DRAFT
2012 ANNUAL REMEDIAL ACTION OPERATION REPORT
LANDFILL 12 (LHAAP-12)
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:

U.S. Army Corps of Engineers

Prepared By:

AECOM

AECOM Technical Services, Inc.

February 2014

DRAFT
2012 ANNUAL REMEDIAL ACTION OPERATION REPORT
LANDFILL 12 (LHAAP-12)
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:

U.S. Army Corp of Engineers

Tulsa District

Prepared By:

AECOM Technical Services, Inc.

Contract No. W912DY-09-D-0059

Task Order No. DS01

February 2014

Table of Contents

List of Figures

List of Tables

List of Appendices

Acronyms and Abbreviations

µg/L	micrograms per liter
AECOM	AECOM Technical Services, Inc.
cis-1,2-DCE	cis-1,2-dichloroethene
IRA	Interim Remedial Action
LHAAP	Longhorn Army Ammunition Plant
LUC	Land Use Control
MCL	maximum contaminant level
MNA	Monitored Natural Attenuation
No.	number
RA(O)	Remedial Action Operation
RD	Remedial Design
ROD	Record of Decision
TCE	trichloroethylene
U.S.	United States
VC	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

The United States (U.S.) Army Corps of Engineers, Tulsa District, contracted AECOM Technical Services, Inc. (AECOM), to perform remedial activities at multiple sites at the former Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas, under the Huntsville District's Worldwide Environmental Restoration Services Contract Number (No.) W912DY-09-D-0059, Task Order No. DS01. As part of this contract, AECOM is performing operations and maintenance and monitoring activities at the closed Landfill 12 (LHAAP-12). A Final Record of Decision (ROD) was executed for LHAAP-12 in August, 2006 (Shaw, 2006). Groundwater monitoring and site inspection activities at LHAAP-12 are ongoing as described in the Final Remedial Design (RD) Addendum (Shaw, 2007). This report summarizes the results of site activities conducted in 2012.

1.1 Remedial Action Operation Scope and Objective

Work completed as part of the Remedial Action Operation (RA[O]) at LHAAP-12 consisted of two components: physical inspections and repairs; and groundwater monitoring. Physical inspections are conducted annually to confirm compliance with Land Use Control (LUC) objectives, which consist of ensuring the integrity of the existing landfill cover, and ensuring no consumption of trichloroethylene (TCE)-contaminated groundwater. The objectives of groundwater monitoring at LHAAP-12 are to ensure that contaminated groundwater does not migrate into nearby surface water and to perform Monitored Natural Attenuation (MNA) so that maximum contaminant levels (MCLs) are achieved for groundwater contaminants: TCE, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC). This report summarizes the results of groundwater sampling and the landfill integrity inspections and repairs.

1.2 Site Description

LHAAP-12 was established in 1963, covers approximately seven acres, and is 500 feet southeast of Central Creek, which eventually drains into Caddo Lake. LHAAP-12 was used for the disposal of industrial solid wastes, possibly containing small quantities of hazardous constituents generated at LHAAP. From 1978 until its closure in April 1994, the landfill was used continuously for the disposal of non-hazardous industrial solid waste, including cafeteria waste, chemical waste, petroleum-contaminated soil, and asbestos. The construction of a landfill cap over the site was completed in 1998 as part of an Interim Remedial Action (IRA). The IRA is consistent with U.S. Environmental Protection Agency presumptive remedy guidance. The final remedy for LHAAP-12 is protective of human health and the environment and consists of LUCs in conjunction with MNA. LUCs include those set in place by the ROD (Shaw, 2006) for landfill cap maintenance and restriction of groundwater use.

2 OPERATIONS AND MAINTENANCE ACTIVITIES AT LHAAP-12

Physical inspection activities at LHAAP-12 consist of:

- Maintenance of the integrity of the landfill cap and repairs to desiccation cracks, erosion, or gullying upon observance.
- Maintenance of the vegetative cover on the landfill cap, including periodic mowing.
- Maintenance of the signage around landfill cap.
- Prohibition of any activities that would affect the integrity of the cap.
- Prohibition of any activities that would cause exposure to contaminated groundwater.

The RD Addendum stipulated physical inspections to be conducted annually although actual inspections are conducted more frequently with daily drive-by oversight to ensure compliance with the above requirements and annual groundwater sampling to monitor the effectiveness of MNA in reducing contaminant concentrations over time. The effectiveness of MNA was evaluated in the Years 1 and 2 report (Shaw, 2011). Groundwater was included as a component of the remedy for LHAAP-12 identified in the ROD (Shaw, 2006).

2.1 Physical Inspection Summary

Inspections conducted during 2012 indicated that minimal repairs were needed. However, some tree seedlings were observed growing on the landfill cover, subsidence above the cap was observed as deep as 1.5 feet in three different locations, and two separate locations of minor surface erosion were observed along the eastern edge of the cap. This subsidence and erosion was addressed at the end of December 2012 and beginning of January 2013 by backfilling with 30 cubic yards of topsoil provided by a local vendor from a certified clean source (sampling was completed in conjunction with the LHAAP-50 soil excavation and backfill project), followed by grass seeding for vegetation restoration. Minor signs of burrowing by animals were observed on the eastern edge of the cap, which will continue to be monitored. No desiccation cracks or gullying has been observed.

During the inspection it was noted that vegetation had encroached upon some portions of the perimeter road and minor debris was identified for removal. This road maintenance was conducted over a period of two months in the Fall of 2012. Signage at LHAAP-12 remains intact and legible. Fencing on the eastern edge of the landfill cap required repair due to normal wear to ensure signage remains visible.

No new water wells have been installed at LHAAP-12. Data gathered from well sampling forms indicate existing wells continue to function well, without excessive sedimentation, and do not require redevelopment at this time. Well-head locks appeared to be deteriorated or damaged, and were subsequently replaced in June 2013. No damaged bollards, pads or procasing was observed, and no encroachment of weeds or brush on the well pads was observed. Monitoring well identification tag replacement, as well as painting/re-labeling as needed, for wells outside the current monitoring network was completed in Fall 2013. A photo log of LHAAP-12 monitoring wells is included in **Appendix A**.

The latest documented physical inspection of the LHAAP-12 landfill cap was completed January 8, 2013. The Site Inspection Checklist is included in **Appendix B**.

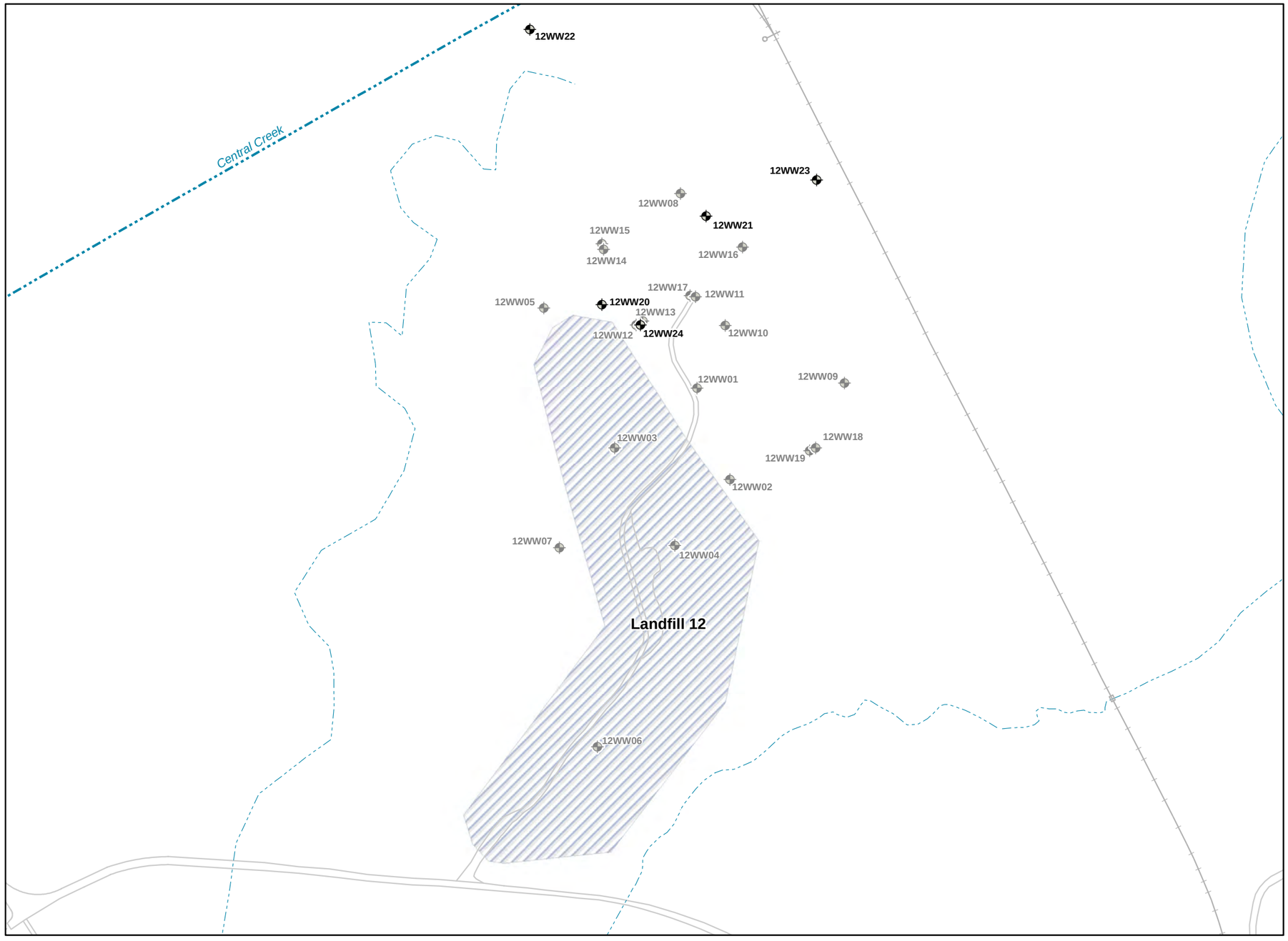
2.2 Groundwater Monitoring and Analytical Results

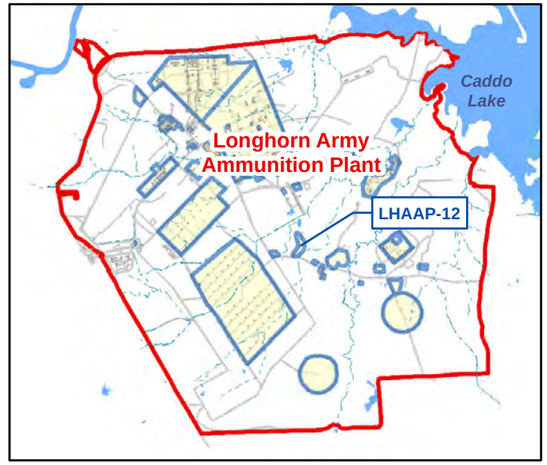
As described by the Groundwater Sampling Plan included in the RD Addendum (Shaw, 2007), groundwater sampling of monitoring wells: 12WW20, 12WW21, and 12WW24, and two compliance monitoring wells: 12WW22 and 12WW23, has been conducted annually beginning in the third year of the RA(O) to evaluate the effectiveness of the landfill cap, to monitor the effectiveness of MNA in reducing contaminant concentrations over time, to evaluate plume migration, and to ensure that TCE-contaminated groundwater does not impact nearby surface water. The locations of these monitoring wells are shown in **Figure 2-1**.

Groundwater flow direction has changed at LHAAP-12 from a previous east to west flow during year 4, to north/north west flow during year 5 due to a significant drop in the water table. Groundwater elevation data collected during sampling events are shown in **Table 2-1**. Year 5 (i.e., 2012) elevation data are plotted on **Figure 2-2**. Year 3 and 4 (i.e., 2010 and 2011) elevation data are plotted on **Figure 2-3**. Year 1 and 2 (i.e., 2008 and 2009) elevation data are plotted on **Figure 2-4**.

Annual samples were collected December 3, 2012 from six monitoring wells: 12WW05, 12WW20, 12WW21, 12WW22, 12WW23, 12WW24, and were analyzed for volatile organic compounds (VOCs). Analytical results are shown in **Table 2-2**. Monitoring Well 12WW24 was dry during the sampling period, but as shown in **Figure 2-5**, TCE, cis-1,2-DCE, and VC concentrations have been continually decreasing in previous years. Plume migration does not appear to be occurring based on continued non-detect results in the compliance wells. Occurrence of MNA at the Site is inconclusive at this time due to Well 12WW24 being dry.

Water samples were collected using the low-flow method Standard Operating Procedure (AECOM, 2013). The objective of using this method was to collect representative samples of the groundwater in the formation adjacent to the well screen, eliminating the mixing of stagnant water above and below the well screen. After water quality parameters stabilized and were within acceptable ranges, samples were collected at the same low flow rate. Groundwater monitoring well sampling, purging, and field well inspection forms were completed for each monitoring well sampled and are included in **Appendix C**. Laboratory analytical results are included in **Appendix D**.





Legend

- Monitored Natural Attenuation Shallow Well
- Monitoring Well
- Former Railroad
- Streams (Continuous)
- Streams (Intermittent)
- Roads
- Landfill Cap Area

Note:
1 - Each well has 5' x 5' concrete surface monument surrounded bollards. Each piezometer has a PVC riser. Appropriate equipment and care used around these features.

AECOM

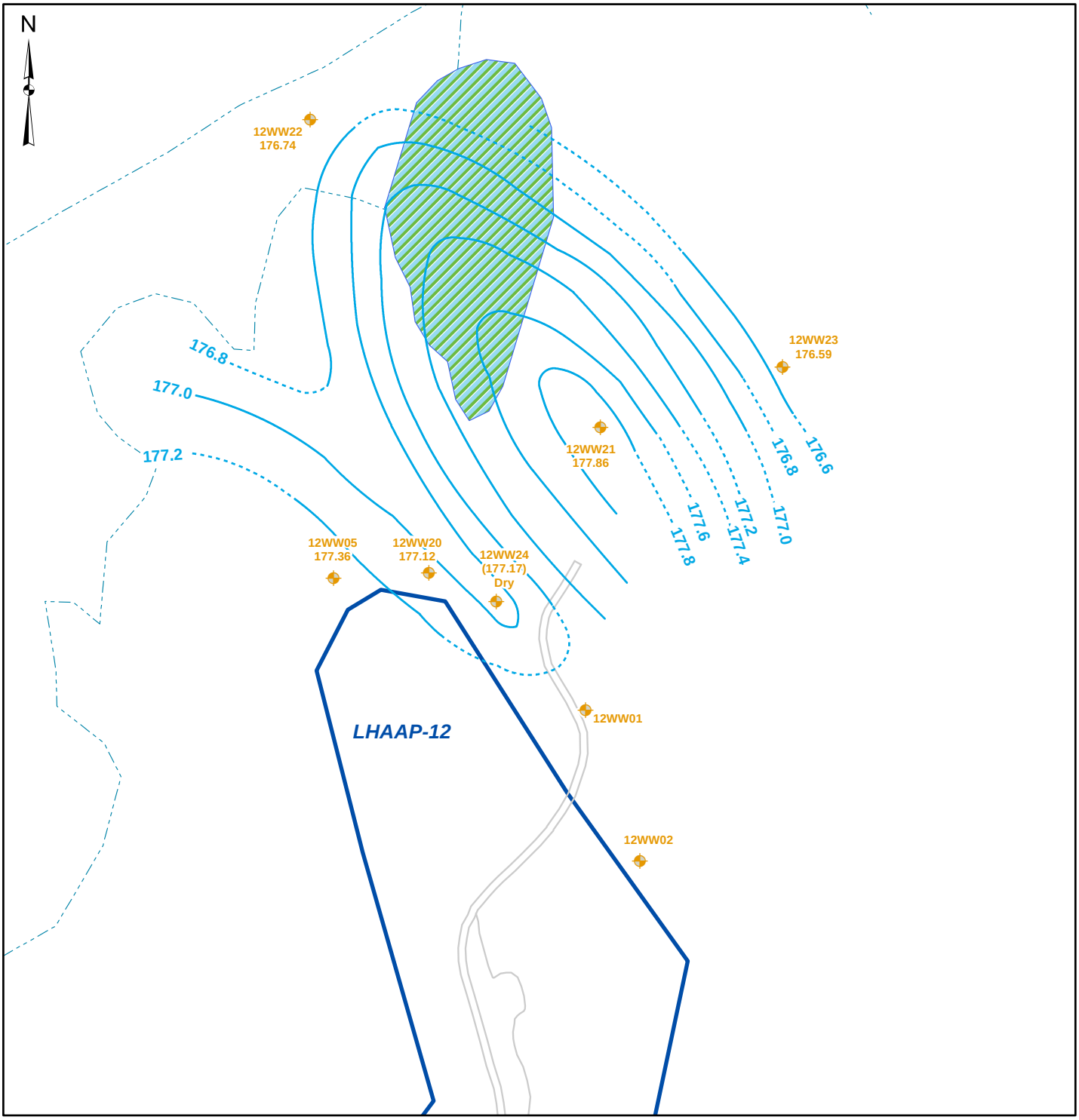
Figure 2-1
Groundwater Monitoring Well Locations
LHAAP-12

Longhorn Army Ammunition Plant
Karnack, Texas

60256135

January 2014

Path: L:\Group\IT_GIS\GIS Projects\Longhorn\MXDs\LHAAP-12\2014-Jan-30\Figure 2-1 LHAAP-12 Groundwater MW Locations.mxd



Legend

- Shallow Monitoring Well
- 2012 Groundwater Gradient Contour (Dashed Where Inferred)
- Roads
- Streams
- Drainage Feature
- Site (Boundary of Landfill Cap)

0 100 200 400 Feet

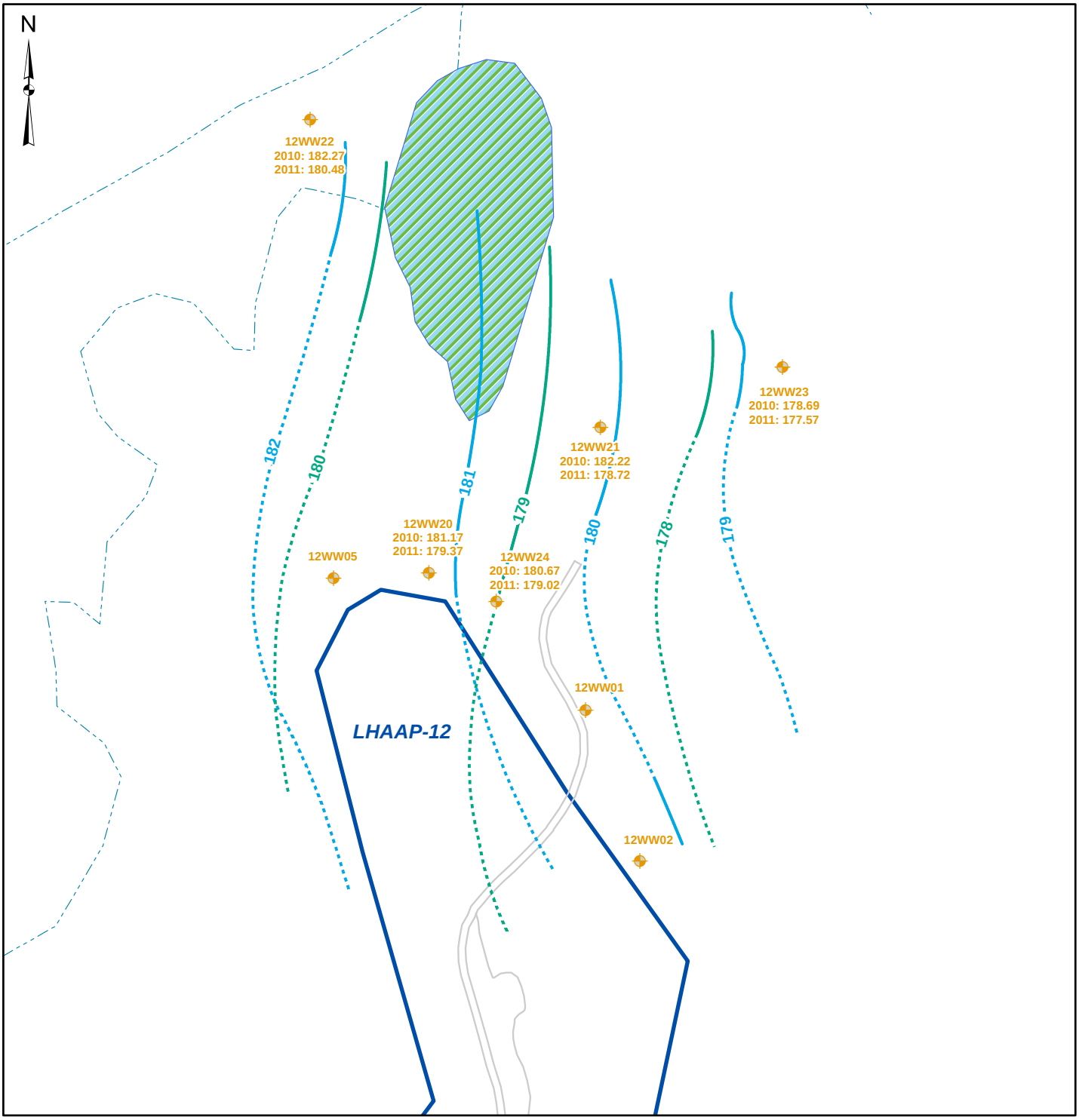
AECOM

Figure 2-2
Groundwater Gradient Map
2012
LHAAP-12
Longhorn Army Ammunition Plant
Karnack, Texas

60256135

January 2014

Path: L:\Group\IT_GIS\GIS Projects\Longhorn\MXDs\LHAAP-12\2014-Jan-30\Figure 2-2 LHAAP-12 GW Gradient Map 2012.mxd



Legend

- Shallow Monitoring Well
- 2010 Groundwater Gradient Contour (Dashed Where Inferred)
- 2011 Groundwater Gradient Contour (Dashed Where Inferred)
- Streams
- Roads
- Drainage Feature
- Site (Boundary of Landfill Cap)

0 100 200 400 Feet

Source: Shaw 2012, Final Remedial Action Operation Summary Report, Tears 3 and 4, LHAAP-12.

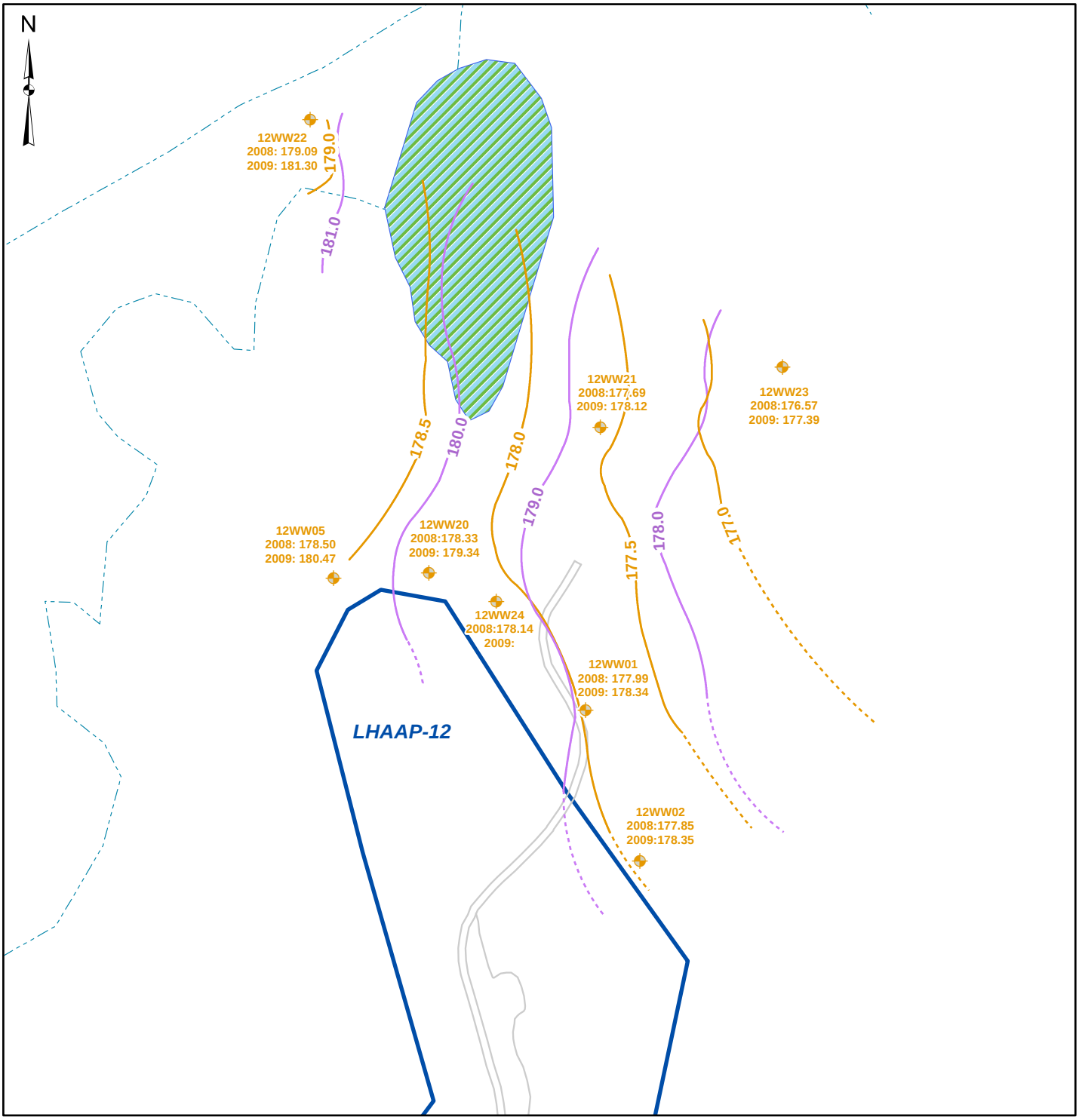
AECOM

Figure 2-3
Groundwater Gradient Map
2010-2011
LHAAP-12
Longhorn Army Ammunition Plant
Karnack, Texas

60256135

January 2014

Path: L:\Group\IT_GIS\GIS Projects\Longhorn\MXDs\LHAAP-12\2014-Jan-30\Figure 2-3 LHAAP-12 GW Gradient Map 2010_2011.mxd



Legend

- Shallow Monitoring Well
- 2008 Groundwater Gradient Contour (Dashed Where Inferred)
- 2009 Groundwater Gradient Contour (Dashed Where Inferred)
- Streams
- Roads
- Drainage Feature
- Site (Boundary of Landfill Cap)

0 100 200 400 Feet

Source: Shaw 2012, Final Remedial Action Operation Summary Report, Tears 3 and 4, LHAAP-12.

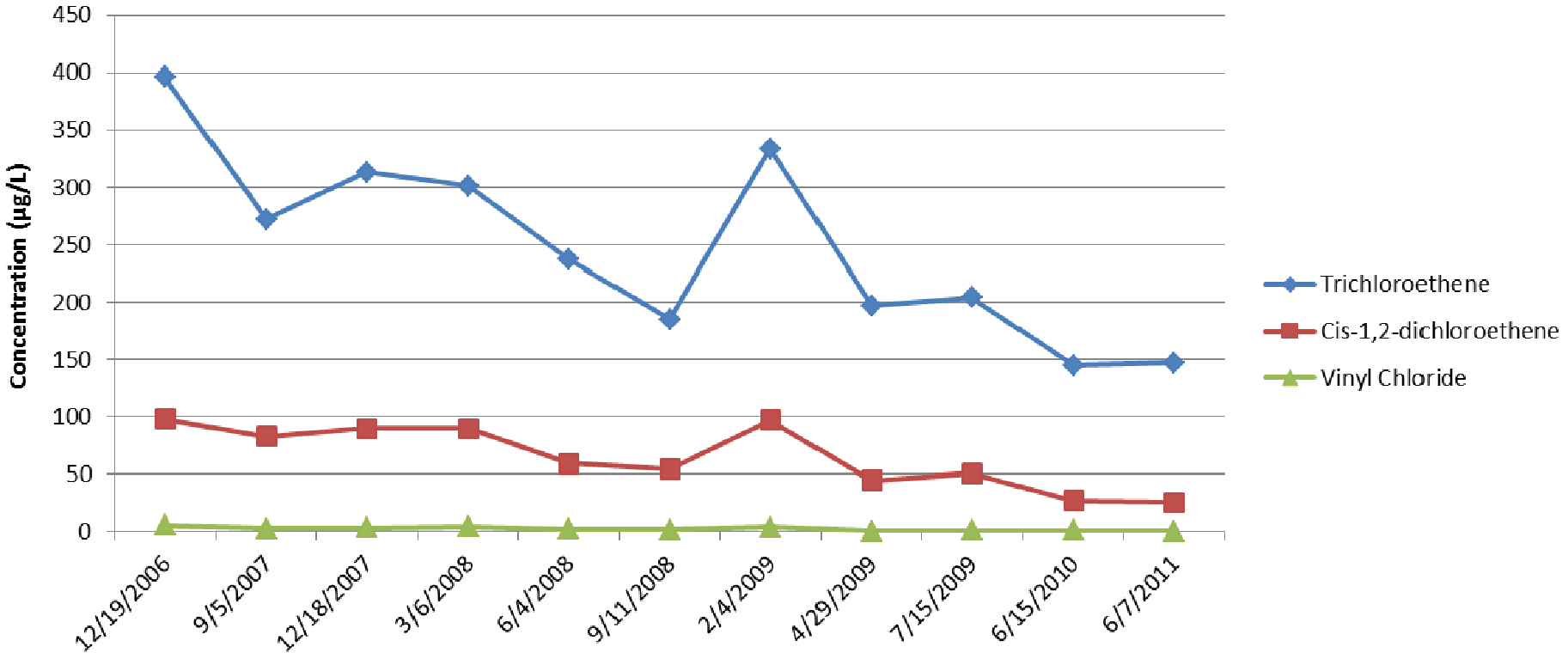
AECOM

Figure 2-4
Groundwater Gradient Map
2008 - 2009
LHAAP-12
Longhorn Army Ammunition Plant
Karnack, Texas

60256135

January 2014

Path: L:\Group\IT_GIS\GIS Projects\Longhorn\MXDs\LHAAP-12\2014-Jan-30\Figure 2-4 LHAAP-12 GW Gradient Map 2008_2009.mxd



AECOM

Figure 2-5
TCE, cis-1,2-DCE and VC Concentrations in 12WW24
LHAAP-12
Longhorn Army Ammunition Plant, Karnack, Texas

60256135

January 2014

Table 2 1: Groundwater Elevation Data – LHAAP-12

RA(O) Year	Well ID	Sampling Date	Top of Casing Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)
1	12WW20	9/5/2007	199.15	19.52	179.63
		12/18/2007	199.15	19.77	179.38
		3/6/2008	199.15	20.16	178.99
		6/4/2008	199.15	19.42	179.73
2		9/11/2008	199.15	20.82	178.33
		2/4/2009	199.15	20.95	178.20
		4/29/2009	199.15	19.81	179.34
		7/15/2009	199.15	20.22	178.93
3		6/15/2010	199.15	17.98	181.17
4		6/7/2011	199.15	19.78	179.37
5		12/3/2012	199.15	22.03	177.12
1	12WW21	9/5/2007	202.07	23.25	178.82
		12/18/2007	202.07	24.30	177.77
		3/6/2008	202.07	24.19	177.88
		6/4/2008	202.07	23.45	178.62
2		9/11/2008	202.07	24.38	177.69
		2/4/2009	202.07	24.68	177.39
		4/29/2009	202.07	23.95	178.12
		7/15/2009	202.07	24.00	178.07
3		6/15/2010	202.07	21.85	180.22
4		6/7/2011	202.07	23.35	178.72
5		12/3/2012	202.07	24.21	177.86
1	12WW22	9/5/2007	190.2	9.37	180.83
		12/18/2007	190.2	11.65	178.55
		3/6/2008	190.2	9.81	180.39
		6/4/2008	190.2	8.43	181.77
2		9/11/2008	190.2	11.11	179.09
		2/4/2009	190.2	10.88	179.32
		4/29/2009	190.2	8.90	181.30
		7/15/2009	190.2	10.05	180.15
3		6/15/2010	190.2	7.93	182.27
4		6/7/2011	190.2	9.72	180.48
5		12/3/2012	190.2	13.46	176.74
1	12WW23	9/5/2007	196.97	19.73	177.24
		12/18/2007	196.97	20.15	176.82
		3/6/2008	196.97	20.20	176.77
		6/4/2008	196.97	20.05	176.92
2		9/11/2008	196.97	20.40	176.57
		2/4/2009	196.97	20.76	176.21
		4/29/2009	196.97	19.58	177.39
		7/15/2009	196.97	20.41	176.56
3		6/15/2010	196.97	18.28	178.69
4		6/7/2011	196.97	19.40	177.57
5		12/3/2012	196.97	20.38	176.59
1	12WW24	9/5/2007	203.17	23.91	179.26
		12/18/2007	203.17	24.92	178.25
		3/6/2008	203.17	24.90	178.27
		6/4/2008	203.17	24.23	178.94
2		9/11/2008	203.17	25.03	178.14
		2/4/2009	203.17	25.37	177.80
		4/29/2009	203.17	24.66	178.51
		7/15/2009	203.17	24.50	178.67
3		6/15/2010	203.17	22.50	180.67
4		6/7/2011	203.17	24.15	179.02
5		12/3/2012	203.17	Dry	Dry

Table 2 2: Groundwater Analytical Results, Year 5 – LHAAP-12

Location ID: Sample Code: Sample Date: Sample Purpose:	Units	12WW20 12WW20-031212 12/3/2012 Regular	12WW20 12WW20-031212D 12/3/2012 Duplicate	12WW21 12WW21-031212 12/3/2012 Regular	12WW22 12WW22-041212 12/4/2012 Regular	12WW23 12WW23-031212 12/3/2012 Regular
Volatile Organic Compounds (8260B)						
1,1,1,2-TETRACHLOROETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,1-TRICHLOROETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	ug/L	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,1,2-TRICHLOROETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
1,1-DICHLOROETHENE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
1,1-DICHLOROPROPENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2,3-TRICHLOROBENZENE	ug/L	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U
1,2,3-TRICHLOROPROPANE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
1,2,4-TRICHLOROBENZENE	ug/L	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,2,4-TRIMETHYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-DIBROMOETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
1,2-DICHLOROETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROPROPANE	ug/L	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,3,5-TRIMETHYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROPROPANE	ug/L	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,4-DICHLOROBENZENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
2,2-DICHLOROPROPANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
2-BUTANONE	ug/L	<5 U	<5 U	<5 U	<5 U	<5 U
2-CHLOROTOLUENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
2-HEXANONE	ug/L	<5 U	<5 U	<5 U	<5 U	<5 U
4-CHLOROTOLUENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
4-METHYL-2-PENTANONE	ug/L	<5 U	<5 U	<5 U	<5 U	<5 U
ACETONE	ug/L	<5 U	<5 U	<5 U	<5 U	<5 U
BENZENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
BROMOBENZENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
BROMOCHLOROMETHANE	ug/L	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
BROMODICHLOROMETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOFORM	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
BROMOMETHANE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
CARBON DISULFIDE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
CARBON TETRACHLORIDE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROBENZENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
CHLOROETHANE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
CHLOROFORM	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
CHLOROMETHANE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	ug/L	0.41 J	0.331 J	<0.5 U	<0.5 U	<0.5 U
CIS-1,3-DICHLOROPROPENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DIBROMOCHLOROMETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DIBROMOMETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ETHYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
HEXACHLOROBUTADIENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
M,P-XYLENE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
METHYLENE CHLORIDE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
NAPHTHALENE	ug/L	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
N-BUTYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
N-PROPYLBENZENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
O-XYLENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
P-ISOPROPYLTOLUENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
SEC-BUTYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
STYRENE	ug/L	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
TERT-BUTYLBENZENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TOLUENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	ug/L	<1 U	<1 U	<1 U	<1 U	<1 U
TRICHLOROETHENE	ug/L	0.5 J	0.582 J	<0.5 U	<0.5 U	<0.5 U
TRICHLOROFLUOROMETHANE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	ug/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

Blue Highlighting Indicates Analyte Detected Above Reporting Limit

J - estimated concentration

U - below detection limit

ug/L - microgram per liter

3 CONCLUSIONS

Physical inspections and groundwater monitoring continue to be completed at LHAAP-12 in compliance with the ROD for LHAAP-12 (Shaw, 2006). No change in land or groundwater use has occurred at the site, LUCs were verified, and the use of the site is consistent with that mandated by the ROD.

