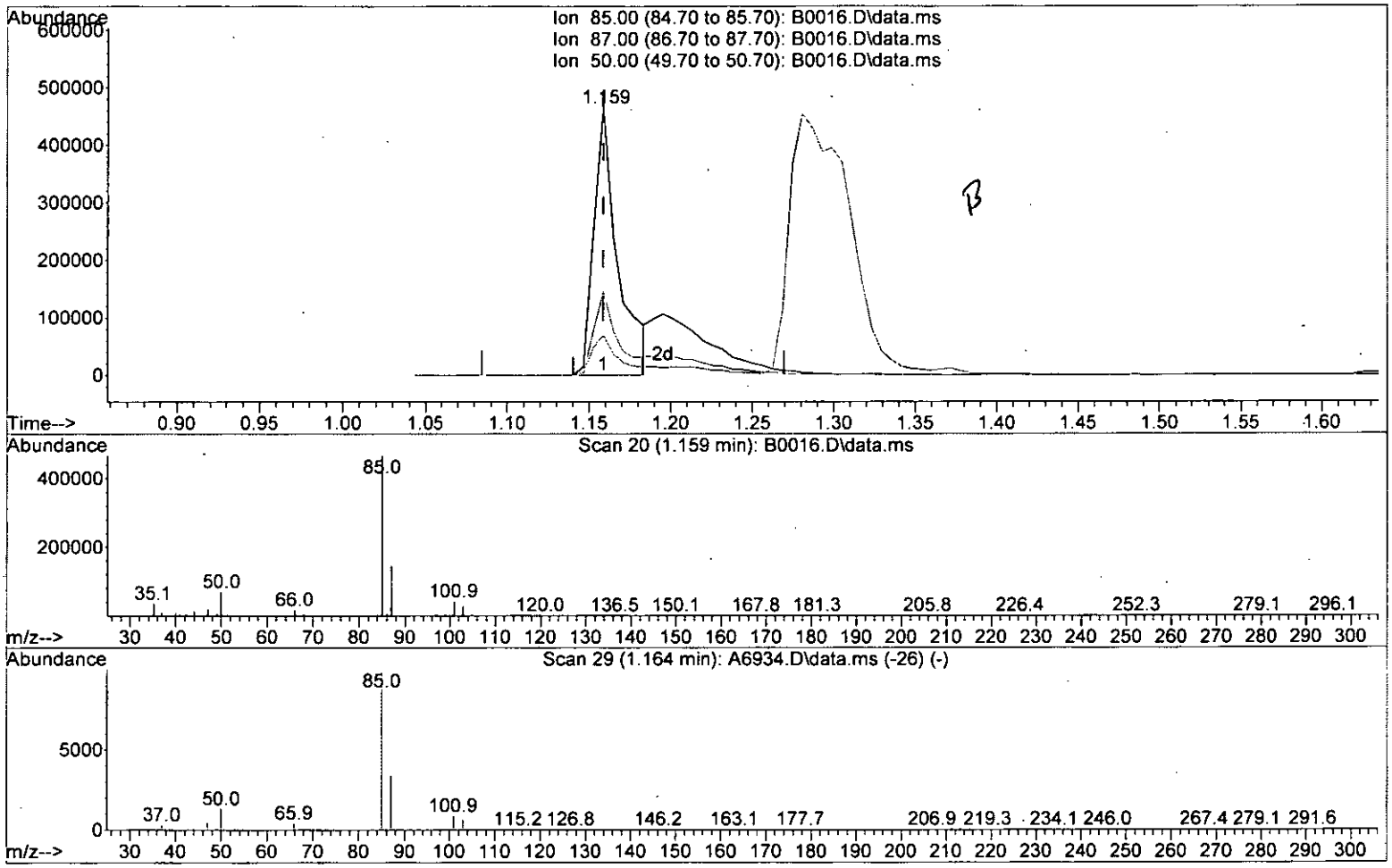
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	2-Chlorotoluene	10.974	91	1811463	51.72	ug/L	94
96)	3-Chlorotoluene	11.029	91	1851228	50.05	ug/L	96
97)	4-Chlorotoluene	11.065	91	2099490	50.29	ug/L	95
98)	1,3,5-Trimethylbenzene	11.065	105	1503637	36.04	ug/L	96
99)	tert-Butylbenzene	11.340	119	1932683	53.36	ug/L	98
100)	1,2,4-Trimethylbenzene	11.376	105	1664976	39.08	ug/L	97
101)	3,4-Dichlorobenzotrifl...	11.443	214	604224	48.75	ug/L	98
102)	sec-Butylbenzene	11.522	105	2688582	54.67	ug/L	97
103)	p-Isopropyltoluene	11.644	119	2313295	52.80	ug/L	97
104)	1,3-Dclbenz	11.608	146	1403348	50.63	ug/L	94
105)	1,4-Dclbenz	11.681	146	1448724	49.86	ug/L	96
106)	2,4-Dichlorobenzotrifl...	11.736	214	564202	48.53	ug/L	97
107)	2,5-Dichlorobenzotrifl...	11.772	214	639975	48.56	ug/L	99
108)	n-Butylbenzene	11.980	91	2068827	53.47	ug/L	97
109)	1,2-Dclbenz	11.986	146	1320274	51.54	ug/L	99
110)	1,2-Dibromo-3-chloropr...	12.608	157	87749	49.95	ug/L	98
111)	Trielution Dichlorotol...	12.730	125	3485118	158.68	ug/L	97
112)	1,3,5-Trichlorobenzene	12.784	180	957032	51.01	ug/L	95
113)	Coelution Dichlorotoluene	13.059	125	2471843	105.35	ug/L	94
114)	1,2,4-Tcbenzene	13.266	180	841645	52.14	ug/L	98
115)	Hexachlorobt	13.406	225	312429	46.75	ug/L	94
116)	Naphthalen	13.461	128	1526977	50.48	ug/L	98
117)	1,2,3-Tclbenzene	13.650	180	648200	48.76	ug/L	97
118)	2,4,5-Trichlorotoluene	14.235	159	416024	42.44	ug/L	98
119)	2,3,6-Trichlorotoluene	14.321	159	375705	43.86	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jun 29 20:55:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0016.D\data.ms

(2) Dichlorodifluoromethane (P)

1.159min (+0.000) 38.66 ug/L

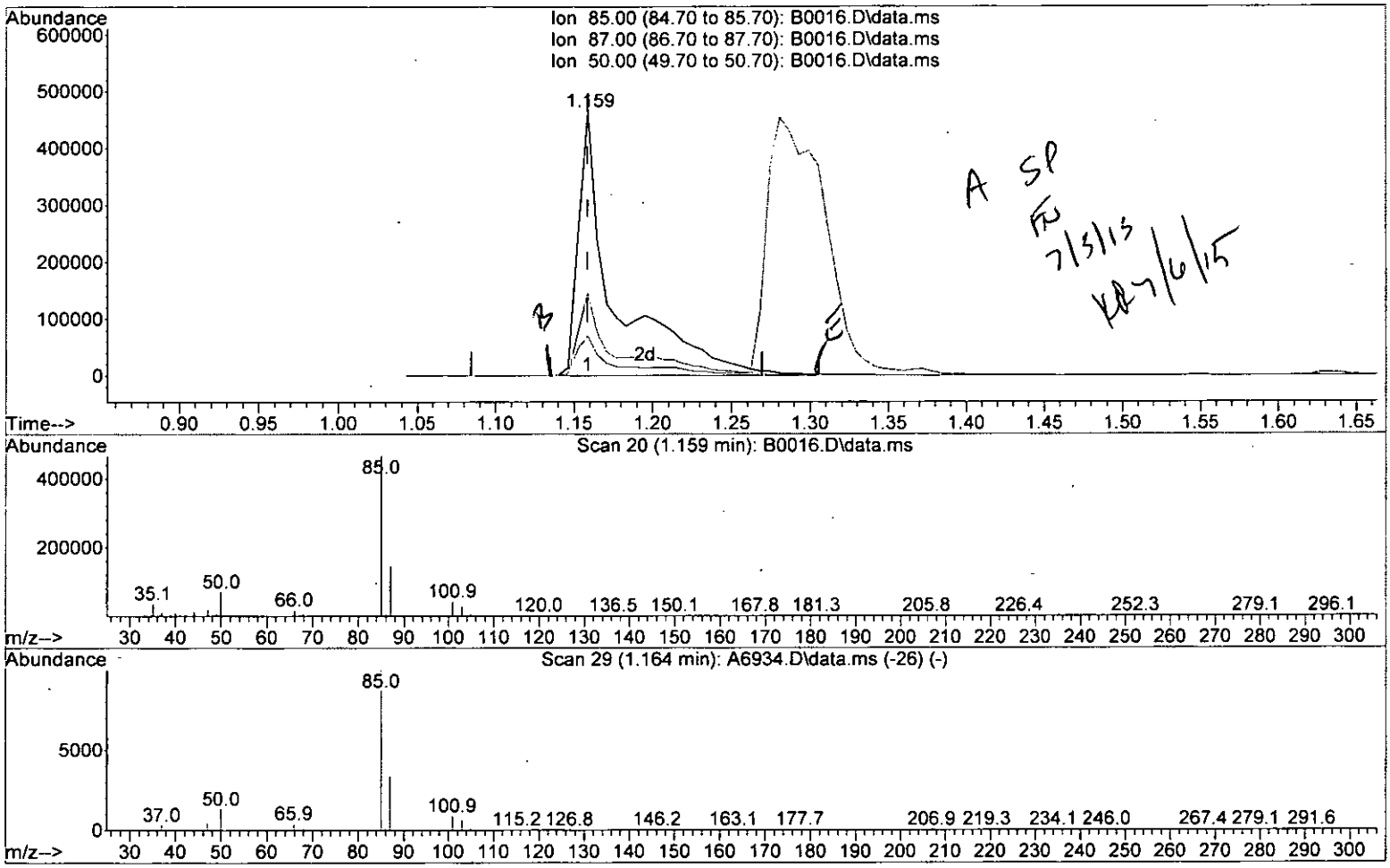
response 466957

Ion	Exp%	Act%
85.00	100	100
87.00	31.50	31.23
50.00	15.00	14.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jun 29 20:55:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0016.D\data.ms

(2) Dichlorodifluoromethane (P)