In accordance with the Groundwater Sampling Plan, found in Appendix A of the RD Addendum for LHAAP-12 (Shaw, 2007), annual sampling of five wells was implemented beginning in Year 3 and will continue until the next Five-Year Review. No damaged bollards, pads or procasing was observed, and no encroachment of weeds or brush on the well pads was observed. Monitoring well identification tag replacement, as well as painting/re-labeling as needed, for wells outside the current monitoring network was completed in Fall 2013. Annual results for Year 5 are documented in this report. Monitoring wells: 12WW05, 12WW20, 12WW21, 12WW22, and 12WW23 were sampled for VOCs. No VOCs were detected above its MCL. VOC concentrations in 12WW24 have shown a decreasing trend in concentrations over the past several years. 12WW20 had a detection for cis-1,2-DCE (0.41micrograms per liter[μg/L]) and TCE (0.58 μg/L), but they were not above the MCL. Groundwater flow direction has slightly changed to north/north west, from an easterly flow in years past. Plume migration does not appear to be occurring based on continued non-detect results in the compliance wells. Due to Well 12WW24 being dry, occurrence of MNA at the Site is inconclusive at this time.

Inspections conducted during 2012 indicated that minimal repairs to the cap were needed. Subsidence above the cap and two separate locations of surface erosion were observed, and was addressed at the end of December 2012 and beginning of January 2013.

4 REFERENCES

AECOM, 2013, *Standard Operating Procedures, Groundwater Sampling Procedures*, Longhorn Army Ammunition Plant, Karnack, Texas, June.

Shaw, 2006, *Final Record of Decision, Landfill 12 (LHAAP-12),* Longhorn Army Ammunition Plant, Karnack, Texas, August.

Shaw, 2007, *Final Remedial Design Addendum Landfill 12 (LHAAP-12),* Longhorn Army Ammunition Plant, Karnack, Texas, June.

Shaw, 2011, *Draft Annual Remedial Action Operation Report, Years 1 and 2, Landfill 12 (LHAAP-12),* Longhorn Army Ammunition Plant, Karnack, Texas, June.

APPENDIX A: MONITORING WELL PHOTO LOG

12WW05 - December 2012

12WW05 - October 2013

12WW20 - December 2012

12WW20 - October 2013

12WW22 - December 2012

12WW22 - October 2013

12WW23 - December 2012

12WW23 - October 2013

12WW24 - December 2012

12WW24 - October 2013

APPENDIX B: SITE INSPECTION CHECKLIST

LUC Inspection and Maintenance Log - LHAAP 12

Date	Inspected by:	Activities Yearly, at a minimum					Corrective action or repairs required?	Repairs / Action Taken
		Protect landfill integrity				Prevent human exposure to groundwater		
		Vegetative Cover maintained: i.e. grass mowed at least annually	Fence and signage maintained	Observance of landfill cover degredation -e.g. desiccation cracks, erosion, or gullying	Continued compliance verified for no digging or disturbance of landfill cover or contents	Verified no withdrawl of use of groundwater (other than environmental testing)		
12/17/2012	AECOM: Gammans, Wacker, McDonnell	No trees/shrubs in fenced landfill. Grasses regularly mowed appear as natural cover. Vegetation encroached upon some portions of the perimeter road and minor debris was identified for removal.	Capped Landfill Area fenced. Fencing Complete Around Landfill Perimeter. Good to Excellent Condition. No Breeches in Barbed Wire.	General Landfill Condition is Excellent. Few Subsidence Areas Marked with flagging: Central ~10'X12', West Edge three small areas one ~ 10X20' and two combined at ~8'X40'. North End ~40'X40', Northwest Mower ruts ~10'X30'. Most areas ~ 1 to 1.5 ft deep. All areas surveyed for GPS coordinates. Minor washout of surface soil and grasses on east side of landfill. One former burrow noted along east edge fence line.		LUCs are functioning to mitigate potential risks to human health and the environment by restricting access to the contaminated media.	The cap is functioning as designed and needs only routine maintenance. The caps are maintained and inspected in accordance with the RCRA requirements. Maintenance procedures are presently under revision.	Minor erosion issues were adequately addressed. Road maintenance was conducted to address encrouching vetetation.

Individual Site Notes – Site Inspection

Longhorn Army Ammunition Plant, Karnack, TX.

2013 LHAAP-12 Site Inspection

Site: LHAAP-012 **Date: 12/17/12**

Field Team: Dave Wacker, Gretchen McDonnell, Dave Gammans

Findings:	**Remedy:**
1. Unlocked Gate:	Needs New Lock, Securing
2. Numerous Subsidence Areas Marked with flagging:	GPS Coordinates Recorded
a. Central ~10'X12'	
b. West Edge three small areas ~10X20' and two combined at ~8'X40'	
c. North End ~40'X40'	
d. Northwest Mower ruts ~10'X30'.	
Most areas ~ 1 to 1.5 ft deep.	Backfill, Tamper, Regrade, Vegetate
3. Minor washout surface soil and grasses on east edge.	Grade, Vegetate
4. East Edge fence line former animal burrow.	Check for activity, backfill and grade
5. Monitoring Well Identification, Condition – Out of date	Confirm IDs, repainting, remarking, some locks, hinge repair (see well list)

APPENDIX C: MONITORING WELL SAMPLING, PURGING AND FIELD WELL INSPECTION FORMS

AECOM

MONITORING WELL SAMP' COLLECTION FORM

LOCATION	Site: CHAAP-12		LocID: 12WW05					Date: 12-3-12 1211					
	Project: Longhorn Army Ammunition Plant		Project No. 60256135					Recorded By: AD Checked By:					
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: ✓ Water Level Indicator: ID#:					Min Recharge Level = (TD-DTW(0.80)) - TD					
	Unit #		Sampling Equipment: Peristaltic/Bladder/Bailer ID#:										
WELL INFO	Casing I.D. (in) [a]: 4		Static Water Level Reading (ft) [c]: 13.16'					Weather Conditions: Drizzling, cool					
	Total Well Depth (ft) [d]: 36'		Screened Interval/Pump placement: 31'					Condition of Well/Remarks:					
CASING INFO	Casing I.D. (in) [a]: 4"	**0.75**	1.5	**2.0**	2.2	3.0	**4.0**	4.3	5.0	6.0	7.0	8.0	
	Unit Casing Volume (gal/lin ft) [b]:	**0.023**	0.09	**0.16**	0.20	0.37	**0.65**	0.75	1.0	1.5	2.0	2.6	

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (C) (10 to 18)	pH (4.6 to 8.5)	mS/cm Cond ~~(µS/cm)~~ (10 to 8,000)	DO (mg/L) (10 mg/L)	Turb. (NTU)	ORP (mv) (+400 to -300)	Remarks (odor, clarity, etc.)
12-3-12	1219	13.31	150	19.73	4.84	7.02	2243	0.0	227	
"	1224	13.33	"	19.65	4.75	7.04	7.64	0.0	238	
"	1229	13.33	"	19.62	4.72	7.04	6.63	0.0	242	
"	1233	13.33	"	19.61	4.72	7.05	6.32	0.0	240	
"	1237	13.33	"	19.57	4.73	7.04	6.27	0.0	237	
"	1241	13.34	"	19.49	4.73	7.04	6.09	0.0	232	
"	1245									
"	1249									

Pump Rate: <=0.5 L/min **Drawdown:** <0.33 ft **Measurements:** 3-5 min **Stabilization:** +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: NO Sample needed/taken **TIME:**

DUPLICATE (D): YES/NO

MATRIX SPIKE (MS): YES/NO

MATRIX DUPLICATE (MD): YES/NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 mL glass vials	HCl	N		8260B-VOCs
1 - 250 mL plastic	NA	N		6850 - Perchlorate

AECOM

MONITORING WELL SAMP' ' COLLECTION FORM

LOCATION	Site: CHAOP-12	LocID: 12MW20	Date: 12-03-12 1320
	Project: Longhorn Army Ammunition Plant	Project No. 60256135	Recorded By: DD Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: ✓ Water Level Indicator: ID#:	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit #	Sampling Equipment: Peristaltic/Bladder/Bailer ID#:	
WELL INFO	Casing I.D. (in) [a]: 4"	Static Water Level Reading (ft) [c]: 22.03'	Weather Conditions: light drizzle Cool
	Total Well Depth (ft) [d]: 38.85'	Screened Interval/Pump placement: 33.85'	Condition of Well/Remarks:

CASING INFO												
Casing I.D. (in) [a]: 4"	**0.75**	1.5	**2.0**	2.2	3.0	**4.0**	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft) [b]:	**0.023**	0.09	**0.16**	0.20	0.37	**0.65**	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (C) (10 to 18)	pH (4.6 to 8.5)	Cond (µS/cm) (10 to 8,000)	DO (mg/L) (10 mg/L)	Turb. (NTU)	ORP (mv) (+400 to -300)	Remarks (odor, clarity, etc.)
12-3-12	1331	22.10	100	20.35	5.09	3.19	1.52	0.0	217	
	1335	22.20		20.26	5.04	3.15	2.35	0.0	227	
	1340	22.25		20.23	4.99	3.18	1.36	0.0	233	
	1344	22.28		20.20	4.99	3.17	1.17	0.0	240	
	1348	22.31		20.14	4.93	3.16	1.07	0.0	244	
	1352	22.34		20.04	4.73	3.15	1.41	0.0	257	
	1356	22.35		20.00	4.70	3.14	0.83	0.0	260	
	1400	22.37		19.58	4.71	3.13	1.06	0.0	261	
	1404	22.38		19.56	4.71	3.12	0.80	0.0	264	
	1408									
	1412									
	1416									

Pump Rate: <=0.5 L/min **Drawdown:** <0.33 ft **Measurements:** 3-5 min **Stabilization:** +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: 12MW20-031212 **TIME:** 1410
12MW20-031212D

DUPLICATE (D): YES/NO
MATRIX SPIKE (MS): YES/NO
MATRIX DUPLICATE (MD): YES/NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 mL glass vials	HCl	N		8260B-VOCs
1 - 250 mL plastic	NA	N		6850 - Perchlorate

AECOM

MONITORING WELL SAMP' COLLECTION FORM

LOCATION	Site: LHAAP-12	LocID: 12WW21	Date: 12-03-12, 1532
	Project: Longhorn Army Ammunition Plant	Project No. 60256135	Recorded By: [illegible] Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: ✓ Water Level Indicator: ~~✓~~ ID#:	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit #	Sampling Equipment: Peristaltic/Bladder/Bailer ID#:	
WELL INFO	Casing I.D. (in) [a]: 4"	Static Water Level Reading (ft) [c]: 24.21'	Weather Conditions: Cool, semi-cloudy
	Total Well Depth (ft) [d]: 41.70'	Screened Interval/Pump placement: 36.70'	Condition of Well/Remarks:

CASING INFO												
Casing I.D. (in) [a]: 4"	**0.75**	1.5	**2.0**	2.2	3.0	**4.0**	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft) [b]:	**0.023**	0.09	**0.16**	0.20	0.37	**0.65**	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (C) (10 to 18)	pH (4.6 to 8.5)	mS/cm Cond ~~(µS/cm)~~ (10 to 8,000)	DO (mg/L) (10 mg/L)	Turb. (NTU)	ORP (mv) (+400 to -300)	Remarks (odor, clarity, etc.)
12-3-12	1535	25.50	100	19.86	5.55	12.1	1.42	0.0	35	
	1539	25.57	"	19.60	5.49	12.5	1.03	0.0	31	
	1543	25.61	"	19.54	5.44	12.6	1.08	0.0	33	
	1547	25.63	"	19.46	5.42	12.7	0.95	0.0	32	
	1551	25.65		19.33	5.42	12.8	0.85	0.0	30	
	1555	25.68		19.30	5.43	12.8	0.83	0.0	29	
	1600	25.70		19.26	5.43	12.8	0.81	0.0	28	

Pump Rate: <=0.5 L/min **Drawdown:** <0.33 ft **Measurements:** 3-5 min **Stabilization:** +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: 12WW21-031212
12WW21-031212MS
12WW21-031212SD

TIME: 1605

DUPLICATE (D): YES/NO

MATRIX SPIKE (MS): YES/NO

MATRIX DUPLICATE (MD): YES/NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 mL glass vials	HCl	N		8260B-VOCs
1 - 250 mL plastic	NA	N		6850 - Perchlorate

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: LHAAP-12	LocID: 12WW22		Date: 12-3-12 0937	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135		Recorded By: [illegible] Checked By:	
EQUIPMENT	Water Quality Meter Type/ID #: (Horiba U-52)	Water Interface Probe: ✓	Water Level Indicator: ID#:	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit #	Sampling Equipment: Peristaltic/Bladder/(Bailer)	ID#:		
WELL INFO	Casing I.D. (in) [a]: 4"	Static Water Level Reading (ft) [c]: 13.46'		Weather Conditions: 67°F, Clear	
	Total Well Depth (ft) [d]: 38.36'	Screened Interval/Pump placement: 33.36'		Condition of Well/Remarks:	

CASING INFO													
Casing I.D. (in) [a]: 4"	**0.75**	1.5	**2.0**	2.2	3.0	**4.0**	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft) [b]:	**0.023**	0.09	**0.16**	0.20	0.37	**0.65**	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (C) (10 to 18)	pH (4.6 to 8.5)	mS/cm Cond ~~(µS/cm)~~ (10 to 8,000)	DO (mg/L) (10 mg/L)	Turb. (NTU)	ORP (mv) (+400 to -300)	Remarks (odor, clarity, etc.)
12-3-12	0946	13.76	100	19.49	6.44	3.56	12.08	0.0	-134	
	0951	13.65		19.53	6.45	3.55	11.56	0.0	-134	
	0956	Not taken		19.56	6.32	3.51	8.43	0.0	-124	← "In" attachment changed out. Previous one was slightly leaking and making hissing noise
	1001	14.44		19.59	6.55	3.49	13.53	0.0	-139	
	1006	14.70		19.50	6.53	3.48	10.50	0.0	-133	
	1011	14.94		19.45	6.37	3.48	11.77	0.0	-131	
										← Well drew down too fast. Taking readings every 4 minutes - Well had to be purged dry due to insufficient recharge rate. Will sample with a bailer tomorrow.
										Well not at 90% recharge
										24.01 at 7:53 AM 12-04-12 - Spoke with Dave, he said to go ahead and sample

Pump Rate: <=0.5 L/min **Drawdown:** <0.33 ft **Measurements:** 3-5 min **Stabilization:** +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: 12WW22-04212 **TIME:** 0800

DUPLICATE (D): YES/NO

MATRIX SPIKE (MS): YES/NO

MATRIX DUPLICATE (MD): YES/NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 mL glass vials	HCl	N		8260B-VOCs
1 - 250 mL plastic	NA	N		6850 - Perchlorate

AECOM

MONITORING WELL SAMP' 'COLLECTION FORM

LOCATION	Site: CHAAP-12	LocID: 12WW23	Date: 12-03-12 1638
	Project: Longhorn Army Ammunition Plant	Project No. 60256135	Recorded By: AS Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: ~~Horiba U-52~~	Water Interface Probe: ✓ Water Level Indicator: ID#:	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit #	Sampling Equipment: Peristaltic/~~Bladder~~/Bailer ID#:	
WELL INFO	Casing I.D. (in) [a]: 4"	Static Water Level Reading (ft) [c]: 20.38'	Weather Conditions: Cool, Semi cloudy
	Total Well Depth (ft) [d]: 25.14'	Screened Interval/Pump placement: 22.73'	Condition of Well/Remarks:

CASING INFO												
Casing I.D. (in) [a]: 4"	**0.75**	1.5	**2.0**	2.2	3.0	**4.0**	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft) [b]:	**0.023**	0.09	**0.16**	0.20	0.37	**0.65**	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (C) (10 to 18)	pH (4.6 to 8.5)	mS/cm Cond ~~(µS/cm)~~ (10 to 8,000)	DO (mg/L) (10 mg/L)	Turb. (NTU)	ORP (mv) (+400 to -300)	Remarks (odor, clarity, etc.)
~~1644~~	1644	20.77	100	19.75	5.54	1.35	1.41	0.0	-53	DO is cycling between 1.30 and 1.10
12-03-12	1648	20.85	"	19.70	5.48	1.35	1.33	0.0	-52	
"	1652	20.90	"	19.67	5.47	1.35	1.35	0.0	-51	"
"	1656	20.97	"	19.63	5.42	1.36	1.22	0.0	-47	
"	1700	21.04	"	19.60	5.37	1.37	1.13	0.0	-42	
"	1704	21.10	"	19.55	5.33	1.37	1.19	0.0	-39	
"	1708									
"	1712									
	1716									
	1720									

Pump Rate: <=0.5 L/min **Drawdown:** <0.33 ft **Measurements:** 3-5 min **Stabilization:** +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: 12WW23-031212 **TIME:** 1710

DUPLICATE (D): YES/NO

MATRIX SPIKE (MS): YES/NO

MATRIX DUPLICATE (MD): YES/NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 mL glass vials	HCl	N		8260B-VOCs
1 - 250 mL plastic	NA	N		6850 - Perchlorate

AECOM

MONITORING WELL SAMP' COLLECTION FORM

LOCATION	Site: LHAAP-12	LocID: 12WW24	Date: 12/3/12
	Project: Longhorn Army Ammunition Plant	Project No. 60256135	Recorded By: AJ Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: ✓ Water Level Indicator: ID#:	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit #	Sampling Equipment: Peristaltic/Bladder/Bailer ID#:	
WELL INFO	Casing I.D. (in) [a]: 4"	Static Water Level Reading (ft) [c]: NA	Weather Conditions: Overcast 68°
	Total Well Depth (ft) [d]: 26'	Screened Interval/Pump placement: NA	Condition of Well/Remarks: Needs Repainting

CASING INFO												
Casing I.D. (in) [a]: 4"	**0.75**	1.5	**2.0**	2.2	3.0	**4.0**	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft) [b]:	**0.023**	0.09	**0.16**	0.20	0.37	**0.65**	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (C) (10 to 18)	pH (4.6 to 8.5)	Cond (µS/cm) (10 to 8,000)	DO (mg/L) (10 mg/L)	Turb. (NTU)	ORP (mv) (+400 to -300)	Remarks (odor, clarity, etc.)
12/3/12	1445	25.94								Well was dry.

Pump Rate: <=0.5 L/min **Drawdown:** <0.33 ft **Measurements:** 3-5 min **Stabilization:** +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: DRY **TIME:**

DUPLICATE (D): YES/NO

MATRIX SPIKE (MS): YES/NO

MATRIX DUPLICATE (MD): YES/NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 mL glass vials	HCl	N		8260B-VOCs
1 - 250 mL plastic	NA	N		6850 - Perchlorate

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: CHAAP-12

Well I.D.: 12WU01
Completed Depth: ~~38.85~~ 29' BS
Measured Depth: 22.03'
Inspector:

☑ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material Steel
Condition ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☑ Good ☐ Broken ☐ Cracked Slightly rusted
Hinge Condition: ☐ Good ☑ less than 50% rusted ☐ more than 50% rusted

☑ FLUSH MOUNTED

Well Cover Present? ☑ Yes ☐ No
Condition: ☑ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water N/A

CONCRETE PAD:

Visible? ☐ Yes ☐ No
Dimensions 4x4 Thickness 4" ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches) 4"
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ~~☐ Yes~~ ☑ No
Lock Functioning Properly ☐ Yes ☐ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☐ Yes ☑ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☐ No
Visual Obstruction? ☐ Yes ☐ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

No Well ID, Some white spray paint on bump posts. Some rusting and paint chipping on bump posts ad casing

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: CHAAP-12

Well I.D.: 12W002
Completed Depth: ~~35~~ ~~29~~ 31.5
Measured Depth: 25.24
Inspector:

☑ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material: Steel
Condition: ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☑ Good ☐ Broken ☐ Cracked Heavily rusted
Hinge Condition: ☐ Good ☐ less than 50% rusted ☑ more than 50% rusted

☑ FLUSH MOUNTED

~~Well Cover Present?~~ ☐ Yes ☐ No
Condition: ☑ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water NA

CONCRETE PAD:

Visible? ☐ Yes ☐ No
Dimensions: 4x4 Thickness: 4" ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches): 4"
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ☑ Yes ☐ No
Lock Functioning Properly ☐ Yes ☑ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☐ Yes ☑ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☑ No
Visual Obstruction? ☐ Yes ☑ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

Minimal rusting + Paint chipping on bumpers. Casing lid and green ground lid have severe rusting

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: CHAAP-12

Well I.D.: 12WL505
Completed Depth: 36'
Measured Depth: 13.16'
Inspector:

☑ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material: Steel
Condition ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☑ Good ☐ Broken ☐ Cracked
Hinge Condition: ☐ Good ☐ less than 50% rusted ☑ more than 50% rusted

☑ FLUSH MOUNTED

Well Cover Present? ☑ Yes ☐ No
Condition: ☑ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water

CONCRETE PAD:

Visible? ☐ Yes ☐ No
Dimensions 4x4 Thickness 3" ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches) 4"
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ☑ Yes ☐ No
Lock Functioning Properly ☐ Yes ☑ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☐ Yes ☑ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☑ No
Visual Obstruction? ☐ Yes ☑ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

NO Well ID. Well cap does not close shut Some peeling paint on bump posts and casing. Some rusting on bump posts, also a few are scraped as if something rubbed against it. Casing has thick rusting around where well lock rests

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: LHAAP-12

Well I.D.: 12WW20
Completed Depth: 38.85'
Measured Depth: 22.03'
Inspector:

☑ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material: Steel
Condition ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☑ Good ☐ Broken ☐ Cracked
Hinge Condition: ☐ Good ☐ less than 50% rusted ☑ more than 50% rusted

☐ FLUSH MOUNTED

Well Cover Present? ☐ Yes ☐ No
Condition: ☐ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water N/A

CONCRETE PAD:

Visible? ☑ Yes ☐ No
Dimensions: 4x4 Thickness: UNK ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches): 4"
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ☑ Yes ☐ No
Lock Functioning Properly ☑ Yes ☐ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☑ Yes ☐ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☑ No
Visual Obstruction? ☐ Yes ☐ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

Paint Tag all around well. A scratch on the bump post is rusted. Minimal paint chip ed rusting on casing. Small burrow on side of concrete pad.

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: LHAAP-12

Well I.D.: 12WW~~12~~ 21
Completed Depth: 41.70'
Measured Depth: 24.21'
Inspector:

☐ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material: Steel
Condition ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☑ Good ☐ Broken ☐ Cracked
Hinge Condition: ☐ Good ☑ less than 50% rusted ☐ more than 50% rusted

☐ FLUSH MOUNTED

Well Cover Present? ☐ Yes ☐ No
Condition: ☐ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water N/A

CONCRETE PAD:

Visible? ☑ Yes ☐ No
Dimensions 3x3 Thickness Unk ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches) 4"
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ☑ Yes ☐ No
Lock Functioning Properly ☑ Yes ☐ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☑ Yes ☐ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☑ No
Visual Obstruction? ☐ Yes ☑ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

Minimal rusting on casing lid and minimal paint chipping on bottom of casing.

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: CHAAP-12

Well I.D.: 12WW22
Completed Depth: 13.46'
Measured Depth: 38.36'
Inspector:

☑ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material
Condition ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☐ Good ☐ Broken ☐ Cracked
Hinge Condition: ☑ Good ☐ less than 50% rusted ☐ more than 50% rusted

☐ FLUSH MOUNTED

Well Cover Present? ☐ Yes ☐ No
Condition: ☐ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water NA

CONCRETE PAD:

Visible? ☐ Yes ☐ No
Dimensions 4x4 Thickness 3" ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches) 4
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ☑ Yes ☐ No
Lock Functioning Properly ☑ Yes ☐ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☑ Yes ☐ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☑ No
Visual Obstruction? ☐ Yes ☑ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Job No.: 60256135
Client:
Site Location: CHAAP-12

Well I.D.: 12W02B3
Completed Depth: 25.14'
Measured Depth: 20.38'
Inspector:

☐ ABOVE GROUND

Protective Casing? ☑ Yes ☐ No
Material: Steel
Condition ☑ Good ☐ Broken ☐ Cracked
Lid Condition: ☑ Good ☐ Broken ☐ Cracked
Hinge Condition: ☑ Good ☑ less than 50% rusted ☐ more than 50% rusted

☐ FLUSH MOUNTED

Well Cover Present? ☐ Yes ☐ No
Condition: ☑ Good ☐ Broken ☐ Cracked
Condition of Sump: ☐ Clean ☐ Dry ☐ Standing Water

CONCRETE PAD:

Visible? ☐ Yes ☐ No
Dimensions 3x3 Thickness Unk ☐ Yes ☐ No
Sloped away from casing: ☐ Yes ☐ No
Check any of the following features that apply:
☐ Many Cracks ☐ Gap Around Casing ☐ Few Cracks ☐ Ponded Water ☐ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches) 4"
Condition: Good ☐ Yes ☐ No
Cap Present: ☑ Yes ☐ No
Well Lock Present: ☑ Yes ☐ No
Lock Functioning Properly ☑ Yes ☐ No
Bump Post ☑ Yes ☐ No
Well I.D. Visible? ☑ Yes ☐ No

WELL INTEGRITY

Bailer Present? ☐ Yes ☑ No
Visual Obstruction? ☐ Yes ☑ No
Is Well Open to Completed Depth? ☐ Yes ☐ No
Is silt present in well? ☐ Yes ☐ No
Is silt greater than 25% if well screen length? ☐ Yes ☐ No

COMMENTS:

Some paint peeling on well casing.

FIELD WELL INSPECTION FORM

Job Name: Longhorn
Well I.D.: 12WW24
Job No.: 60256135
Completed Depth: 26'
Client:
Measured Depth: Dry
Site Location: LHAAP-12
Inspector:

☑ ABOVE GROUND

Protective Casing? ❑ Yes ❑ No
Material: Steel
Condition ☑ Good ❑ Broken ❑ Cracked
Lid Condition: ☑ Good ❑ Broken ❑ Cracked
Hinge Condition: ☑ Good ❑ less than 50% rusted ❑ more than 50% rusted

❑ FLUSH MOUNTED

Well Cover Present? ❑ Yes ❑ No
Condition: ❑ Good ❑ Broken ❑ Cracked
Condition of Sump: ❑ Clean ❑ Dry ❑ Standing Water

CONCRETE PAD:

Visible? ☑ Yes ❑ No
Dimensions 3x3 Thickness Unk ❑ Yes ❑ No
Sloped away from casing: ❑ Yes ❑ No
Check any of the following features that apply:
❑ Many Cracks ❑ Gap Around Casing ❑ Few Cracks ❑ Ponded Water ❑ No Pad Present

INTERCASING (PVC)

Inner Diameter (inches) 4"
Condition: Good ❑ Yes ❑ No
Cap Present: ☑ Yes ❑ No
Well Lock Present: ☑ Yes ❑ No
Lock Functioning Properly ☑ Yes ❑ No
Bump Post ❑ Yes ❑ No
Well I.D. Visible? ❑ Yes ❑ No

WELL INTEGRITY

Bailer Present? ❑ Yes ☑ No
Visual Obstruction? ❑ Yes ☑ No
Is Well Open to Completed Depth? ❑ Yes ❑ No
Is silt present in well? ❑ Yes ❑ No
Is silt greater than 25% if well screen length? ❑ Yes ❑ No

COMMENTS:

Significant paint chipping on casing and one bump post, the one post also has some rusting, but not much

APPENDIX D: LABORATORY ANALYTICAL RESULTS

QUALITY CONTROL SUMMARY REPORT
LHAAP-12 AND LHAAP-16
FOR
GROUNDWATER TREATMENT PLANT
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:

U.S. Army Corps of Engineers

Prepared By:

AECOM

AECOM Technical Services

January 2013

Table of Contents

List of Tables

1 INTRODUCTION

AECOM reviewed two data packages from Microbac Laboratory Services, Marietta, OH. Groundwater samples were collected December 3, 2012 at Sites 12 and 16 at Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas. Data were reviewed for conformance to the requirements of the following guidance documents: Automated Data Review by Laboratory Data Consultants (ADR.net), United States Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, (EPA, July 2002), and EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, (EPA, June 2001).

1.1 Intended Use of Data

The objective of this sampling event for Site 12 is to monitor remedy performance by natural attenuation with land use controls. Site 16 is to evaluate plume behavior over time by monitoring natural attenuation.

Analyses requested included:

- SW8260 – Volatiles by GC/MS
- SW6850 – Perchlorates by LC/MS/MS

Table 2 lists the sample identifications and their associated laboratory identifications. Table 3 lists qualified results with the associated quality control parameter that was exceeded.

1.2 Preservation and Holding Times

Sample identification data were evaluated for agreement with the chain-of-custody (COC). All samples were received in appropriate containers, within the proper temperature range, in good condition, and with the required signatures.

16EW01-041212 missed hold times by 5 hours, the sample was originally in hold time but had to be re-run at a lower dilution. Positive hits are J qualified.

1.3 Calibrations

Initial calibration criteria modification includes RSD< or = to 30%, two compounds allowed up to 40%. If the continuing calibration verification (CCV) compound exceeds 30% drift, the compound is checked in the LCS, if both are outside recovery limits, the compound is rejected, R. If only the CCV exceeds recovery criteria and is less than ± 40% drift, then the compound is qualified J or UJ.

1.3.1 Continuing Calibration Verifications (CCV)

Table 3 shows qualified analytical data.

1.3.2 Blanks

Where contamination by a target analyte of one of the various blanks was found, if the sample result for an associated sample was non-detect or less than 5X (10X for common laboratory contaminants) the analyte concentration in the blank, the corresponding sample result for the

analyte was qualified B. Where the sample result for the affected analyte was greater than 5X the amount in the blank, no qualifier was applied.

All blanks show no contamination.

1.3.3 Surrogates

All surrogates are within criteria.

1.3.4 Laboratory Control Sample (LCS)

All LCS are within criteria.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project. The data quality objectives have been met for the project.

Table 1: Completeness by Method

Method	Total Analytes	No. of Rejected Results	% Completeness
SW8260	768	0	100
SW6850	8	0	100

Table 2: Field Sample Identification and Laboratory Identification

ClientSampleID	LabSampleID	Collected	SW8260	SW6850
12WW20-031212	L12120212-01	12/3/12	X	
12WW20-031212D	L12120212-02	12/3/12	X	
12WW21-031212	L12120212-03	12/3/12	X	
12WW21-031212MS	L12120212-04	12/3/12	X	
12WW21-031212SD	L12120212-05	12/3/12	X	
12WW23-031212	L12120212-06	12/3/12	X	
EB031212-01	L12120212-07	12/3/12	X	
12WW22-041212	L12120212-08	12/3/12	X	
TB031212-01	L12120213-01	12/4/2012	X	
16EW01-041212	L12120213-02	12/4/2012	X	X
16EW02-041212	L12120213-03	12/4/2012	X	X
16EW03-041212	L12120213-04	12/4/2012	X	X
16EW04-041212	L12120213-05	12/4/2012	X	X
16EW05-041212	L12120213-06	12/4/2012	X	X
16EW06-041212	L12120213-07	12/4/2012	X	X
16EW07-041212	L12120213-08	12/4/2012	X	X
16EW07-041212D	L12120213-09	12/4/2012	X	X
16EW08-041212	L12120213-10	12/4/2012	X	X

Table 3: Qualified Analytical Data

ClientSampleID	LabSampleID	AnalyteName	DVQualOverall	Reason
16EW01-041212	L12120213-02	1,2-Dichloroethane	J	Hold time exceedence
		cis-1,2-Dichloroethene	J	Hold time exceedence
		Trichloroethene	J	Hold time exceedence
		Vinyl chloride	J	Hold time exceedence

Microbac

Laboratory Report Number: L12120212

Linda Raabe
AECOM Technical Services, Inc.
112 East Pecan
San Antonio, TX 78205

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Erin Long – Project Chemist
(740) 373-4071
Erin.Long@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on December 17 2012

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: DOD Ver 4.1

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

The following discrepancies were noted:

Discrepancy	Resolution
Trip blank marked on chain of custody, but, we did not receive a set for this chain. CLS	

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
001-000222	H	2.0		J2317152933

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
12WW20-031212	L12120212-01	12/03/2012 14:10	12/05/2012 10:26
12WW20-031212D	L12120212-02	12/03/2012 14:10	12/05/2012 10:26
12WW21-031212	L12120212-03	12/03/2012 16:05	12/05/2012 10:26
12WW21-031212MS	L12120212-04	12/03/2012 16:05	12/05/2012 10:26
12WW21-031212SD	L12120212-05	12/03/2012 16:05	12/05/2012 10:26
12WW23-031212	L12120212-06	12/03/2012 17:10	12/05/2012 10:26
EB-031212-01	L12120212-07	12/03/2012 09:20	12/05/2012 10:26
12WW22-041212	L12120212-08	12/04/2012 08:00	12/05/2012 10:26

Microbac REPORT L12120212
PREPARED FOR AECOM Technical Services, Inc.
WORK ID:

1.0 Summary Data

1.1 Narratives

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	8260
Prep Batch Number(s):	416683	**Reviewer Name:**	Michelle Taylor
LRC Date:	2012-12-17 00:00:00		

Laboratory Data Package Cover Page

X	R1	Field chain-of-custody documentation;
X	R2	Sample identification cross-reference;
X	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
X	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
X	R5	Test reports/summary forms for blank samples;
X	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
X	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
X	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
X	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
X	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Michelle Taylor	Michelle Taylor	Data Specialist	2012-12-17 05:00:00

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	8260
Prep Batch Number(s):	416683	**Reviewer Name:**	Michelle Taylor
LRC Date:	2012-12-17 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports					
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?	X				
Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
Test reports/summary forms for blank samples	X				
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	X				

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	8260
Prep Batch Number(s):	416683	**Reviewer Name:**	Michelle Taylor
LRC Date:	2012-12-17 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?	X				
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			X		
Were MS/MSD analyzed at the appropriate frequency?			X		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
Were MS/MSD RPDs within laboratory QC limits?			X		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	8260
Prep Batch Number(s):	416683	**Reviewer Name:**	Michelle Taylor
LRC Date:	2012-12-17 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?	X				
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?		X			1
Was the ICAL curve verified for each analyte?		X			2
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?	X				
Were ion abundance data within the method-required QC limits?	X				
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?	X				
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?	X				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?			X		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	8260
Prep Batch Number(s):	416683	**Reviewer Name:**	Michelle Taylor
LRC Date:	2012-12-17 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	8260
Prep Batch Number(s):	416683	**Reviewer Name:**	Michelle Taylor
LRC Date:	2012-12-17 00:00:00		

the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

1) 1,2-Dibromo-3-Chloropropane and Dichlorodifluoromethane was below the lower control limits in the CCV analyzed 12/14/2012 on HPMS8.
2) Vinyl Chloride was below the lower control limit in the ICV analyzed 11/06/2012 on HPMS8.

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	6850
Prep Batch Number(s):	WG416116	**Reviewer Name:**	Mike Cochran
LRC Date:	2012-12-17 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Mike Cochran		Semivolatiles Supervisor	2012-12-17 15:02:20

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	6850
Prep Batch Number(s):	WG416116	**Reviewer Name:**	Mike Cochran
LRC Date:	2012-12-17 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports					
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?			X		
Were % moisture (or solids) reported for all soil and sediment samples?			X		
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples	X				
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	X				

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	6850
Prep Batch Number(s):	WG416116	**Reviewer Name:**	Mike Cochran
LRC Date:	2012-12-17 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			X		
Were MS/MSD analyzed at the appropriate frequency?			X		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
Were MS/MSD RPDs within laboratory QC limits?			X		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	6850
Prep Batch Number(s):	WG416116	**Reviewer Name:**	Mike Cochran
LRC Date:	2012-12-17 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?	X				
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?	X				
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?	X				
Were ion abundance data within the method-required QC limits?	X				
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?	X				
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?	X				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?			X		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	6850
Prep Batch Number(s):	WG416116	**Reviewer Name:**	Mike Cochran
LRC Date:	2012-12-17 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L12120212
Project Name:		**Method:**	6850
Prep Batch Number(s):	WG416116	**Reviewer Name:**	Mike Cochran
LRC Date:	2012-12-17 00:00:00		

the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

1.2 Certificate of Analysis

Certificate of Analysis

Sample #:	L12120212-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW20-031212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 20:52
Collect Date:	12/03/2012 14:10	**Dilution:**	1	**File ID:**	8M384172
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.410	J	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	J	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	85.9	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	98.5	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW20-031212D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 21:22
Collect Date:	12/03/2012 14:10	**Dilution:**	1	**File ID:**	8M384173
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.331	J	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.582	J	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	85	115	
1,2-Dichloroethane-d4	86.5	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	96.1	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW21-031212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 21:52
Collect Date:	12/03/2012 16:05	**Dilution:**	1	**File ID:**	8M384174
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	85	115	
1,2-Dichloroethane-d4	87.0	70	120	
Toluene-d8	105	85	120	
4-Bromofluorobenzene	99.5	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-04	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW21-031212MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 17:53
Collect Date:	12/03/2012 16:05	**Dilution:**	1	**File ID:**	8M384166
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	19.3		10.0	5.00	2.50
Benzene	71-43-2	20.1		1.00	0.250	0.125
Bromobenzene	108-86-1	19.6		1.00	0.250	0.125
Bromochloromethane	74-97-5	22.3		1.00	0.400	0.200
Bromodichloromethane	75-27-4	19.6		1.00	0.500	0.250
Bromoform	75-25-2	20.3		2.00	1.00	0.500
Bromomethane	74-83-9	20.2		2.00	1.00	0.500
2-Butanone	78-93-3	17.9		10.0	5.00	2.50
n-Butylbenzene	104-51-8	17.9		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	17.7		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	16.7		1.00	0.500	0.250
Carbon disulfide	75-15-0	24.3		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	18.9		1.00	0.500	0.250
Chlorobenzene	108-90-7	18.5		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	19.7		1.00	0.500	0.250
Chloroethane	75-00-3	20.3		2.00	1.00	0.500
Chloroform	67-66-3	19.8		1.00	0.250	0.125
Chloromethane	74-87-3	17.5		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	17.2		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	17.0		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.8		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	19.9		1.00	0.500	0.250
Dibromomethane	74-95-3	21.6		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	18.2		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	17.9		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.1		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	21.1		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.5		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	18.9		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	18.1		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	20.0		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	21.2		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	20.8		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	18.9		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.1		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	19.8		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.5		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.8		1.00	0.500	0.250
2-Hexanone	591-78-6	17.5		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	17.0		1.00	0.500	0.250
Isopropylbenzene	98-82-8	18.5		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	18.3		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	19.0		10.0	5.00	2.50
Methylene chloride	75-09-2	21.1		1.00	0.500	0.250
Naphthalene	91-20-3	19.7		1.00	0.400	0.200
n-Propylbenzene	103-65-1	17.9		1.00	0.250	0.125
Styrene	100-42-5	21.4		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	19.9		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	20.6		1.00	0.400	0.200
Tetrachloroethene	127-18-4	20.1		1.00	0.500	0.250
Toluene	108-88-3	19.9		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.6		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.9		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	18.7		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	22.1		1.00	0.500	0.250
Trichloroethene	79-01-6	22.1		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	19.3		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	19.5		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.6		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	19.8		1.00	0.500	0.250
Vinyl chloride	75-01-4	17.0		1.00	0.500	0.250
o-Xylene	95-47-6	19.1		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	40.0		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	87.5	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	100	75	120	

Certificate of Analysis

Sample #:	L12120212-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW21-031212SD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 18:23
Collect Date:	12/03/2012 16:05	**Dilution:**	1	**File ID:**	8M384167
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	18.2		10.0	5.00	2.50
Benzene	71-43-2	20.3		1.00	0.250	0.125
Bromobenzene	108-86-1	18.8		1.00	0.250	0.125
Bromochloromethane	74-97-5	22.5		1.00	0.400	0.200
Bromodichloromethane	75-27-4	19.7		1.00	0.500	0.250
Bromoform	75-25-2	20.9		2.00	1.00	0.500
Bromomethane	74-83-9	19.4		2.00	1.00	0.500
2-Butanone	78-93-3	18.0		10.0	5.00	2.50
n-Butylbenzene	104-51-8	18.1		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	17.4		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	17.0		1.00	0.500	0.250
Carbon disulfide	75-15-0	23.7		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	18.5		1.00	0.500	0.250
Chlorobenzene	108-90-7	18.8		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	19.7		1.00	0.500	0.250
Chloroethane	75-00-3	20.5		2.00	1.00	0.500
Chloroform	67-66-3	20.0		1.00	0.250	0.125
Chloromethane	74-87-3	17.8		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	16.7		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	16.8		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.2		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.1		1.00	0.500	0.250
Dibromomethane	74-95-3	21.2		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	17.7		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	17.8		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.1		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	21.1		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.4		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	19.3		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	18.5		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	19.6		1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	21.0		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	20.9		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	18.7		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.5		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.0		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.7		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.9		1.00	0.500	0.250
2-Hexanone	591-78-6	18.7		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	16.8		1.00	0.500	0.250
Isopropylbenzene	98-82-8	18.6		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	18.3		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	18.2		10.0	5.00	2.50
Methylene chloride	75-09-2	20.7		1.00	0.500	0.250
Naphthalene	91-20-3	20.0		1.00	0.400	0.200
n-Propylbenzene	103-65-1	17.4		1.00	0.250	0.125
Styrene	100-42-5	21.4		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.1		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	20.5		1.00	0.400	0.200
Tetrachloroethene	127-18-4	21.0		1.00	0.500	0.250
Toluene	108-88-3	20.4		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.6		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.5		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	18.9		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	22.6		1.00	0.500	0.250
Trichloroethene	79-01-6	21.7		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	19.2		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	19.8		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.6		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	19.5		1.00	0.500	0.250
Vinyl chloride	75-01-4	16.8		1.00	0.500	0.250
o-Xylene	95-47-6	19.5		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	39.8		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	85	115	
1,2-Dichloroethane-d4	88.9	70	120	
Toluene-d8	105	85	120	
4-Bromofluorobenzene	97.8	75	120	

Certificate of Analysis

Sample #:	L12120212-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW23-031212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 22:22
Collect Date:	12/03/2012 17:10	**Dilution:**	1	**File ID:**	8M384175
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	85	115	
1,2-Dichloroethane-d4	86.7	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	101	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	EB-031212-01	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 20:22
Collect Date:	12/03/2012 09:20	**Dilution:**	1	**File ID:**	8M384171
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	85.6	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	95.9	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-07	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	EB-031212-01	**Prep Method:**	6850	**Prep Date:**	12/07/2012 16:00
Matrix:	Water	**Analytical Method:**	6850	**Cal Date:**	12/05/2012 13:09
Workgroup #:	WG416116	**Analyst:**	JWR	**Run Date:**	12/07/2012 22:19
Collect Date:	12/03/2012 09:20	**Dilution:**	1	**File ID:**	1LM.LM18898
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Perchlorate	14797-73-0	0.200	U	0.400	0.200	0.100

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW22-041212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 22:51
Collect Date:	12/04/2012 08:00	**Dilution:**	1	**File ID:**	8M384176
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	86.1	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	97.6	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

Certificate of Analysis

Sample #:	L12120212-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW20-031212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 20:52
Collect Date:	12/03/2012 14:10	**Dilution:**	1	**File ID:**	8M384172
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.410	J	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	J	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	85.9	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	98.5	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW20-031212D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 21:22
Collect Date:	12/03/2012 14:10	**Dilution:**	1	**File ID:**	8M384173
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.331	J	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.582	J	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	85	115	
1,2-Dichloroethane-d4	86.5	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	96.1	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW21-031212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 21:52
Collect Date:	12/03/2012 16:05	**Dilution:**	1	**File ID:**	8M384174
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	85	115	
1,2-Dichloroethane-d4	87.0	70	120	
Toluene-d8	105	85	120	
4-Bromofluorobenzene	99.5	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-04	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW21-031212MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 17:53
Collect Date:	12/03/2012 16:05	**Dilution:**	1	**File ID:**	8M384166
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	19.3		10.0	5.00	2.50
Benzene	71-43-2	20.1		1.00	0.250	0.125
Bromobenzene	108-86-1	19.6		1.00	0.250	0.125
Bromochloromethane	74-97-5	22.3		1.00	0.400	0.200
Bromodichloromethane	75-27-4	19.6		1.00	0.500	0.250
Bromoform	75-25-2	20.3		2.00	1.00	0.500
Bromomethane	74-83-9	20.2		2.00	1.00	0.500
2-Butanone	78-93-3	17.9		10.0	5.00	2.50
n-Butylbenzene	104-51-8	17.9		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	17.7		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	16.7		1.00	0.500	0.250
Carbon disulfide	75-15-0	24.3		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	18.9		1.00	0.500	0.250
Chlorobenzene	108-90-7	18.5		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	19.7		1.00	0.500	0.250
Chloroethane	75-00-3	20.3		2.00	1.00	0.500
Chloroform	67-66-3	19.8		1.00	0.250	0.125
Chloromethane	74-87-3	17.5		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	17.2		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	17.0		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.8		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	19.9		1.00	0.500	0.250
Dibromomethane	74-95-3	21.6		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	18.2		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	17.9		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.1		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	21.1		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.5		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	18.9		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	18.1		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	20.0		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	21.2		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	20.8		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	18.9		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.1		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	19.8		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.5		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.8		1.00	0.500	0.250
2-Hexanone	591-78-6	17.5		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	17.0		1.00	0.500	0.250
Isopropylbenzene	98-82-8	18.5		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	18.3		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	19.0		10.0	5.00	2.50
Methylene chloride	75-09-2	21.1		1.00	0.500	0.250
Naphthalene	91-20-3	19.7		1.00	0.400	0.200
n-Propylbenzene	103-65-1	17.9		1.00	0.250	0.125
Styrene	100-42-5	21.4		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	19.9		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	20.6		1.00	0.400	0.200
Tetrachloroethene	127-18-4	20.1		1.00	0.500	0.250
Toluene	108-88-3	19.9		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.6		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.9		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	18.7		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	22.1		1.00	0.500	0.250
Trichloroethene	79-01-6	22.1		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	19.3		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	19.5		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.6		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	19.8		1.00	0.500	0.250
Vinyl chloride	75-01-4	17.0		1.00	0.500	0.250
o-Xylene	95-47-6	19.1		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	40.0		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	87.5	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	100	75	120	

Sample #:	L12120212-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW21-031212SD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 18:23
Collect Date:	12/03/2012 16:05	**Dilution:**	1	**File ID:**	8M384167
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	18.2		10.0	5.00	2.50
Benzene	71-43-2	20.3		1.00	0.250	0.125
Bromobenzene	108-86-1	18.8		1.00	0.250	0.125
Bromochloromethane	74-97-5	22.5		1.00	0.400	0.200
Bromodichloromethane	75-27-4	19.7		1.00	0.500	0.250
Bromoform	75-25-2	20.9		2.00	1.00	0.500
Bromomethane	74-83-9	19.4		2.00	1.00	0.500
2-Butanone	78-93-3	18.0		10.0	5.00	2.50
n-Butylbenzene	104-51-8	18.1		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	17.4		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	17.0		1.00	0.500	0.250
Carbon disulfide	75-15-0	23.7		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	18.5		1.00	0.500	0.250
Chlorobenzene	108-90-7	18.8		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	19.7		1.00	0.500	0.250
Chloroethane	75-00-3	20.5		2.00	1.00	0.500
Chloroform	67-66-3	20.0		1.00	0.250	0.125
Chloromethane	74-87-3	17.8		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	16.7		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	16.8		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.2		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.1		1.00	0.500	0.250
Dibromomethane	74-95-3	21.2		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	17.7		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	17.8		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.1		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	21.1		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.4		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	19.3		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	18.5		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	19.6		1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	21.0		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	20.9		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	18.7		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.5		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.0		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.7		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.9		1.00	0.500	0.250
2-Hexanone	591-78-6	18.7		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	16.8		1.00	0.500	0.250
Isopropylbenzene	98-82-8	18.6		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	18.3		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	18.2		10.0	5.00	2.50
Methylene chloride	75-09-2	20.7		1.00	0.500	0.250
Naphthalene	91-20-3	20.0		1.00	0.400	0.200
n-Propylbenzene	103-65-1	17.4		1.00	0.250	0.125
Styrene	100-42-5	21.4		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.1		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	20.5		1.00	0.400	0.200
Tetrachloroethene	127-18-4	21.0		1.00	0.500	0.250
Toluene	108-88-3	20.4		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.6		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.5		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	18.9		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	22.6		1.00	0.500	0.250
Trichloroethene	79-01-6	21.7		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	19.2		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	19.8		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.6		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	19.5		1.00	0.500	0.250
Vinyl chloride	75-01-4	16.8		1.00	0.500	0.250
o-Xylene	95-47-6	19.5		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	39.8		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	85	115	
1,2-Dichloroethane-d4	88.9	70	120	
Toluene-d8	105	85	120	
4-Bromofluorobenzene	97.8	75	120	

Certificate of Analysis

Sample #: L12120212-06
Client ID: 12WW23-031212
Matrix: Water
Workgroup #: WG416683
Collect Date: 12/03/2012 17:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 11/06/2012 13:19
Run Date: 12/14/2012 22:22
File ID: 8M384175

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	85	115	
1,2-Dichloroethane-d4	86.7	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	101	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	EB-031212-01	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 20:22
Collect Date:	12/03/2012 09:20	**Dilution:**	1	**File ID:**	8M384171
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	85.6	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	95.9	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12120212-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	12WW22-041212	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2012 13:19
Workgroup #:	WG416683	**Analyst:**	ADC	**Run Date:**	12/14/2012 22:51
Collect Date:	12/04/2012 08:00	**Dilution:**	1	**File ID:**	8M384176
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	5.00	U	10.0	5.00	2.50
Benzene	71-43-2	0.250	U	1.00	0.250	0.125
Bromobenzene	108-86-1	0.250	U	1.00	0.250	0.125
Bromochloromethane	74-97-5	0.400	U	1.00	0.400	0.200
Bromodichloromethane	75-27-4	0.500	U	1.00	0.500	0.250
Bromoform	75-25-2	1.00	U	2.00	1.00	0.500
Bromomethane	74-83-9	1.00	U	2.00	1.00	0.500
2-Butanone	78-93-3	5.00	U	10.0	5.00	2.50
n-Butylbenzene	104-51-8	0.500	U	1.00	0.500	0.250
sec-Butylbenzene	135-98-8	0.500	U	1.00	0.500	0.250
tert-Butylbenzene	98-06-6	0.500	U	1.00	0.500	0.250
Carbon disulfide	75-15-0	1.00	U	2.00	1.00	0.500
Carbon tetrachloride	56-23-5	0.500	U	1.00	0.500	0.250
Chlorobenzene	108-90-7	0.250	U	1.00	0.250	0.125
Chlorodibromomethane	124-48-1	0.500	U	1.00	0.500	0.250
Chloroethane	75-00-3	1.00	U	2.00	1.00	0.500
Chloroform	67-66-3	0.250	U	1.00	0.250	0.125
Chloromethane	74-87-3	1.00	U	2.00	1.00	0.500
2-Chlorotoluene	95-49-8	0.250	U	1.00	0.250	0.125
4-Chlorotoluene	106-43-4	0.500	U	1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	2.00	U	5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	0.500	U	1.00	0.500	0.250
Dibromomethane	74-95-3	0.500	U	1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	0.250	U	1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	0.500	U	1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	0.250	U	1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	0.500	U	1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	0.250	U	1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	0.500	U	1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	1.00	U	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	0.400	U	1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	0.400	U	1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	0.500	U	1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	0.500	U	1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	1.00	U	2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	0.500	U	1.00	0.500	0.250
Ethylbenzene	100-41-4	0.500	U	1.00	0.500	0.250
2-Hexanone	591-78-6	5.00	U	10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	0.500	U	1.00	0.500	0.250
Isopropylbenzene	98-82-8	0.500	U	1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	0.500	U	1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	5.00	U	10.0	5.00	2.50
Methylene chloride	75-09-2	0.500	U	1.00	0.500	0.250
Naphthalene	91-20-3	0.400	U	1.00	0.400	0.200
n-Propylbenzene	103-65-1	0.250	U	1.00	0.250	0.125
Styrene	100-42-5	0.250	U	1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	0.400	U	1.00	0.400	0.200
Tetrachloroethene	127-18-4	0.500	U	1.00	0.500	0.250
Toluene	108-88-3	0.500	U	1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	0.300	U	1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	0.400	U	1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	0.500	U	1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	0.500	U	1.00	0.500	0.250
Trichloroethene	79-01-6	0.500	U	1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	U	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	0.500	U	1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	0.500	U	1.00	0.500	0.250
Vinyl chloride	75-01-4	0.500	U	1.00	0.500	0.250
o-Xylene	95-47-6	0.500	U	1.00	0.500	0.250
m-,p-Xylene	179601-23-1	1.00	U	2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	86.1	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	97.6	75	120	

U	Analyte was not detected. The concentration is below the reported LOD.

2.1.1.2 QC Summary Data

Example 8260 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

RF = [(Ax) (Cis)] / [(Ais) (Cx)]

where:	Example
Ax = Area of the characteristic ion for the compound being measured:	3399156
Cis = Concentration of the specific internal standard (ug/mL)	25
Ais = Area of the characteristic ion of the specific internal standard	846471
Cx = Concentration of the compound in the standard being measured (ug/mL)	100
RF = Calculated Response Factor	**1.0039**

2.0 Calculating the concentration (C) of a compound in water using the average RF: *

Cx = [(Ax) (Cis) (Vn)(D)] / [(Ais) (RF) (Vs)]

where:	**Example**
Ax = Area of the characteristic ion for the compound being measured	**3122498**
Cis = Concentration of the specific internal standard (ug/L)	**25**
D = Dilution factor for sample as a multiplier (10x = 10)	**1**
Ais = Area of the characteristic ion of the specific internal standard	**611048**
RF = Average RF from the ICAL	**1.004**
Vs = Purge volume of sample (mL)	**10**
Vn = Nominal purge volume of sample (mL) (10.0 mL)	**10**
Cx = Concentration of the compound in the sample being measured (ug/L)	**127.2428**

3.0 Calculating the concentration (C) of a compound in soil using the average RF: *

Cx = [(Ax) (Cis) (Wn)(D)] / [(Ais) (RF) (Ws)]

where:	**Example**
Ax = Area of the characteristic ion for the compound being measured	**3122498**
Cis = Concentration of the specific internal standard (ug/L)	**25**
D = Dilution factor for sample as a multiplier (10x = 10)	**1**
Ais = Area of the characteristic ion of the specific internal standard	**611048**
RF = Average RF from the ICAL	**1.004**
Ws = Weight of sample purged (g)	**5**
Wn = Nominal purge weight (g) (5.0 g)	**5**
Cx = Concentration of the compound in the sample being measured (ug/L)	**127.2428**

Dry weight correction:

Percent solids (PCT_S)	**50**
Cd = (Cx) (100)/PCT_S	**254.4856**

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, y = mx + b

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

Step 2: Calculate y from Quantitation Report

y = 86550/593147 = 0.1459

Step 3: Solve for x

x = (y - b)/m = [(0.1459 -(- 0.00642)]/ 0.213 = 0.7152

Step 4: Solve for analyte concentration Cx

Cx = Cis (x) = (25.0)(0.7152) = 17.88

Example Spreadsheet Calculation:

Slope from curve, m:	**0.213**
Intercept from curve, b:	**-0.00642**
Area of analyte, Ax:	**86550**
Area of Internal Standard , Ais:	**593147**
Concentration of IS, Cis	**25.00**
Response Ratio:	**0.145917**
Amount Ratio:	**0.715195**
Concentration:	**17.87988**
Units of Internal Standard:	**ug/L**

5.0 Concentration from Quadratic Regression

Step 1 - Retrieve Curve Data from Plot, y = Ax^2 + Bx + C
Where:
Ax^2 + Bx + (C - y) = 0
A, B, C = constants from the ICAL quadratic regression
y = Response ratio = Area of analyte/Area of internal standard (IS)
x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

y = Ax/Ais

Step 3: Solve for x using the quadratic formula
Ax^2 + Bx + C - y = 0

$$x = \frac{b \pm \sqrt{\left(b^2 - 4a(c - y)\right)}}{2a}$$ (Two possible solutions)

Step 4: Solve for analyte concentration Cx

Cx = (Cis)(Amount ratio)

Example Spreadsheet Calculation:

Value of A from plot:	**-0.00629**	
Value of B from plot:	**0.511**	
Value of C from plot:	**-0.0276**	
Area of unknown from quantitation report:	**293821**	
Area of IS from quantiation report:	**784848**	
Response ratio, y:	**0.374367**	
C - y:	**-0.40197**	
Root 1 - Computed amount ratio , X1:	**80.44567**	
Root 2 - Computed amount ratio , X2:	**0.794396**	use this solution
Concentration of IS, Cis:	**25.00**	
Concentration of analyte, Cx:	**19.86**	ug/L

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 012512
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 14
Method: 624 SOP: MSV10 Rev: 8
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13
Maintenance Log ID: 40490

Internal Standard: STD49574 Surrogate Standard: STD49574
CCV: STD49665 LCS: STD49523 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG387881(ICAL), WG387845

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M376554	WG387844-01 50ng BFB STD 8260	NA	1	1	STD49582	01/25/12 10:52
8M376555	WG387844-02 50ug/L CCV STD 8260	NA	1	1	STD49665	01/25/12 11:14
8M376556	WG387XXX-01 100ug/L A9 CCV STD 8260	NA	1	1	STD49484	01/25/12 11:43
8M376557	WG387845-01 VBLK0125 BLANK STD 826	NA	1	1		01/25/12 12:13
8M376558	WG387881-01 5ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 12:43
8M376559	WG387881-02 20ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 13:28
8M376560	WG387881-03 50ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 13:58
8M376561	WG387881-04 100ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 14:29
8M376562	WG387881-05 200ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 14:59
8M376563	WG387881-06 300ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 15:29
8M376564	WG387881-07 400ug/L A9FOO STD	NA	1	1	STD49721	01/25/12 15:59
8M376565	WG387881-08 100ug/L A9FOO ALT	NA	1	1	STD49721	01/25/12 16:29
8M376566	WG387845-02 100ug/L A9FOO LCS	NA	1	1	STD49721	01/25/12 16:59
8M376567	WG387845-03 100ug/L A9FOO LCSDUP	NA	1	1	STD49721	01/25/12 17:29
8M376568	WG387845-04 100ug/L A9FOO P\&A	NA	1	1	STD49721	01/25/12 17:59
8M376569	WG387845-05 100ug/L A9FOO P\&A	NA	1	1	STD49721	01/25/12 18:29

Approved: February 02, 2012

Page: 1

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 110612
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 15
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13

Maintenance Log ID: 43902

Internal Standard: STD54450 Surrogate Standard: STD54450
CCV: STD54419 LCS: STD54557 MS/MSD: STD54557

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG413483, WG413484

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M383305	WG413483-01 BFB 50ng 8260	NA	1	1	STD54518	11/06/12 07:53
8M383306	RINSE	NA	1	1	STD54657	11/06/12 08:18
8M383307	WG413483-02 0.3ug/L STD 8260	NA	1	1	STD54657	11/06/12 08:48
8M383308	WG413483-03 0.4ug/L STD 8260	NA	1	1	STD54657	11/06/12 09:18
8M383309	WG413483-04 1.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 09:47
8M383310	WG413483-05 2.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 10:17
8M383311	WG413483-06 5.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 10:47
8M383312	WG413483-07 20.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 11:17
8M383313	WG413483-08 50.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 11:47
8M383314	WG413483-09 100.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 12:17
8M383315	WG413483-10 200.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 12:48
8M383316	WG413483-11 300.0ug/L STD 8260	NA	1	1	STD54657	11/06/12 13:19
8M383317	RINSE	NA	1	1	STD54657	11/06/12 13:51
8M383318	WG413483-12 50.0ug/L ALTSRC 8260	NA	1	1	STD54557	11/06/12 14:23
8M383319	RINSE	NA	1	1	STD54557	11/06/12 15:06
8M383320	WG413606-01 50ng/L BFB STD 8260	NA	1	1	STD54557	11/06/12 15:36
8M383321	WG413606-02 50ug/L CCV STD 8260	NA	1	1	STD54557	11/06/12 16:03
8M383322	WG413XXX-01 100ug/L A9FOO CCV	NA	1	1	STD54557	11/06/12 16:35
8M383323	WG413484-01 VBLK 1106 8260	NA	1	1		11/06/12 17:07
8M383324	WG413483-12 50ug/L ALTSRC STD	NA	1	1	STD54557	11/06/12 17:39
8M383325	WG413484-02 20ug/L LCS STD	NA	1	1	STD54557	11/06/12 18:10
8M383326	WG413484-03 20ug/L LCSDUP STD	NA	1	1	STD54557	11/06/12 18:41
8M383327	L12101000-11 B 250X 826-SPE	<2	1	250		11/06/12 19:12
8M383328	L12101000-12 B 1000X 826-SPE	<2	1	1000		11/06/12 19:43
8M383329	L12100941-07 B 826-SPE	<2	1	1		11/06/12 20:13
8M383330	L12110031-01 10X 826-TC	NA	17	10		11/06/12 20:44
8M383331	L12101013-12 A 826-SPE	<2	1	1		11/06/12 21:14
8M383332	L12101013-01 A 826-SPE	<2	1	1		11/06/12 21:44
8M383333	L12101013-02 A 826-SPE	<2	1	1		11/06/12 22:14
8M383334	L12101013-03 A 826-SPE	<2	1	1		11/06/12 22:44
8M383335	L12101013-04 A 826-SPE	<2	1	1		11/06/12 23:14
8M383336	L12101013-05 A 826-SPE	<2	1	1		11/06/12 23:44
8M383337	L12101013-06 A 826-SPE	<2	1	1		11/07/12 00:14
8M383338	L12101013-07 A 826-SPE	<2	1	1		11/07/12 00:44

Approved: November 07, 2012

Page: 1

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 110612
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 15
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13

Maintenance Log ID: 43902

Internal Standard: STD54450 Surrogate Standard: STD54450
CCV: STD54419 LCS: STD54557 MS/MSD: STD54557

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG413483, WG413484

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M383339	L12101013-08 A 826-SPE	<2	1	1		11/07/12 01:14
8M383340	L12101013-09 A 826-SPE	<2	1	1		11/07/12 01:44
8M383341	L12101013-10 A 826-SPE	<2	1	1		11/07/12 02:14
8M383342	L12101013-11 A 826-SPE	<2	1	1		11/07/12 02:44
8M383343	RINSE	NA	1	1		11/07/12 03:14
8M383344	WG413484-04 624-BLK	NA	1	1		11/07/12 03:44
8M383345	WG413532-01 TC-BLK	NA	17	10		11/07/12 08:25
8M383346	L12110117-02 A 624-SPE	<2	2	1		11/07/12 08:55
8M383347	L12110117-03 A 624-SPE	<2	2	1		11/07/12 09:25
8M383348	L12110133-01 A 624-SPE	<2	2	1		11/07/12 09:55
8M383349	L12110134-01 A 624-SPE	<2	2	1		11/07/12 10:26
8M383350	RINSE	NA	2	1		11/07/12 10:56

Comments

Seq.	Rerun	Dil.	Reason	Analytes
14	X			
File ID: 8M383318				
dnr rr no surrogates				

Approved: November 07, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 121412
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 15
Method: 624 SOP: MSV10 Rev: 9
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13
Maintenance Log ID: 44310

Internal Standard: STD54975 Surrogate Standard: STD54975
CCV: STD54685 LCS: STD55359 MS/MSD: STD55359

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG416683,WG416691

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M384161	WG416681-01 50ng BFB STD 8260	NA	1	1	STD54518	12/14/12 15:25
8M384162	WG416681-02 50ug/L CCV STD 8260	NA	1	1	STD54685	12/14/12 15:52
8M384163	WG416XXX-01 100ug/L A9FOO 8260	NA	1	1	STDXXXXX	12/14/12 16:22
8M384164	WG416683-01 BLANK 12/14 8260	NA	1	1		12/14/12 16:53
8M384165	WG416683-02 20ug/L LCS 8260	NA	1	1	STD55359	12/14/12 17:23
8M384166	L12120212-04 A MS 826-LOW	<2	1	1	STD55359	12/14/12 17:53
8M384167	L12120212-05 A MSD 826-LOW	<2	1	1	STD55359	12/14/12 18:23
8M384168	L12120164-01 B 826-BETX	<2	1	1		12/14/12 18:53
8M384169	L12120061-03 A 826-LOW	<2	1	1		12/14/12 19:23
8M384170	L12120085-02 A 826-LOW	<2	1	1		12/14/12 19:53
8M384171	L12120212-07 A 826-LOW	<2	1	1		12/14/12 20:22
8M384172	L12120212-01 A 826-LOW	<2	1	1		12/14/12 20:52
8M384173	L12120212-02 A 826-LOW	<2	1	1		12/14/12 21:22
8M384174	L12120212-03 A 826-LOW	<2	1	1		12/14/12 21:52
8M384175	L12120212-06 A 826-LOW	<2	1	1		12/14/12 22:22
8M384176	L12120212-08 A 826-LOW	<2	1	1		12/14/12 22:51
8M384177	L12120061-01 A 826-LOW	<2	1	1		12/14/12 23:21
8M384178	L12120085-01 A 50X 826-LOW	<2	1	1		12/14/12 23:51
8M384179	L12120188-08 A 826-SPE7	<2	1	1		12/15/12 00:20
8M384180	L12120188-09 A 826-SPE7	<2	1	1		12/15/12 00:50
8M384181	L12120188-10 A 826-SPE7	<2	1	1		12/15/12 01:20
8M384182	L12120188-11 A 826-SPE7	<2	1	1		12/15/12 01:50
8M384183	L12120188-12 A 826-SPE7	<2	1	1		12/15/12 02:19
8M384184	L12120188-13 A 826-SPE7	<2	1	1		12/15/12 02:49
8M384185	WG416691-01 20ug/L LCS 624	NA	2	1	STD55359	12/15/12 03:19
8M384186	WG416691-02 20ug/L LCSDUP 624	NA	2	1	STD55359	12/15/12 03:48
8M384187	RINSE	NA	2	1		12/15/12 04:18
8M384188	WG416691-03 624-BLK	NA	2	1		12/15/12 04:48
8M384189	L12120396-03 B 624-SPE	<2	2	1		12/15/12 05:17
8M384190	L12120311-01 A 624-SPE	<2	2	1		12/15/12 05:47
8M384191	L12120316-01 A 624-SPE	<2	2	1		12/15/12 06:17
8M384192	L12120316-02 A 624-SPE	<2	2	1		12/15/12 06:46
8M384193	L12120316-03 A 624-SPE	<2	2	1		12/15/12 07:16
8M384194	L12120392-01 A 624-SPE	<2	2	1		12/15/12 07:46

Approved: December 17, 2012

Page: 1

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 121412
Analyst1: ADC Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 15
Method: 624 SOP: MSV10 Rev: 9
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 13
Maintenance Log ID: 44310

Internal Standard: STD54975 Surrogate Standard: STD54975
CCV: STD54685 LCS: STD55359 MS/MSD: STD55359

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG416683,WG416691

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M384195	L12120393-01 A 624-SPE	<2	2	1		12/15/12 08:15
8M384196	L12120357-01 A 624	<2	2	1		12/15/12 08:45
8M384197	L12120357-02 A 624	<2	2	1		12/15/12 09:15
8M384198	L12120342-01 A 624	7	2	1		12/15/12 09:44
8M384199	L12120360-01 A 624	7	2	1		12/15/12 10:14
8M384200	L12120360-02 A 624	8	2	1		12/15/12 10:44
8M384201	L12120396-01 A 624	7	2	1		12/15/12 11:13
8M384202	L12120416-01 A 624-SPE1	7	2	1		12/15/12 11:43
8M384203	L12120411-02 A 624-SPE	7	2	1		12/15/12 12:13
8M384204	RINSE	NA	2	1		12/15/12 12:43
8M384205	RINSE	NA	2	1		12/15/12 13:13
8M384206	RINSE	NA	2	1		12/15/12 13:43

Approved: December 17, 2012

Microbac Laboratories Inc.

Data Checklist

Date: 25-JAN-2012
Analyst: ADC
Analyst: NA
Method: 8260
Instrument: HPMS8
Curve Workgroup: WG387881
Runlog ID: 44940
Analytical Workgroups: WG387845

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ADC
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
02-FEB-2012

Secondary Reviewer:
02-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-02-2012 15:04:22

Microbac Laboratories Inc.