1.159min (+0.000) 61.33 ug/L m

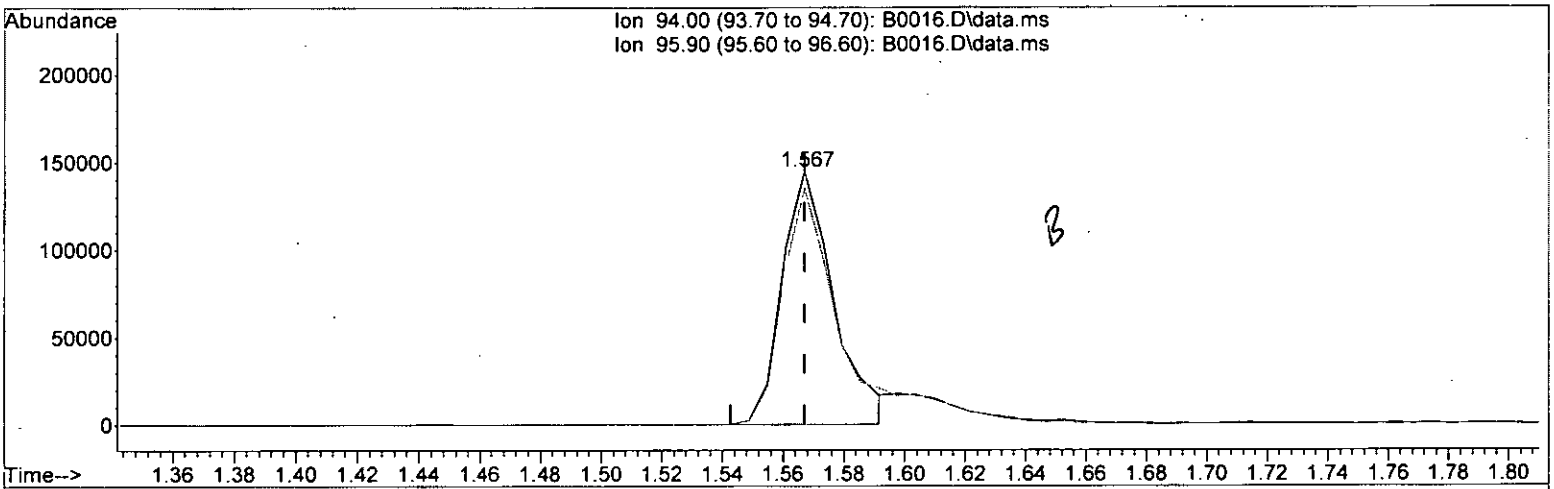
response 740656

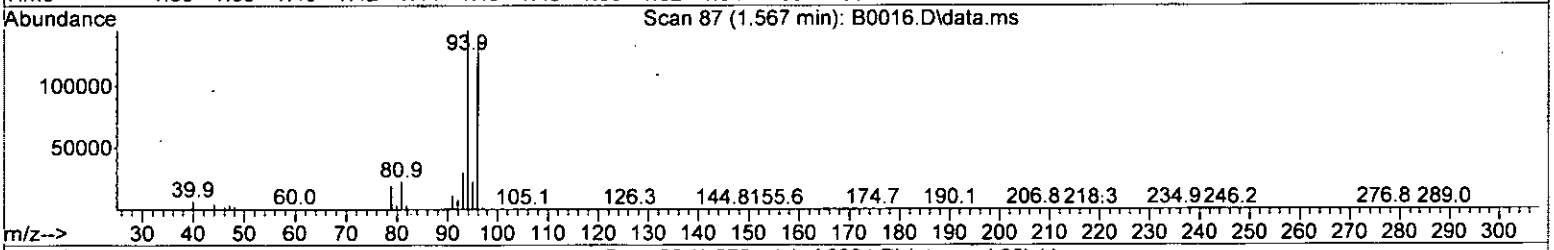
Ion	Exp%	Act%
85.00	100	100
87.00	31.50	31.23
50.00	15.00	14.85
0.00	0.00	0.00

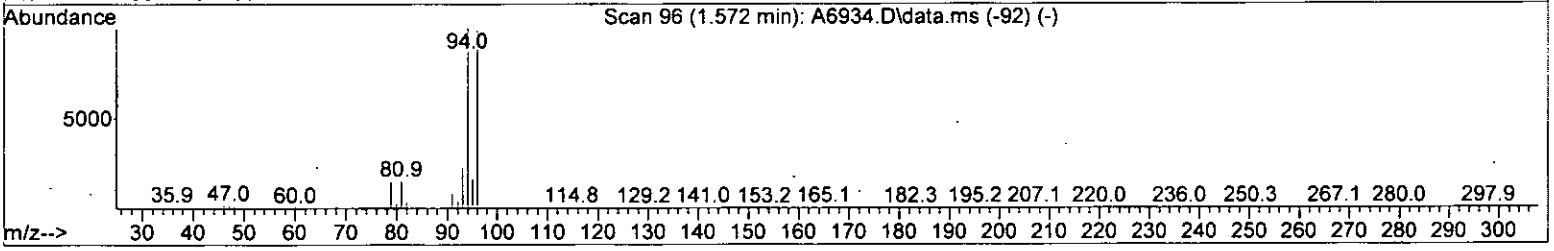
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jun 29 20:55:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration







TIC: B0016.D\data.ms

(5) Bromomethane (P)

1.567min (+0.000) 25.49 ug/L

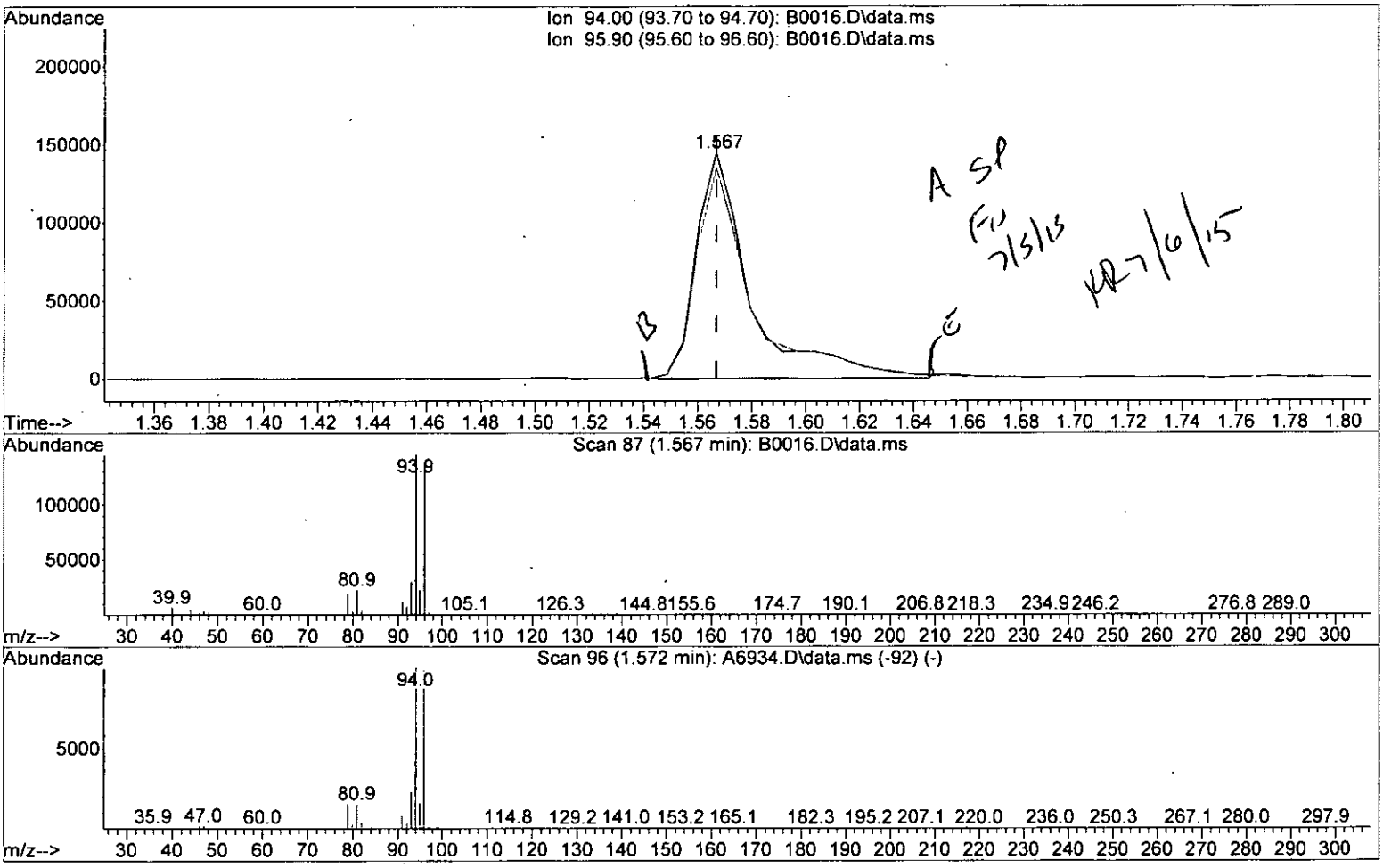
response 169838

Ion	Exp%	Act%
94.00	100	100
95.90	91.60	93.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jun 29 20:55:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



TIC: B0016.D\data.ms

(5) Bromomethane (P)