Data Checklist

Date: 14-DEC-2012
Analyst: ADC
Analyst: NA
Method: 8260/624
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 50527
Analytical Workgroups: WG416683,WG416691

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	MES
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	MES
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer: 17-DEC-2012

Secondary Reviewer: 17-DEC-2012

CHECKLIST1 - Modified 03/05/2008
Generated: DEC-17-2012 12:52:16

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG416683

Login Number: L12120212

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
12WW20-031212	01	12/03/12					12/14/2012	11.3	14		12/14/12	11.3	14	
12WW20-031212D	02	12/03/12					12/14/2012	11.3	14		12/14/12	11.3	14	
12WW21-031212	03	12/03/12					12/14/2012	11.2	14		12/14/12	11.2	14	
12WW21-031212MS	04	12/03/12					12/14/2012	11.1	14		12/14/12	11.1	14	
12WW21-031212SD	05	12/03/12					12/14/2012	11.1	14		12/14/12	11.1	14	
12WW23-031212	06	12/03/12					12/14/2012	11.2	14		12/14/12	11.2	14	
EB-031212-01	07	12/03/12					12/14/2012	11.5	14		12/14/12	11.5	14	
12WW22-041212	08	12/04/12					12/14/2012	10.6	14		12/14/12	10.6	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2701651
Report generated 12/17/2012 14:18

Login Number: L12120212
Instrument Id: HPMS8
Workgroup (AAB#): WG416683

Method: 8260
CAL ID: HPMS8-06-NOV-12
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L12120212-01	1.00	01	85.9	102	98.5	104
L12120212-02	1.00	01	86.5	100	96.1	104
L12120212-03	1.00	01	87.0	101	99.5	105
L12120212-04	1.00	01	87.5	102	100	104
L12120212-05	1.00	01	88.9	103	97.8	105
L12120212-06	1.00	01	86.7	100	101	104
L12120212-07	1.00	01	85.6	102	95.9	104
L12120212-08	1.00	01	86.1	102	97.6	104
WG416683-01	1.00	01	89.9	103	97.7	106
WG416683-02	1.00	01	88.7	102	96.6	103

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	70	-	120
2 - Dibromofluoromethane	85	-	115
3 - 4-Bromofluorobenzene	75	-	120
4 - Toluene-d8	85	-	120

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 2701240
Report generated: 12/17/2012 14:19

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12120212
Blank File ID: 8M384164
Prep Date: 12/14/12 16:53
Analyzed Date: 12/14/12 16:53
Analyst: ADC

Work Group: WG416683
Blank Sample ID: WG416683-01
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG416683-02	8M384165	12/14/12 17:23	01
12WW21-031212MS	L12120212-04	8M384166	12/14/12 17:53	01
12WW21-031212SD	L12120212-05	8M384167	12/14/12 18:23	01
EB-031212-01	L12120212-07	8M384171	12/14/12 20:22	01
12WW20-031212	L12120212-01	8M384172	12/14/12 20:52	01
12WW20-031212D	L12120212-02	8M384173	12/14/12 21:22	01
12WW21-031212	L12120212-03	8M384174	12/14/12 21:52	01
12WW23-031212	L12120212-06	8M384175	12/14/12 22:22	01
12WW22-041212	L12120212-08	8M384176	12/14/12 22:51	01

Report Name: BLANK_SUMMARY
PDF File ID: 2701652
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L12120212 Prep Date:12/14/12 16:53 Sample ID:WG416683-01
Instrument ID:HPMS8 Run Date:12/14/12 16:53 Prep Method:5030B/5030C/503
File ID:8M384164 Analyst:ADC Method:8260B
Workgroup (AAB#):WG416683 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-06-NOV-12

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	2.00	0.500	1	U
Bromomethane	0.500	2.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	2.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	2.00	0.500	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	2.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	2.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	2.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U
Isopropylbenzene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 2701653
17-DEC-2012 14:18

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L12120212 Prep Date: 12/14/12 16:53 Sample ID: WG416683-01
Instrument ID: HPMS8 Run Date: 12/14/12 16:53 Prep Method: 5030B/5030C/503
File ID: 8M384164 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG416683 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-06-NOV-12

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	1.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	2.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	2.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	103	85 - 115	PASS
1,2-Dichloroethane-d4	89.9	70 - 120	PASS
Toluene-d8	106	85 - 120	PASS
4-Bromofluorobenzene	97.7	75 - 120	PASS

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 2701653
17-DEC-2012 14:18

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12120212 Run Date: 12/14/2012 Sample ID: WG416683-02
Instrument ID: HPMS8 Run Time: 17:23 Prep Method: 5030B/5030C/503
File ID: 8M384165 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG416683 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD55359 Cal ID: HPMS8-06-NOV-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	19.8	99.2	40 - 140	
Benzene	20.0	19.1	95.7	80 - 120	
Bromobenzene	20.0	17.6	87.8	75 - 125	
Bromochloromethane	20.0	20.3	101	65 - 130	
Bromodichloromethane	20.0	18.4	91.9	75 - 120	
Bromoform	20.0	20.1	100	70 - 130	
Bromomethane	20.0	16.7	83.5	30 - 145	
2-Butanone	20.0	19.1	95.3	30 - 150	
n-Butylbenzene	20.0	16.7	83.4	70 - 135	
sec-Butylbenzene	20.0	16.2	81.1	70 - 125	
tert-Butylbenzene	20.0	15.6	77.8	70 - 130	
Carbon disulfide	20.0	23.4	117	35 - 160	
Carbon tetrachloride	20.0	16.7	83.5	65 - 140	
Chlorobenzene	20.0	18.2	91.0	80 - 120	
Chlorodibromomethane	20.0	19.2	96.1	60 - 135	
Chloroethane	20.0	17.8	89.0	60 - 135	
Chloroform	20.0	18.8	94.0	65 - 135	
Chloromethane	20.0	14.1	70.4	40 - 125	
2-Chlorotoluene	20.0	16.3	81.4	75 - 125	
4-Chlorotoluene	20.0	15.4	77.1	75 - 130	
1,2-Dibromo-3-chloropropane	20.0	16.3	81.6	50 - 130	
1,2-Dibromoethane	20.0	19.0	95.2	80 - 120	
Dibromomethane	20.0	20.4	102	75 - 125	
1,2-Dichlorobenzene	20.0	16.7	83.3	70 - 120	
1,3-Dichlorobenzene	20.0	16.7	83.5	75 - 125	
1,4-Dichlorobenzene	20.0	17.7	88.5	75 - 125	
Dichlorodifluoromethane	20.0	14.5	72.7	30 - 155	
1,1-Dichloroethane	20.0	18.2	91.0	70 - 135	
1,2-Dichloroethane	20.0	17.9	89.4	70 - 130	
1,1-Dichloroethene	20.0	16.4	81.8	70 - 130	
cis-1,2-Dichloroethene	20.0	19.5	97.5	70 - 125	
trans-1,2-Dichloroethene	20.0	18.1	90.4	60 - 140	
1,2-Dichloropropane	20.0	20.1	101	75 - 125	
1,3-Dichloropropane	20.0	19.6	97.8	75 - 125	
2,2-Dichloropropane	20.0	15.5	77.3	70 - 135	
cis-1,3-Dichloropropene	20.0	20.3	101	70 - 130	
trans-1,3-Dichloropropene	20.0	18.6	93.1	55 - 140	
1,1-Dichloropropene	20.0	18.2	91.0	75 - 130	
Ethylbenzene	20.0	19.1	95.3	75 - 125	
2-Hexanone	20.0	17.1	85.5	55 - 130	
Hexachlorobutadiene	20.0	15.1	75.6	50 - 140	

LCS - Modified 03/06/2008
PDF File ID: 2701234
Report generated: 12/17/2012 14:18

Login Number: L12120212 Run Date: 12/14/2012 Sample ID: WG416683-02
Instrument ID: HPMS8 Run Time: 17:23 Prep Method: 5030B/5030C/503
File ID: 8M384165 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG416683 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD55359 Cal ID: HPMS8-06-NOV-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Isopropylbenzene	20.0	17.5	87.4	75 - 125	
p-Isopropyltoluene	20.0	17.1	85.7	75 - 130	
4-Methyl-2-pentanone	20.0	18.7	93.6	60 - 135	
Methylene chloride	20.0	18.8	93.9	55 - 140	
Naphthalene	20.0	18.6	93.2	55 - 140	
n-Propylbenzene	20.0	16.5	82.4	70 - 130	
Styrene	20.0	20.7	104	65 - 135	
1,1,1,2-Tetrachloroethane	20.0	19.5	97.4	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	18.8	94.1	65 - 130	
Tetrachloroethene	20.0	19.4	97.2	45 - 150	
Toluene	20.0	18.9	94.7	75 - 120	
1,2,3-Trichlorobenzene	20.0	17.4	87.1	55 - 140	
1,2,4-Trichlorobenzene	20.0	17.6	88.0	65 - 135	
1,1,1-Trichloroethane	20.0	17.4	86.9	65 - 130	
1,1,2-Trichloroethane	20.0	21.3	106	75 - 125	
Trichloroethene	20.0	20.1	100	70 - 125	
Trichlorofluoromethane	20.0	16.1	80.4	60 - 145	
1,2,3-Trichloropropane	20.0	18.3	91.6	75 - 125	
1,2,4-Trimethylbenzene	20.0	18.5	92.5	75 - 130	
1,3,5-Trimethylbenzene	20.0	18.5	92.7	75 - 130	
Vinyl chloride	20.0	14.4	72.0	50 - 145	
o-Xylene	20.0	18.8	93.8	80 - 120	
m-,p-Xylene	40.0	38.0	94.9	75 - 130	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	85 - 115	PASS
1,2-Dichloroethane-d4	88.7	70 - 120	PASS
Toluene-d8	103	85 - 120	PASS
4-Bromofluorobenzene	96.6	75 - 120	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2701234
Report generated: 12/17/2012 14:18

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12120212 Cal ID: HPMS8- 06-NOV-12 Worknum: WG416683

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L12120212-03 File ID: 8M384174 Dil: 1 Method: 5035A

Sample ID: L12120212-04 MS File ID: 8M384166 Dil: 1 Matrix: 8260B

Sample ID: L12120212-05 MSD File ID: 8M384167 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Acetone	U	20.0	19.3	96.6	20.0	18.2	91	5.99	40 - 140	30	
Benzene	U	20.0	20.1	100	20.0	20.3	102	1.24	80 - 120	30	
Bromobenzene	U	20.0	19.6	97.9	20.0	18.8	94.1	3.92	75 - 125	30	
Bromochloromethane	U	20.0	22.3	111	20.0	22.5	113	1.23	65 - 130	30	
Bromodichloromethane	U	20.0	19.6	98.2	20.0	19.7	98.6	0.444	75 - 120	30	
Bromoform	U	20.0	20.3	101	20.0	20.9	105	3.19	70 - 130	30	
Bromomethane	U	20.0	20.2	101	20.0	19.4	97	4.18	30 - 145	30	
2-Butanone	U	20.0	17.9	89.5	20.0	18.0	90	0.621	30 - 150	30	
n-Butylbenzene	U	20.0	17.9	89.3	20.0	18.1	90.3	1.16	70 - 135	30	
sec-Butylbenzene	U	20.0	17.7	88.5	20.0	17.4	86.9	1.84	70 - 125	30	
tert-Butylbenzene	U	20.0	16.7	83.6	20.0	17.0	85.2	1.92	70 - 130	30	
Carbon disulfide	U	20.0	24.3	121	20.0	23.7	118	2.42	35 - 160	30	
Carbon tetrachloride	U	20.0	18.9	94.6	20.0	18.5	92.7	2.00	65 - 140	30	
Chlorobenzene	U	20.0	18.5	92.3	20.0	18.8	93.9	1.73	80 - 120	30	
Chlorodibromomethane	U	20.0	19.7	98.7	20.0	19.7	98.7	0.0109	60 - 135	30	
Chloroethane	U	20.0	20.3	102	20.0	20.5	102	0.866	60 - 135	30	
Chloroform	U	20.0	19.8	98.8	20.0	20.0	99.9	1.07	65 - 135	30	
Chloromethane	U	20.0	17.5	87.6	20.0	17.8	88.9	1.47	40 - 125	30	
2-Chlorotoluene	U	20.0	17.2	85.9	20.0	16.7	83.7	2.61	75 - 125	30	
4-Chlorotoluene	U	20.0	17.0	85.2	20.0	16.8	84.1	1.26	75 - 130	30	
1,2-Dibromo-3-chloropropane	U	20.0	16.8	84.2	20.0	18.2	90.9	7.68	50 - 130	30	
1,2-Dibromoethane	U	20.0	19.9	99.7	20.0	20.1	100	0.727	80 - 120	30	
Dibromomethane	U	20.0	21.6	108	20.0	21.2	106	1.65	75 - 125	30	
1,2-Dichlorobenzene	U	20.0	18.2	91	20.0	17.7	88.5	2.89	70 - 120	30	
1,3-Dichlorobenzene	U	20.0	17.9	89.4	20.0	17.8	88.8	0.684	75 - 125	30	
1,4-Dichlorobenzene	U	20.0	19.1	95.5	20.0	19.1	95.5	0.0256	75 - 125	30	
Dichlorodifluoromethane	U	20.0	21.1	106	20.0	21.1	105	0.0726	30 - 155	30	
1,1-Dichloroethane	U	20.0	19.5	97.7	20.0	19.4	96.9	0.800	70 - 135	30	
1,2-Dichloroethane	U	20.0	18.9	94.5	20.0	19.3	96.6	2.15	70 - 130	30	
1,1-Dichloroethene	U	20.0	18.1	90.5	20.0	18.5	92.4	2.07	70 - 130	30	
cis-1,2-Dichloroethene	U	20.0	20.8	104	20.0	20.8	104	0.166	70 - 125	30	
trans-1,2-Dichloroethene	U	20.0	20.0	99.8	20.0	19.6	97.8	2.03	60 - 140	30	
1,2-Dichloropropane	U	20.0	21.2	106	20.0	21.0	105	1.11	75 - 125	30	
1,3-Dichloropropane	U	20.0	20.8	104	20.0	20.9	104	0.475	75 - 125	30	
2,2-Dichloropropane	U	20.0	18.9	94.6	20.0	18.7	93.4	1.32	70 - 135	30	
cis-1,3-Dichloropropene	U	20.0	22.1	111	20.0	22.5	112	1.60	70 - 130	30	
trans-1,3-Dichloropropene	U	20.0	19.8	99	20.0	20.0	100	1.16	55 - 140	30	
1,1-Dichloropropene	U	20.0	19.5	97.4	20.0	19.7	98.5	1.10	75 - 130	30	
Ethylbenzene	U	20.0	19.8	99.2	20.0	19.9	99.3	0.0490	75 - 125	30	
2-Hexanone	U	20.0	17.5	87.4	20.0	18.7	93.4	6.54	55 - 130	30	
Hexachlorobutadiene	U	20.0	17.0	84.9	20.0	16.8	83.8	1.33	50 - 140	30	

MS_MSD - Modified 03/06/2008

PDF File ID: 2701235

Report generated 12/17/2012 14:18

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12120212 Cal ID: HPMS8 06-NOV-12 Worknum: WG416683

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L12120212-03 File ID: 8M384174 Dil: 1 Method: 5035A

Sample ID: L12120212-04 MS File ID: 8M384166 Dil: 1 Matrix: 8260B

Sample ID: L12120212-05 MSD File ID: 8M384167 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Isopropylbenzene	U	20.0	18.5	92.6	20.0	18.6	93.2	0.686	75 - 125	30	
p-Isopropyltoluene	U	20.0	18.3	91.5	20.0	18.3	91.5	0.0286	75 - 130	30	
4-Methyl-2-pentanone	U	20.0	19.0	94.9	20.0	18.2	90.8	4.41	60 - 135	30	
Methylene chloride	U	20.0	21.1	105	20.0	20.7	103	1.76	55 - 140	30	
Naphthalene	U	20.0	19.7	98.7	20.0	20.0	100	1.47	55 - 140	30	
n-Propylbenzene	U	20.0	17.9	89.4	20.0	17.4	87.1	2.55	70 - 130	30	
Styrene	U	20.0	21.4	107	20.0	21.4	107	0.319	65 - 135	30	
1,1,1,2-Tetrachloroethane	U	20.0	19.9	99.5	20.0	20.1	100	0.742	80 - 130	30	
1,1,2,2-Tetrachloroethane	U	20.0	20.6	103	20.0	20.5	102	0.469	65 - 130	30	
Tetrachloroethene	U	20.0	20.1	101	20.0	21.0	105	4.23	45 - 150	30	
Toluene	U	20.0	19.9	99.5	20.0	20.4	102	2.24	75 - 120	30	
1,2,3-Trichlorobenzene	U	20.0	18.6	93.1	20.0	18.6	93.1	0.0454	55 - 140	30	
1,2,4-Trichlorobenzene	U	20.0	18.9	94.6	20.0	18.5	92.7	1.95	65 - 135	30	
1,1,1-Trichloroethane	U	20.0	18.7	93.6	20.0	18.9	94.6	1.06	65 - 130	30	
1,1,2-Trichloroethane	U	20.0	22.1	110	20.0	22.6	113	2.23	75 - 125	30	
Trichloroethene	U	20.0	22.1	110	20.0	21.7	109	1.69	70 - 125	30	
Trichlorofluoromethane	U	20.0	19.3	96.7	20.0	19.2	95.9	0.858	60 - 145	30	
1,2,3-Trichloropropane	U	20.0	19.5	97.4	20.0	19.8	98.9	1.54	75 - 125	30	
1,2,4-Trimethylbenzene	U	20.0	19.6	98	20.0	19.6	98	0.0241	75 - 130	30	
1,3,5-Trimethylbenzene	U	20.0	19.8	98.8	20.0	19.5	97.7	1.12	75 - 130	30	
Vinyl chloride	U	20.0	17.0	84.8	20.0	16.8	84.2	0.640	50 - 145	30	
o-Xylene	U	20.0	19.1	95.3	20.0	19.5	97.6	2.35	80 - 120	30	
m-,p-Xylene	U	40.0	40.0	100	40.0	39.8	99.4	0.636	75 - 130	30	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2701235

Report generated 12/17/2012 14:18

BFB

Login Number: L12120212
Instrument: HPMS8
Analyst: ADC
Workgroup: WG387844

Tune ID: WG387844-01
Run Date: 01/25/2012
Run Time: 10:52
File ID: 8M376554
Cal ID: HPMS8-12-DEC-11

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	19.8	8808	PASS
75.0	95.0	30.0	60.0	45.0	19993	PASS
95.0	95.0	100	100	100	44392	PASS
96.0	95.0	5.00	9.00	6.71	2979	PASS
173	174	0	2.00	0.970	324	PASS
174	95.0	50.0	100	75.3	33405	PASS
175	174	5.00	9.00	7.47	2495	PASS
176	174	95.0	101	97.5	32579	PASS
177	176	5.00	9.00	6.44	2099	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG387881-01	STD	01	01/25/2012 12:43	
WG387881-02	STD	01	01/25/2012 13:28	
WG387881-03	STD	01	01/25/2012 13:58	
WG387881-04	STD-CCV	01	01/25/2012 14:29	
WG387881-05	STD	01	01/25/2012 14:59	
WG387881-06	STD	01	01/25/2012 15:29	
WG387881-07	STD	01	01/25/2012 15:59	
WG387881-08	SSCV	01	01/25/2012 16:29	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2701654
Report generated 12/17/2012 14:18

BFB

Login Number: L12120212
Instrument: HPMS8
Analyst: ADC
Workgroup: WG413483

Tune ID: WG413483-01
Run Date: 11/06/2012
Run Time: 07:53
File ID: 8M383305
Cal ID: HPMS8-06-NOV-12

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	26.3	11880	PASS
75.0	95.0	30.0	60.0	54.7	24693	PASS
95.0	95.0	100	100	100	45162	PASS
96.0	95.0	5.00	9.00	6.86	3096	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	79.5	35914	PASS
175	174	5.00	9.00	8.14	2922	PASS
176	174	95.0	101	97.0	34821	PASS
177	176	5.00	9.00	6.56	2283	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG413483-02	STD	01	11/06/2012 08:48	
WG413483-03	STD	01	11/06/2012 09:18	
WG413483-04	STD	01	11/06/2012 09:47	
WG413483-05	STD	01	11/06/2012 10:17	
WG413483-06	STD	01	11/06/2012 10:47	
WG413483-07	STD	01	11/06/2012 11:17	
WG413483-08	STD-CCV	01	11/06/2012 11:47	
WG413483-09	STD	01	11/06/2012 12:17	
WG413483-10	STD	01	11/06/2012 12:48	
WG413483-11	STD	01	11/06/2012 13:19	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2701654
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12120212
Instrument: HPMS8
Analyst: ADC
Workgroup: WG413606

Tune ID: WG413606-01
Run Date: 11/06/2012
Run Time: 15:36
File ID: 8M383320
Cal ID: HPMS8-06-NOV-12

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	26.0	13323	PASS
75.0	95.0	30.0	60.0	50.5	25925	PASS
95.0	95.0	100	100	100	51304	PASS
96.0	95.0	5.00	9.00	7.12	3652	PASS
173	174	0	2.00	0.811	319	PASS
174	95.0	50.0	100	76.7	39333	PASS
175	174	5.00	9.00	7.87	3095	PASS
176	174	95.0	101	100	39333	PASS
177	176	5.00	9.00	7.16	2817	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG413483-12	SSCV	01	11/06/2012 17:39	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2701654
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L12120212
Instrument: HPMS8
Analyst: ADC
Workgroup: WG416681

Tune ID: WG416681-01
Run Date: 12/14/2012
Run Time: 15:25
File ID: 8M384161
Cal ID: HPMS8-06-NOV-12

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.3	6771	PASS
75.0	95.0	30.0	60.0	50.0	13349	PASS
95.0	95.0	100	100	100	26715	PASS
96.0	95.0	5.00	9.00	7.11	1900	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	82.2	21957	PASS
175	174	5.00	9.00	7.82	1717	PASS
176	174	95.0	101	95.9	21048	PASS
177	176	5.00	9.00	6.51	1370	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG416681-02	CCV	01	12/14/2012 15:52	
WG416683-01	BLANK	01	12/14/2012 16:53	
WG416683-02	LCS	01	12/14/2012 17:23	
L12120212-04	12WW21-031212MS	01	12/14/2012 17:53	
L12120212-05	12WW21-031212SD	01	12/14/2012 18:23	
L12120212-07	EB-031212-01	01	12/14/2012 20:22	
L12120212-01	12WW20-031212	01	12/14/2012 20:52	
L12120212-02	12WW20-031212D	01	12/14/2012 21:22	
L12120212-03	12WW21-031212	01	12/14/2012 21:52	
L12120212-06	12WW23-031212	01	12/14/2012 22:22	
L12120212-08	12WW22-041212	01	12/14/2012 22:51	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 2701654
Report generated 12/17/2012 14:18

Calibration Table Report
Method: A9FOOWT.M
Title: A9-FOO Water - IC: 01/25/12- HPMS8
Last Calibration: Wed Feb 01 15:35:09 2012
Curve: WG387881
Calibration Files

Compound	5 8M376558.D	20 8M376559.D	50 8M376560.D	100 8M376561.D	200 8M376562.D	300 8M376563.D	400 8M376564.D	500 8M367713.D	Avg	%RSD	Linear
Fluorobenzene	ISTD										
Acetonitrile	0.018	0.017	0.018	0.019	0.020	0.019	0.019		0.019	5.995	
3-Chloro-1-propene	0.376	0.390	0.392	0.395	0.408	0.388	0.382		0.390	2.658	
2-Chloro-1,3-butadiene	0.465	0.465	0.468	0.464	0.475	0.452	0.445		0.462	2.198	
Ethyl Acetate	0.125	0.125	0.128	0.137	0.138	0.133	0.126		0.130	4.168	
Methacrylonitrile	0.053	0.050	0.054	0.055	0.056	0.054	0.053		0.054	4.009	
Isobutyl Alcohol		0.005	0.006	0.006	0.006	0.006	0.006		0.006	7.894	
1-Butanol		0.001	0.002	0.003	0.003	0.003	0.003		0.003	23.485	0.996
Methyl methacrylate	0.141	0.155	0.162	0.167	0.172	0.164	0.159		0.160	6.259	
2-Nitropropane	0.043	0.051	0.055	0.059	0.063	0.060	0.058		0.056	11.690	
Chlorobenzene-d5	ISTD										
1,4-Dichlorobenzene-d4	ISTD										
Cyclohexanone		0.025	0.024	0.024	0.025	0.026	0.024		0.025	3.783	

Wed Feb 01 15:40:12 2012

Calibration Table Report
Method: 8260WTR.M
Title: Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Calibration: Tue Nov 06 14:04:33 2012
Curve: WG413483
Calibration Files

Compound	0.3 8M383307.D	0.4 8M383308.D	1 8M383309.D	2 8M383310.D	5 8M383311.D	20 8M383312.D	50 8M383313.D	100 8M383314.D	200 8M383315.D	300 8M383316.D	Avg	%RSD	R^2 LINEAR	 QUADRATCI
Fluorobenzene	ISTD													
Dichlorodifluoromethane			0.350	0.359	0.358	0.358	0.360	0.344	0.326	0.346	0.350	3.312		
Chloromethane			0.683	0.705	0.587	0.577	0.576	0.549	0.519	0.543	0.592	11.220		
Vinyl Chloride		0.516	0.446	0.455	0.439	0.437	0.434	0.422	0.392	0.420	0.440	7.663		
1,3-Butadiene	0.393	0.367	0.377	0.382	0.371	0.386	0.390	0.322	0.285	0.245	0.352	14.407		
Bromomethane			0.169	0.193	0.186	0.201	0.222	0.221	0.221	0.247	0.207	12.027		
Chloroethane		0.161	0.234	0.223	0.222	0.225	0.231	0.226	0.218	0.239	0.220	10.533		
Trichlorofluoromethane		0.603	0.646	0.623	0.618	0.653	0.664	0.648	0.620	0.671	0.639	3.606		
Diethyl ether			0.186	0.188	0.194	0.202	0.204	0.203		0.205	0.197	4.070		
Isoprene			0.447	0.430	0.414	0.418	0.444	0.426	0.442	0.428	0.431	2.860		
Acrolein			0.023	0.023	0.028	0.027	0.028	0.028		0.029	0.027	9.012		
1,1,2-Trichloro-1,2,2-Trifluoroe			0.312	0.313	0.299	0.308	0.314	0.313	0.302	0.332	0.312	3.216		
Acetone					0.060	0.067	0.065	0.061	0.063	0.066	0.064	4.607		
1,1-Dichloroethene		0.701	0.593	0.656	0.654	0.671	0.688	0.670	0.652	0.704	0.665	5.033		
Tert-Butyl Alcohol			0.011	0.014	0.014	0.013	0.014	0.013		0.015	0.013	9.606		
Dimethyl Sulfide			0.376	0.349	0.347	0.349	0.369	0.354	0.354	0.348	0.356	2.994		
Iodomethane			0.213	0.232	0.250	0.284	0.310	0.295	0.300	0.288	0.271	13.047		
Methyl acetate				0.168	0.163	0.162	0.167	0.162	0.167	0.176	0.167	2.807		
Methylene Chloride		0.254	0.262	0.287	0.274	0.277	0.279	0.271	0.264	0.293	0.273	4.494		
Carbon Disulfide		0.712	0.780	0.782	0.729	0.713	0.748	0.695	0.701	0.672	0.726	5.209		
Acrylonitrile			0.073	0.069	0.078	0.083	0.089	0.086		0.107	0.084	14.831		
Methyl Tert Butyl Ether	0.253	0.239	0.275	0.295	0.296	0.310	0.320	0.312	0.317	0.365	0.298	12.084		
trans-1,2-Dichloroethene		0.536	0.585	0.629	0.629	0.612	0.622	0.614	0.587	0.660	0.608	5.805		
n-Hexane			0.527	0.515	0.506	0.490	0.512	0.474	0.471	0.448	0.493	5.434		
Diisopropyl ether			1.355	1.353	1.397	1.402	1.390	1.322		1.261	1.354	3.702		
Vinyl Acetate					0.486	0.542	0.516	0.513	0.493	0.500	0.509	3.938		
1,1-Dichloroethane		0.631	0.704	0.654	0.686	0.688	0.691	0.672	0.653	0.733	0.679	4.518		
Ethyl-Tert-Butyl ether			1.063	1.083	1.136	1.146	1.143	1.088		1.089	1.107	3.043		
2-Butanone					0.076	0.096	0.094	0.090	0.095	0.101	0.092	9.615		
Propionitrile			0.016	0.025	0.027	0.029	0.030	0.029		0.033	0.027	19.605	0.995	
2,2-Dichloropropane		0.625	0.578	0.621	0.565	0.603	0.600	0.585	0.553	0.594	0.592	4.066		
cis-1,2-Dichloroethene		0.297	0.317	0.305	0.315	0.310	0.314	0.312	0.303	0.348	0.314	4.620		
Chloroform	0.521	0.627	0.609	0.611	0.634	0.625	0.630	0.615	0.585	0.637	0.609	5.705		
1-Bromopropane			0.024	0.050	0.055	0.054	0.058	0.056	0.057	0.056	0.051	21.742	1.000	
Bromochloromethane		0.167	0.168	0.176	0.177	0.181	0.189	0.181	0.180	0.205	0.180	6.254		
Tetrahydrofuran			0.047	0.052	0.055	0.057	0.059	0.058		0.065	0.056	10.148		
Dibromofluoromethane				0.319	0.349	0.344	0.357	0.335	0.337	0.338	0.340	3.453		
1,1,1-Trichloroethane		0.505	0.620	0.625	0.626	0.613	0.636	0.618	0.590	0.631	0.607	6.651		
Cyclohexane			0.776	0.712	0.728	0.723	0.744	0.698	0.708	0.678	0.721	4.133		
1,1-Dichloropropene		0.459	0.464	0.507	0.481	0.459	0.481	0.467	0.450	0.494	0.474	3.957		
Tert-Amyl-Methyl ether			0.593	0.628	0.652	0.667	0.670	0.643		0.670	0.646	4.358		
Carbon Tetrachloride		0.546	0.57	0.558	0.565	0.566	0.584	0.567	0.548	0.582	0.56516	2.33717		
1,2-Dichloroethane-d4					0.402	0.425	0.413	0.385	0.383	0.373	0.39691	4.99823		
Heptane											0	0		
1,2-Dichloroethane		0.438	0.499	0.533	0.499	0.524	0.538	0.516	0.5	0.543	0.51007	6.26563		
Benzene		1.198	1.165	1.195	1.136	1.126	1.158	1.106	1.051	1.111	1.13838	4.097		
Trichloroethene		0.352	0.349	0.307	0.332	0.337	0.345	0.337	0.327	0.358	0.33835	4.57344		
Methylcyclohexane			0.411	0.435	0.441	0.426	0.446	0.419	0.427	0.417	0.42784	2.87295		
1,2-Dichloropropane		0.29	0.335	0.343	0.331	0.342	0.352	0.343	0.338	0.374	0.33869	6.47875		
Bromodichloromethane		0.391	0.422	0.475	0.443	0.474	0.489	0.464	0.453	0.496	0.45644	7.32341		
1,4-Dioxane					0.001	0.001	0.001	0.001		0.001	0.00109	7.75033		
Dibromomethane		0.095	0.136	0.153	0.144	0.145	0.159	0.154	0.152	0.171	0.14541	14.7382		
2-Chloroethyl Vinyl Ether			0.099	0.122	0.132	0.161	0.152	0.145	0.15	0.157	0.13984	14.9029		
4-Methyl-2-Pentanone				0.079	0.059	0.103	0.082	0.081	0.085	0.089	0.08262	15.9637	0.997	
cis-1,3-Dichloropropene		0.491	0.458	0.469	0.459	0.506	0.514	0.494		0.534	0.49063	5.52907		
Dimethyl Disulfide			0.372	0.417	0.422	0.443	0.486	0.465	0.478	0.477	0.44518	8.83736		
Chlorobenzene-d5	ISTD													
Toluene-d8					1.372	1.386	1.341	1.263	1.263	1.24	1.31081	4.7954		
Toluene		1.658	1.603	1.59	1.572	1.551	1.546	1.495	1.401	1.45	1.54056	5.17879		
Ethyl Methacrylate			0.21	0.266	0.262	0.292	0.306	0.296	0.307	0.313	0.28143	12.248		
Paraldehyde											0	0		
trans-1,3-Dichloropropene		0.491	0.533	0.521	0.518	0.556	0.573	0.55	0.541	0.598	0.54234	5.88636		
1,1,2-Trichloroethane		0.158	0.217	0.225	0.235	0.232	0.25	0.237	0.239	0.274	0.22955	13.6101		
2-Hexanone					0.083	0.118	0.093	0.091	0.096	0.099	0.09665	12.3531		
1,3-Dichloropropane		0.406	0.436	0.435	0.434	0.449	0.454	0.431	0.432	0.485	0.4401	4.86018		
Tetrachloroethene		0.315	0.326	0.347	0.341	0.352	0.357	0.345	0.341	0.378	0.34486	5.18929		
Dibromochloromethane		0.347	0.348	0.365	0.386	0.401	0.418	0.401	0.403	0.451	0.39117	8.64294		
1,2-Dibromoethane		0.341	0.252	0.27	0.279	0.284	0.288	0.28	0.285	0.321	0.28882	9.1854		
1-Chlorohexane		0.554	0.527	0.509	0.527	0.493	0.522	0.489	0.488	0.473	0.50906	5.05705		
Chlorobenzene		1.22	1.195	1.157	1.15	1.116	1.119	1.084	1.028	1.08	1.12769	5.33438		
1,1,1,2-Tetrachloroethane		0.431	0.443	0.468	0.447	0.452	0.461	0.455	0.437	0.466	0.45094	2.84916		
Ethylbenzene		0.685	0.661	0.662	0.619	0.622	0.621	0.608	0.598	0.64	0.63517	4.55441		
m-,p-Xylene		0.728	0.785	0.781	0.794	0.754	0.769	0.731	0.682	0.693	0.74627	5.4446		
o-Xylene		0.712	0.743	0.744	0.738	0.744	0.749	0.727	0.701	0.754	0.73479	2.4056		
Styrene		1	1.178	1.169	1.257	1.248	1.258	1.219	1.158	1.203	1.18792	6.72672		
Bromoform			0.191	0.188	0.2	0.228	0.232	0.23	0.239	0.271	0.22241	12.6807		
Isopropylbenzene		2.12	2.163	2.206	2.035	2.054	2.034	1.924	1.747	1.701	1.99822	8.79793		
1,4-Dichlorobenzene-d4	ISTD													
1,1,2,2-Tetrachloroethane		0.438	0.468	0.455	0.474	0.491	0.481	0.47	0.463	0.532	0.47456	5.50099		
p-Bromofluorobenzene					1.145	1.106	1.074	1.01	0.982	0.968	1.04751	6.83805		

1,2,3-Trichloropropane			0.129	0.182	0.156	0.174	0.181	0.17	0.166	0.189	0.16845	11.3173
trans-1,4-Dichloro-2-Butene			0.199	0.235	0.243	0.245	0.257	0.244	0.242	0.243	0.23842	7.09617
n-Propylbenzene		4.401	4.398	4.326	4.194	4.02	3.982	3.757	3.272	3.161	3.94555	11.789
Bromobenzene	0.983	0.958	0.923	0.99	0.909	0.903	0.912	0.893	0.842	0.941	0.92543	4.81173
1,3,5-Trimethylbenzene		3.362	3.515	3.529	3.427	3.299	3.263	3.112	2.762	2.74	3.22312	9.2073
2-Chlorotoluene		3.46	3.005	3.055	2.979	2.764	2.644	2.547	2.179	2.258	2.76566	14.7589
4-Chlorotoluene		3	2.959	2.886	2.777	2.713	2.704	2.434	2.232	2.366	2.67465	10.1804
a-Methylstyrene			1.708	1.514	1.681	1.575	1.633	1.562	1.479	1.428	1.57257	6.21464
tert-Butylbenzene		0.815	0.65	0.692	0.668	0.663	0.629	0.629	0.587	0.646	0.66432	9.59103
1,2,4-Trimethylbenzene		3.344	3.606	3.594	3.526	3.382	3.333	3.156	2.774	2.735	3.27203	9.96452
sec-Butylbenzene		4.087	4.088	4.02	4.034	3.819	3.767	3.544	3.133	3.058	3.72782	10.7493
p-Isopropyltoluene		2.995	3.431	3.302	3.322	3.227	3.135	2.99	2.656	2.646	3.07841	9.18515
1,3-Dichlorobenzene		1.87	1.951	1.837	1.885	1.81	1.778	1.727	1.601	1.715	1.79713	5.86293
1,4-Dichlorobenzene	1.845	1.903	1.985	1.965	1.853	1.815	1.781	1.731	1.605	1.708	1.81912	6.47812
n-Butylbenzene		3.252	2.919	3.078	3.035	2.862	2.786	2.64	2.345	2.36	2.80854	11.1235
1,2-Dichlorobenzene	1.615	1.55	1.719	1.637	1.663	1.603	1.614	1.54	1.439	1.55	1.59301	4.86264
1,2-Dibromo-3-Chloropropane				0.085	0.107	0.111	0.115	0.107	0.107	0.124	0.10823	10.9898
1,2,4-Trichlorobenzene		0.977	1.029	1.121	1.106	1.081	1.049	1.015	0.959	1.046	1.04254	5.2595
Hexachlorobutadiene		0.539	0.48	0.568	0.486	0.479	0.47	0.465	0.434	0.472	0.48806	8.303
Naphthalene		1.608	1.677	1.774	1.794	1.874	1.843	1.736	1.666	1.79	1.75125	4.98607
1,2,3-Trichlorobenzene	0.786	0.938	0.954	0.824	0.903	0.923	0.895	0.864	0.831	0.917	0.88348	6.21614

Wed Nov 07 11:05:47 2012

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12120212 Run Date: 11/06/2012 Sample ID: WG413483-12
Instrument ID: HPMS8 Run Time: 17:39 Method: 8260B
File ID: 8M383324 Analyst: ADC QC Key: DOD4
ICal Workgroup: WG413483 Cal ID: HPMS8 - 06-NOV-12

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	50.0	47.2	ug/L	0.575	5.60	20	
1,1-Dichloroethene	CCC	50.0	44.6	ug/L	0.594	10.7	20	
1,2-Dichloropropane	CCC	50.0	50.9	ug/L	0.345	1.70	20	
Ethylbenzene	CCC	50.0	45.9	ug/L	0.584	8.10	20	
Toluene	CCC	50.0	46.6	ug/L	1.44	6.80	20	
Vinyl Chloride	CCC	50.0	39.9	ug/L	0.351	20.2	20	*
Bromoform	SPCC	50.0	54.9	ug/L	0.244	9.70	20	
Chlorobenzene	SPCC	50.0	43.7	ug/L	0.985	12.7	20	
Chloromethane	SPCC	50.0	40.6	ug/L	0.481	18.9	20	
1,1-Dichloroethane	SPCC	50.0	45.4	ug/L	0.616	9.30	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	55.1	ug/L	0.523	10.1	20	
Acetone		50.0	55.7	ug/L	0.0709	11.3	20	
Benzene		50.0	47.5	ug/L	1.08	5.00	20	
Bromobenzene		50.0	47.1	ug/L	0.872	5.80	20	
Bromochloromethane		50.0	50.5	ug/L	0.182	1.10	20	
Bromodichloromethane		50.0	48.5	ug/L	0.443	3.00	20	
Bromomethane		50.0	42.7	ug/L	0.177	14.7	20	
2-Butanone		50.0	55.2	ug/L	0.102	10.3	20	
n-Butylbenzene		50.0	45.2	ug/L	2.54	9.70	20	
sec-Butylbenzene		50.0	43.0	ug/L	3.21	14.0	20	
tert-Butylbenzene		50.0	42.6	ug/L	0.565	14.9	20	
Carbon Disulfide		50.0	53.9	ug/L	0.783	7.90	20	
Carbon Tetrachloride		50.0	45.0	ug/L	0.509	9.90	20	
Dibromochloromethane		50.0	50.1	ug/L	0.392	0.300	20	
Chloroethane		50.0	49.9	ug/L	0.220	0.100	20	
2-Chlorotoluene		50.0	43.9	ug/L	2.43	12.3	20	
4-Chlorotoluene		50.0	41.0	ug/L	2.19	18.0	20	
1,2-Dibromo-3-Chloropropane		50.0	53.4	ug/L	0.116	6.70	20	
1,2-Dibromoethane		50.0	50.2	ug/L	0.290	0.300	20	
Dibromomethane		50.0	53.4	ug/L	0.155	6.70	20	
1,2-Dichlorobenzene		50.0	45.1	ug/L	1.44	9.80	20	
1,3-Dichlorobenzene		50.0	43.4	ug/L	1.56	13.2	20	
1,4-Dichlorobenzene		50.0	46.5	ug/L	1.69	7.10	20	
Dichlorodifluoromethane		50.0	48.9	ug/L	0.342	2.20	20	
1,2-Dichloroethane		50.0	50.7	ug/L	0.517	1.40	20	
cis-1,2-Dichloroethene		50.0	47.5	ug/L	0.298	5.00	20	
trans-1,2-Dichloroethene		50.0	46.4	ug/L	0.564	7.30	20	
1,3-Dichloropropane		50.0	53.1	ug/L	0.467	6.10	20	
2,2-Dichloropropane		50.0	45.0	ug/L	0.533	9.90	20	
cis-1,3-Dichloropropene		50.0	53.1	ug/L	0.521	6.20	20	
trans-1,3-Dichloropropene		50.0	50.6	ug/L	0.549	1.30	20	
1,1-Dichloropropene		50.0	46.4	ug/L	0.440	7.20	20	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2701236
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12120212 Run Date: 11/06/2012 Sample ID: WG413483-12
Instrument ID: HPMS8 Run Time: 17:39 Method: 8260B
File ID: 8M383324 Analyst: ADC QC Key: DOD4
ICal Workgroup: WG413483 Cal ID: HPMS8 - 06-NOV-12