1.567min (+0.000) 29.98 ug/L m

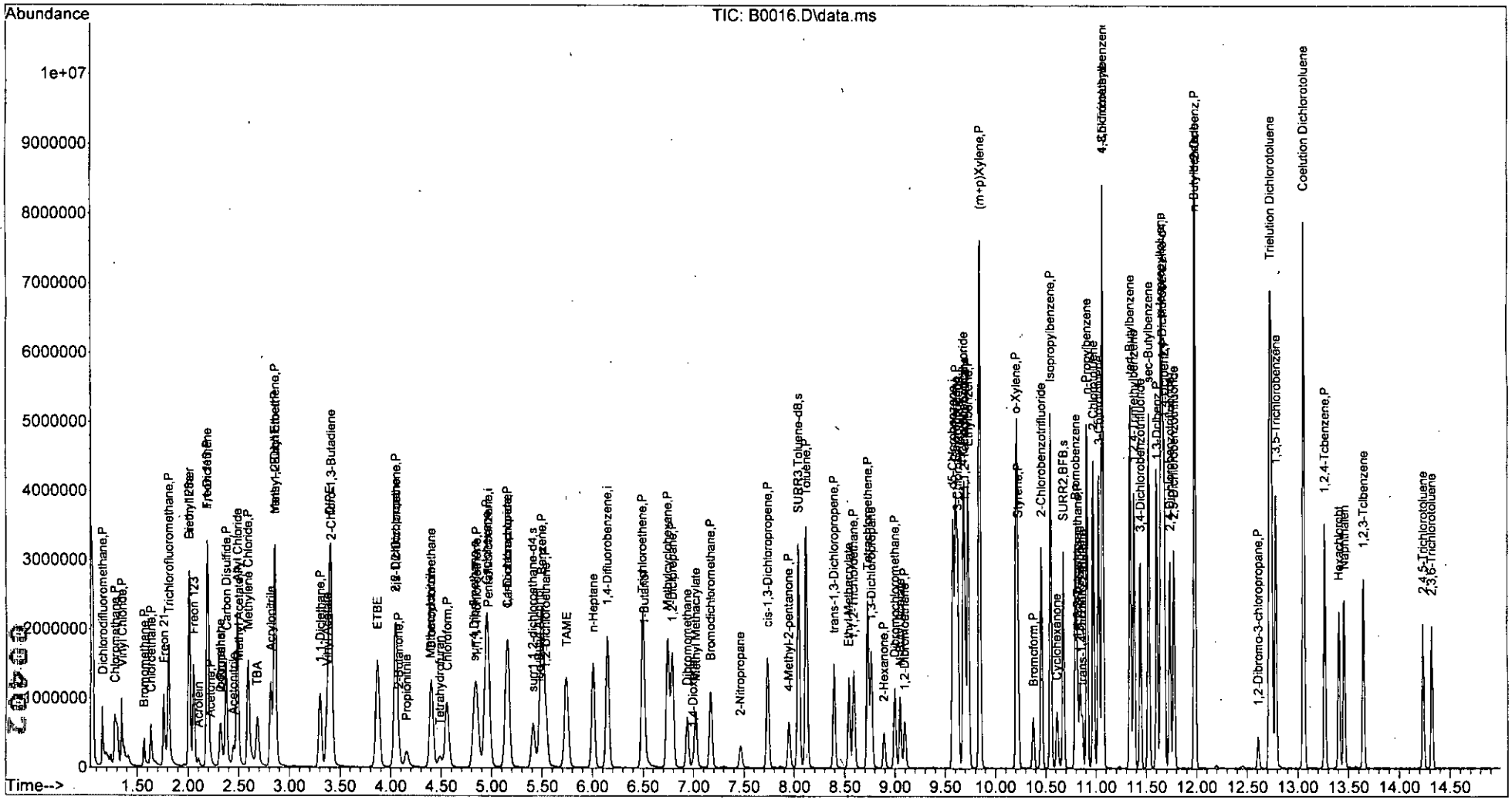
response 199702

Ion	Exp%	Act%
94.00	100	100
95.90	91.60	93.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0016.D
Acq On : 29 Jun 2015 8:40 pm
Operator : F. Naegler
Sample : R1504947-001MS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 05 15:44:03 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 21:08
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	RQ1507370-06	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0017.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	**54.0**		5.0	
71-55-6	1,1,1-Trichloroethane	**50.6**		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	**50.6**		5.0	
79-00-5	1,1,2-Trichloroethane	**45.1**		5.0	
75-34-3	1,1-Dichloroethane	**49.9**		5.0	
75-35-4	1,1-Dichloroethene	**54.2**		5.0	
96-18-4	1,2,3-Trichloropropane	**47.2**		5.0	
96-12-8	1,2-Dibromo-3-chloropropane	**50.4**		5.0	
106-93-4	1,2-Dibromoethane	**50.3**		5.0	
95-50-1	1,2-Dichlorobenzene	**50.4**		5.0	
107-06-2	1,2-Dichloroethane	**47.7**		5.0	
78-87-5	1,2-Dichloropropane	**48.3**		5.0	
106-46-7	1,4-Dichlorobenzene	**49.5**		5.0	
78-93-3	2-Butanone (MEK)	**45.2**		10	
591-78-6	2-Hexanone	**50.4**		10	
108-10-1	4-Methyl-2-pentanone (MIBK)	**46.8**		10	
67-64-1	Acetone	**45.9**		10	
107-13-1	Acrylonitrile	**233**		100	
71-43-2	Benzene	**48.8**		5.0	
74-97-5	Bromochloromethane	**50.1**		5.0	
75-27-4	Bromodichloromethane	**49.6**		5.0	
75-25-2	Bromoform	**54.9**		5.0	
74-83-9	Bromomethane	**31.6**		5.0	
75-15-0	Carbon Disulfide	**51.2**		10	
56-23-5	Carbon Tetrachloride	**52.8**		5.0	
108-90-7	Chlorobenzene	**52.3**		5.0	
75-00-3	Chloroethane	**52.6**		5.0	
67-66-3	Chloroform	**48.2**		5.0	
74-87-3	Chloromethane	**50.4**		5.0	
124-48-1	Dibromochloromethane	**54.6**		5.0	
74-95-3	Dibromomethane	**48.0**		5.0	
75-09-2	Methylene Chloride	**52.8**		5.0	
100-41-4	Ethylbenzene	**47.2**		5.0	
74-88-4	Iodomethane	**37.8**		10	
100-42-5	Styrene	**30.9**		5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	LU Engineers	**Service Request:**	R1504947
Project:	Cuba Landfill Monitoring 6/15/ 50191-01	**Date Collected:**	6/19/15 1430
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/29/15 21:08
Sample Name:	MW-12	**Units:**	µg/L
Lab Code:	RQ1507370-06	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	451014
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\062915\B0017.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-18-4	Tetrachloroethene	**51.2**		5.0	
108-88-3	Toluene	**46.6**		5.0	
79-01-6	Trichloroethene	**50.0**		5.0	
75-69-4	Trichlorofluoromethane	**51.9**		5.0	
108-05-4	Vinyl Acetate	**35.6**		10	
75-01-4	Vinyl Chloride	**50.8**		5.0	
156-59-2	cis-1,2-Dichloroethene	**49.4**		5.0	
10061-01-5	cis-1,3-Dichloropropene	**47.2**		5.0	
179601-23-1	m,p-Xylenes	**91.8**		5.0	
95-47-6	o-Xylene	**45.8**		5.0	
156-60-5	trans-1,2-Dichloroethene	**55.6**		5.0	
10061-02-6	trans-1,3-Dichloropropene	**47.0**		5.0	
110-57-6	trans-1,4-Dichloro-2-butene	**38.3**		5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Bromofluorobenzene	90	85-122	6/29/15 21:08	
Dibromofluoromethane	97	89-119	6/29/15 21:08	
Toluene-d8	93	87-121	6/29/15 21:08	

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0017.D
Acq On : 29 Jun 2015 9:08 pm
Operator : F. Naegler
Sample : R1504947-001DMS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 29 21:23:06 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

FJ 7/5/15

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.969	168	1170889	50.00	ug/L		0.00
41) 1,4-Difluorobenzene	6.146	114	1771026	50.00	ug/L		0.00
70) d5-Chlorobenzene	9.578	117	1562792	50.00	ug/L		0.00
90) 1,4-Dichlorobenzene-d4	11.663	152	949309	50.00	ug/L		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	4.829	113	537127	48.60	ug/L		0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.20%				
46) surr1,1,2-dichloroetha...	5.408	65	535785	47.18	ug/L		0.00
Spiked Amount 50.000	Range 78 - 122		Recovery = 94.36%				
64) SURR3,Toluene-d8	8.042	98	1953697	46.37	ug/L		0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 92.74%				
69) SURR2,BFB	10.675	95	766643	44.77	ug/L		0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 89.54%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.159	85	685689	56.40	ug/L		99
3) Chloromethane	1.281	50	1122525	50.44	ug/L		95
4) Vinyl Chloride	1.348	62	822819	50.75	ug/L		98
5) Bromomethane	1.567	94	211618	31.55	ug/L		98
6) Chloroethane	1.634	64	418889	52.62	ug/L		95
7) Freon 21	1.762	67	1069949	55.01	ug/L		97
8) Trichlorofluoromethane	1.811	101	811448	51.85	ug/L		99
9) Diethyl Ether	2.012	59	481468	51.08	ug/L	#	79
10) Freon 123a	2.012	67	610917	51.45	ug/L		97
11) Freon 123	2.055	83	634591	48.30	ug/L		82
12) Acrolein	2.104	56	64398	36.37	ug/L		96
13) 1,1-Diclethene	2.195	96	467664	54.21	ug/L		92
14) Freon 113	2.195	101	489147	54.20	ug/L		92
15) Acetone	2.220	43	158703	45.86	ug/L		98
16) 2-Propanol	2.323	45	498046	811.29	ug/L		93
17) Iodomethane	2.317	142	483413	37.84	ug/L		95
18) Carbon Disulfide	2.378	76	1586285	51.19	ug/L		100
19) Acetonitrile	2.451	40	142805	264.58	ug/L		99
20) Allyl Chloride	2.488	76	264898	47.20	ug/L	#	30
21) Methyl Acetate	2.500	43	320525	37.58	ug/L		89
22) Methylene Chloride	2.591	84	558471	52.77	ug/L	#	72
23) TBA	2.683	59	704533	895.95	ug/L		69
24) Acrylonitrile	2.817	53	882095	233.02	ug/L		99
25) Methyl-t-Butyl Ether	2.860	73	1182260	47.93	ug/L		88
26) trans-1,2-Dichloroethene	2.860	96	539590	55.57	ug/L		90
27) 1,1-Diclethane	3.305	63	1080997	49.87	ug/L		98
28) Vinyl Acetate	3.372	86	62172	35.56	ug/L		99
29) DIPE	3.402	45	2645553	44.52	ug/L	#	73
30) 2-Chloro-1,3-Butadiene	3.414	53	907701	36.00	ug/L		90
31) ETBE	3.872	59	1659662	40.89	ug/L		94
32) 2,2-Dichloropropane	4.048	77	607391	43.36	ug/L		97
33) cis-1,2-Dichloroethene	4.055	96	575102	49.42	ug/L		88
34) 2-Butanone	4.085	43	249177	45.24	ug/L		85
35) Propionitrile	4.158	54	318035	232.65	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0017.D
Acq On : 29 Jun 2015 9:08 pm
Operator : F. Naegler
Sample : R1504947-001DMS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 29 21:23:06 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Bromochloromethane	4.408	130	358303	50.07	ug/L	#	80
37) Methacrylonitrile	4.396	67	144161	44.64	ug/L	#	32
38) Tetrahydrofuran	4.487	42	148380	43.58	ug/L		81
39) Chloroform	4.561	83	929290	48.19	ug/L		97
40) 1,1,1-Trichloroethane	4.853	97	830094	50.61	ug/L		96
42) Cyclohexane	4.945	41	697892	41.44	ug/L		87
44) Carbontetrachloride	5.158	121	231137	52.82	ug/L		88
45) 1,1-Dichloropropene	5.158	75	673192	47.02	ug/L		96
47) Benzene	5.499	78	2164399	48.76	ug/L		86
48) 1,2-Dichloroethane	5.536	62	730688	47.69	ug/L		89
49) Iso-Butyl Alcohol	5.481	43	429057	932.03	ug/L		94
50) TAME	5.737	73	1147748	44.87	ug/L		87
51) n-Heptane	6.005	43	854049	44.26	ug/L		84
52) 1-Butanol	6.505	56	535640	2613.43	ug/L		85
53) Trichloroethene	6.493	130	612823	49.97	ug/L		97
54) Methylcyclohexane	6.749	55	768181	42.35	ug/L	#	80
55) 1,2-Diclpropane	6.792	63	631999	48.30	ug/L		98
56) Dibromomethane	6.938	93	276462	48.03	ug/L		98
57) 1,4-Dioxane	7.005	88	71003	1087.41	ug/L		83
58) Methyl Methacrylate	7.023	69	236818	45.95	ug/L	#	61
59) Bromodichloromethane	7.176	83	683578	49.58	ug/L		99
60) 2-Nitropropane	7.468	41	182203	120.66	ug/L		95
62) cis-1,3-Dichloropropene	7.737	75	737796	47.21	ug/L		92
63) 4-Methyl-2-pentanone	7.950	43	524962	46.84	ug/L		89
65) Toluene	8.121	91	2231460	46.56	ug/L		96
66) trans-1,3-Dichloropropene	8.395	75	612519	47.03	ug/L		98
67) Ethyl Methacrylate	8.541	69	471707	45.96	ug/L	#	57
68) 1,1,2-Trichloroethane	8.590	97	385372	45.10	ug/L		98
71) Tetrachloroethene	8.730	164	480495	51.16	ug/L		96
72) 2-Hexanone	8.889	43	355306	50.40	ug/L		89
73) 1,3-Dichloropropane	8.767	76	694280	50.84	ug/L	#	82
74) Dibromochloromethane	8.999	129	509197	54.64	ug/L		98
75) N-Butyl Acetate	9.054	43	719136	42.47	ug/L		93
76) 1,2-Dibromoethane	9.096	107	382975	50.32	ug/L		99
77) 3-Chlorobenzotrifluoride	9.627	180	878185	51.34	ug/L		98
78) Chlorobenzene	9.608	112	1605630	52.25	ug/L		96
79) 4-Chlorobenzotrifluoride	9.681	180	793389	52.70	ug/L		96
80) 1,1,1,2-Tetrachloroethane	9.694	131	568550	54.04	ug/L		93
81) Ethylbenzene	9.730	106	759936	47.15	ug/L		92
82) (m+p)Xylene	9.846	106	1779664	91.78	ug/L		89
83) o-Xylene	10.206	106	881412	45.82	ug/L		95
84) Styrene	10.218	104	1005538	30.87	ug/L		99
85) Bromoform	10.376	173	278404	54.86	ug/L		96
86) 2-Chlorobenzotrifluoride	10.456	180	862949	53.29	ug/L		93
87) Isopropylbenzene	10.547	105	2568855	54.36	ug/L		99
88) Cyclohexanone	10.608	55	306684	609.20	ug/L		97
89) trans-1,4-Dichloro-2-B...	10.864	53	130690	38.33	ug/L		86
91) 1,1,2,2-Tetrachloroethane	10.815	83	490457	50.59	ug/L		97
92) Bromobenzene	10.797	156	675519	49.12	ug/L		93
93) 1,2,3-Trichloropropane	10.840	110	134567	47.15	ug/L		88
94) n-Propylbenzene	10.913	91	2955458	52.40	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0017.D
Acq On : 29 Jun 2015 9:08 pm
Operator : F. Naegler
Sample : R1504947-001DMS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 29 21:23:06 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration