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2-Hexanone		50.0	52.4	ug/L	0.101	4.90	20	
Hexachlorobutadiene		50.0	43.0	ug/L	0.419	14.1	20	
Isopropylbenzene		50.0	43.2	ug/L	1.73	13.6	20	
p-Isopropyltoluene		50.0	45.0	ug/L	2.77	10.1	20	
4-Methyl-2-Pentanone		50.0	50.5	ug/L	0.0867	1.00	20	
Methylene Chloride		50.0	48.4	ug/L	0.265	3.10	20	
Naphthalene		50.0	53.9	ug/L	1.89	7.80	20	
n-Propylbenzene		50.0	43.2	ug/L	3.41	13.7	20	
Styrene		50.0	50.3	ug/L	1.19	0.500	20	
1,1,1,2-Tetrachloroethane		50.0	48.9	ug/L	0.441	2.20	20	
Tetrachloroethene		50.0	47.4	ug/L	0.327	5.20	20	
1,2,3-Trichlorobenzene		50.0	50.9	ug/L	0.900	1.90	20	
1,2,4-Trichlorobenzene		50.0	48.9	ug/L	1.02	2.20	20	
1,1,1-Trichloroethane		50.0	45.5	ug/L	0.552	9.00	20	
1,1,2-Trichloroethane		50.0	55.0	ug/L	0.252	9.90	20	
Trichloroethene		50.0	49.7	ug/L	0.336	0.600	20	
Trichlorofluoromethane		50.0	47.5	ug/L	0.606	5.10	20	
1,2,3-Trichloropropane		50.0	54.9	ug/L	0.185	9.70	20	
1,2,4-Trimethylbenzene		50.0	47.4	ug/L	3.10	5.20	20	
1,3,5-Trimethylbenzene		50.0	48.0	ug/L	3.09	4.00	20	
o-Xylene		50.0	44.5	ug/L	0.654	11.0	20	
m-,p-Xylene		100	91.8	ug/L	0.685	8.20	20	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2701236
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12120212 Run Date: 12/14/2012 Sample ID: WG416681-02
Instrument ID: HPMS8 Run Time: 15:52 Method: 8260B
File ID: 8M384162 Analyst: ADC QC Key: DOD4
Workgroup (AAB#): WG416683 Cal ID: HPMS8 - 06-NOV-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	46.2	ug/L	0.564	7.52	20	
1,1-Dichloroethene	CCC	50.0	46.1	ug/L	0.613	7.83	20	
1,2-Dichloropropane	CCC	50.0	48.7	ug/L	0.330	2.56	20	
Ethylbenzene	CCC	50.0	48.0	ug/L	0.610	3.92	20	
Toluene	CCC	50.0	49.1	ug/L	1.51	1.78	20	
Vinyl Chloride	CCC	50.0	43.1	ug/L	0.380	13.7	20	
Bromoform	SPCC	50.0	45.4	ug/L	0.202	9.18	20	
Chlorobenzene	SPCC	50.0	48.6	ug/L	1.10	2.73	20	
Chloromethane	SPCC	50.0	40.3	ug/L	0.477	19.5	20	
1,1-Dichloroethane	SPCC	50.0	47.6	ug/L	0.646	4.84	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	43.9	ug/L	0.416	12.3	20	
Xylenes		150	150	ug/L	0.740	0.129	20	
Acetone		50.0	42.4	ug/L	0.0540	15.3	20	
Benzene		50.0	47.9	ug/L	1.09	4.11	20	
Bromobenzene		50.0	45.0	ug/L	0.833	9.96	20	
Bromochloromethane		50.0	50.0	ug/L	0.180	0.0990	20	
Bromodichloromethane		50.0	44.9	ug/L	0.410	10.2	20	
Bromomethane		50.0	50.4	ug/L	0.209	0.796	20	
2-Butanone		50.0	44.0	ug/L	0.0810	12.0	20	
n-Butylbenzene		50.0	44.3	ug/L	2.49	11.4	20	
sec-Butylbenzene		50.0	46.2	ug/L	3.45	7.55	20	
tert-Butylbenzene		50.0	45.0	ug/L	0.597	10.1	20	
Carbon Disulfide		50.0	56.6	ug/L	0.821	13.1	20	
Carbon Tetrachloride		50.0	45.0	ug/L	0.509	9.96	20	
Dibromochloromethane		50.0	47.4	ug/L	0.371	5.25	20	
Chloroethane		50.0	48.8	ug/L	0.214	2.49	20	
2-Chlorotoluene		50.0	42.5	ug/L	2.35	14.9	20	
4-Chlorotoluene		50.0	45.1	ug/L	2.41	9.75	20	
1,2-Dibromo-3-Chloropropane		50.0	39.2	ug/L	0.0848	21.7	20	*
1,2-Dibromoethane		50.0	44.6	ug/L	0.258	10.8	20	
Dibromomethane		50.0	47.6	ug/L	0.138	4.82	20	
1,2-Dichlorobenzene		50.0	45.3	ug/L	1.44	9.45	20	
1,3-Dichlorobenzene		50.0	45.7	ug/L	1.64	8.57	20	
1,4-Dichlorobenzene		50.0	45.5	ug/L	1.65	9.05	20	
Dichlorodifluoromethane		50.0	38.5	ug/L	0.270	23.0	20	*
1,2-Dichloroethane		50.0	42.2	ug/L	0.430	15.7	20	
cis-1,2-Dichloroethene		50.0	49.5	ug/L	0.310	1.02	20	
trans-1,2-Dichloroethene		50.0	47.0	ug/L	0.572	5.91	20	
1,3-Dichloropropane		50.0	46.5	ug/L	0.409	7.05	20	
2,2-Dichloropropane		50.0	47.1	ug/L	0.557	5.80	20	
cis-1,3-Dichloropropene		50.0	47.3	ug/L	0.464	5.37	20	
trans-1,3-Dichloropropene		50.0	47.1	ug/L	0.511	5.79	20	

CCV - Modified 03/05/2008
PDF File ID: 2701238
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12120212 Run Date: 12/14/2012 Sample ID: WG416681-02
Instrument ID: HPMS8 Run Time: 15:52 Method: 8260B
File ID: 8M384162 Analyst: ADC QC Key: DOD4
Workgroup (AAB#): WG416683 Cal ID: HPMS8 - 06-NOV-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	47.2	ug/L	0.447	5.60	20	
2-Hexanone		50.0	42.6	ug/L	0.0823	14.9	20	
Hexachlorobutadiene		50.0	42.0	ug/L	0.410	16.0	20	
Isopropylbenzene		50.0	48.0	ug/L	1.92	3.99	20	
p-Isopropyltoluene		50.0	47.1	ug/L	2.90	5.74	20	
4-Methyl-2-Pentanone		50.0	41.0	ug/L	0.0703	17.9	20	
Methylene Chloride		50.0	47.7	ug/L	0.261	4.56	20	
Naphthalene		50.0	43.6	ug/L	1.53	12.9	20	
n-Propylbenzene		50.0	45.7	ug/L	3.60	8.69	20	
Styrene		50.0	51.3	ug/L	1.22	2.66	20	
1,1,1,2-Tetrachloroethane		50.0	46.9	ug/L	0.423	6.14	20	
Tetrachloroethene		50.0	49.7	ug/L	0.343	0.561	20	
1,2,3-Trichlorobenzene		50.0	43.0	ug/L	0.759	14.1	20	
1,2,4-Trichlorobenzene		50.0	44.1	ug/L	0.920	11.8	20	
1,1,1-Trichloroethane		50.0	45.1	ug/L	0.548	9.82	20	
1,1,2-Trichloroethane		50.0	49.4	ug/L	0.227	1.26	20	
Trichloroethene		50.0	49.7	ug/L	0.336	0.574	20	
Trichlorofluoromethane		50.0	44.0	ug/L	0.562	11.9	20	
1,2,3-Trichloropropane		50.0	42.9	ug/L	0.145	14.2	20	
1,2,4-Trimethylbenzene		50.0	46.1	ug/L	3.02	7.84	20	
1,3,5-Trimethylbenzene		50.0	45.8	ug/L	2.95	8.32	20	
o-Xylene		50.0	50.0	ug/L	0.735	0.00680	20	
m-,p-Xylene		100	99.8	ug/L	0.745	0.191	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 2701238
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L12120212
Instrument ID: HPMS8
Workgroup (AAB#): WG416683

ICAL CCV Number: WG413483-08
CAL ID: HPMS8-06-NOV-12
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG413483-08	NA	NA	290272	532726	643805
Upper Limit	NA	NA	580544	1065452	1287610
Lower Limit	NA	NA	145136	266363	321903
L12120212-01	1.00	01	195043	345576	401420
L12120212-02	1.00	01	197369	343026	402449
L12120212-03	1.00	01	193306	341578	397962
L12120212-04	1.00	01	205839	368553	431704
L12120212-05	1.00	01	207315	359274	426073
L12120212-06	1.00	01	192071	341676	401604
L12120212-07	1.00	01	197155	343842	408714
L12120212-08	1.00	01	194429	341786	395178
WG416683-01	1.00	01	212427	372415	439518
WG416683-02	1.00	01	213941	369776	441789

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

INTERNAL_STD_ICAL - Modified 03/06/2008
PDF File ID: 2701239
Report generated 12/17/2012 14:18

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY

(COMPARED TO MIDPOINT OF ICAL)

Login Number: L12120212

Instrument ID: HPMS8

Workgroup (AAB#): WG416683

ICAL CCV Number: WG413483-08

CAL ID: HPMS8-06-NOV-12

Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG413483-08	NA	NA	16.96	13.97	10.12
Upper Limit	NA	NA	17.46	14.47	10.62
Lower Limit	NA	NA	16.46	13.47	9.62
L12120212-01	1.00	01	16.88	13.87	10.03
L12120212-02	1.00	01	16.88	13.87	10.03
L12120212-03	1.00	01	16.89	13.88	10.03
L12120212-04	1.00	01	16.88	13.88	10.03
L12120212-05	1.00	01	16.88	13.87	10.03
L12120212-06	1.00	01	16.88	13.87	10.03
L12120212-07	1.00	01	16.89	13.88	10.03
L12120212-08	1.00	01	16.88	13.88	10.03
WG416683-01	1.00	01	16.88	13.88	10.03
WG416683-02	1.00	01	16.89	13.88	10.03

IS-1 - 1,4-Dichlorobenzene-d4

IS-2 - Chlorobenzene-d5

IS-3 - Fluorobenzene

Underline = Response outside limits

INTERNAL_STD_RT_ICAL - Modified 03/06/2008

PDF File ID: 2701655

Report generated: 12/17/2012 14:19

2.1.1.3 Sample Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384172.D Vial: 12
Acq On : 14 Dec 2012 20:52 Operator: ADC
Sample : L12120212-01 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:43 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

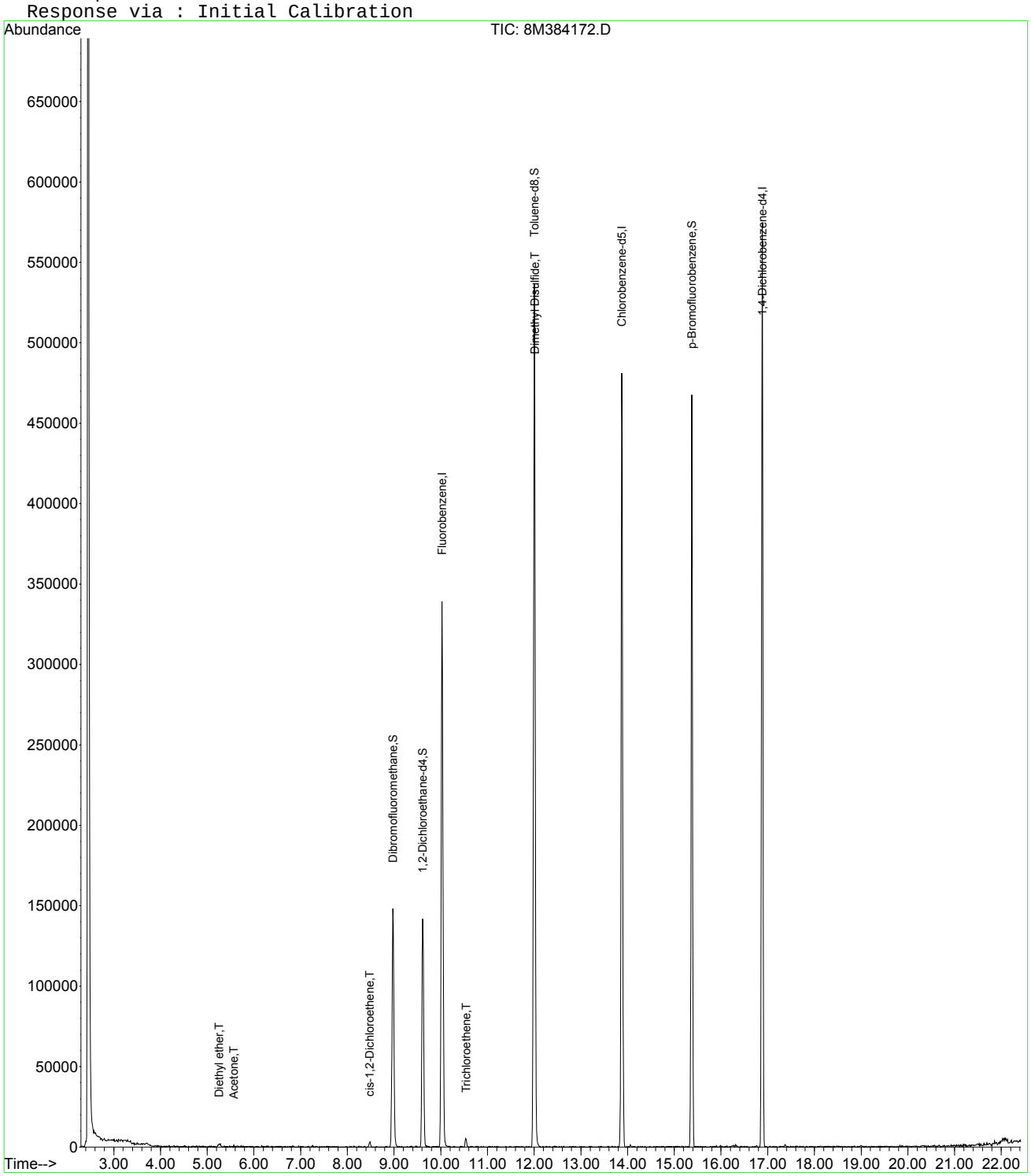
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	401420	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.87	117	345576	25.00	ug/L	-0.01
78) 1,4-Dichlorobenzene-d4	16.88	152	195043	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	138909	25.4488	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 101.80%			
43) 1,2-Dichloroethane-d4	9.61	65	136868	21.4757	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 85.92%			
58) Toluene-d8	12.00	98	471121	26.0009	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.00%			
80) p-Bromofluorobenzene	15.37	95	201273	24.6284	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.52%			
Target Compounds						Qvalue
9) Diethyl ether	5.25	59	2289	0.7219	ug/L #	38
13) Acetone	5.57	43	524	0.5122	ug/L #	53
32) cis-1,2-Dichloroethene	8.48	96	2065	0.4101	ug/L	56
47) Trichloroethene	10.54	130	2719	0.5005	ug/L	94
56) Dimethyl Disulfide	12.01	94	13997	1.9581	ug/L #	22

(#) = qualifier out of range (m) = manual integration
8M384172.D 8260WTR.M Mon Dec 17 08:50:43 2012 Page 1

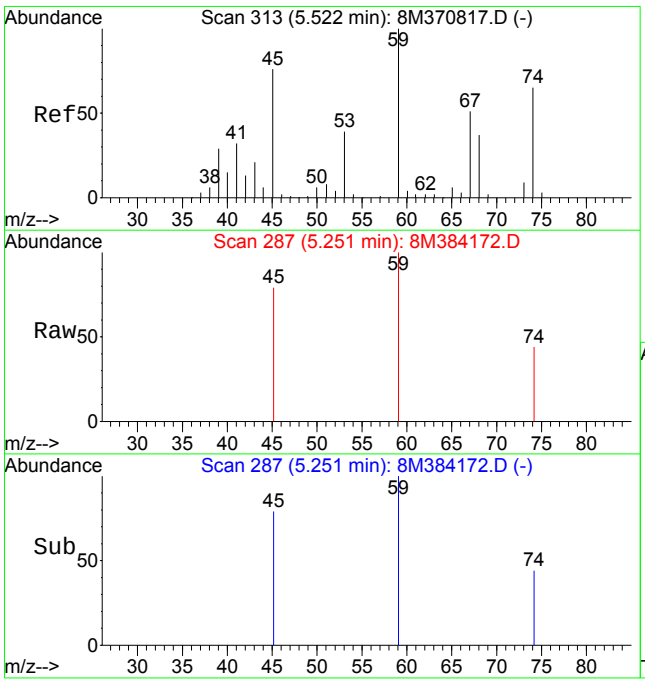
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384172.D Vial: 12
Acq On : 14 Dec 2012 20:52 Operator: ADC
Sample : L12120212-01 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration



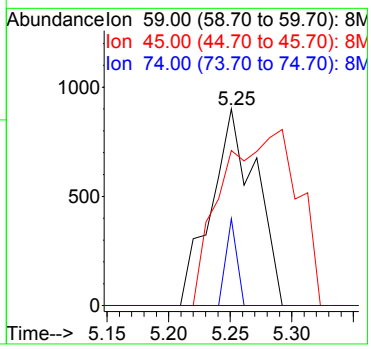
8M384172.D 8260WTR.M Mon Dec 17 08:50:44 2012 Page 2

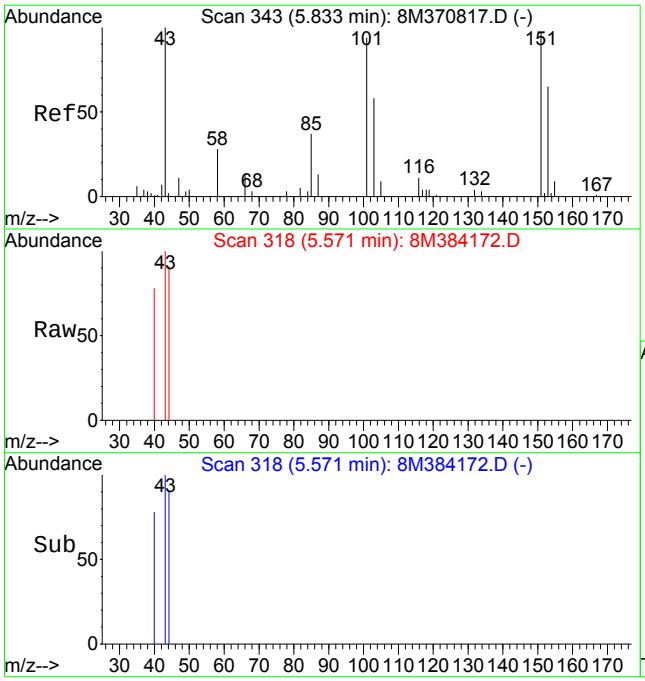


#9
Diethyl ether
Concen: 0.72 ug/L
RT: 5.25 min Scan# 287
Delta R.T. -0.01 min
Lab File: 8M384172.D
Acq: 14 Dec 2012 20:52

Tgt Ion: 59 Resp: 2289

Ion	Ratio	Lower	Upper
59	100		
45	149.8	52.7	123.1#
74	10.8	28.7	66.9#

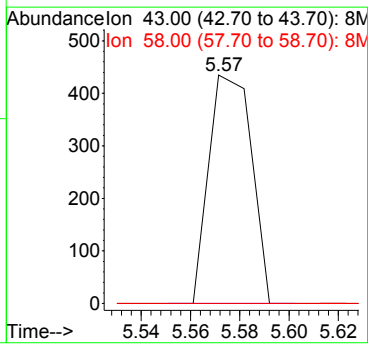


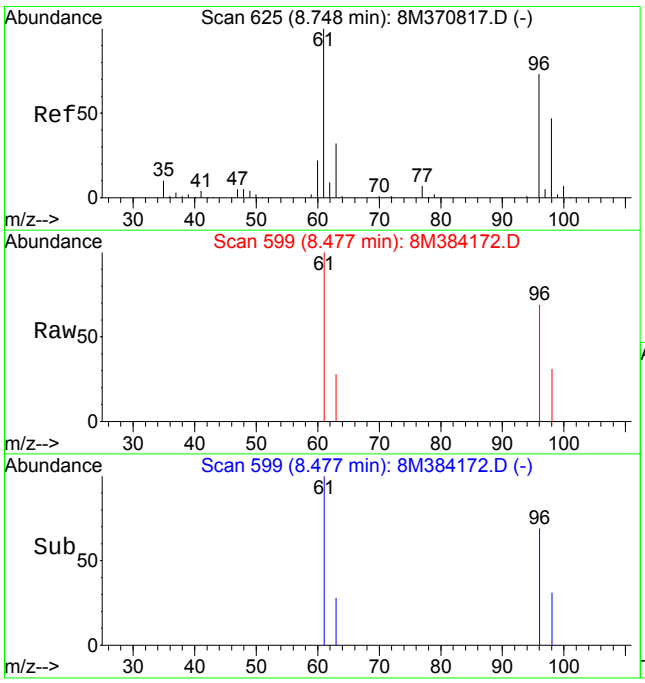


#13
Acetone
Concen: 0.51 ug/L
RT: 5.57 min Scan# 318
Delta R.T. 0.01 min
Lab File: 8M384172.D
Acq: 14 Dec 2012 20:52

Tgt Ion: 43 Resp: 524

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	31.4#

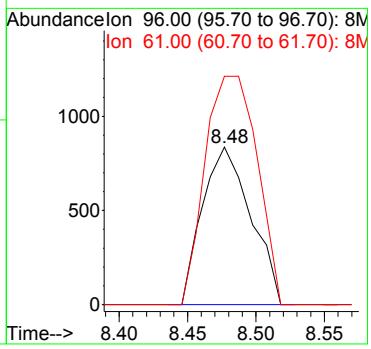


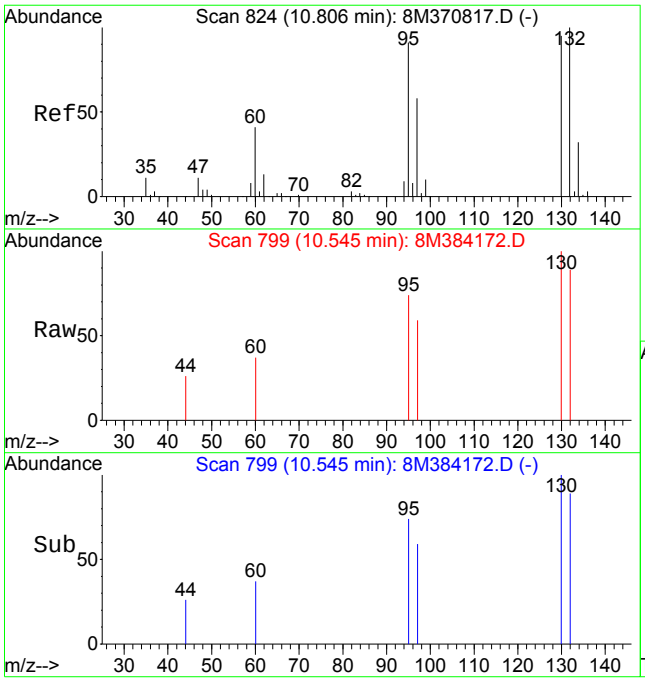


#32
cis-1,2-Dichloroethene
Concen: 0.41 ug/L
RT: 8.48 min Scan# 599
Delta R.T. -0.01 min
Lab File: 8M384172.D
Acq: 14 Dec 2012 20:52

Tgt Ion: 96 Resp: 2065

Ion	Ratio	Lower	Upper
96	100		
61	156.2	137.1	319.9

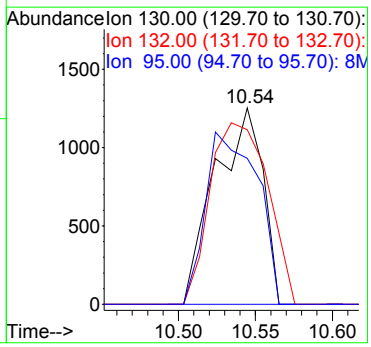


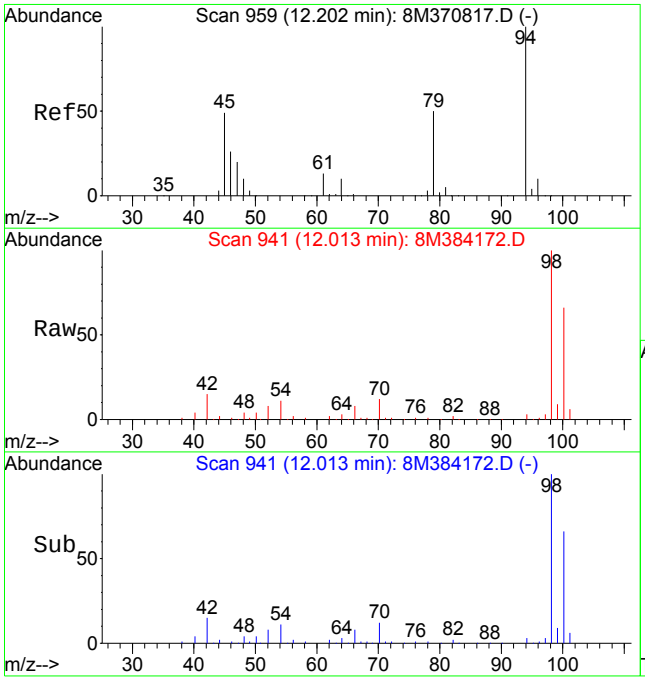


#47
Trichloroethene
Concen: 0.50 ug/L
RT: 10.54 min Scan# 799
Delta R.T. -0.00 min
Lab File: 8M384172.D
Acq: 14 Dec 2012 20:52

Tgt Ion:130 Resp: 2719

Ion	Ratio	Lower	Upper
130	100		
132	111.7	63.4	147.8
95	94.3	60.1	140.1

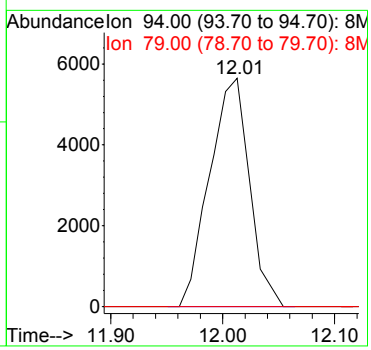




#56
Dimethyl Disulfide
Concen: 1.96 ug/L
RT: 12.01 min Scan# 941
Delta R.T. 0.08 min
Lab File: 8M384172.D
Acq: 14 Dec 2012 20:52

Tgt Ion: 94 Resp: 13997

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384173.D Vial: 13
Acq On : 14 Dec 2012 21:22 Operator: ADC
Sample : L12120212-02 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:45 2012 Quant Results File: 8260WTR.RES

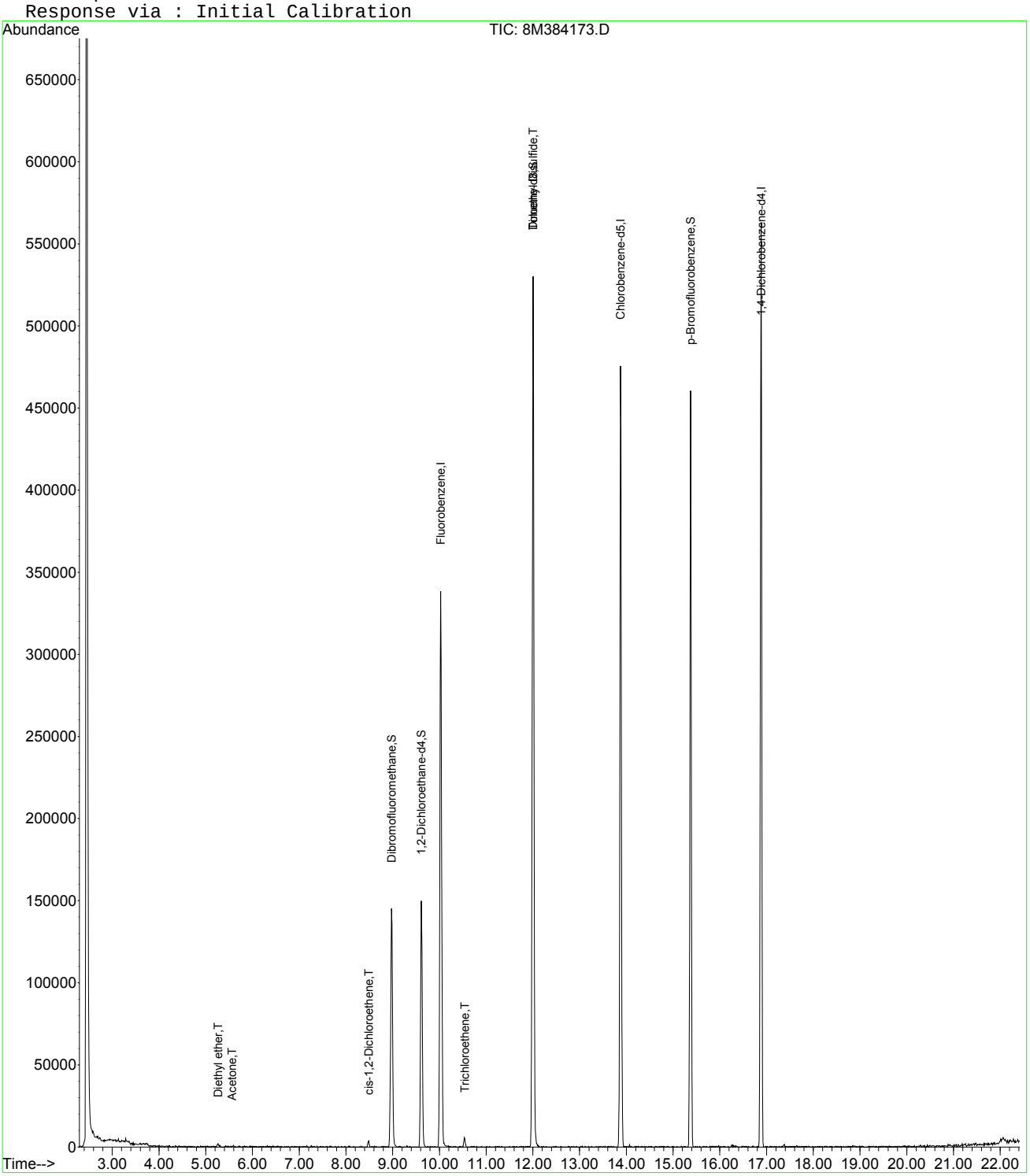
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

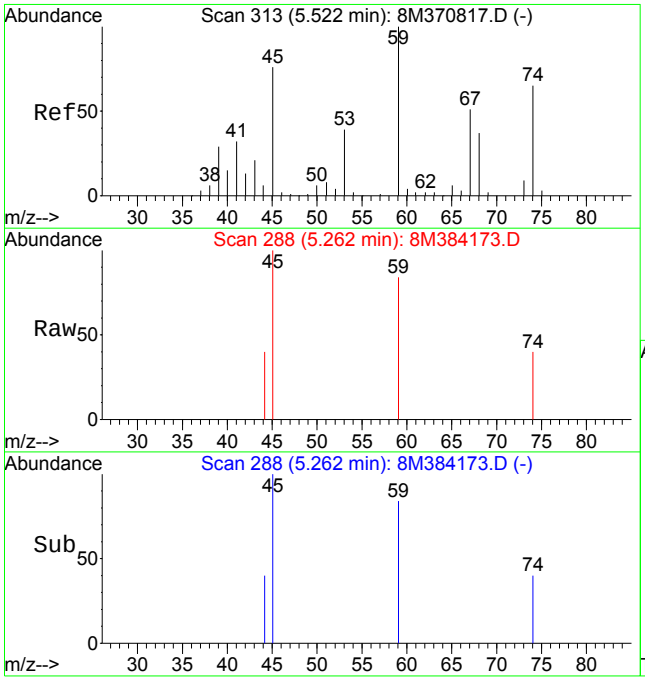
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	402449	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.87	117	343026	25.00	ug/L	-0.01
78) 1,4-Dichlorobenzene-d4	16.88	152	197369	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	137473	25.1214	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.48%			
43) 1,2-Dichloroethane-d4	9.61	65	138241	21.6357	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 86.56%			
58) Toluene-d8	12.00	98	469039	26.0784	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.32%			
80) p-Bromofluorobenzene	15.37	95	198630	24.0185	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.08%			
Target Compounds						Qvalue
9) Diethyl ether	5.26	59	1571	0.4942	ug/L #	56
13) Acetone	5.56	43	913	0.8902	ug/L #	53
32) cis-1,2-Dichloroethene	8.49	96	1673	0.3314	ug/L	89
47) Trichloroethene	10.55	130	3169	0.5818	ug/L	95
56) Dimethyl Disulfide	12.00	94	13515	1.8859	ug/L #	22

(#) = qualifier out of range (m) = manual integration
8M384173.D 8260WTR.M Mon Dec 17 08:50:46 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\121412\8M384173.D Vial: 13
Acq On : 14 Dec 2012 21:22 Operator: ADC
Sample : L12120212-02 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration

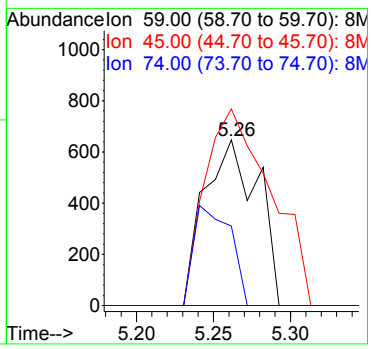


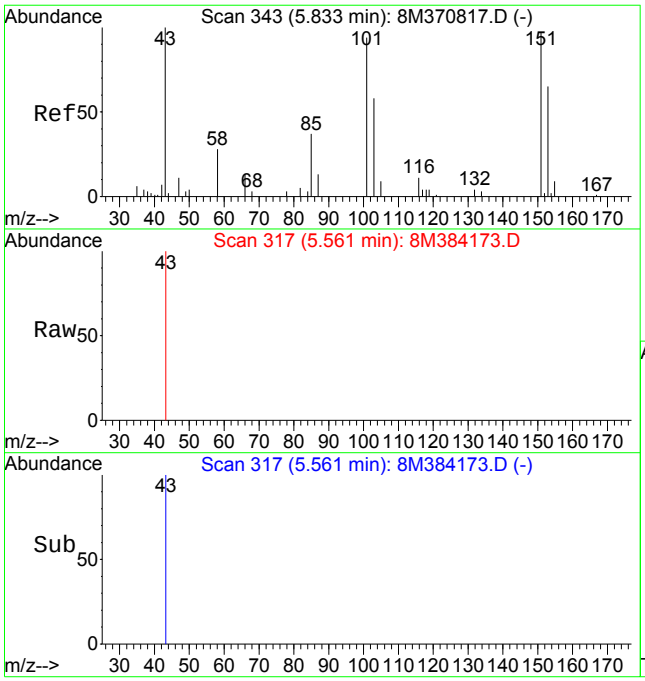


#9
Diethyl ether
Concen: 0.49 ug/L
RT: 5.26 min Scan# 288
Delta R.T. 0.00 min
Lab File: 8M384173.D
Acq: 14 Dec 2012 21:22