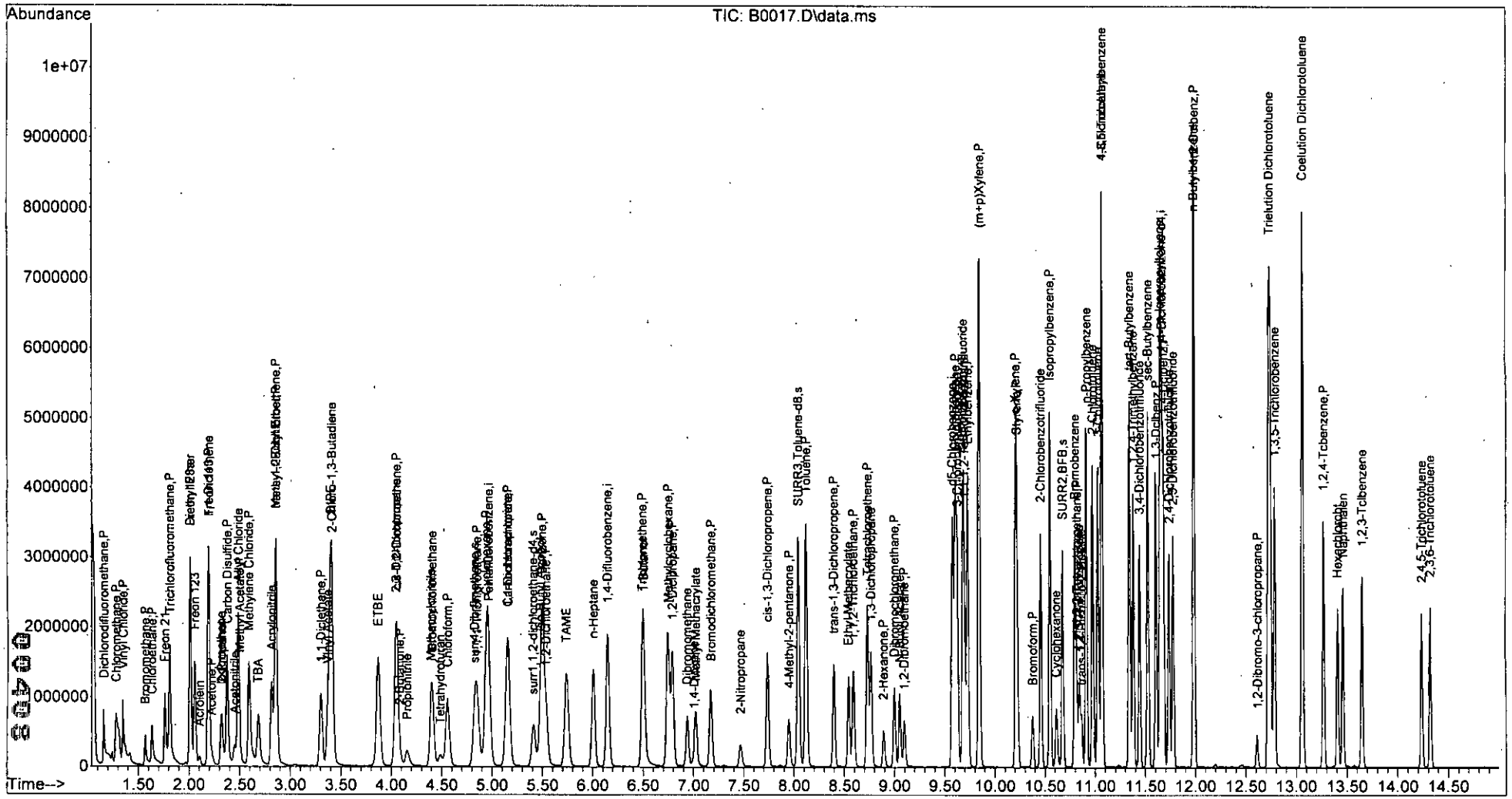
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	2-Chlorotoluene	10.974	91	1804935	51.04	ug/L	95
96)	3-Chlorotoluene	11.029	91	1904304	50.99	ug/L	96
97)	4-Chlorotoluene	11.065	91	2078046	49.29	ug/L	95
98)	1,3,5-Trimethylbenzene	11.065	105	1443616	34.27	ug/L	98
99)	tert-Butylbenzene	11.340	119	1922550	52.57	ug/L	97
100)	1,2,4-Trimethylbenzene	11.376	105	1634453	37.99	ug/L	96
101)	3,4-Dichlorobenzotrifl...	11.443	214	635823	50.81	ug/L	99
102)	sec-Butylbenzene	11.523	105	2670787	53.79	ug/L	98
103)	p-Isopropyltoluene	11.645	119	2271734	51.36	ug/L	97
104)	1,3-Dclbenz	11.608	146	1403609	50.15	ug/L	97
105)	1,4-Dclbenz	11.681	146	1450723	49.45	ug/L	98
106)	2,4-Dichlorobenzotrifl...	11.736	214	588614	50.14	ug/L	99
107)	2,5-Dichlorobenzotrifl...	11.773	214	664901	49.97	ug/L	99
108)	n-Butylbenzene	11.980	91	2050646	52.49	ug/L	97
109)	1,2-Dclbenz	11.986	146	1303091	50.38	ug/L	99
110)	1,2-Dibromo-3-chloropr...	12.614	157	89338	50.36	ug/L	91
111)	Trielution Dichlorotol...	12.730	125	3667952	165.40	ug/L	96
112)	1,3,5-Trichlorobenzene	12.785	180	987962	52.15	ug/L	96
113)	Coelution Dichlorotoluene	13.059	125	2534061	106.97	ug/L	95
114)	1,2,4-Tcbenzene	13.266	180	840146	51.55	ug/L	98
115)	Hexachlorobt	13.406	225	312641	46.33	ug/L	94
116)	Naphthalen	13.461	128	1563754	51.20	ug/L	98
117)	1,2,3-Tclbenzene	13.650	180	667967	49.77	ug/L	99
118)	2,4,5-Trichlorotoluene	14.235	159	459076	46.38	ug/L	97
119)	2,3,6-Trichlorotoluene	14.321	159	424524	49.08	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\msvoa10\data\062915\
Data File : B0017.D
Acq On : 29 Jun 2015 9:08 pm
Operator : F. Naegler
Sample : R1504947-001DMS|1.0 Inst : MSVOA10
Misc : LUE 6734 T4
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jun 29 21:23:06 2015
Quant Method : I:\ACQUDATA\MSVOA10\METHODS\W050615.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Thu May 07 14:25:48 2015
Response via : Initial Calibration



Analysis: 8260C Analyst: F. Naugler Tune Method: T050615.M

Date: 5/6/15 Data Path: j:\acqudata\msvoa10\050615 Run Method: W050615.M

Instr. MS #10 LIMS Run#: —

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	TUNE								A8244	Y	
2	CCV								45	(N)	
3	LCS								46	(N)	
4	MBLK								47	–	
5	MBLK								48	–	Recalibrate!
1	BLK								49	Y	
1	TUNE								50	Y	
2	ICALBLK								51	Y	
3	0.5 ppb Std								52	Y	
4	1.0								53	Y	
5	2.0								54	Y	
6	5.0								55	Y	
7	20								56	Y	
8	50								57	Y	
9	100								58	Y	
10	150								59	Y	
11	200								60	Y	
12	BLK								61	Y	
13	BLK								62	Y	
14	BLK								63	Y	
15	50ppb ICV								64	Y	

WATER ICAL TABLE

CONC (PPB)	0.5	1.0	2.0	5.0	20	50	100	150	200
1° T/G = 80776	10mL/1mL 5mL/5mL	10mL/5mL	20mL/5mL	50mL/5mL	2mL/5mL	5mL/5mL	10mL/5mL	15mL/5mL	20mL/5mL
1° HSL = 80863	↓	↓	↓	↓	↓	↓	↓	↓	↓
1° Fr = 80865	↓	↓	↓	↓	↓	↓	↓	↓	↓
1° HBO = 80514	↓	↓	↓	↓	↓	↓	↓	↓	↓
1° OCC = 80330	↓	↓	↓	↓	↓	↓	↓	↓	↓
SURR = 80872	—	—	—	1mL/5mL	2mL/5mL	—	5mL/5mL	7.5mL/5mL	10mL/5mL

All samples = 10 mL + 1 uL combined IS/Surr. 10 mL purged

Primary :
Primary :
Primary :
Primary :
Primary :

Fr Secondary 200 : 80315 – 12.5mL
T/G Secondary 500 : 80762 – 5mL
HSL Secondary ↓ : 80794 –
HBO Secondary : 80314 –
OCC Secondary ↓ : 80331 – ↓

50mL (ICV)

Combined IS/Surr 500 : 80685
Surrogate : —
Internal Std : —

6040

Analysis: 8260C | Analyst: F. Naegler | Tune Method: TOS0615.M

Date: 6/29/15 | Data Path: j:\acqudata\msvoa10\062915 | Run Method: WOS0615.M

Instr. MS #10 | LIMS Run#: 451014

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	BLK								A9991	Y	
2	BLK								92	Y	
1	TUNE								93	Y	
2	CCV								94	Y	
3	LCS								95	Y	
4	MBLK								96	(N)	
5	MBLK								97	Y	RQ1507370-01
6	R1504947-017	1.0		[redacted]	6734	4	1	<2	98	Y	
7	-001	1.0					1	<2	99	Y	
8	-002	1.0					1	<2	B0000	Y	
9	-003	1.0					1	<2	01	Y	
10	-004	1.0					1	<2	02	(Y)	Rpt 1/2
11	-005	1.0					1	<2	03	Y	
12	-006	1.0					1	<2	04	Y	
13	-007	1.0					1	<2	05	Y	
14	-008	1.0					1	<2	06	Y	
15	-009	1.0					1	<2	07	Y	
16	-010	1.0					1	<2	08	Y	
17	-011	1.0					1	<2	09	(N)	
18	-012	1.0					1	<2	10	Y	
19	-013	1.0					1	<2	11	Y	
20	-014	1.0					1	<2	12	Y	
21	-015	1.0					1	<2	13	Y	
22	-016	1.0					1	<2	14	Y	
23	-004	2.0	25/50mL				2	<2	15	Y	DL
24	-001MS	1.0					2	<2	16	Y	
25	-001MSD	1.0					3	<2	17	Y	
26	BLK								18	Y	
			RV 6/30/15								

All samples = 10 mL + 1 uL combined IS/Surr. 10 mL purged

T/G Primary 500 : 81995 - 5mL | 50mL

HSL Primary : 81773 -

Fr Primary : 82140 -

HBO Primary : 82139 - (CCV)

OCC Primary : 82129 -

Fr Secondary 200 : 81715 - 5mL

T/G Secondary 500 : 82141 - 2mL

HSL Secondary : 82142 -

HBO Secondary : 81810 - 50mL (LCS)

OCC Secondary : 82130 - 12.5mL - 5mL 50mL (SPK)

Combined IS/Surr 500 : 82128

Surrogate : —

Internal Std : —

Analysis: 8260C Analyst: F. Naegler Tune Method: TO5O615.M

Date: 6/30/15 Data Path: J:\acqudata\msvoa 1\ 063015 Run Method: WO5O615-M

Instr.: MS#10 LIMS Run#: 451196

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	BLK								F0000	Y	
1	TUNE								01	Y	
2	CCV								02	Y	
3	LCS								03	Y	
4	MBLK								04	(N)	
5	MBLK								05	Y	RQ1507371-01
6	R1505066-002	1.0		[redacted]	6673	2	1	<2	06	Y	
7	↓ -001	5.0	10|5mL	↓	↓	↓	1	<2	07	Y	foamy
8	R1504947-011	1.0		[redacted]	6734	4	2	<2	08	Y	
9	R1505015-009	5.0	10|5mL	[redacted]	8997	2	2	<2	09	Y	DL
10	R1505028-001	1.0		[redacted]	9145	2	1	<2	10	Y	
11	↓ -002	1.0		↓	↓	↓	1	<2	11	Y	
12	R1504953-001	10.0	5|5mL	[redacted]	6673	4	1	(7)	12	Y	foamy
13	↓ -002	10.0	↓	↓	↓	↓	1	(5)	13	Y	↓
14	R1504918-001	10.0	5|5mL	[redacted]	9866	2	2	<2	14	Y	DL
15	↓ -003	500.0	1|5mL→5|5mL	↓	↓	↓	2	<2	15	Y	DL
16	↓ -011	20.0	2.5|5mL	↓	↓	↓	2	<2	16	Y	DL
17	R1505071-021	1.0		[redacted]	9491	2	1	<2	17	Y	
18	-022	1.0		↓	↓	↓	1	<2	18	Y	
19	-003	100.0	5|5mL→5|5mL	↓	↓	↓	1	<2	19	(N)	Rpt 1|50
20	-004	1.0		↓	↓	↓	1	<2	20	Y	
21	-005	1.0		↓	↓	↓	1	<2	21	(Y)	Rpt 1|10
22	-006	1.0		↓	↓	↓	1	<2	22	(N)	Rpt 1/1 dil?
23	-003MS	100.0	5|5mL→5|5mL	↓	↓	↓	1	<2	23	(N)	Rpt 1|50
24	-003MSD	100.0	↓	↓	↓	↓	1	<2	24	(N)	↓
25	BLK								25	Y	

FN 6/30/15

All samples = 10 mL + 1 uL combined IS/Surr. 10 mL purged

T/G Primary 500 : 81995 - 5mL | 5mL
HSL Primary : 81773 -
Fr Primary : 82140 -
HBO Primary : 82139 -
OCC Primary : 82129 -
(CCV)

Fr Secondary 200 : 81715 - 5mL
T/G Secondary 500 : 82141 - 2mL
HSL Secondary : 82142 -
HBO Secondary : 81810 -
OCC Secondary : 82130 -
5mL (LCS)
-12.5mL - 5mL
5mL (SPK)

Combined IS/Surr 500 : 82128
Surrogate : —
Internal Std : —

Appendix D

SITE-WIDE INSPECTION FORM

Cuba Landfill Site
Town of Cuba, Allegany County

NAME OF INSPECTOR: CASEY BOK

COMPANY OF INSPECTOR: LU Engineers

DATE OF INSPECTION: 6/19/15

CURRENT USE OF SITE: Landfill

EVIDENCE OF VANDALISM (wells, vents, protective cover damage):
None

EVIDENCE OF COVER SYSTEM INTRUSION (ruts, burrows, excavations):
None

EVIDENCE OF PENETRATIONS (poles, posts, stakes): None

EVIDENCE OF HUMAN ENCROACHMENT (trash, fire pits, tire/footprints):
ATV Tire Tracks along road & down the center of hillside perpendicular to the road

GENERAL SITE CONDITION (gates, access road, culverts): Great Site gate locks & undamaged. Pile of tree stump on either side. cap appears to be in good condition

EVIDENCE OF EROSION, SETTLEMENT RUTTING, POTHOLES, SLIPPAGE:
None of Significance

EVIDENCE OF STRESSED VEGETATION OR BARE SPOTS: None

EVIDENCE OF DAMAGE TO WELLS/VENTS: None

EVIDENCE OF COVER SYSTEM SUBSIDENCE NEAR WELLS/VENTS:
MW-15 heaved about 0.5ft

EVIDENCE OF WILDLIFE INTRUSION (nests, burrows, wasp nests):
None

EVIDENCE OF SPILLED LIQUIDS (well tampering/vent blowout):
None

GAS VENTS: Unusual conditions- belching, whistling, excessive gas production:
Nothing unusual

MONITORING WELLS: Well covers in place and secure: Yes & locked

EVIDENCE OF DRAINAGE ISSUES (i.e., blockage due to sedimentation, ponding):
None

EVIDENCE OF SWALE OVERFLOW (i.e., stormwater pathway strays from swales):
None

EVIDENCE OF WILLOW TREE MORTALITY:

Roughly 20% of trees to the east look dead
Some snapped @ trunk

EVIDENCE OF PHYTOREMEDIATION FAILURE (i.e., excessive leachate on access road south of willow trees):

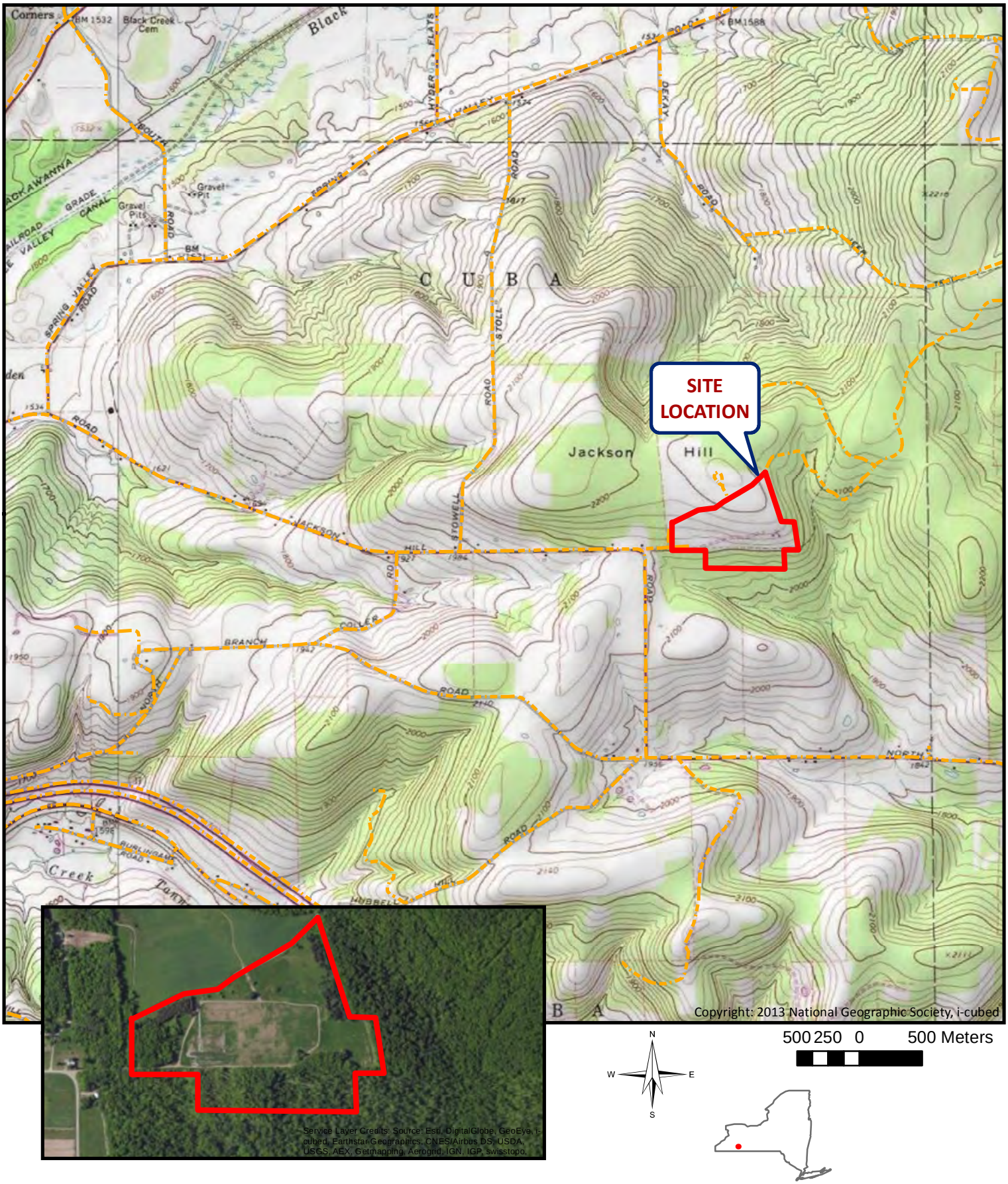
Small amount of standing water along road just below willow tree area

LANDFILL/GAS VENT MONITORING DATA

Gas Vent	Explosivity	PID Reading (PID)
		0.0
		No peaks on any vent



Figures



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Figure 1
Site Location Map
Cuba Landfill Site
Allegany County, NY

Date: November 2014
SCALE: 1:20,000
CREATED/CHECKED: CB/ED
Data Source: 2011 National Geographic Society

LEGEND

- SURFACE CONTOURS
- SURFACE DRAINAGE
- LFG-8 — LANDFILL GAS VENTS
- MW-10 — MONITORING WELLS
- WILLOW TREES
- MH — MANHOLE
- SW-03 — SURFACE WATER SAMPLING LOCATION
- LANDFILL BOUNDARY
- PD — PD — PERIMETER DRAIN (PD)
- PROPERTY LINE
- STREAM

N/F GLC NEW YORK, INC.
L.1053 P.324
S.B.L. 155.00-1-6.14

N/F GLC NEW YORK, INC.
L.1053 P.324
S.B.L. 155.00-1-6.17

N/F JOHN K. SWITALSKI
L.1004 P.347
S.B.L. 155.00-1-6.16

N/F DEAN WILDRICK
L. 567 P.410
S.B.L. 168.00-1-5

N/F VILLAGE OF CUBA
L. 740 P. 147
S.B.L. 155.00-1-6.15
AREA = 13.958 AC.

N/F VILLAGE OF CUBA
L. 573 P. 45
S.B.L. 155.00-1-7
AREA = 24.841 AC.
(LOTS 7 AND 15)

N/F WILGER FAMILY TRUST
L.740 P.103
S.B.L. 155.00-1-5.8

GATE NIAGARA #2

GATE

DEER SNOW ROAD

JACKSON HILL ROAD

DETENTION POND

MW-1D
MW-1S
MW-2
MW-3
MW-4
MW-7
MW-8
MW-9
MW-10D
MW-10
MW-11
MW-12
MW-13

SW-01
SW-02
SW-03
SW-04

LFG-8
LFG-9
LFG-10
LFG-11
LFG-12
LFG-13
LFG-14

SP-3
SP-4

200 100 0 200
GRAPHIC SCALE IN FEET

LOCATION MAP

NOTES:

1. MAP SOURCE: EA ENGINEERING, SCIENCE, AND TECHNOLOGY FIRST QUARTERLY GROUNDWATER MONITORING AND INSPECTION REPORT, JUNE 2012 (EA PROJECT No. 1447436)
2. BOUNDARY LINES SHOWN FOR REFERENCE ONLY. TAKEN FROM DESIGN DRAWINGS PREPARED BY DVIRKA AND BARTILUCCI, CONSULTING ENGINEERS.
3. PERIMETER DRAIN (PD) SHOWN BASED ON PLAN INFORMATION, ONLY INVERTS SHOT WERE FROM FIELD LOCATION.
4. HORIZONTAL CONTROL: NORTH AS SHOWN ON THIS MAP IS REFERENCE TO NAD 83(COR 96) (EPOCH:2002.0000) NEW YORK STATE PLANE COORDINATE SYSTEM (3103 WEST) CONTROL DATUM.
5. VERTICAL CONTROL: ELEVATIONS AS SHOWN ON THIS MAP ARE BASED ON NAVD 1988. SOURCE BENCHMARK PBM #1 RAIL ROAD SPIKE IN NW FACE OF 12" TREE ELEVATION =2102.74. (TAKEN FROM CONSTRUCTION DRAWINGS) AT THE INTERSECTION OF SNOW ROAD AND JACKSON HILL ROAD.
6. CONTOUR INTERVAL IS ONE FOOT, INDEX CONTOUR IS FIVE FOOT.
7. MONITORING WELLS, MW-1S, MW-1D, MW-2, MW-3, MW-4, AND MW-9 ARE FROM 2001 CUBA LANDFILL SURVEY BY YEC, INC.