Tgt Ion: 59 Resp: 1571

Ion	Ratio	Lower	Upper
59	100		
45	145.8	52.7	123.1#
74	41.1	28.7	66.9

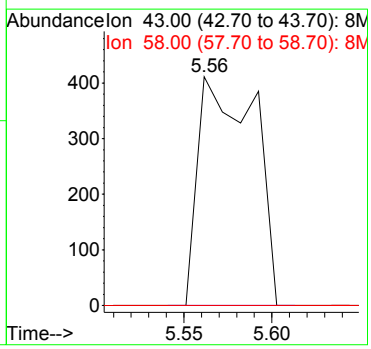


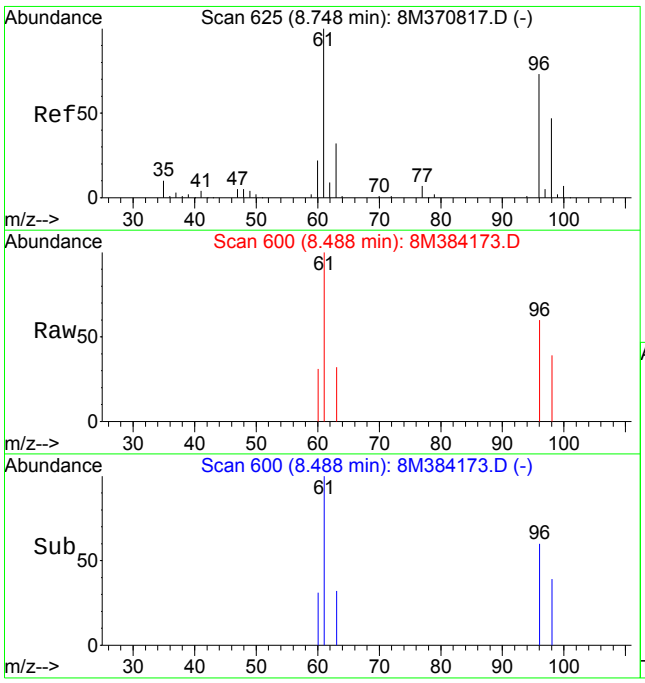


#13
Acetone
Concen: 0.89 ug/L
RT: 5.56 min Scan# 317
Delta R.T. 0.00 min
Lab File: 8M384173.D
Acq: 14 Dec 2012 21:22

Tgt Ion: 43 Resp: 913

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	31.4#

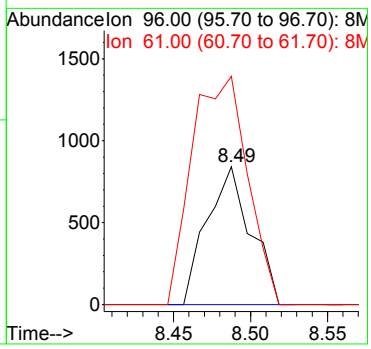


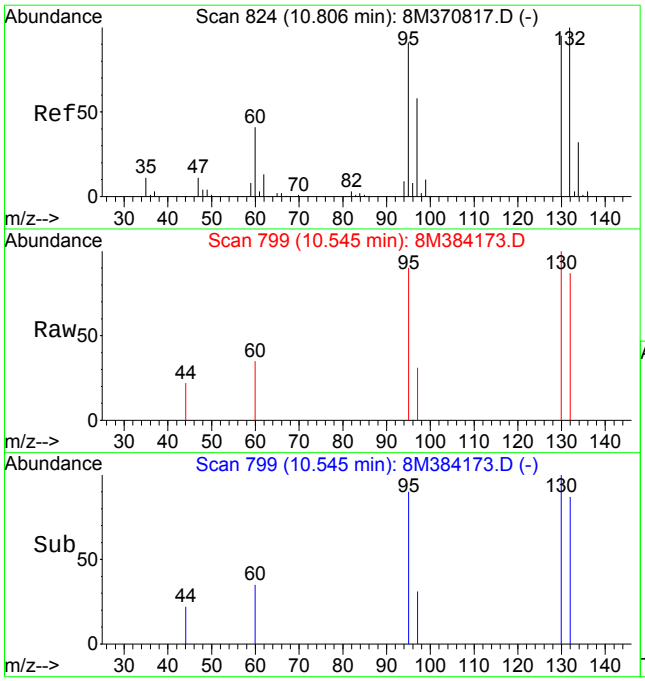


#32
cis-1,2-Dichloroethene
Concen: 0.33 ug/L
RT: 8.49 min Scan# 600
Delta R.T. 0.00 min
Lab File: 8M384173.D
Acq: 14 Dec 2012 21:22

Tgt Ion: 96 Resp: 1673

Ion	Ratio	Lower	Upper
96	100		
61	209.6	137.1	319.9

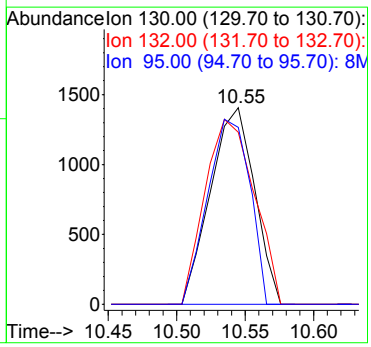


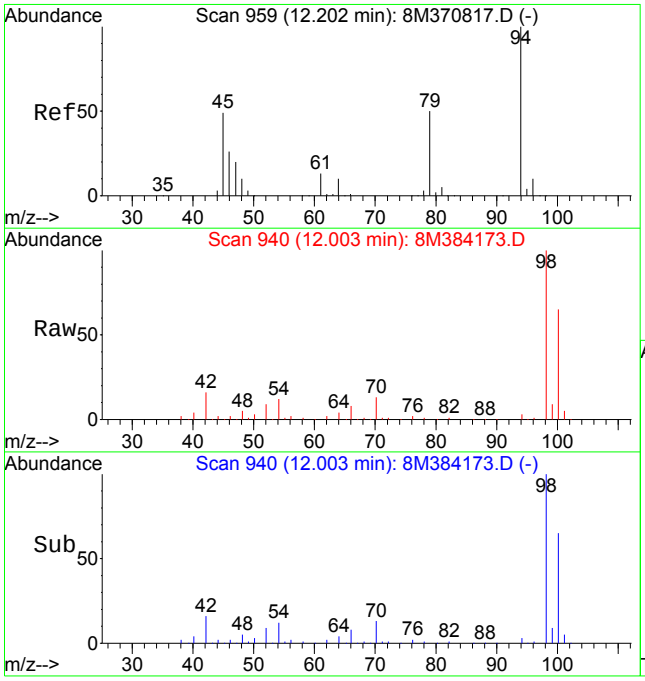


#47
Trichloroethene
Concen: 0.58 ug/L
RT: 10.55 min Scan# 799
Delta R.T. 0.00 min
Lab File: 8M384173.D
Acq: 14 Dec 2012 21:22

Tgt Ion:130 Resp: 3169

Ion	Ratio	Lower	Upper
130	100		
132	105.1	63.4	147.8
95	90.4	60.1	140.1

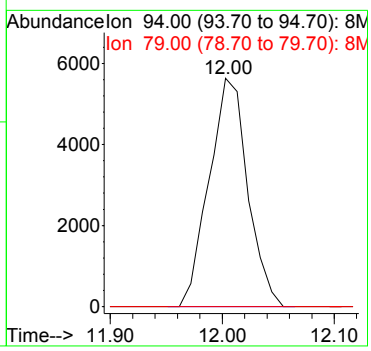




#56
Dimethyl Disulfide
Concen: 1.89 ug/L
RT: 12.00 min Scan# 940
Delta R.T. 0.07 min
Lab File: 8M384173.D
Acq: 14 Dec 2012 21:22

Tgt Ion: 94 Resp: 13515

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384174.D Vial: 14
Acq On : 14 Dec 2012 21:52 Operator: ADC
Sample : L12120212-03 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:48 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

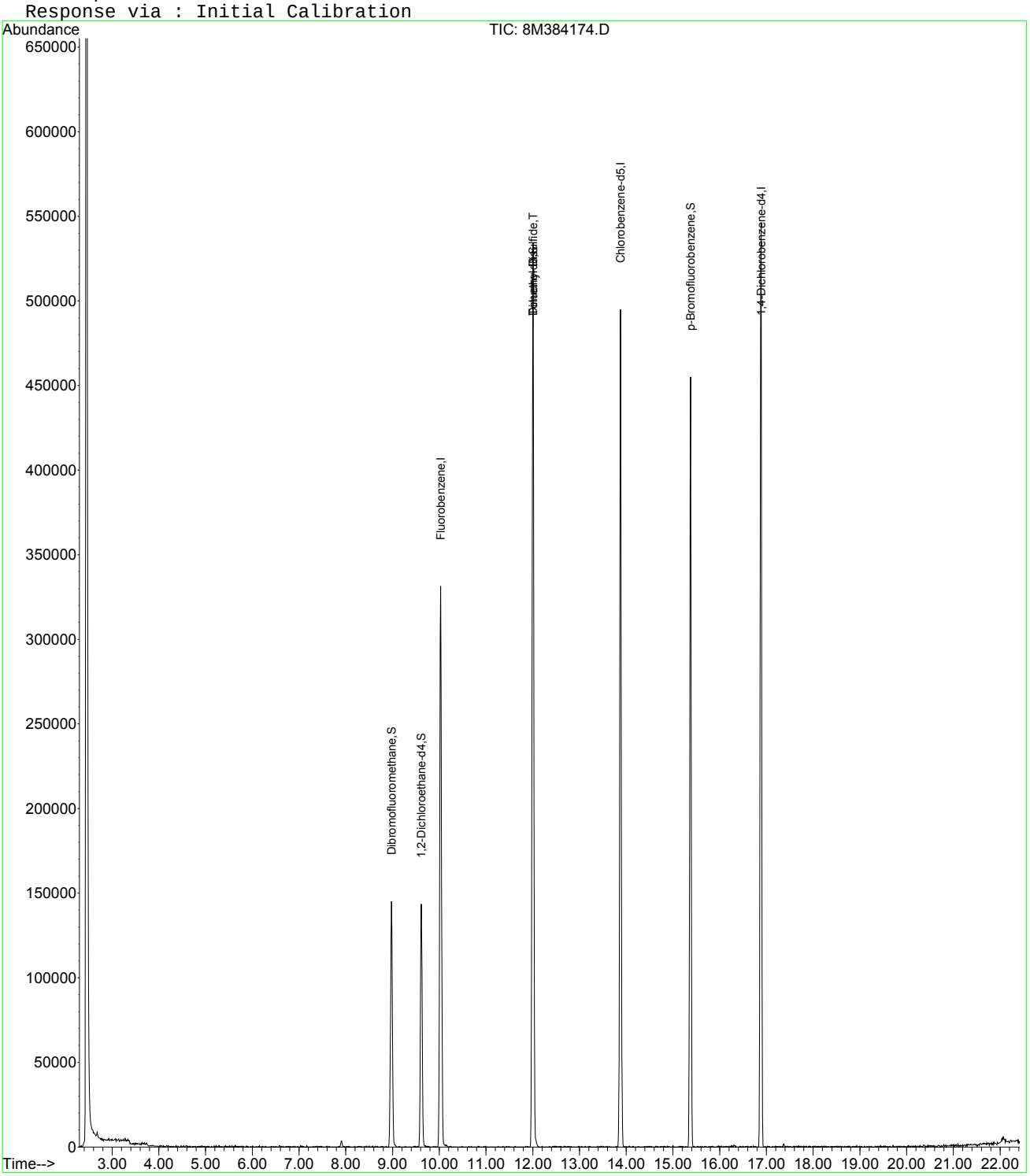
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	397962	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	341578	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.89	152	193306	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.98	111	136527	25.2298	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.92%			
43) 1,2-Dichloroethane-d4	9.62	65	137381	21.7435	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 86.96%			
58) Toluene-d8	12.01	98	471034	26.3004	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 105.20%			
80) p-Bromofluorobenzene	15.38	95	201471	24.8741	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 99.48%			
Target Compounds						Qvalue
56) Dimethyl Disulfide	12.01	94	13715	1.9354	ug/L #	22

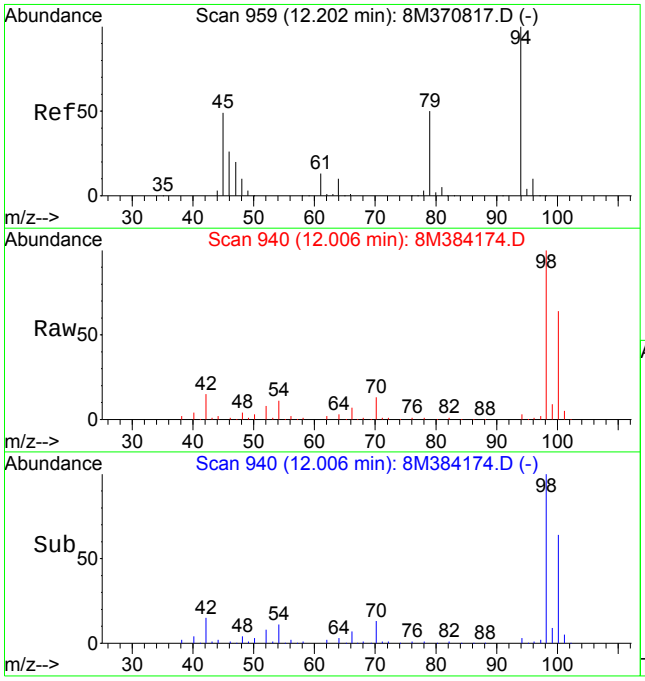
(#) = qualifier out of range (m) = manual integration
8M384174.D 8260WTR.M Mon Dec 17 08:50:49 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384174.D Vial: 14
Acq On : 14 Dec 2012 21:52 Operator: ADC
Sample : L12120212-03 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration

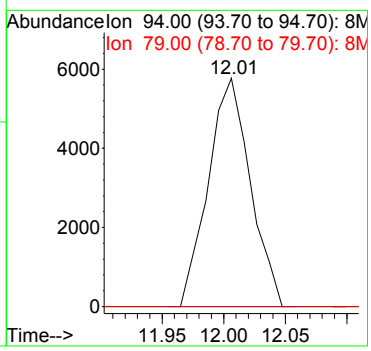




#56
Dimethyl Disulfide
Concen: 1.94 ug/L
RT: 12.01 min Scan# 940
Delta R.T. 0.08 min
Lab File: 8M384174.D
Acq: 14 Dec 2012 21:52

Tgt Ion: 94 Resp: 13715

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384166.D Vial: 6
Acq On : 14 Dec 2012 17:53 Operator: ADC
Sample : L12120212-04 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 18:15:42 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	431704	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	368553	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.88	152	205839	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	150126	25.5745	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.28%			
43) 1,2-Dichloroethane-d4	9.62	65	149907	21.8716	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 87.48%			
58) Toluene-d8	12.00	98	503220	26.0410	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.16%			
80) p-Bromofluorobenzene	15.37	95	215893	25.0318	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 100.12%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.73	85	127619	21.1143	ug/L	99
3) Chloromethane	3.11	50	179197	17.5231	ug/L	98
4) Vinyl Chloride	3.31	62	128914	16.9577	ug/L	100
5) 1,3-Butadiene	3.35	54	1107	0.1822	ug/L #	1
6) Bromomethane	4.10	94	72469	20.2337	ug/L	98
7) Chloroethane	4.25	64	77122	20.3116	ug/L	94
8) Trichlorofluoromethane	4.73	101	213275	19.3414	ug/L	100
10) Isoprene	5.29	67	139113	18.6803	ug/L	88
12) 1,1,2-Trichloro-1,2,2-Trif	5.52	101	116153	21.5843	ug/L	96
13) Acetone	5.56	43	21261	19.3262	ug/L	84
14) 1,1-Dichloroethene	5.80	61	207912	18.0965	ug/L	93
16) Dimethyl Sulfide	6.05	62	124620	20.2925	ug/L	86
17) Iodomethane	6.28	142	103633	22.1121	ug/L	93
18) Methyl acetate	6.33	43	52124	18.1255	ug/L	96
19) Methylene Chloride	6.57	84	99398	21.0597	ug/L	79
20) Carbon Disulfide	6.59	76	303933	24.2501	ug/L	100
21) Acrylonitrile	6.73	53	32278	22.3554	ug/L	96
22) Methyl Tert Butyl Ether	6.81	73	225810	21.9143	ug/L	98
23) trans-1,2-Dichloroethene	7.03	61	209552	19.9565	ug/L	96
24) n-Hexane	7.15	57	166140	19.5172	ug/L	93
27) 1,1-Dichloroethane	7.64	63	229140	19.5385	ug/L	99
29) 2-Butanone	8.20	43	28432	17.8947	ug/L	92
31) 2,2-Dichloropropane	8.43	77	193288	18.9182	ug/L	99
32) cis-1,2-Dichloroethene	8.48	96	112855	20.8398	ug/L	89
33) Chloroform	8.69	83	208001	19.7672	ug/L	99
35) Bromochloromethane	8.91	130	69319	22.2568	ug/L	86
38) 1,1,1-Trichloroethane	9.23	97	196312	18.7243	ug/L	99
39) Cyclohexane	9.27	56	240696	19.3400	ug/L	95
40) 1,1-Dichloropropene	9.43	75	159335	19.4814	ug/L	96
42) Carbon Tetrachloride	9.57	117	184566	18.9118	ug/L	98
45) 1,2-Dichloroethane	9.73	62	166481	18.9012	ug/L	99
46) Benzene	9.78	78	394457	20.0663	ug/L	92
47) Trichloroethene	10.54	130	129111	22.0978	ug/L	95
48) Methylcyclohexane	10.64	83	156486	21.1813	ug/L	89
49) 1,2-Dichloropropane	10.74	63	124050	21.2105	ug/L	94
50) Bromodichloromethane	11.03	83	154739	19.6324	ug/L	100
51) 1,4-Dioxane	11.04	88	452	24.0734	ug/L #	1
52) Dibromomethane	11.10	93	54237	21.5998	ug/L	97
53) 2-Chloroethyl Vinyl Ether	11.35	63	801	0.3317	ug/L #	52
54) 4-Methyl-2-Pentanone	11.39	58	27764	18.9823	ug/L	96
55) cis-1,3-Dichloropropene	11.68	75	187106	22.1168	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M384166.D 8260WTR.M Fri Dec 14 18:15:43 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384166.D Vial: 6
Acq On : 14 Dec 2012 17:53 Operator: ADC
Sample : L12120212-04 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 18:15:42 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

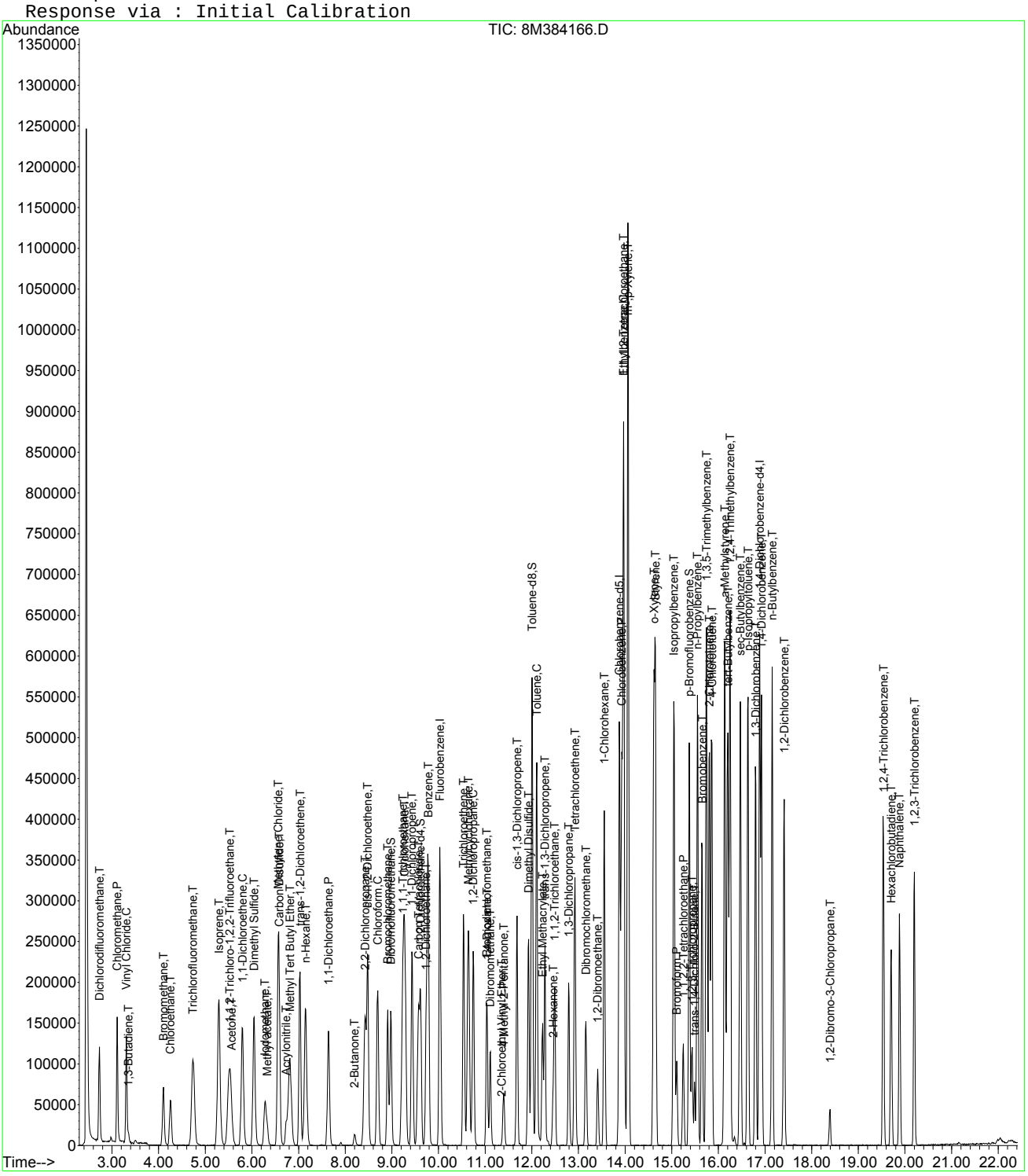
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dimethyl Disulfide	11.93	94	176679	22.9830	ug/L	97
59)	Toluene	12.11	91	451921	19.8987	ug/L	100
60)	Ethyl Methacrylate	12.23	69	96288	23.2086	ug/L	82
62)	trans-1,3-Dichloropropene	12.28	75	158274	19.7959	ug/L	100
63)	1,1,2-Trichloroethane	12.49	97	74754	22.0906	ug/L	99
64)	2-Hexanone	12.46	58	24920	17.4899	ug/L	89
65)	1,3-Dichloropropane	12.79	76	134701	20.7613	ug/L	82
66)	Tetrachloroethene	12.92	164	102373	20.1365	ug/L	94
67)	Dibromochloromethane	13.16	129	113840	19.7412	ug/L	98
68)	1,2-Dibromoethane	13.41	107	84879	19.9346	ug/L	97
69)	1-Chlorohexane	13.55	91	151069	20.1302	ug/L	86
70)	Chlorobenzene	13.93	112	306984	18.4657	ug/L	95
71)	1,1,1,2-Tetrachloroethane	13.97	131	132340	19.9075	ug/L	100
72)	Ethylbenzene	13.97	106	185793	19.8417	ug/L	94
73)	m-,p-Xylene	14.06	106	440289	40.0202	ug/L	96
74)	o-Xylene	14.62	106	206507	19.0640	ug/L	94
75)	Styrene	14.65	104	374065	21.3600	ug/L	92
76)	Bromoform	15.11	173	66409	20.2539	ug/L	98
77)	Isopropylbenzene	15.04	105	545443	18.5159	ug/L	98
79)	1,1,2,2-Tetrachloroethane	15.25	83	80443	20.5879	ug/L	99
81)	1,2,3-Trichloropropane	15.44	110	27025	19.4852	ug/L	93
82)	trans-1,4-Dichloro-2-Buten	15.49	53	25871	13.1788	ug/L	86
83)	n-Propylbenzene	15.55	91	580578	17.8717	ug/L	98
84)	Bromobenzene	15.65	156	149136	19.5727	ug/L	92
85)	1,3,5-Trimethylbenzene	15.75	105	524610	19.7685	ug/L	98
86)	2-Chlorotoluene	15.81	91	391182	17.1788	ug/L	98
87)	4-Chlorotoluene	15.86	91	375299	17.0421	ug/L	98
88)	a-Methylstyrene	16.14	118	269130	20.7857	ug/L	95
89)	tert-Butylbenzene	16.20	134	91413	16.7126	ug/L	95
90)	1,2,4-Trimethylbenzene	16.25	105	528085	19.6019	ug/L	99
91)	sec-Butylbenzene	16.47	105	543185	17.6972	ug/L	99
92)	p-Isopropyltoluene	16.64	119	463885	18.3019	ug/L	99
93)	1,3-Dichlorobenzene	16.80	146	264620	17.8836	ug/L	97
94)	1,4-Dichlorobenzene	16.93	146	286153	19.1051	ug/L	98
95)	n-Butylbenzene	17.15	91	412837	17.8529	ug/L	98
96)	1,2-Dichlorobenzene	17.41	146	238843	18.2099	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	18.39	75	15009	16.8425	ug/L	71
98)	1,2,4-Trichlorobenzene	19.54	180	162359	18.9146	ug/L	98
99)	Hexachlorobutadiene	19.71	225	68244	16.9825	ug/L	96
100)	Naphthalene	19.88	128	284606	19.7382	ug/L	99
101)	1,2,3-Trichlorobenzene	20.20	180	135430	18.6179	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384166.D Vial: 6
Acq On : 14 Dec 2012 17:53 Operator: ADC
Sample : L12120212-04 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 18:15 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384167.D Vial: 7
Acq On : 14 Dec 2012 18:23 Operator: ADC
Sample : L12120212-05 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 18:45:45 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	426073	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.87	117	359274	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.88	152	207315	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	149058	25.7281	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.92%			
43) 1,2-Dichloroethane-d4	9.61	65	150263	22.2133	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 88.84%			
58) Toluene-d8	12.00	98	493564	26.2010	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.80%			
80) p-Bromofluorobenzene	15.37	95	212492	24.4620	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.84%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.73	85	125863	21.0990	ug/L	99
3) Chloromethane	3.11	50	179484	17.7831	ug/L	99
4) Vinyl Chloride	3.31	62	126421	16.8495	ug/L	99
5) 1,3-Butadiene	3.34	54	1219	0.2033	ug/L #	49
6) Bromomethane	4.10	94	68594	19.4049	ug/L	94
7) Chloroethane	4.25	64	76778	20.4883	ug/L	93
8) Trichlorofluoromethane	4.74	101	208695	19.1762	ug/L	100
10) Isoprene	5.28	67	135001	18.3677	ug/L	88
12) 1,1,2-Trichloro-1,2,2-Trif	5.51	101	112832	21.2443	ug/L	96
13) Acetone	5.56	43	19763	18.2019	ug/L	86
14) 1,1-Dichloroethene	5.79	61	209499	18.4757	ug/L	94
16) Dimethyl Sulfide	6.05	62	119914	19.7843	ug/L	87
17) Iodomethane	6.28	142	102648	22.1914	ug/L	92
18) Methyl acetate	6.32	43	47489	16.7320	ug/L	95
19) Methylene Chloride	6.55	84	96391	20.6925	ug/L	81
20) Carbon Disulfide	6.59	76	292797	23.6703	ug/L	100
21) Acrylonitrile	6.73	53	32075	22.5084	ug/L	94
22) Methyl Tert Butyl Ether	6.81	73	219714	21.6045	ug/L	97
23) trans-1,2-Dichloroethene	7.02	61	202658	19.5550	ug/L	94
24) n-Hexane	7.14	57	158478	18.8631	ug/L	93
27) 1,1-Dichloroethane	7.64	63	224349	19.3828	ug/L	99
29) 2-Butanone	8.20	43	28236	18.0063	ug/L	93
31) 2,2-Dichloropropane	8.43	77	188269	18.6705	ug/L	99
32) cis-1,2-Dichloroethene	8.48	96	111198	20.8052	ug/L	87
33) Chloroform	8.69	83	207499	19.9801	ug/L	99
35) Bromochloromethane	8.91	130	69263	22.5327	ug/L	85
38) 1,1,1-Trichloroethane	9.23	97	195816	18.9238	ug/L	99
39) Cyclohexane	9.27	56	228773	18.6250	ug/L	93
40) 1,1-Dichloropropene	9.44	75	158999	19.6972	ug/L	100
42) Carbon Tetrachloride	9.57	117	178546	18.5367	ug/L	99
45) 1,2-Dichloroethane	9.74	62	167884	19.3124	ug/L	97
46) Benzene	9.77	78	394188	20.3176	ug/L	92
47) Trichloroethene	10.54	130	125290	21.7272	ug/L	97
48) Methylcyclohexane	10.64	83	155559	21.3341	ug/L	89
49) 1,2-Dichloropropane	10.74	63	121079	20.9761	ug/L	95
50) Bromodichloromethane	11.03	83	153400	19.7197	ug/L	99
52) Dibromomethane	11.10	93	52652	21.2457	ug/L	95
54) 4-Methyl-2-Pentanone	11.39	58	26193	18.1626	ug/L	97
55) cis-1,3-Dichloropropene	11.68	75	187641	22.4731	ug/L	100
56) Dimethyl Disulfide	11.93	94	173629	22.8848	ug/L	98
59) Toluene	12.11	91	450544	20.3504	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M384167.D 8260WTR.M Fri Dec 14 18:45:45 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384167.D Vial: 7
Acq On : 14 Dec 2012 18:23 Operator: ADC
Sample : L12120212-05 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 18:45:45 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

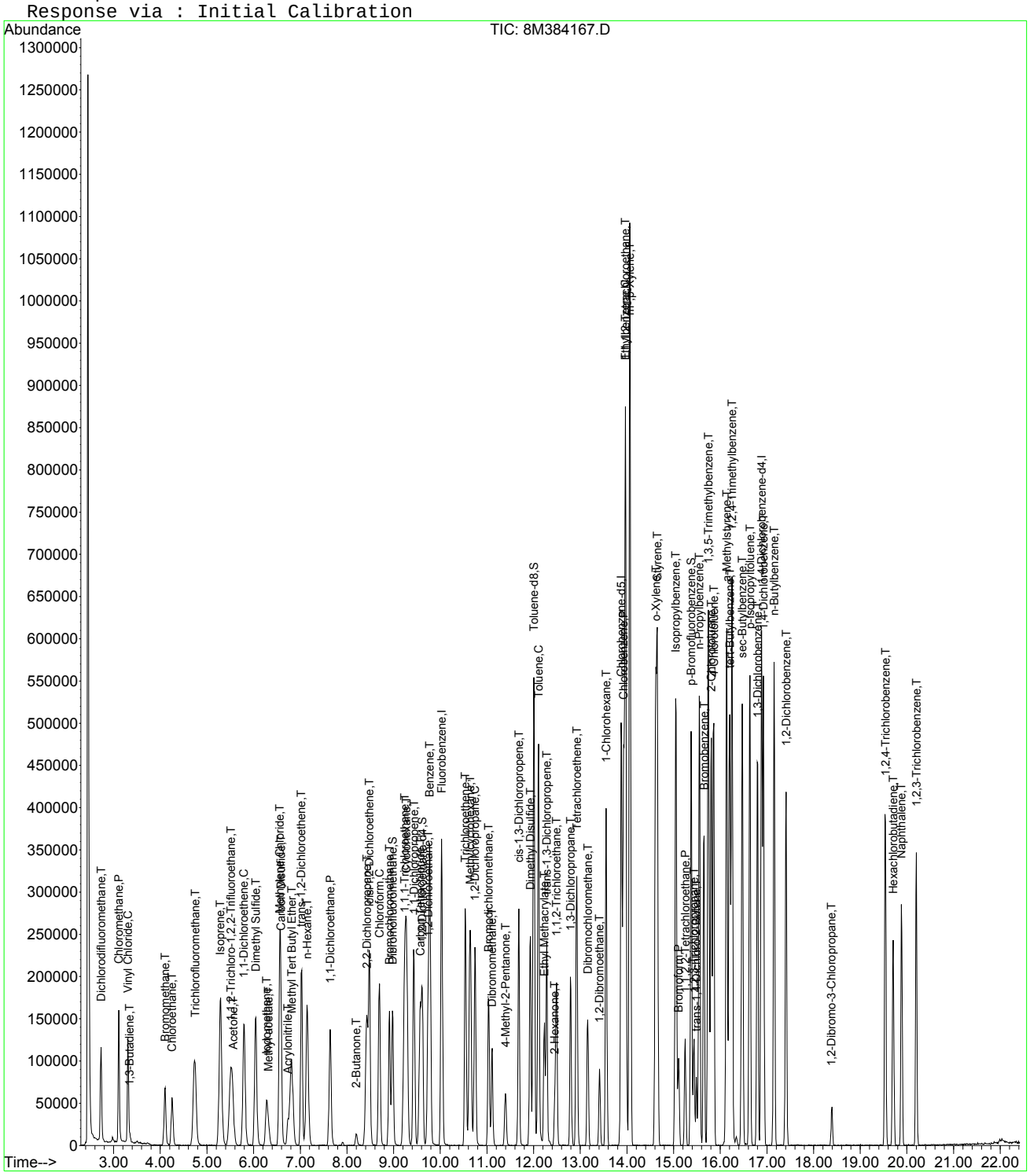
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
60)	Ethyl Methacrylate	12.23	69	92651	22.9087 ug/L	84
62)	trans-1,3-Dichloropropene	12.28	75	156083	20.0261 ug/L	99
63)	1,1,2-Trichloroethane	12.49	97	74516	22.5889 ug/L	100
64)	2-Hexanone	12.45	58	25935	18.6724 ug/L	87
65)	1,3-Dichloropropane	12.79	76	131935	20.8602 ug/L	86
66)	Tetrachloroethene	12.92	164	104106	21.0063 ug/L	92
67)	Dibromochloromethane	13.16	129	110986	19.7434 ug/L	99
68)	1,2-Dibromoethane	13.41	107	83346	20.0801 ug/L	97
69)	1-Chlorohexane	13.55	91	144977	19.8173 ug/L	87
70)	Chlorobenzene	13.93	112	304477	18.7879 ug/L	96
71)	1,1,1,2-Tetrachloroethane	13.97	131	129969	20.0558 ug/L	99
72)	Ethylbenzene	13.97	106	181204	19.8514 ug/L	95
73)	m-,p-Xylene	14.06	106	426484	39.7666 ug/L	98
74)	o-Xylene	14.62	106	206092	19.5171 ug/L	92
75)	Styrene	14.65	104	365811	21.4282 ug/L	92
76)	Bromoform	15.11	173	66838	20.9112 ug/L	98
77)	Isopropylbenzene	15.04	105	535369	18.6433 ug/L	99
79)	1,1,2,2-Tetrachloroethane	15.25	83	80641	20.4917 ug/L	96
81)	1,2,3-Trichloropropane	15.44	110	27641	19.7875 ug/L	96
82)	trans-1,4-Dichloro-2-Buten	15.49	53	26149	13.2256 ug/L	86
83)	n-Propylbenzene	15.55	91	570014	17.4216 ug/L	98
84)	Bromobenzene	15.65	156	144435	18.8208 ug/L	95
85)	1,3,5-Trimethylbenzene	15.75	105	522462	19.5473 ug/L	99
86)	2-Chlorotoluene	15.81	91	383832	16.7360 ug/L	99
87)	4-Chlorotoluene	15.86	91	373264	16.8290 ug/L	96
88)	a-Methylstyrene	16.14	118	266246	20.4165 ug/L	95
89)	tert-Butylbenzene	16.20	134	93850	17.0360 ug/L	92
90)	1,2,4-Trimethylbenzene	16.25	105	532000	19.6066 ug/L	100
91)	sec-Butylbenzene	16.47	105	537091	17.3741 ug/L	99
92)	p-Isopropyltoluene	16.64	119	467345	18.3072 ug/L	99
93)	1,3-Dichlorobenzene	16.80	146	264702	17.7618 ug/L	96
94)	1,4-Dichlorobenzene	16.92	146	288131	19.1002 ug/L	97
95)	n-Butylbenzene	17.15	91	420641	18.0609 ug/L	98
96)	1,2-Dichlorobenzene	17.41	146	233694	17.6905 ug/L	100
97)	1,2-Dibromo-3-Chloropropan	18.38	75	16324	18.1878 ug/L	86
98)	1,2,4-Trichlorobenzene	19.54	180	160360	18.5487 ug/L	99
99)	Hexachlorobutadiene	19.71	225	67827	16.7586 ug/L	97
100)	Naphthalene	19.88	128	290882	20.0298 ug/L	99
101)	1,2,3-Trichlorobenzene	20.20	180	136463	18.6263 ug/L	98