J:\PROJECTS\CADD

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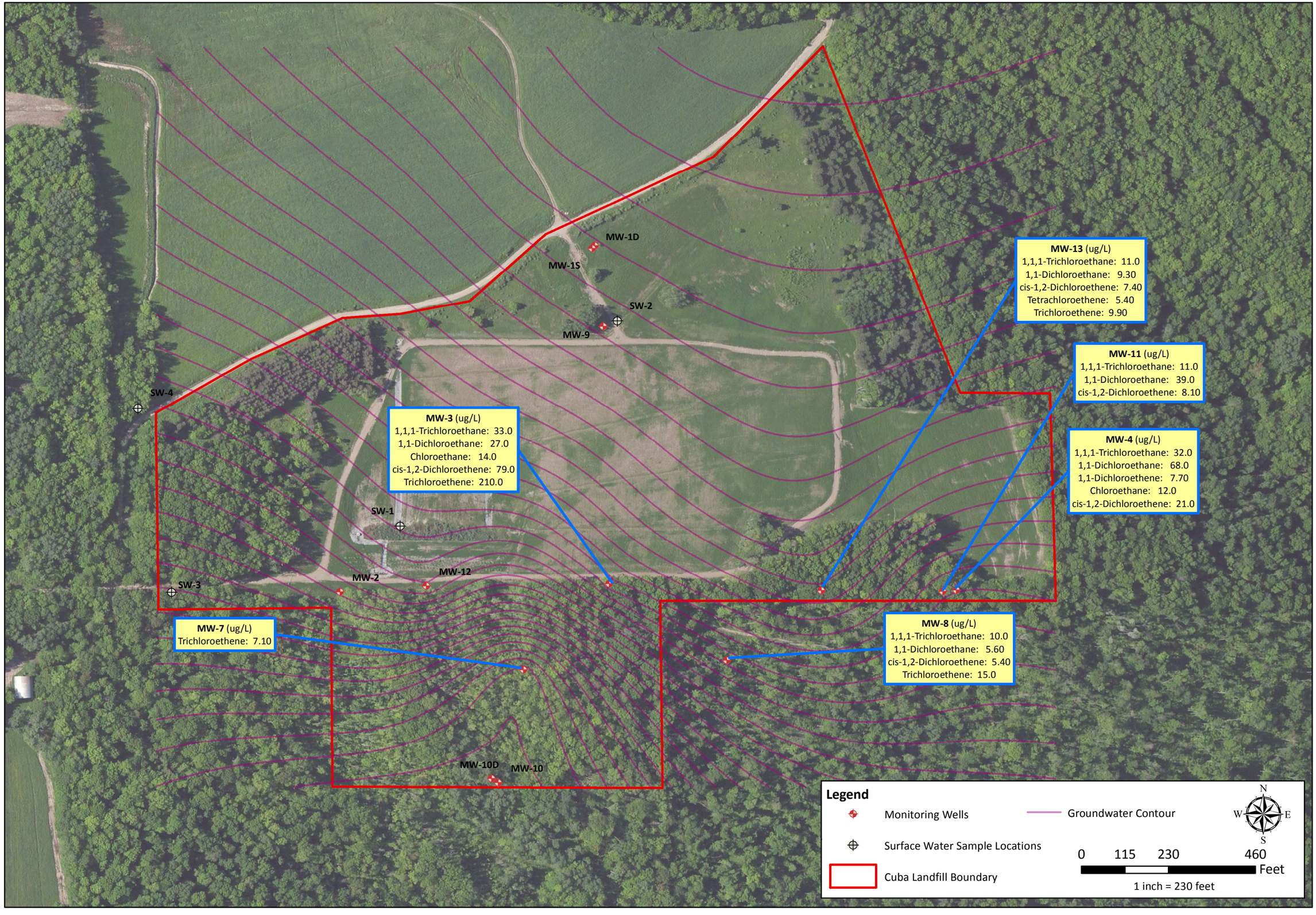
PROJECT No. 50191-01 SCALE: 1"=100'
DESIGNED BY N/A DRAWN BY N/A CK'D BY ED
DATE 11/19/14
FILE No.

DRAWING TITLE
FIGURE 2
SITE LAYOUT PLAN
FEBRUARY 2015

SHEET No. 2 OF 4
DRAWING No. 2

PROJECT TITLE
CUBA LANDFILL SITE
PERIODIC REVIEW REPORT
FEBRUARY 2015

REVISIONS
No. Date Description



DATE: FEBRUARY 2016
SCALE: 1 Inch = 230 Feet
DRAWN/CHECKED: CSB/AC
DATA SOURCE: ESRI Online

FIGURE. 3
ANALYTICAL RESULTS & GROUNDWATER CONTOUR MAP
CUBA LANDFILL SITE

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Tables

VILLAGE OF CUBA LANDFILL SITE
GROUNDWATER MONITORING AND SITE INSPECTION REPORT
JUNE 2015

Lu Engineers
Lu Project No.: 50191-01
Jun-15

TABLE 1 - VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER & SURFACE WATER

Detected Parameter List USEPA Method 8260B	NYSDEC Ambient Water Quality Standard Class GA	Sample ID	MW-1S		MW-1D		MW-3		MW-4		MW-7		MW-8		MW-9		MW-10		MW-10D	
		Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
		Sample Date	6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015	
1,1,1-Trichloroethane	5(s)	µg/L	*<5.0*	U	<5.0	U	***33.0***		**32.00**		<5.0	U	**10.00**		*NS*		<5.0	U	<5.0	U
1,1-Dichloroethane	5(s)	µg/L	*<5.0*	U	<5.0	U	***27.0***		**68.00**		<5.0	U	**5.60**		*NS*		<5.0	U	<5.0	U
1,1-Dichloroethene	5(s)	µg/L	*<5.0*	U	<5.0	U	<5.0	U	**7.70**		<5.0	U	<5.0	U	*NS*		<5.0	U	<5.0	U
Acetone	50*	µg/L	*<10.0*	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	*NS*		**17.00**		<10.0	U
Chloroethane	5(s)	µg/L	*<5.0*	U	<5.0	U	***14.0***		**12.00**		<5.0	U	<5.0	U	*NS*		<5.0	U	<5.0	U
cis-1,2-Dichloroethene	5(s)	µg/L	*<5.0*	U	<5.0	U	***79.0***		**21.00**		<5.0	U	**5.40**		*NS*		<5.0	U	<5.0	U
Tetrachloroethene	5(s)	µg/L	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	*NS*		<5.0	U	<5.0	U
Trichloroethene	5(s)	µg/L	*<5.0*	U	<5.0	U	***210.0***		<5.0	U	**7.10**		**15.00**		*NS*		<5.0	U	<5.0	U

Detected Parameter List USEPA Method 8260B	NYSDEC Ambient Water Quality Standard Class GA	Sample ID	MW-11		MW-12		MW-15		MW-13		SW-01		SW-02		SW-03		SW-04		MW-DUP		DW	
		Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
		Sample Date	6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015		6/19/2015		7/15/2014		6/19/2015		6/19/2015		6/19/2015	
1,1,1-Trichloroethane	5(s)	µg/L	**11.00**		<5.0	U	<5.0	U	**11.00**		<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
1,1-Dichloroethane	5(s)	µg/L	**39.00**		<5.0	U	<5.0	U	**9.30**		<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
1,1-Dichloroethene	5(s)	µg/L	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Acetone	50*	µg/L	<10.0	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	*<10.0*	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U
Chloroethane	5(s)	µg/L	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
cis-1,2-Dichloroethene	5(s)	µg/L	**8.10**		<5.0	U	<5.0	U	**7.40**		<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Tetrachloroethene	5(s)	µg/L	<5.0	U	<5.0	U	<5.0	U	**5.40**		<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Trichloroethene	5(s)	µg/L	<5.0	U	<5.0	U	<5.0	U	**9.90**		<5.0	U	*<5.0*	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U

NOTES:

USEPA = U.S. Environmental Protection Agency

NYDEC = New York State Department of Environmental Conservation

--- = indicates no applicable standard.

µg/L = micrograms per liter.

U = Not detected at the Practical Quantitation Limit. Sample quantitiation limits shown as <_.

NS = No sample collected.

BOLD blue highlighted values indicate that the result is above the NYSDEC Ambient Water Quality Standard(s) or Guidance(g).

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (TOGS) 1.1.1, August 1999.

* = NYSDEC Part 703.5 Guidance Value (no standard)

Table 2 - VOC Groundwater Results Trend Analysis

Detected Parameters[1]	NYS Groundwater Standard[2]	MW-1S						MW-1D					MW-03					MW-04							MW-07				MW-08			
		Pre-Remediation	Post-Remediation					Post-Remediation					Pre-Remediation	Post-Remediation				Pre-Remediation	Post-Remediation						Post-Remediation				Post-Remediation			
VOCs 8260B		Nov-97	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	Nov-97	11-Nov	14-Jul	14-Nov	15-Jun	Nov-97	11-Jan	11-Jul	11-Nov	14-Jul	14-Nov	15-Jun	11-Nov	14-Jul	14-Nov	15-Jun	11-Nov	14-Jul	14-Nov	15-Jun
Acetone	**50***	ND	ND	2.21	ND	ND	ND	ND	NA	ND	ND	ND	14	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	**5**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	4.0	**56.2**	NS	NS	**14.0**	ND	**5.62**	**6.22**	2.12	**5.1**	**11.0**	**12.0**	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	**5**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NS	NS	**79.0**	ND	**13.4**	**10.2**	**10.1**	**15.0**	**18.0**	**21.0**	3.22	ND	ND	ND	**6.66**	**5.2**	**6.5**	**5.4**
1,1-Dichloroethane	**5**	ND	ND	ND	ND	ND	ND	0.19	NA	ND	ND	ND	**11.0**	**86.4**	NS	NS	**27.0**	**100.0**	**85.5**	**84.6**	**62.7**	**89.0**	**79.0**	**68.0**	1.53	ND	ND	ND	**5.61**	**5.3**	**6.2**	**5.6**
1,1-Dichloroethene	**5**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	**65.0**	4.8	NS	NS	ND	1.0	3.62	3.95	3.08	**8.7**	**6.9**	**7.7**	0.55	ND	ND	ND	0.54	ND	ND	ND
Ethylbenzene	**5**	ND	0.11	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	**5**	1	ND	ND	ND	ND	ND	0.2	NA	ND	ND	ND	**240.0**	**84.8**	NS	NS	**33.0**	**12.0**	**30.1**	**24.5**	**19.7**	**35.0**	**24.0**	**32.0**	**5.63**	**5.9**	ND	ND	**9.92**	**8.4**	**11.0**	**10.0**
Tetrachloroethene	**5**	1	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NS	NS	ND	ND	2.26	1.25	1.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**5**	ND	0.47	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	**5**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	**290.0**	**162.0**	NS	NS	**210.0**	4.0	**14.1**	**6.22**	**6.75**	ND	ND	ND	**7.55**	**6.9**	**6.9**	**7.1**	**18.6**	**12.0**	**18.0**	**15.0**

Table 2 - VOC Groundwater Results Trend Analysis

Detected Parameters[1]	NYS Groundwater Standard[2]	MW-09						MW-10(S)					MW-10D				MW-11					MW-12					MW-13				
		Pre-Remediation	Post-Remediation					Post-Remediation					Post-Remediation				Post-Remediation					Post-Remediation					Post Remediation				
VOCs 8260B		Nov-97	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	11-Nov	14-Jul	14-Nov	15-Jun	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun
Acetone	**50***	ND	8.18	**51.5**	NS	NS	NS	4.62	2.13	12.0	ND	17.0	6.66	ND	ND	ND	5.45	1.81	ND	ND	ND	5.22	2.41	ND	ND	ND	6.21	1.61	ND	ND	ND
Benzene	**1**	ND	0.12	0.54	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	0.52	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	**5**	ND	1.3	0.96	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.23	1.17	ND	ND	ND	ND	ND	ND	ND	ND	0.61	0.37	ND	ND	ND
cis-1,2-Dichloroethene	**5**	ND	0.59	0.53	NS	NS	NS	ND	ND	ND	ND	ND	0.69	ND	ND	ND	4.87	4.17	**9.1**	ND	**8.1**	1.29	1.47	ND	ND	ND	**14.7**	**17.1**	**12.0**	**11.0**	**7.4**
1,1-Dichloroethane	**5**	2	3.48	2.71	NS	NS	NS	ND	ND	ND	ND	ND	0.5	ND	ND	ND	**50.5**	**44.0**	**53.0**	**25.0**	**39.0**	2.1	2.14	ND	ND	ND	**21.4**	**20.0**	**15.0**	**14.0**	**9.3**
1,1-Dichloroethene	**5**	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	0.18	ND	ND	ND	1.61	1.48	ND	ND	ND	0.32	0.21	ND	ND	ND	1.06	1.67	ND	ND	ND
Ethylbenzene	**5**	ND	0.15	ND	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	**5**	0.9	0.78	0.31	NS	NS	NS	ND	ND	ND	ND	ND	1.66	ND	ND	ND	**13.9**	**12.8**	**15.0**	**6.0**	**11.0**	1.97	1.59	ND	ND	ND	**27.4**	**24.7**	**16.0**	**14.0**	**11.0**
1,1,2-Trichloroethane	**1**	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**ND**
Tetrachloroethene	**5**	2	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.45	2.92	ND	ND	ND	ND	ND	ND	ND	ND	**7.39**	**6.55**	**6.4**	**5.7**	**5.4**
Toluene	**5**	ND	0.73	ND	NS	NS	NS	0.34	ND	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	**5**	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	ND	ND	ND
Trichloroethene	**5**	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	0.7	ND	ND	ND	4.03	4.27	ND	ND	ND	1.33	1.45	ND	ND	ND	**17.8**	**15.9**	**13.0**	**13.0**	**9.9**
Vinyl chloride	**2**	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	**5**	ND	0.6	ND	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

~ parameter detected above NYS Ambient Groundwater Standard or applicable NYSDEC Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

1 - Results presentend in ug/L or parts per billion (ppb)

2 - NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)

* - NYSDEC Guidance Value (TOGS 1.1.1)

BOLD - Data exceeds NYS Ambient Groundwater Standard or applicable NYSDEC Guidance Value

NOTE: Sample results are illustrated for all available data. Not all wells were sampled during each sampling event presented in this table.

TABLE 3 - INSTITUTIONAL AND ENGINEERING CONTROLS COMPLIANCE SUMMARY
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Institutional/Engineering Control	Description	Objective	Monitoring	Performance/Status
Institutional Controls				
Land Use Restriction	Restricts the use of the landfill property.	Controls potential for direct contact with waste materials, leachate, and contaminated groundwater.	NA	Use of the property has been restricted through the recorded Declaration of Covenants and Restrictions with Allegany County.
Groundwater Use Restriction	Restricts the use of groundwater.	Controls potential for direct contact with contaminated groundwater.	NA	Groundwater use restriction in effect as part of the Declaration of Covenants and Restrictions with Allegany County for the Cuba Landfill site area groundwater.
Excavation Work Plan	Describes procedures to be used to manage excavated contaminated soil and /or waste from the site (sampling, analysis, disposal requirements).	To provide for appropriate handling, management, and disposal of contaminated soil and/or waste.	NA	Excavation plan to be implemented in accordance with approved site management plan. To date, no excavation of contaminated soil or waste has occurred during the reporting period.
Soil Vapor Intrusion Evaluation	Determines the potential for soil vapor intrusion and if mitigation measures, such as creating a vapor barrier or a passive sub-slab depressurization system, are necessary.	Eliminate potential exposure to vapors in the proposed structure.	NA	The potential for vapor intrusion must be evaluated for any buildings to be developed on or around the site, and any potential impacts that are identified must be monitored or mitigated. Measures to mitigate potential vapor intrusion will be evaluated, selected,
Engineering Controls				
Engineered Landfill Cap	Comprised of a geocomposite gas venting layer, a 40-mil LLDPE textured geomembrane, geocomposite drainage layer, and an 18-in. soil barrier protection layer. Topsoil and a reinforced vegetated surface are over the barrier protection layer.	Prevent exposure to remaining contamination in soil/fill at the site by placing cap over the remaining and consolidated waste	Monitoring via site inspections and leachate indicator monitoring.	Cap is vegetated, stable, and effective. Maintenance operations are limited to repairs to minor localized erosion and control of animal burrows in surficial cover soils. Leachate indicators are analyzed periodically. Leachate generation rates are decreasing, as would be expected following the construction of an engineered cap.
Passive Gas Vents	Polyvinyl chloride pipe gas vents were installed within the landfill cap boundaries.	Collect landfill gas generated under the cap and to convey the gas to the existing landfill gas collection system to control potential for lateral migration.	Monitored via site inspections and monitoring of landfill gas with portable monitoring equipment.	Gas monitoring results are typical of landfill gas and appropriate operation of the gas control system is in place.

Institutional/Engineering Control	Description	Objective	Monitoring	Performance/Status
Landfill Surface Drainage	A berm constructed of soil and waste materials below the liner system defined each swale. Following the placement of the geocomposite drainage layer, a strip of the geocomposite was cut out in each swale for the placement of perforated 6-in. corrugated polyethylene pipe topped with pea gravel and wrapped with geotextile that was later heat seamed to the geocomposite on either side.	Four drainage swales were included in the landfill cap design to promote efficient drainage over the cap. Each swale was constructed to allow stormwater to flow in a northeast-southwest direction across the landfill.	Monitored through site inspections and groundwater/surface water sampling.	A media monitoring program is in place for groundwater. Groundwater and surface water samples are collected periodically. Stream and tributary water quality has not been impacted from surface water discharges from the site. VOC and metal concentrations are generally decreasing or remaining stable in groundwater.
Phytoremediation	168 willow trees were planted south of the retention pond. Two varieties of bare-root willow trees were selected to be planted. The tree varieties include golden curls willow and prairie cascade willow.	Trees were intended to mitigate potential leachate seepage south of the Site. Staining was previously observed in stream water during RI sampling along the southern boundary of the site.	Monitored through site inspections.	To date, there has been no evidence of excessive leachate on the access road south of the willow trees planted for phytoremediation. Approx. 20% of the willow trees have died at the east end of the planting area.
Site Security	8-ft chain link fence gates were installed at the entrances of the property on Deep Snow Road, one to the southwest of the site and one to the north of the site. Gates have been secured with locks.	Minimize the potential for trespassing and vehicular traffic.	Monitoring via site inspection.	Security measures in place and effective.
Access Road	A permanent maintenance road was constructed by placing 6 in. of road paving material over a non-woven geotextile.	Provides access controls to the site, minimizing the potential for human encroachment on the landfill cap surface.	Monitoring via site inspection.	Access road in place and effective.

VILLAGE OF CUBA LANDFILL SITE
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TABLE 4 - BASELINE LEACHATE INDICATOR & INORGANIC PARAMETERS DETECTED IN GROUNDWATER & SURFACE WATER

Baseline Parameter List	USEPA Method	Sample ID	902012-MW-1D		902012-MW-1S		902012-MW-3		902012-MW-4		902012-MW-7		NYSDEC Ambient Water Quality Standard Class GA
		Sample Type	Water		Water		Water		Water		Water		
		Sample Date	7/15/2014		7/15/2014				7/15/2014		7/14/2014		
Leachate Indicators													
Alkalinity, as CaCO3	SM 2320 B	mg/L	75.7		70.3		NS		156		177		---
Ammonia (as N)	E350.1	mg/L	<0.050	U	0.123		NS		0.444		<0.050	U	*2(s)*
Biochemical oxygen demand (BOD5)	SM5210B	mg/L	<2.0	U	4.5		NS		9.2		<2.0	U	---
Bromide	300	mg/L	<1.0	U	<1.0	U	NS		<1.0	U	<1.0	U	*2(g)*
Chemical Oxygen Demand	E410.4	mg/L	<5.0	U	<5.0	U	NS		22.1		<5.0	U	---
Chloride	300	mg/L	9.8		<2.0	U	NS		2.1		24.5		*250(s)*
Color	SM2120B	color units	18		32		NS		13		14		---
Hardness, Calcium/Magnesium (as CaCO3)	M2340B	mg/L	86.1		86.8		NS		169		241		---
Kjeldahl Nitrogen - Total (as N)	E351.2	mg/L	0.40		0.6		NS		0.67		0.71		---
Nitrate (as N)	300	mg/L	<1.0	U	<1.0	U	NS		<1.0	U	<1.0	U	*10(s)*
Organic carbon-Total (TOC)	SM5310B	mg/L	1.7		1.0		NS		7.8		1.2		---
Phenolics, Total Recoverable	420.4	mg/L	<0.0050	U	<0.0050	U	NS		<0.0050	U	<0.0050	U	*0.001(s)*
Residue-filterable (TDS)	SM2540C	mg/L	125		111		NS		168		277		---
Sulfate (as SO4)	300	mg/L	10.8		9.1		NS		8.3		23		*250(s)*
Inorganic Parameters													
Aluminum	SW6010B	µg/L	5180		14600		NS		709		32,900		---
Antimony	SW6010B	µg/L	<60.0	U	<60.0	U	NS		<60.0	U	<60.0	U	*3 (g)*
Arsenic	SW6010B	µg/L	<10	U	<10	U	NS		<10	U	17.5		*25 (s)*
Barium	SW6010B	µg/L	30.6		159		NS		20.7		277		*1000 (s)*
Beryllium	SW6010B	µg/L	<3	U	<3	U	NS		<3	U	<3	U	*3 (g)*
Boron	SW6010B	µg/L	<200	U	<200	U	NS		<200	U	<200	U	*1000 (s)*
Cadmium	SW6010B	µg/L	<5	U	<5	U	NS		<5	U	<5	U	*5*
Calcium	SW6010B	µg/L	18,700		22,200		NS		48,900		46,800		---
Chromium	SW6010B	µg/L	<10	U	19.9		NS		<10	U	47.3		*50 (s)*
Chromium, Hexavalent	SW7196A	µg/L	<0.010	U	<0.010	U	NS		<0.010	U	<0.010	U	*50 (s)*
Cobalt	SW6010B	µg/L	<50	U	<50	U	NS		<50	U	<50	U	---
Copper	SW6010B	µg/L	95.5		<20.0	U	NS		<20.0	U	**4,990**		*200 (s)*
Cyanide, Total	SW9012	µg/L	<0.010	U	<0.010	U	NS		<0.010	U	<0.010	U	*200 (s)*
Iron	SW6010B	µg/L	**3,410**		**18,300**		NS		**1,050**		**40,700**		*300 (a)*
Lead	SW6010B	µg/L	6.80		7.4		NS		<5	U	**499**		*25*
Magnesium	SW6010B	µg/L	9,600		7,580		NS		11,500		30,000		---
Manganese	SW6010B	µg/L	82.9		**509**		NS		**1,090**		**961**		*300 (a)*
Mercury	SW7470A	µg/L	<0.200	U	<0.200	U	NS		<0.200	U	<0.200	U	*0.7 (s)*
Nickel	SW7470A	µg/L	<40.0	U	<40.0	U	NS		<40.0	U	77.3		*100 (s)*
Potassium	SW7470A	µg/L	2,780		5,970		NS		3,800		10,600		---
Selenium	SW7470A	µg/L	<10.0	U	<10.0	U	NS		<10.0	U	<10.0	U	*10 (s)*
Silver	SW7470A	µg/L	<10.0	U	<10.0	U	NS		<10.0	U	<10.0	U	*50 (s)*
Sodium	SW7470A	µg/L	3,670		2,200		NS		4,340		6,170		*20,000(s)*
Vanadium	SW7470A	µg/L	<50.0	U	<50	U	NS		<50.0	U	<50.0	U	---
Zinc	SW7470A	µg/L	37.7		55.3		NS		<20.0	U	584		*2,000 (g)*

(a) The sum of iron and manganese shall not exceed 500 ug/L. NOTE: USEPA = U.S. Environmental Protection Agency

NYSDEC = New York State Department of Environmental Conservation

mg/L = Milligrams per liter.

--- = Indicates no applicable standard.

µg/L = Micrograms per liter.

U = Not detected at the Practical Quantitation Limit. Sample quantitation limits shown as <_.

D = Concentration is the result of a dilution.

NS = Sample was not collected

Bold values indicate that the result is above the NYSDEC Ambient Water Quality Standard (s) or Guidance (g). Duplicate sample was collected from 902012-MW-12.

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (1.1.1) August 1999.