(#) = qualifier out of range (m) = manual integration
8M384167.D 8260WTR.M Fri Dec 14 18:45:45 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384167.D Vial: 7
Acq On : 14 Dec 2012 18:23 Operator: ADC
Sample : L12120212-05 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 18:45 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384175.D Vial: 15
Acq On : 14 Dec 2012 22:22 Operator: ADC
Sample : L12120212-06 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:50 2012 Quant Results File: 8260WTR.RES

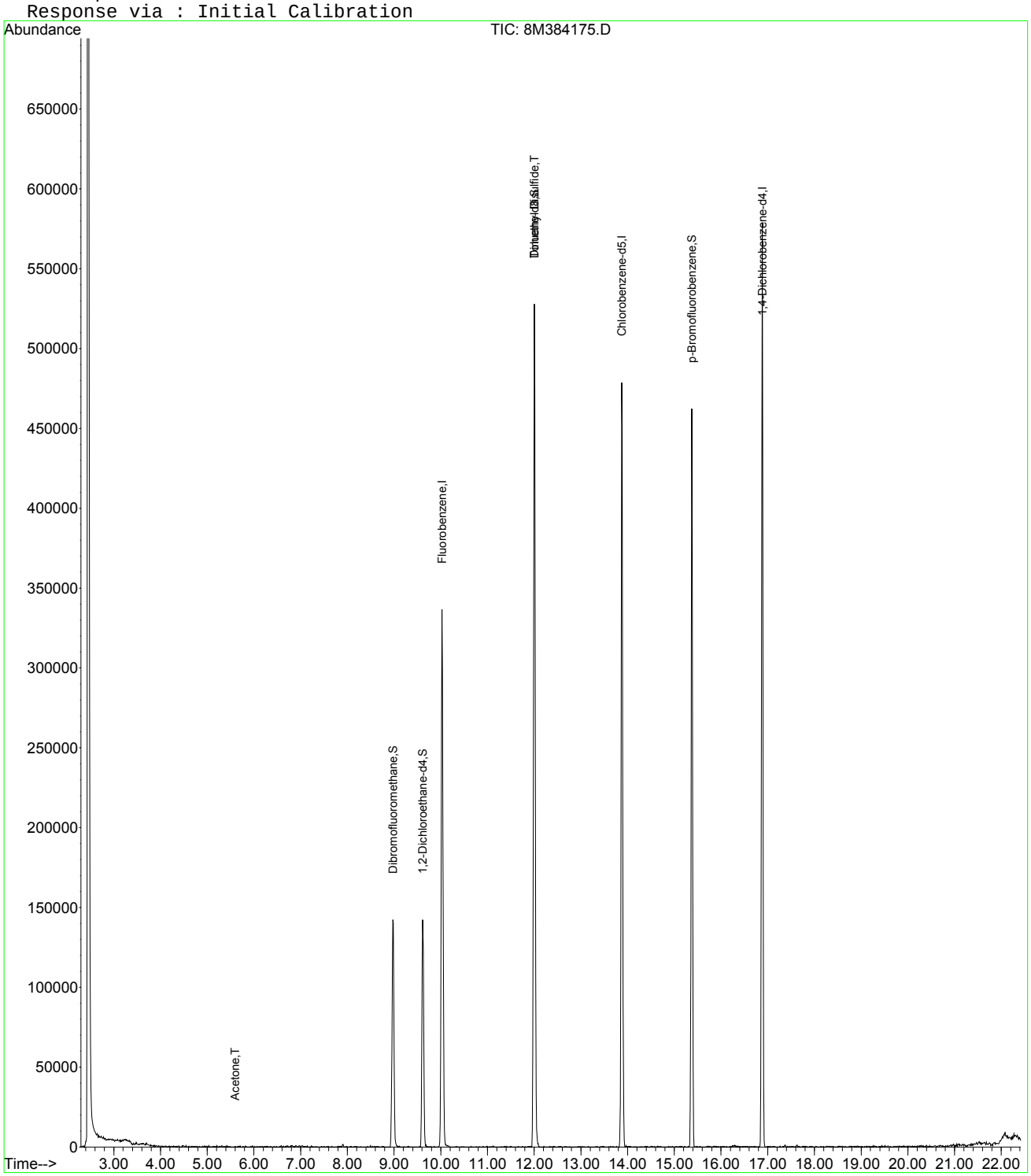
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

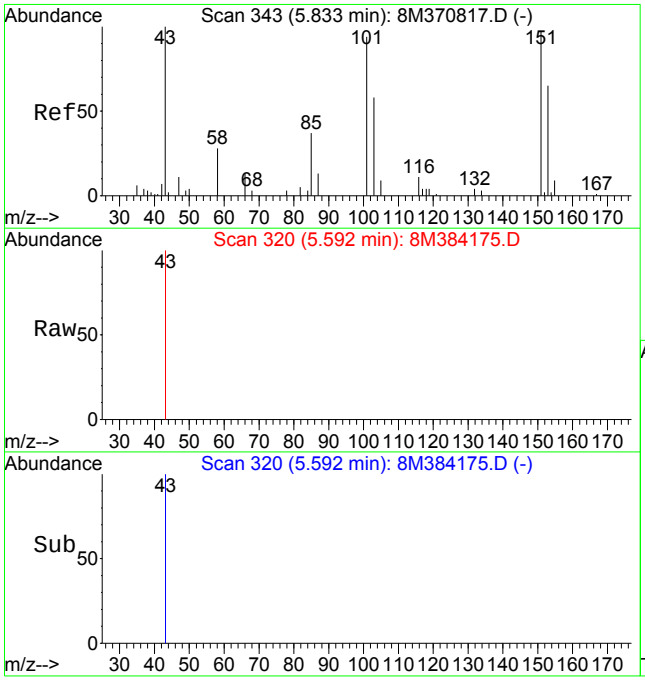
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	401604	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.87	117	341676	25.00	ug/L	-0.01
78) 1,4-Dichlorobenzene-d4	16.88	152	192071	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	137090	25.1041	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.40%			
43) 1,2-Dichloroethane-d4	9.61	65	138180	21.6716	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 86.68%			
58) Toluene-d8	12.00	98	465221	25.9684	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.88%			
80) p-Bromofluorobenzene	15.37	95	203678	25.3083	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 101.24%			
Target Compounds						Qvalue
13) Acetone	5.59	43	406	0.3967	ug/L	# 53
56) Dimethyl Disulfide	12.00	94	13062	1.8265	ug/L	# 22

(#) = qualifier out of range (m) = manual integration
8M384175.D 8260WTR.M Mon Dec 17 08:50:50 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\121412\8M384175.D Vial: 15
Acq On : 14 Dec 2012 22:22 Operator: ADC
Sample : L12120212-06 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration

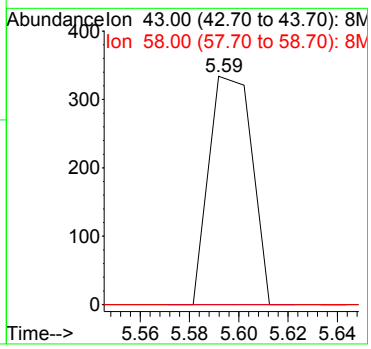


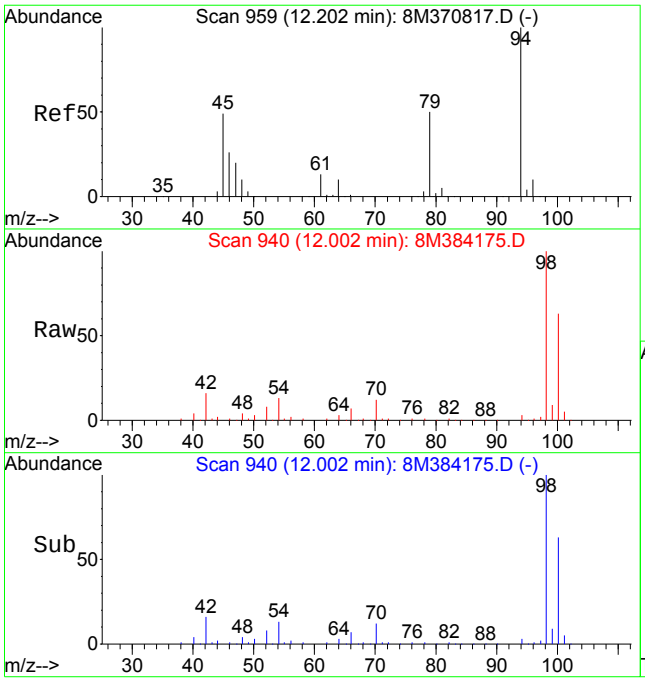


#13
Acetone
Concen: 0.40 ug/L
RT: 5.59 min Scan# 320
Delta R.T. 0.03 min
Lab File: 8M384175.D
Acq: 14 Dec 2012 22:22

Tgt Ion: 43 Resp: 406

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	31.4#

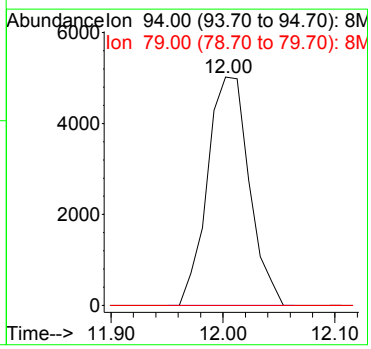




#56
Dimethyl Disulfide
Concen: 1.83 ug/L
RT: 12.00 min Scan# 940
Delta R.T. 0.07 min
Lab File: 8M384175.D
Acq: 14 Dec 2012 22:22

Tgt Ion: 94 Resp: 13062

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384171.D Vial: 11
Acq On : 14 Dec 2012 20:22 Operator: ADC
Sample : L12120212-07 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:41 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

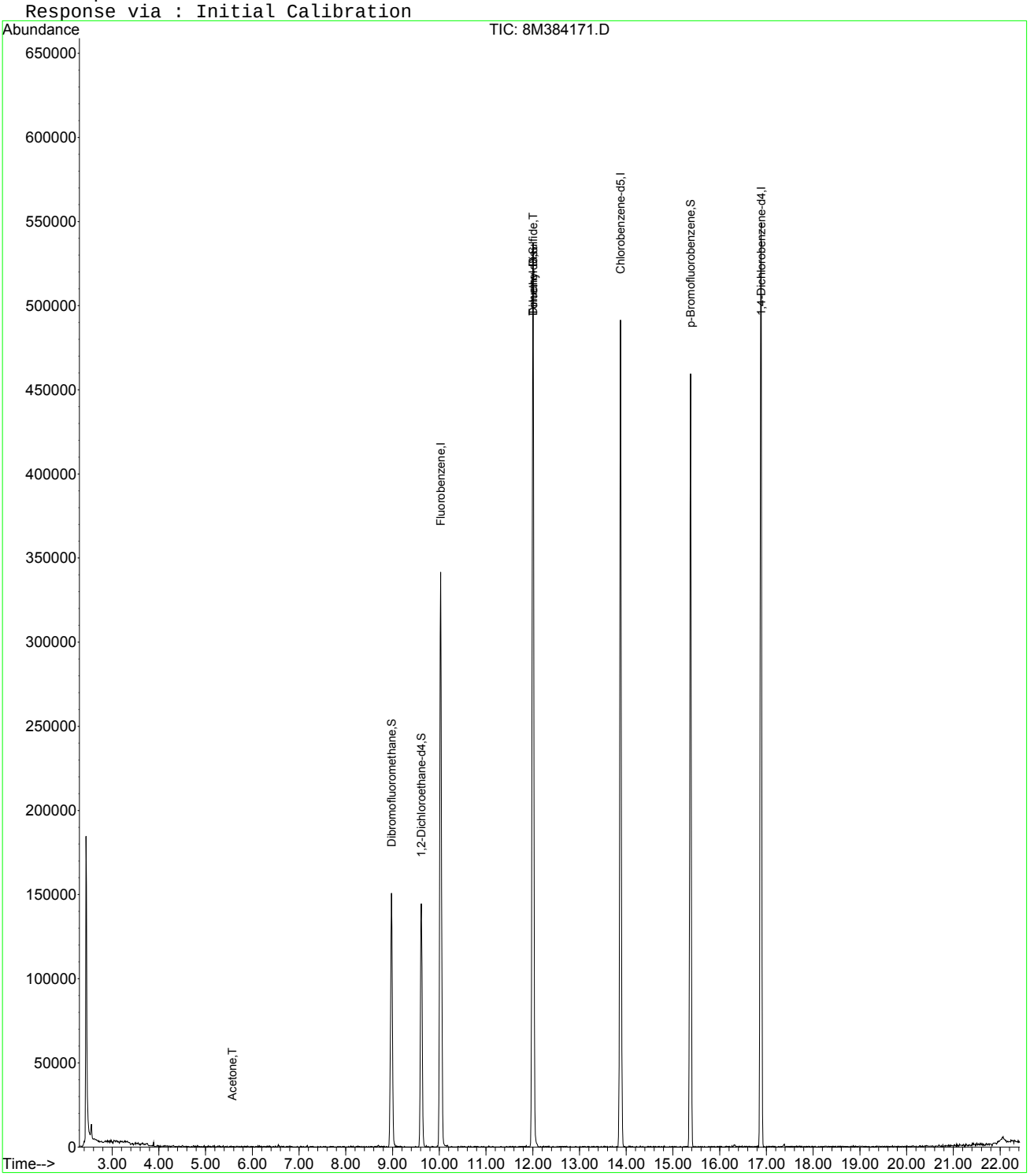
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	408714	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	343842	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.89	152	197155	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.98	111	141462	25.4540	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 101.80%			
43) 1,2-Dichloroethane-d4	9.62	65	138805	21.3910	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 85.56%			
58) Toluene-d8	12.01	98	470824	26.1156	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.48%			
80) p-Bromofluorobenzene	15.38	95	198055	23.9750	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.92%			
Target Compounds						Qvalue
13) Acetone	5.57	43	211	0.2026	ug/L #	53
56) Dimethyl Disulfide	12.01	94	14321	1.9677	ug/L #	22

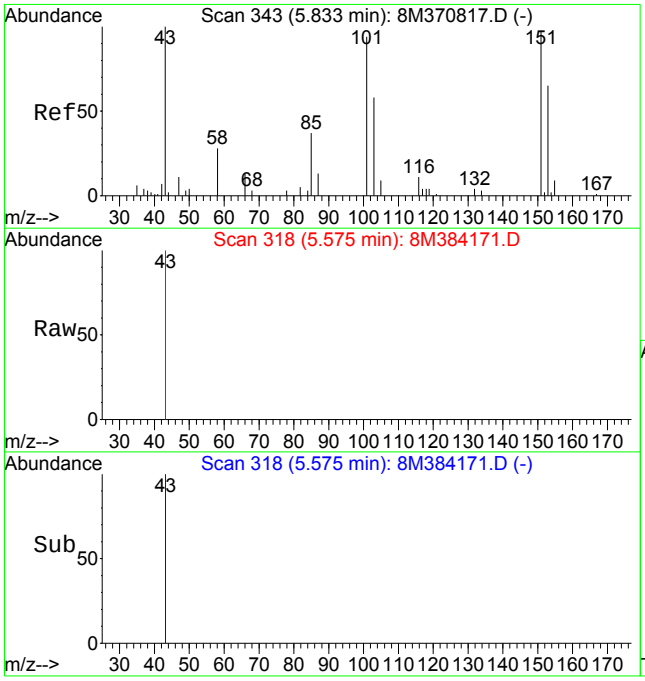
(#) = qualifier out of range (m) = manual integration
8M384171.D 8260WTR.M Mon Dec 17 08:50:41 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384171.D Vial: 11
Acq On : 14 Dec 2012 20:22 Operator: ADC
Sample : L12120212-07 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration

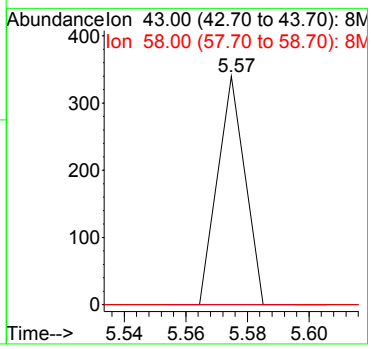


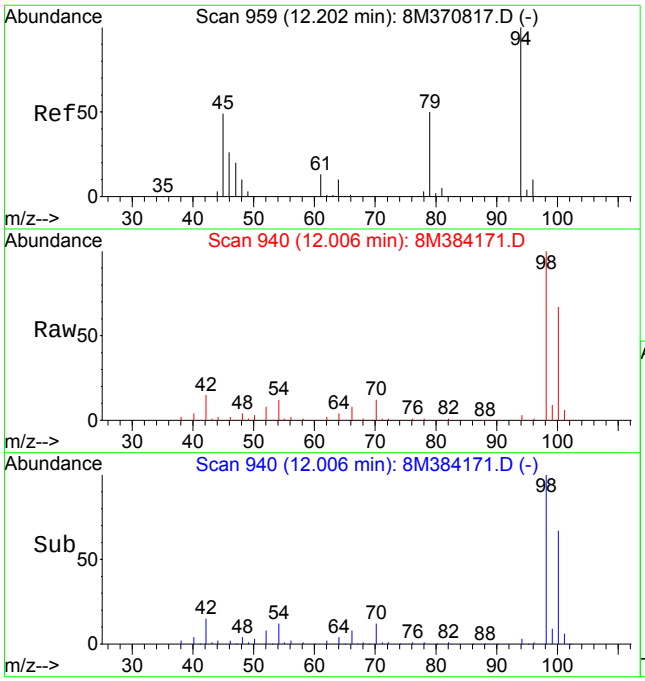


#13
Acetone
Concen: 0.20 ug/L
RT: 5.57 min Scan# 318
Delta R.T. 0.01 min
Lab File: 8M384171.D
Acq: 14 Dec 2012 20:22

Tgt Ion: 43 Resp: 211

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	31.4#

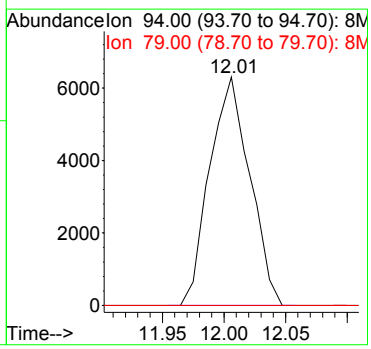




#56
Dimethyl Disulfide
Concen: 1.97 ug/L
RT: 12.01 min Scan# 940
Delta R.T. 0.08 min
Lab File: 8M384171.D
Acq: 14 Dec 2012 20:22

Tgt Ion: 94 Resp: 14321

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384176.D Vial: 16
Acq On : 14 Dec 2012 22:51 Operator: ADC
Sample : L12120212-08 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:52 2012 Quant Results File: 8260WTR.RES

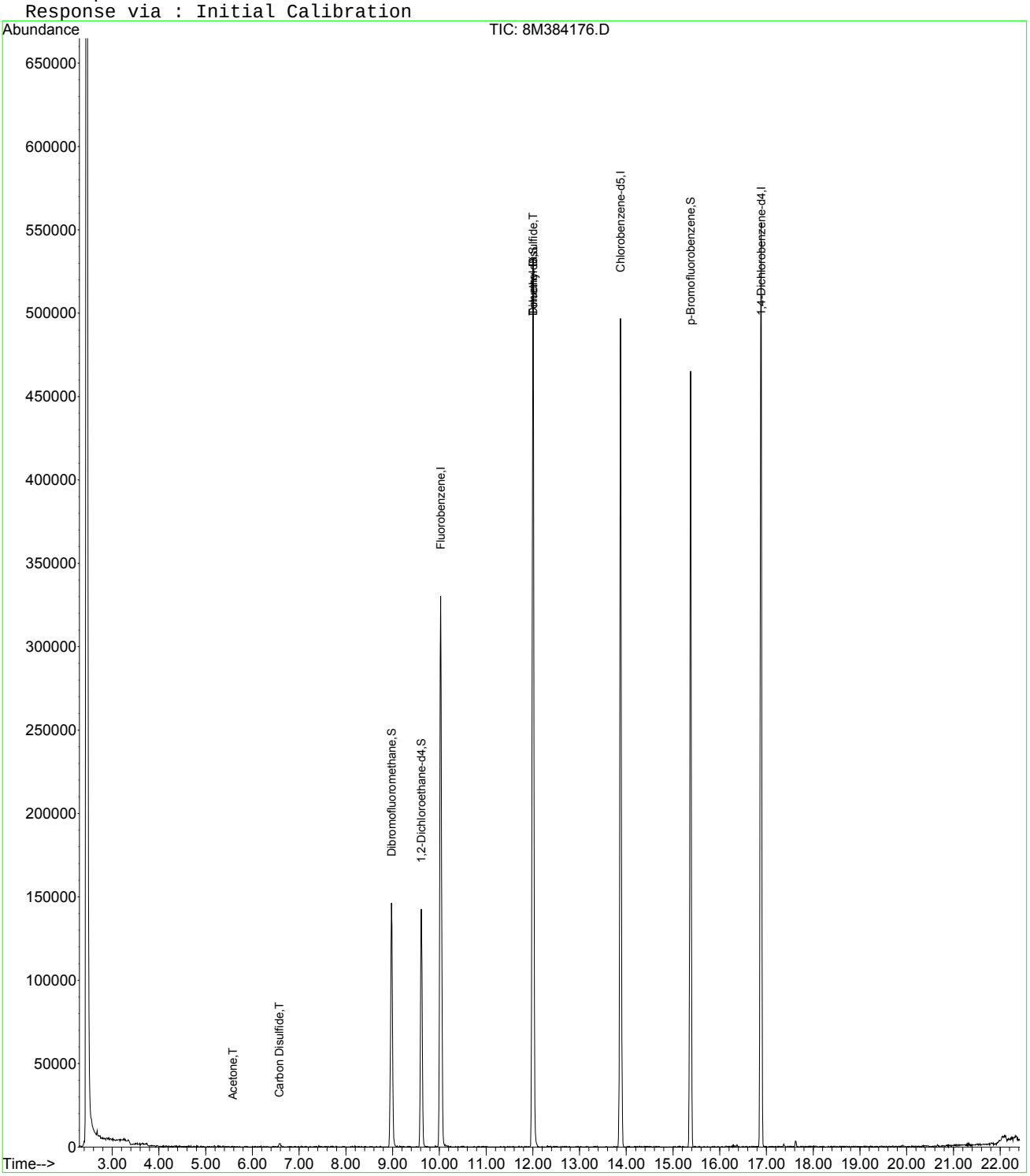
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

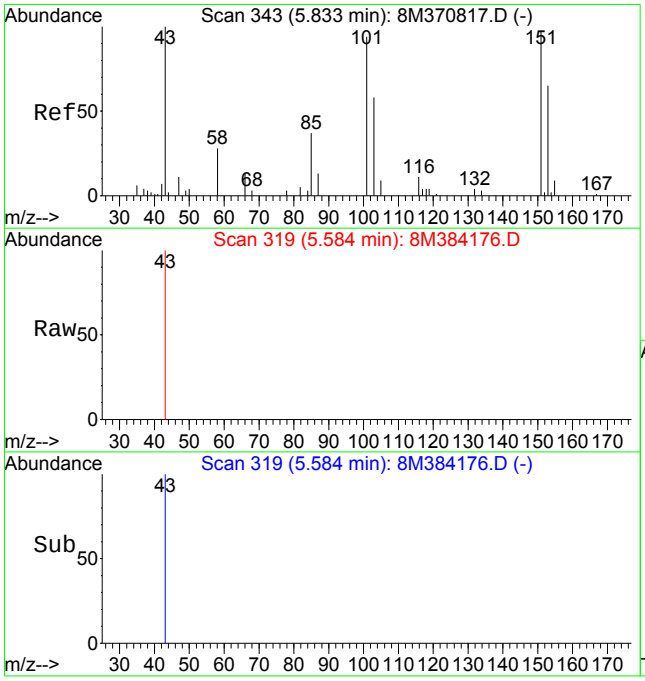
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	395178	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	341786	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.88	152	194429	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	136766	25.4520	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 101.80%			
43) 1,2-Dichloroethane-d4	9.62	65	135015	21.5196	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 86.08%			
58) Toluene-d8	12.00	98	466734	26.0444	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.16%			
80) p-Bromofluorobenzene	15.38	95	198878	24.4122	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.64%			
Target Compounds						Qvalue
13) Acetone	5.58	43	489	0.4856	ug/L #	53
20) Carbon Disulfide	6.58	76	4320	0.3765	ug/L #	75
56) Dimethyl Disulfide	12.00	94	14880	2.1146	ug/L #	22

(#) = qualifier out of range (m) = manual integration
8M384176.D 8260WTR.M Mon Dec 17 08:50:52 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\121412\8M384176.D Vial: 16
Acq On : 14 Dec 2012 22:51 Operator: ADC
Sample : L12120212-08 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration

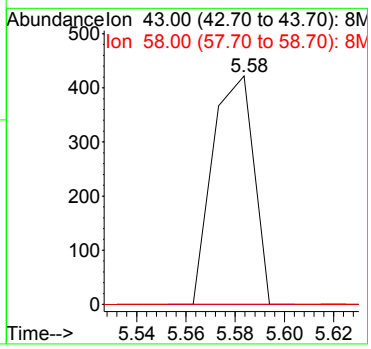


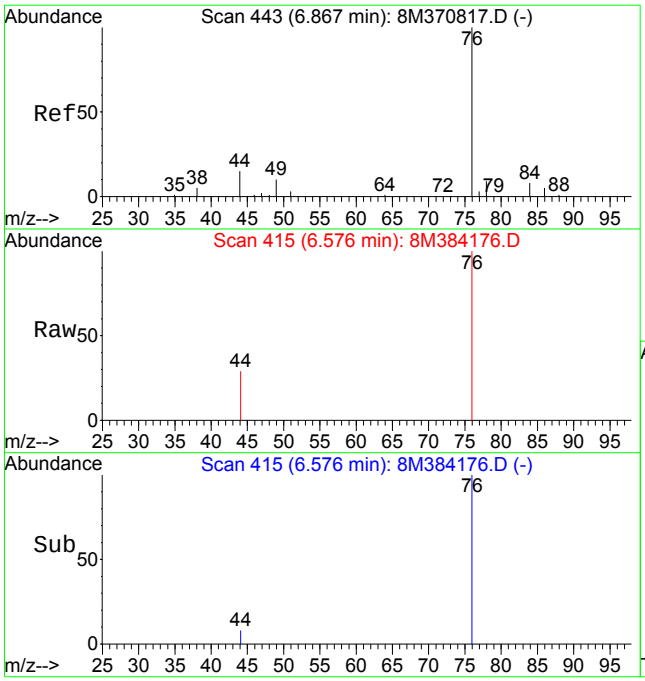


#13
Acetone
Concen: 0.49 ug/L
RT: 5.58 min Scan# 319
Delta R.T. 0.02 min
Lab File: 8M384176.D
Acq: 14 Dec 2012 22:51

Tgt Ion: 43 Resp: 489

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	31.4#

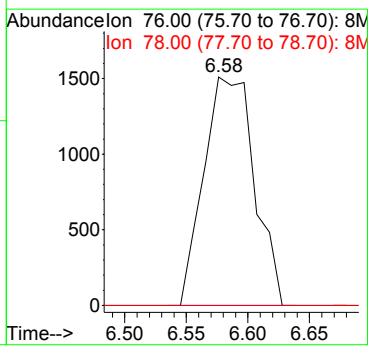


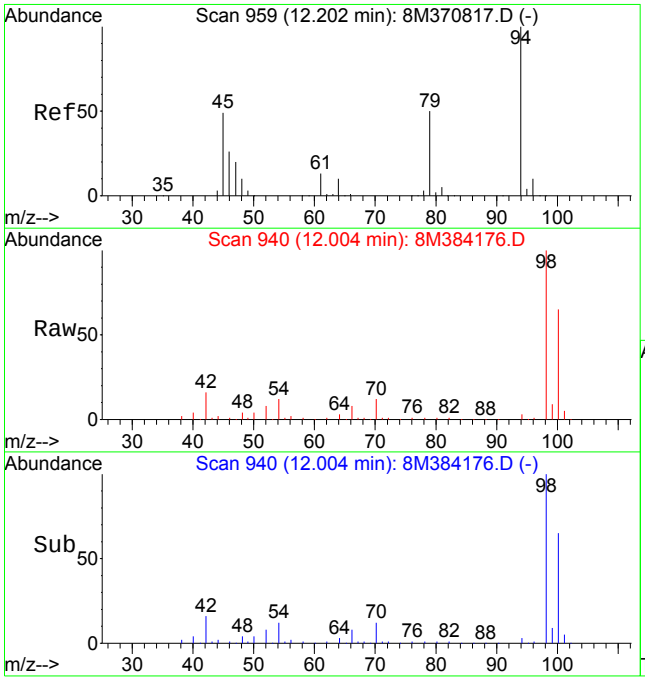


#20
Carbon Disulfide
Concen: 0.38 ug/L
RT: 6.58 min Scan# 415
Delta R.T. -0.01 min
Lab File: 8M384176.D
Acq: 14 Dec 2012 22:51

Tgt Ion: 76 Resp: 4320

Ion	Ratio	Lower	Upper
76	100		
78	0.0	5.5	12.7#

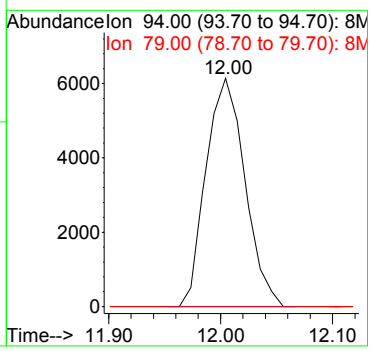




#56
Dimethyl Disulfide
Concen: 2.11 ug/L
RT: 12.00 min Scan# 940
Delta R.T. 0.07 min
Lab File: 8M384176.D
Acq: 14 Dec 2012 22:51

Tgt Ion: 94 Resp: 14880

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



2.1.1.4 Standards Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376558.D Vial: 5
Acq On : 25 Jan 2012 12:43 Operator: ADC
Sample : WG387881-01 5ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:13 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

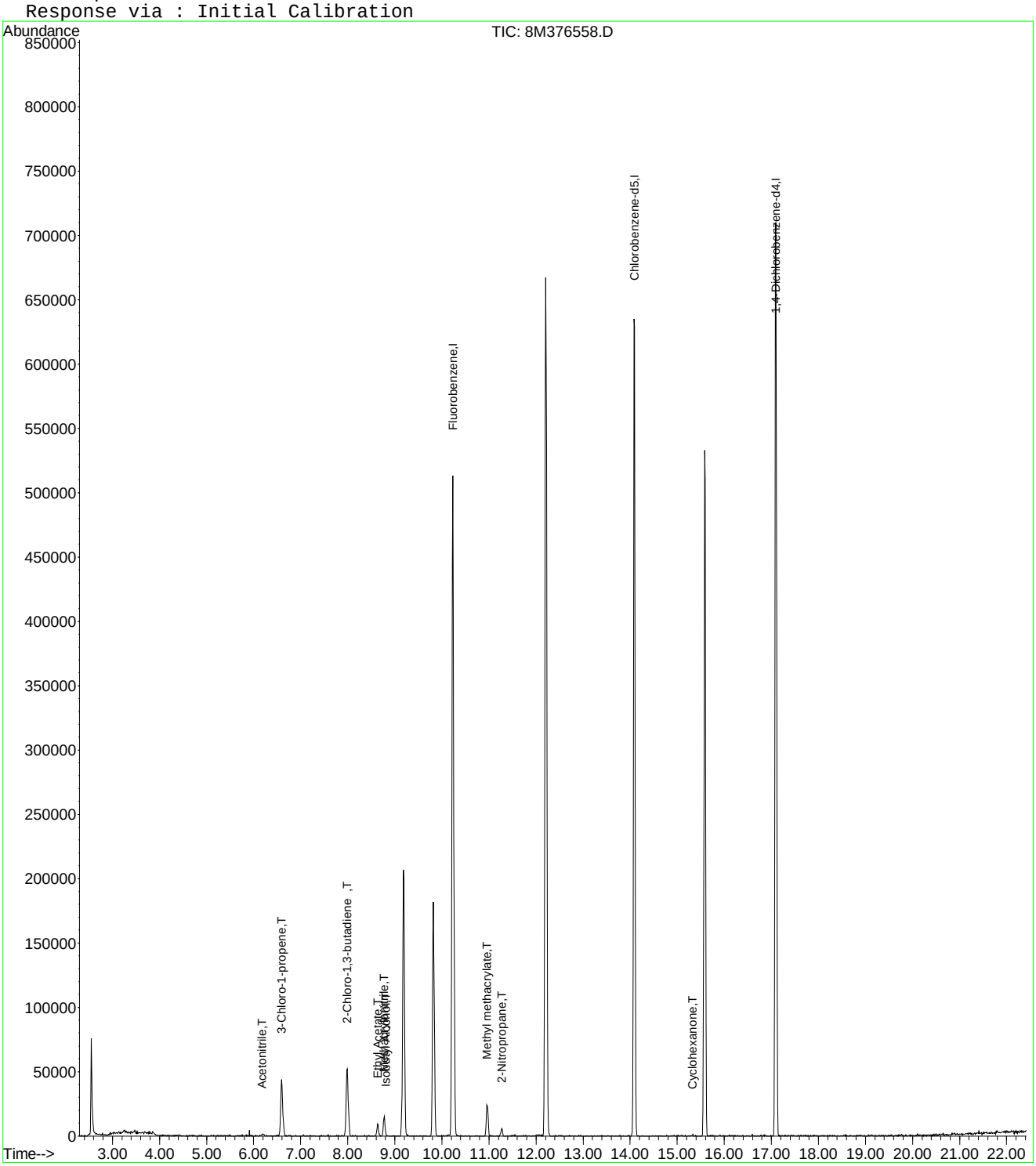
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.23	96	656295	25.00	ug/L		0.00
11) Chlorobenzene-d5	14.09	117	486754	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	17.10	152	262855	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	6.18	41	2309	4.7425	ug/L		65
3) 3-Chloro-1-propene	6.59	41	49314	4.8141	ug/L		100
4) 2-Chloro-1,3-butadiene	7.99	53	61015	5.0296	ug/L		95
5) Ethyl Acetate	8.63	43	16418	4.7992	ug/L		95
6) Methacrylonitrile	8.77	67	6918	4.9194	ug/L		83
7) Isobutyl Alcohol	8.81	43	817	5.5399	ug/L	#	11
9) Methyl methacrylate	10.96	41	18510	4.4070	ug/L		97
10) 2-Nitropropane	11.27	43	5684	3.8971	ug/L		93
13) Cyclohexanone	15.32	55	508	1.9649	ug/L	#	31

(#) = qualifier out of range (m) = manual integration
8M376558.D A9FOOWT.M Wed Feb 01 15:38:15 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376558.D Vial: 5
Acq On : 25 Jan 2012 12:43 Operator: ADC
Sample : WG387881-01 5ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376559.D Vial: 6
Acq On : 25 Jan 2012 13:28 Operator: ADC
Sample : WG387881-02 20ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:15 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