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TABLE 4 - BASELINE LEACHATE INDICATOR & INORGANIC PARAMETERS DETECTED IN GROUNDWATER & SURFACE WATER

Baseline Parameter List	USEPA Method	Sample ID	902012-MW-8		902012-MW-9		902012-MW-10		902012-MW-10D		902012-MW-11		902012-MW-12		NYSDEC Ambient Water Quality Standard Class GA
		Sample Type	Water		Water		Water		Water		Water		Water		
		Sample Date	7/14/2014						7/14/2014		7/15/2014		7/15/2014		
Leachate Indicators															
Alkalinity, as CaCO3	SM 2320 B	mg/L	NS		NS		NS		177		154		358		---
Ammonia (as N)	E350.1	mg/L	NS		NS		NS		<0.050	U	0.148		0.109		*2(s)*
Biochemical oxygen demand (BOD5)	SM5210B	mg/L	NS		NS		NS		<2.0	U	<2.0	U	<2.0	U	---
Bromide	SW9056	mg/L	NS		NS		NS		<1.0	U	<1.0	U	<1.0	U	*2(g)*
Chemical Oxygen Demand	E410.4	mg/L	NS		NS		NS		<5.0	U	9.8		<5.0	U	---
Chloride	SW9056	mg/L	NS		NS		NS		14.5		<2.0	U	2.8		*250(s)*
Color	SM2120B	color units	NS		NS		NS		12		16		17		---
Hardness, Calcium/Magnesium (as CaCO3)	M2340B	mg/L	124		NS		NS		186		147		334		---
Kjeldahl Nitrogen - Total (as N)	E351.2	mg/L	NS		NS		NS		<0.20	U	0.58		1.0		---
Nitrate (as N)	SW9056	mg/L	NS		NS		NS		<1.0	U	<1.0	U	<1.0	U	*10(s)*
Organic carbon-Total (TOC)	SM5310B	mg/L	NS		NS		NS		1.7		3.7		2.0		---
Phenolics, Total Recoverable	SW9065	mg/L	NS		NS		NS		<0.0050	U	<0.0050	U	<0.0050	U	*0.001(s)*
Residue-filterable (TDS)	SM2540C	mg/L	NS		NS		NS		226		182		393		---
Sulfate (as SO4)	SW9056	mg/L	NS		NS		NS		26.1		7.6		28.3		*250(s)*
Inorganic Parameters															
Aluminum	SW6010B	µg/L	6,800		NS		NS		464		1750		11,400		---
Antimony	SW6010B	µg/L	<60.0	U	NS		NS		<60.0	U	<60.0	U	<60.0	U	*3 (g)*
Arsenic	SW6010B	µg/L	<10	U	NS		NS		<10	U	<10	U	<10	U	*25 (s)*
Barium	SW6010B	µg/L	51.1		NS		NS		48.7		26.7		101		*1000 (s)*
Beryllium	SW6010B	µg/L	<3	U	NS		NS		<3	U	<3	U	<3	U	*3 (g)*
Boron	SW6010B	µg/L	<200	U	NS		NS		<200	U	<200	U	<200	U	*1000 (s)*
Cadmium	SW6010B	µg/L	<5	U	NS		NS		<5	U	<5	U	<5	U	*5*
Calcium	SW6010B	µg/L	28,000		NS		NS		42,900		41,300		69,200		---
Chromium	SW6010B	µg/L	<10	U	NS		NS		<10	U	<10	U	16		*50 (s)*
Chromium, Hexavalent	SW7196A	µg/L	<0.010	U	NS		NS		<0.010	U	<0.010	U	<0.020	U	*50 (s)*
Cobalt	SW6010B	µg/L	<50	U	NS		NS		<50	U	<50	U	<50	U	---
Copper	SW6010B	µg/L	<20.0	U	NS		NS		<20.0	U	<20.0	U	<20.0	U	*200 (s)*
Cyanide, Total	SW9012	µg/L	NS		NS		NS		<0.010	U	<0.010	U	<0.010	U	*200 (s)*
Iron	SW6010B	µg/L	**5,780**		NS		NS		**470**		**1,600**		**14,400**		*300 (a)*
Lead	SW6010B	µg/L	<5	U	NS		NS		<5	U	<5	U	<5	U	*25*
Magnesium	SW6010B	µg/L	13,200		NS		NS		19,300		10,800		39,300		---
Manganese	SW6010B	µg/L	65.9		NS		NS		95.5		**855**		**335**		*300 (a)*
Mercury	SW7470A	µg/L	<0.200	U	NS		NS		<0.200	U	<0.200	U	<0.200	U	*0.7(s)*
Nickel	SW7470A	µg/L	<40.0	U	NS		NS		<40.0	U	<40.0	U	<40.0	U	*100 (s)*
Potassium	SW7470A	µg/L	3,390		NS		NS		2,520		2,290		10,500		---
Selenium	SW7470A	µg/L	<10.0	U	NS		NS		<10.0	U	<10.0	U	<10.0	U	*10 (s)*
Silver	SW7470A	µg/L	<10.0	U	NS		NS		<10.0	U	<10.0	U	<10.0	U	*50 (s)*
Sodium	SW7470A	µg/L	4,520		NS		NS		17,300		3,610		**21,500**		*20,000(s)*
Vanadium	SW7470A	µg/L	<50.0	U	NS		NS		<50.0	U	<50.0	U	<50.0	U	---
Zinc	SW7470A	µg/L	<20.0	U	NS		NS		<20.0	U	<20.0	U	34.4		*2,000 (g)*

(a) The sum of iron and manganese shall not exceed 500 ug/L. NOTE: USEPA = U.S. Environmental Protection Agency

NYSDEC = New York State Department of Environmental Conservation

mg/L = Milligrams per liter.

--- = Indicates no applicable standard.

µg/L = Micrograms per liter.

U = Not detected at the Practical Quantitation Limit. Sample quantitation limits shown as (<_).

D = Concentration is the result of a dilution.

NS = Sample was not collected

Bold values indicate that the result is above the NYSDEC Ambient Water Quality Standard (s) or Guidance (g). Duplicate sample was collected from 902012-MW-12.

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (1.1.1) August 1999.

VILLAGE OF CUBA LANDFILL SITE
PERIODIC REVIEW REPORT
FEBRUARY 2015

TABLE 4 - BASELINE LEACHATE INDICATOR & INORGANIC PARAMETERS DETECTED IN GROUNDWATER & SURFACE WATER

Baseline Parameter List	USEPA Method	Sample ID	902012-MW-13		902012-SW-01		902012-SW-02		902012-SW-03		902012-SW-04		902012-MW-DUP		NYSDEC Ambient Water Quality Standard Class GA
		Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
		Sample Date	7/15/2014		7/15/2014		7/15/2014		7/15/2014		7/15/2014		7/15/2014		
Leachate Indicators															
Alkalinity, as CaCO3	SM 2320 B	mg/L	199		116		13.2		107		23.5		358		---
Ammonia (as N)	E350.1	mg/L	0.15		<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.140		***2(s)***
Biochemical oxygen demand (BOD5)	SM5210B	mg/L	<2.0	U	3.9	U	<2.0	U	<2.0	U	<2.0	U	NA		---
Bromide	SW9056	mg/L	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	***2(g)***
Chemical Oxygen Demand	E410.4	mg/L	<5.0	U	51.8		35.5		35		30.3		<5.0	U	---
Chloride	SW9056	mg/L	<2.0	U	8.7		<2.0	U	5.9		2.3		2.7		***250(s)***
Color	SM2120B	color units	17		130		90		86		190		130		---
Hardness, Calcium/Magnesium (as CaCO3)	M2340B	mg/L	215		114		12.8		101		17.3		435		---
Kjeldahl Nitrogen - Total (as N)	E351.2	mg/L	0.95		4.46		1.24		1.11		2.12		0.83		---
Nitrate (as N)	SW9056	mg/L	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	***10(s)***
Organic carbon-Total (TOC)	SM5310B	mg/L	1.6		16.9		16.8		18.0		20.9		2.0		---
Phenolics, Total Recoverable	SW9065	mg/L	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U	***0.001(s)***
Residue-filterable (TDS)	SM2540C	mg/L	218		155		51		174		118		393		---
Sulfate (as SO4)	SW9056	mg/L	11.5		6		<2.0	U	5.3		3.9		26.3		***250(s)***
Inorganic Parameters															
Aluminum	SW6010B	µg/L	34,800		3,590		285		536		8,960		89,900		---
Antimony	SW6010B	µg/L	<60.0	U	<60.0	U	<60.0	U	<60.0	U	<60.0	U	<60.0	U	***3 (g)***
Arsenic	SW6010B	µg/L	13.4		<10.0	U	<10.0	U	<10.0	U	<10.0	U	**36.6**		***25 (s)***
Barium	SW6010B	µg/L	223		43.7		<20.0	U	<20.0	U	56.9		421		***1000 (s)***
Beryllium	SW6010B	µg/L	<3	U	<3	U	<3	U	<3	U	<3	U	<3	U	***3 (g)***
Boron	SW6010B	µg/L	<200	U	<200	U	<200	U	<200	U	<200	U	<200	U	***1000 (s)***
Cadmium	SW6010B	µg/L	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	***5***
Calcium	SW6010B	µg/L	59,500		29,400		3,610		27,600		3,690		80,800		---
Chromium	SW6010B	µg/L	**50.6**		<10.0	U	<10.0	U	<10.0	U	10.2		**126**		***50 (s)***
Chromium, Hexavalent	SW7196A	µg/L	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.020	U	***50 (s)***
Cobalt	SW6010B	µg/L	<50.0	U	<50.0	U	<50.0	U	<50.0	U	<50.0	U	<50.0	U	---
Copper	SW6010B	µg/L	30.5		21.8		<20.0	U	<20.0	U	<20.0	U	72.4		***200 (s)***
Cyanide, Total	SW9012	µg/L	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.010	U	***200 (s)***
Iron	SW6010B	µg/L	**46,300**		**4,610**		**370**		**894**		**8,470**		**134,000**		***300 (a)***
Lead	SW6010B	µg/L	10.8		<5	U	<5	U	<5	U	<5	U	**47.3**		***25***
Magnesium	SW6010B	µg/L	16,100		9,990		<1,000	U	7,720		1,970		56,600		---
Manganese	SW6010B	µg/L	**1,040**		**1,010**		42.3		204		169		**3,100**		***300 (a)***
Mercury	SW7470A	µg/L	<0.200	U	<0.200	U	<0.200	U	<0.200	U	<0.200	U	<0.200	U	***0.7 (s)***
Nickel	SW7470A	µg/L	<40.0	U	<40.0	U	<40.0	U	<40.0	U	<40.0	U	**102**		***100 (s)***
Potassium	SW7470A	µg/L	13,300		3,200		<2,000	U	2,360		3,970		26,500		---
Selenium	SW7470A	µg/L	<10.0	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	***10 (s)***
Silver	SW7470A	µg/L	<10.0	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U	***50 (s)***
Sodium	SW7470A	µg/L	5,580		4,990		<1,000	U	4,010		9,490		**22,700**		***20,000(s)***
Vanadium	SW7470A	µg/L	<50.0	U	<50.0	U	<50.0	U	<50.0	U	<50.0	U	108		---
Zinc	SW7470A	µg/L	113		26.7		<20.0	U	<20.0	U	30.2		264		***2,000 (g)***

(a) The sum of iron and manganese shall not exceed 500 ug/L. NOTE: USEPA = U.S. Environmental Protection Agency

NYSDEC = New York State Department of Environmental Conservation

mg/L = Milligrams per liter.

--- = Indicates no applicable standard.

µg/L = Micrograms per liter.

U = Not detected at the Practical Quantitation Limit. Sample quantitation limits shown as (<_).

D = Concentration is the result of a dilution.

NS = Sample was not collected

Bold values indicate that the result is above the NYSDEC Ambient Water Quality Standard (s) or Guidance (g). Duplicate sample was collected from 902012-MW-12.

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (1.1.1) August 1999. Class GA groundwater values are applied to well samples.