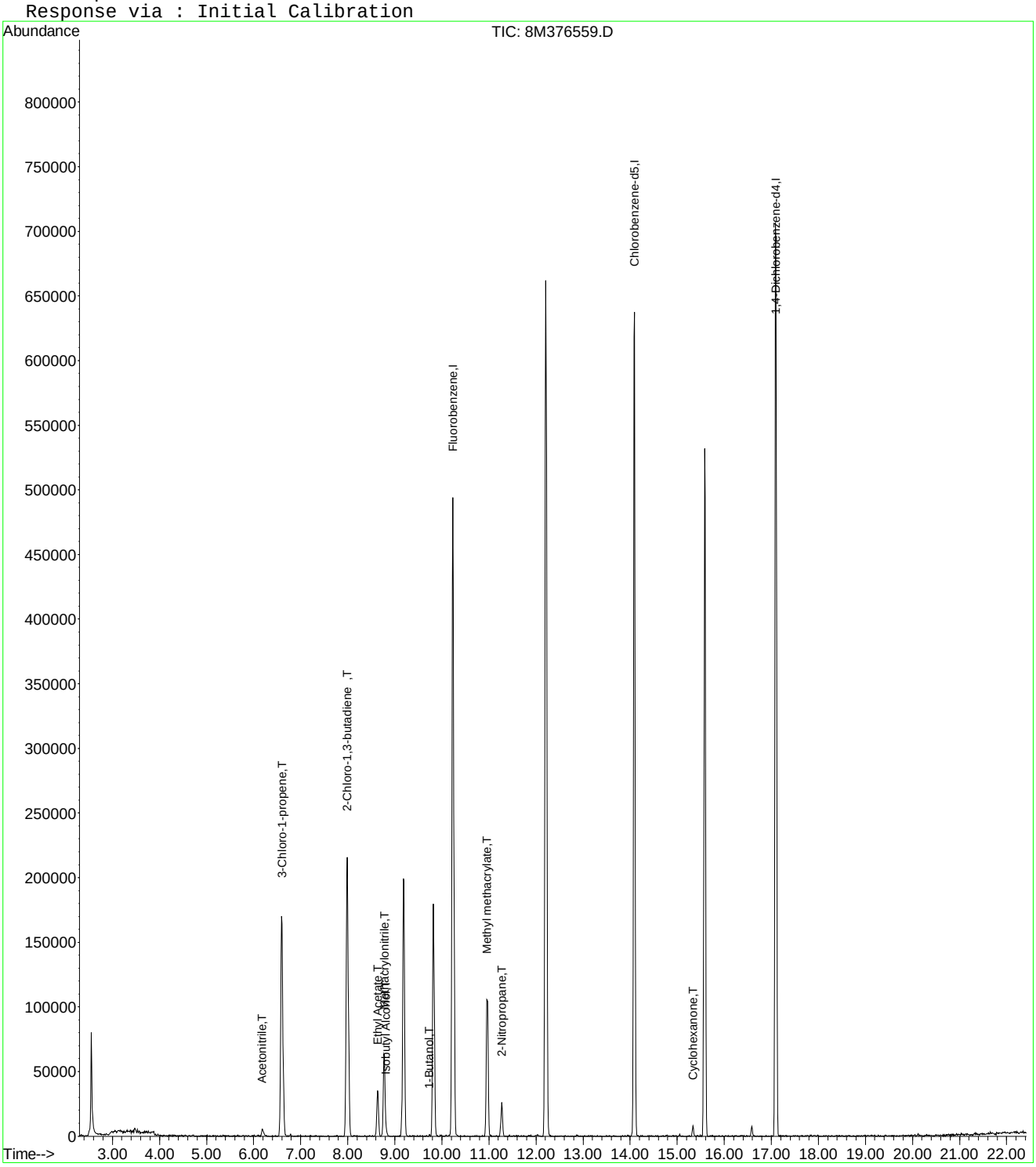
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.24	96	641906	25.00	ug/L		0.00
11) Chlorobenzene-d5	14.09	117	480006	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	17.10	152	261314	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	6.18	41	8633	18.1289	ug/L		99
3) 3-Chloro-1-propene	6.61	41	200453	20.0070	ug/L		100
4) 2-Chloro-1,3-butadiene	7.99	53	238952	20.1388	ug/L		99
5) Ethyl Acetate	8.63	43	64409	19.2495	ug/L		98
6) Methacrylonitrile	8.78	67	25503	18.5419	ug/L		95
7) Isobutyl Alcohol	8.81	43	4920	34.1090	ug/L	#	53
8) 1-Butanol	9.73	56	710	18.9652	ug/L		99
9) Methyl methacrylate	10.96	41	79471	19.3450	ug/L		98
10) 2-Nitropropane	11.27	43	26253	18.4031	ug/L		99
13) Cyclohexanone	15.33	55	5242	20.3952	ug/L		88

(#) = qualifier out of range (m) = manual integration
8M376559.D A9FOOWT.M Wed Feb 01 15:38:16 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376559.D Vial: 6
Acq On : 25 Jan 2012 13:28 Operator: ADC
Sample : WG387881-02 20ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376560.D Vial: 7
Acq On : 25 Jan 2012 13:58 Operator: ADC
Sample : WG387881-03 50ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:17 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

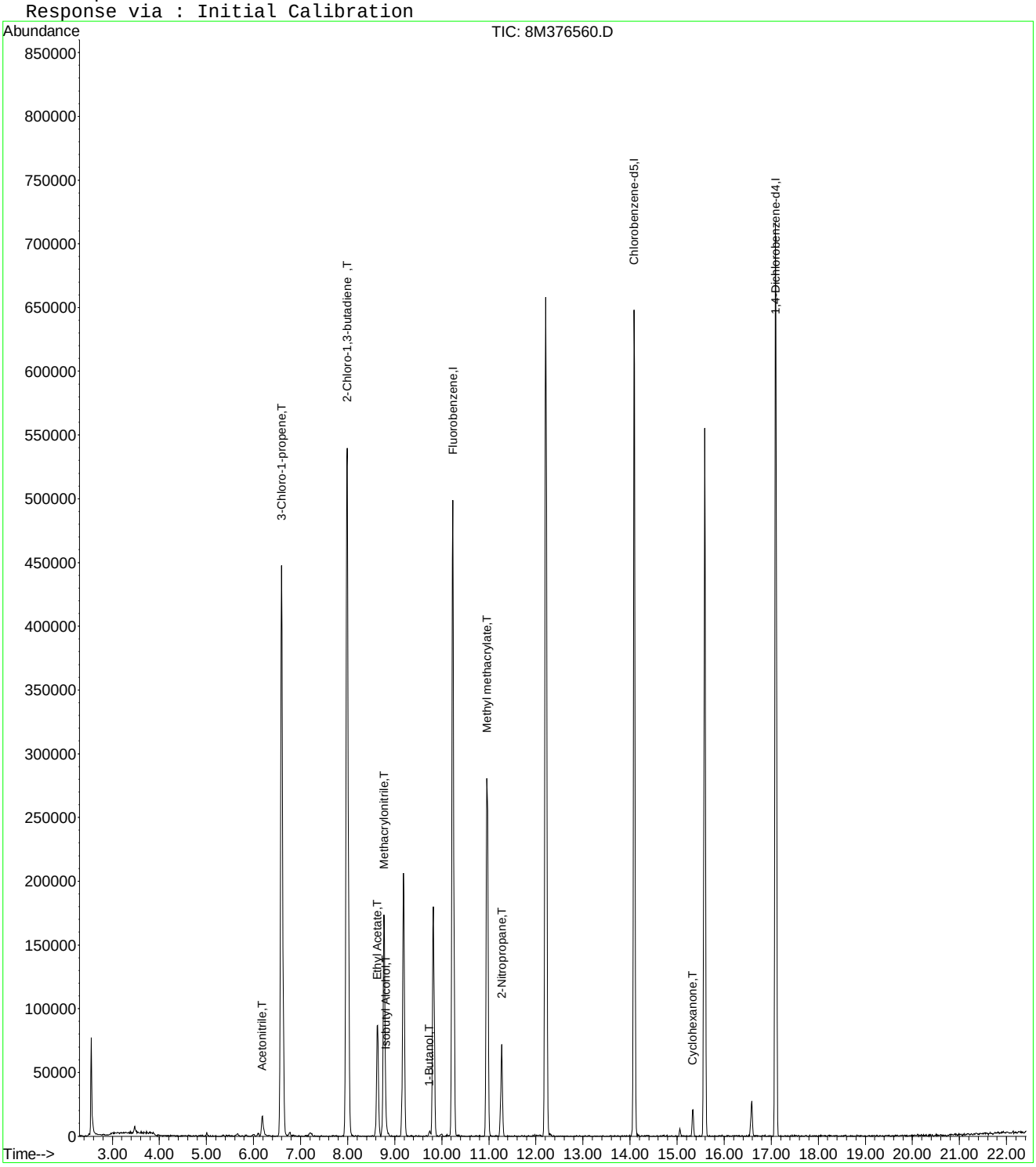
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.24	96	648527	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.08	117	482506	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.09	152	263746	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.18	41	23521	48.8886	ug/L	95
3) 3-Chloro-1-propene	6.60	41	508641	50.2487	ug/L	100
4) 2-Chloro-1,3-butadiene	7.99	53	607253	50.6565	ug/L	99
5) Ethyl Acetate	8.62	43	166201	49.1644	ug/L	100
6) Methacrylonitrile	8.77	67	70376	50.6442	ug/L	98
7) Isobutyl Alcohol	8.81	43	14323	98.2836	ug/L	96
8) 1-Butanol	9.73	56	3105	50.3795	ug/L	79
9) Methyl methacrylate	10.96	41	210106	50.6224	ug/L	99
10) 2-Nitropropane	11.27	43	71916	49.8977	ug/L	97
13) Cyclohexanone	15.32	55	12432	47.9236	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M376560.D A9FOOWT.M Wed Feb 01 15:38:18 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376560.D Vial: 7
Acq On : 25 Jan 2012 13:58 Operator: ADC
Sample : WG387881-03 50ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376561.D Vial: 8
Acq On : 25 Jan 2012 14:29 Operator: ADC
Sample : WG387881-04 100ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:19 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

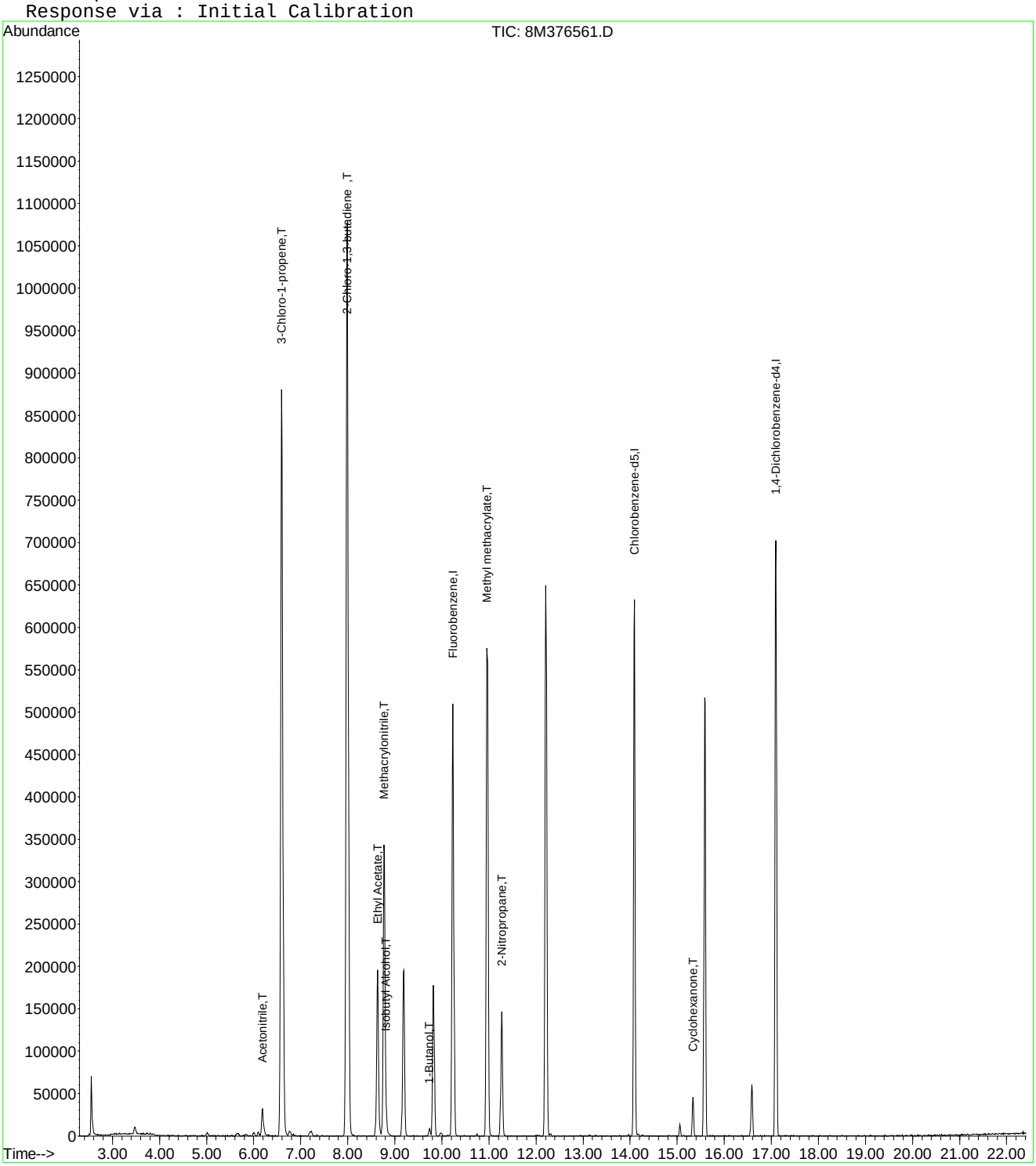
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.23	96	644867	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.09	117	466673	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.10	152	256948	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.19	41	49584	103.6457	ug/L	100
3) 3-Chloro-1-propene	6.60	41	1019216	101.2600	ug/L	100
4) 2-Chloro-1,3-butadiene	7.99	53	1196904	100.4113	ug/L	100
5) Ethyl Acetate	8.63	43	352520	104.8718	ug/L	100
6) Methacrylonitrile	8.77	67	141285	102.2491	ug/L	100
7) Isobutyl Alcohol	8.81	43	31160	215.0317	ug/L	100
8) 1-Butanol	9.73	56	7250	105.4560	ug/L	100
9) Methyl methacrylate	10.96	41	432008	104.6777	ug/L	100
10) 2-Nitropropane	11.27	43	151905	105.9950	ug/L	100
13) Cyclohexanone	15.33	55	24800	98.1298	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M376561.D A9FOOWT.M Wed Feb 01 15:38:20 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376561.D Vial: 8
Acq On : 25 Jan 2012 14:29 Operator: ADC
Sample : WG387881-04 100ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376562.D Vial: 9
Acq On : 25 Jan 2012 14:59 Operator: ADC
Sample : WG387881-05 200ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:21 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

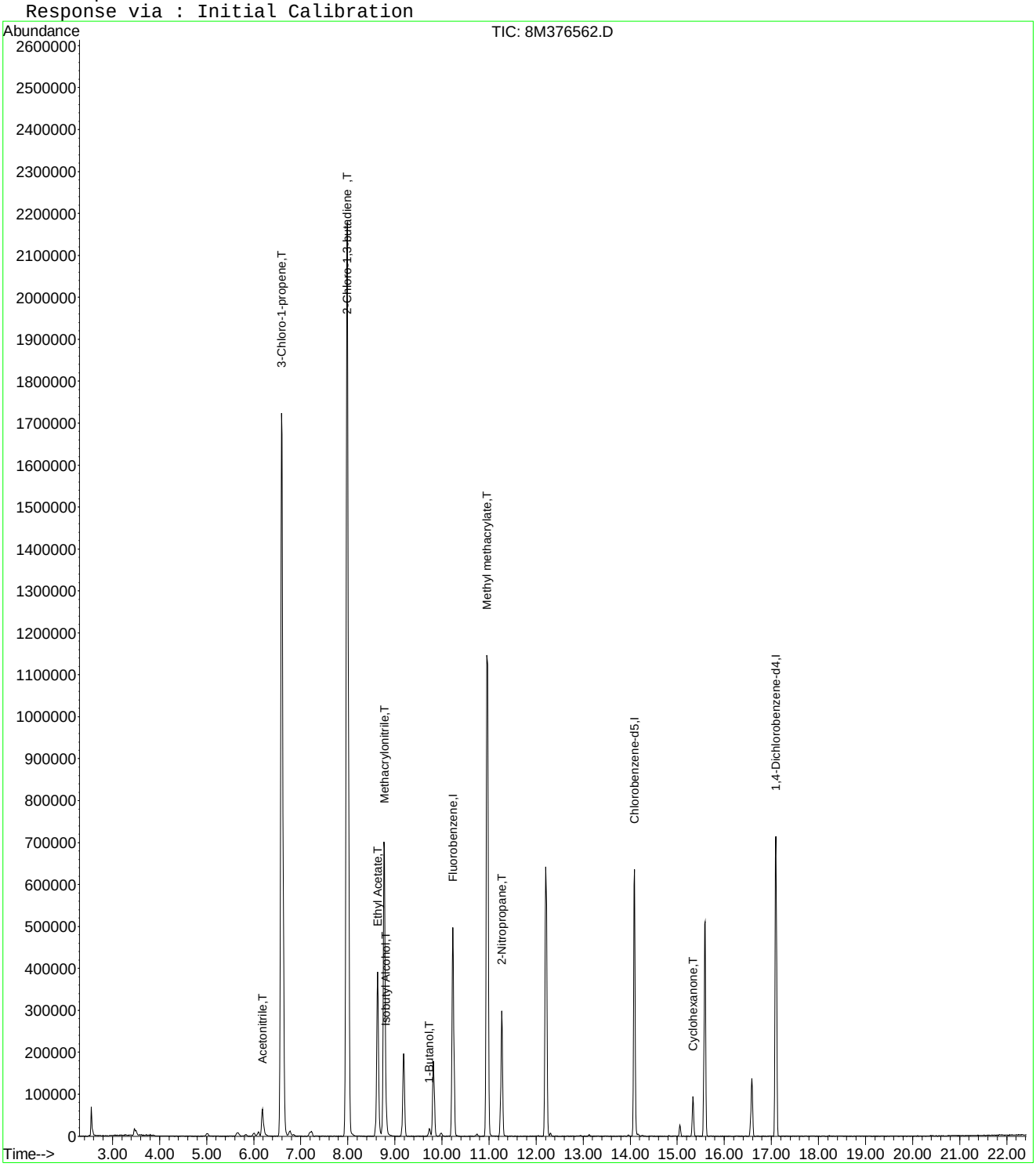
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.23	96	635990	25.00	ug/L		0.00
11) Chlorobenzene-d5	14.09	117	471643	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	17.10	152	259529	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	6.19	41	102381	216.9947	ug/L		99
3) 3-Chloro-1-propene	6.59	41	2077765	209.3089	ug/L		100
4) 2-Chloro-1,3-butadiene	7.99	53	2418154	205.6965	ug/L		99
5) Ethyl Acetate	8.63	43	702184	211.8096	ug/L		99
6) Methacrylonitrile	8.78	67	287125	210.6949	ug/L		100
7) Isobutyl Alcohol	8.81	43	59100	413.5352	ug/L	#	11
8) 1-Butanol	9.73	56	13732	193.7587	ug/L		75
9) Methyl methacrylate	10.96	41	874313	214.8073	ug/L		99
10) 2-Nitropropane	11.27	43	318671	225.4632	ug/L		93
13) Cyclohexanone	15.33	55	52772	206.7341	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M376562.D A9FOOWT.M Wed Feb 01 15:38:22 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376562.D Vial: 9
Acq On : 25 Jan 2012 14:59 Operator: ADC
Sample : WG387881-05 200ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376563.D Vial: 10
Acq On : 25 Jan 2012 15:29 Operator: ADC
Sample : WG387881-06 300ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:23 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

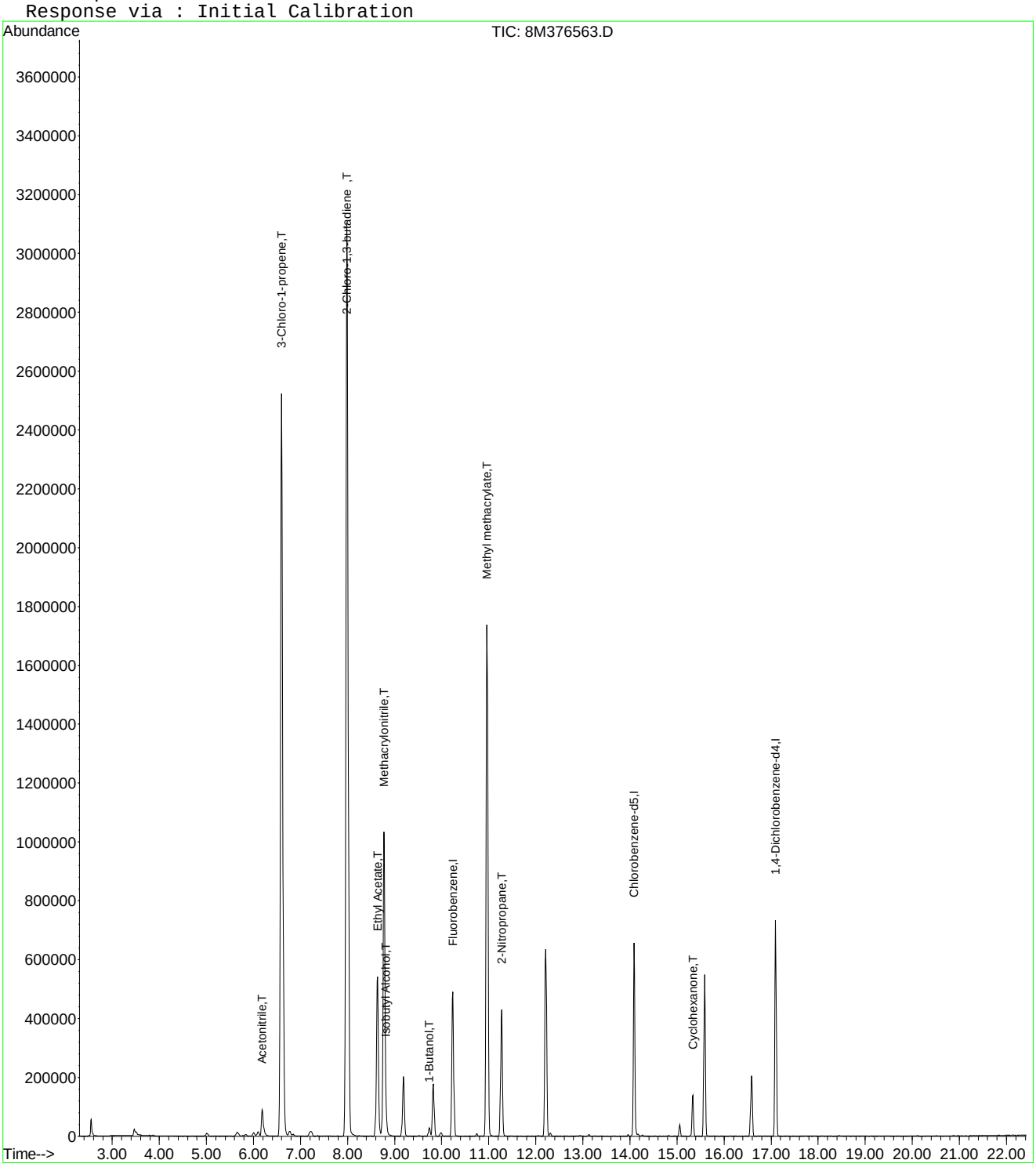
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.24	96	643596	25.00	ug/L		0.00
11) Chlorobenzene-d5	14.08	117	478604	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	17.09	152	258958	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	6.19	41	145734	305.2302	ug/L		100
3) 3-Chloro-1-propene	6.60	41	2997257	298.3680	ug/L		100
4) 2-Chloro-1,3-butadiene	7.98	53	3489509	293.3218	ug/L		99
5) Ethyl Acetate	8.64	43	1024074	305.2552	ug/L		100
6) Methacrylonitrile	8.77	67	420542	304.9506	ug/L		100
7) Isobutyl Alcohol	8.81	43	90964	628.9722	ug/L	#	11
8) 1-Butanol	9.73	56	23466	320.6313	ug/L		90
9) Methyl methacrylate	10.96	41	1263842	306.8400	ug/L		100
10) 2-Nitropropane	11.27	43	460658	322.0689	ug/L		97
13) Cyclohexanone	15.34	55	79883	313.6314	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M376563.D A9FOOWT.M Wed Feb 01 15:38:24 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376563.D Vial: 10
Acq On : 25 Jan 2012 15:29 Operator: ADC
Sample : WG387881-06 300ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376564.D Vial: 11
Acq On : 25 Jan 2012 15:59 Operator: ADC
Sample : WG387881-07 400ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:25 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

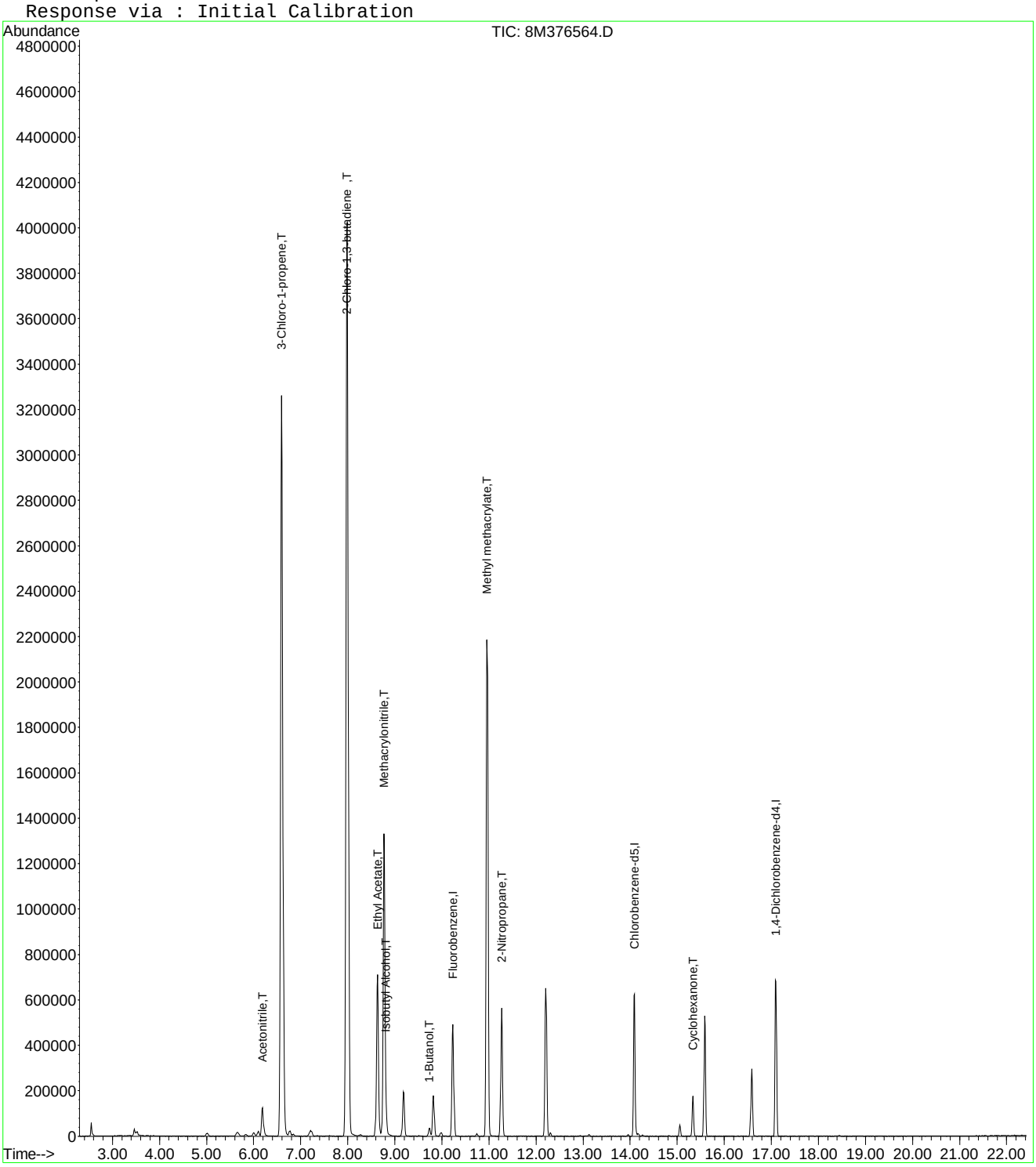
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.23	96	641318	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.09	117	477949	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.10	152	257944	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.19	41	195716	411.3703	ug/L	97
3) 3-Chloro-1-propene	6.60	41	3916511	391.2619	ug/L	100
4) 2-Chloro-1,3-butadiene	7.98	53	4569564	385.4736	ug/L	99
5) Ethyl Acetate	8.63	43	1295880	387.6470	ug/L	99
6) Methacrylonitrile	8.77	67	540691	393.4677	ug/L	98
7) Isobutyl Alcohol	8.81	43	116114	805.7242	ug/L	95
8) 1-Butanol	9.73	56	27906	380.8093	ug/L	86
9) Methyl methacrylate	10.96	41	1633999	398.1171	ug/L	100
10) 2-Nitropropane	11.27	43	593841	416.6585	ug/L	96
13) Cyclohexanone	15.33	55	97561	384.5434	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M376564.D A9FOOWT.M Wed Feb 01 15:38:26 2012 Page 1

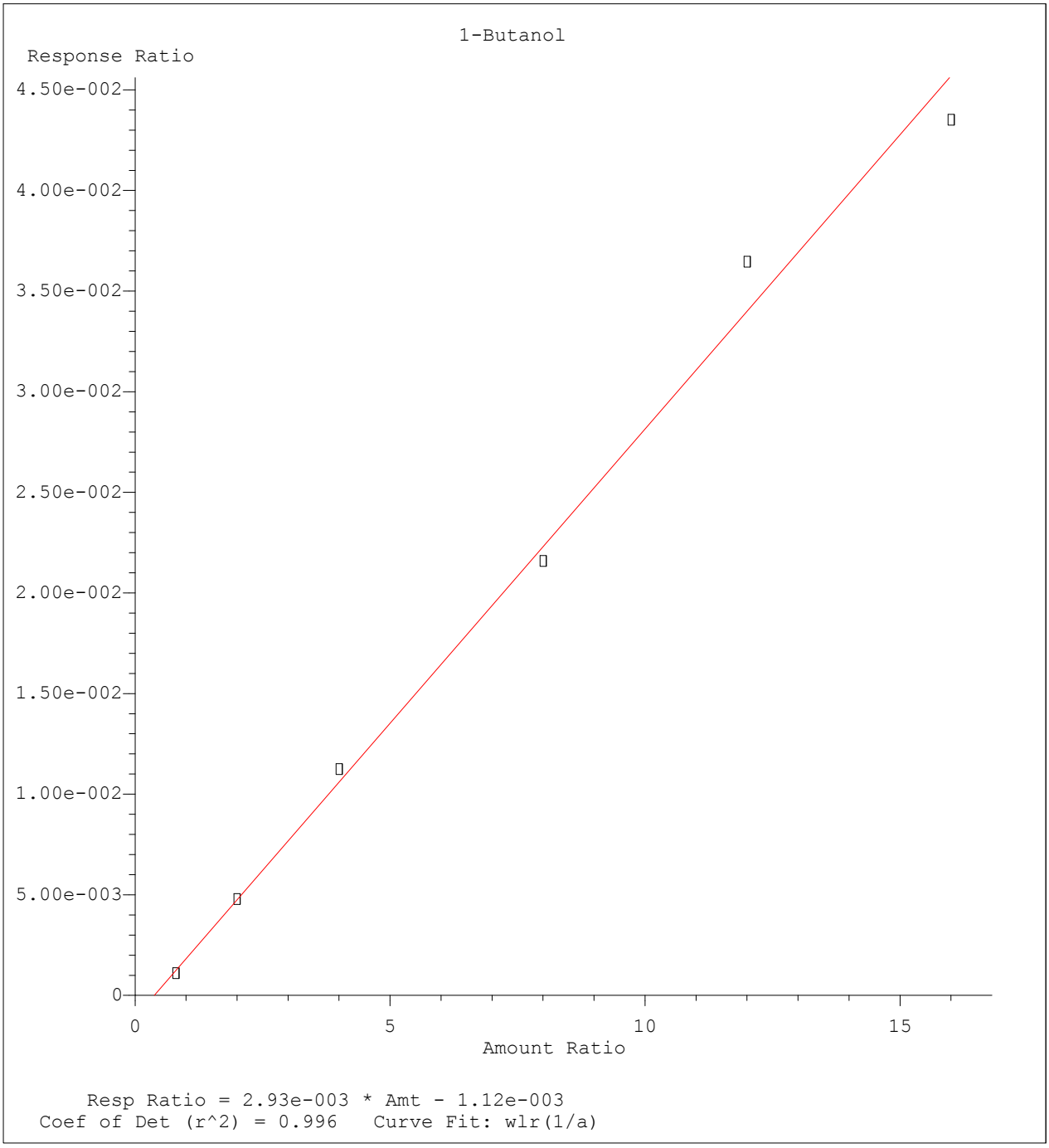
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376564.D Vial: 11
Acq On : 25 Jan 2012 15:59 Operator: ADC
Sample : WG387881-07 400ug/L A9FOO STD Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



8M376564.D A9FOOWT.M Wed Feb 01 15:38:26 2012 Page 2



Method Name: C:\MSDCHEM\1\METHODS\A9FOOWT.M
Calibration Table Last Updated: Wed Feb 01 15:35:09 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376565.D Vial: 12
Acq On : 25 Jan 2012 16:29 Operator: ADC
Sample : WG387881-08 100ug/L A9FOO ALT Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 01 15:38:27 2012 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

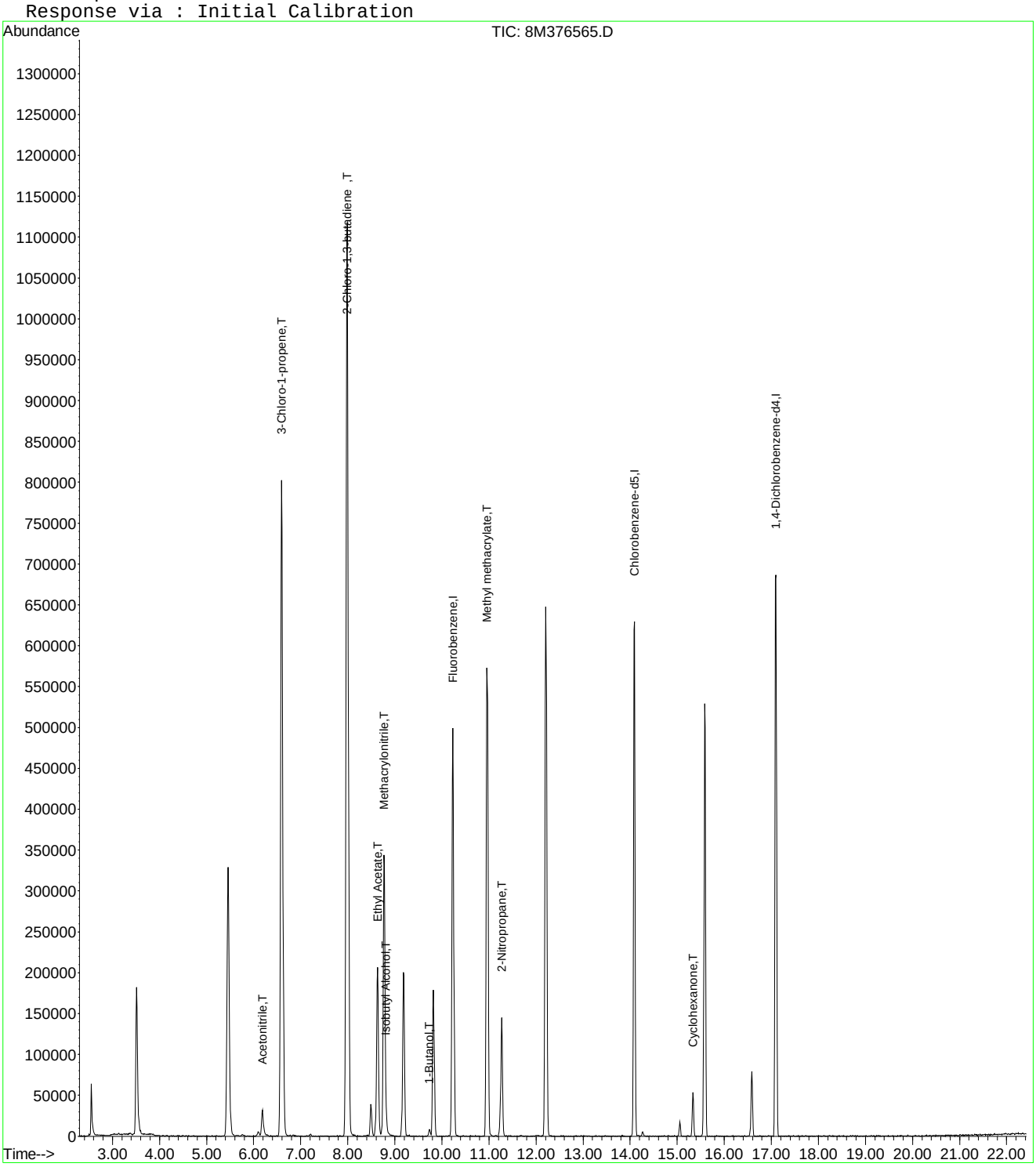
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.23	96	639588	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.09	117	475173	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.10	152	258713	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.19	41	44826	94.4734	ug/L	93
3) 3-Chloro-1-propene	6.59	41	937126	93.8727	ug/L	100
4) 2-Chloro-1,3-butadiene	7.99	53	1257481	106.3640	ug/L	99
5) Ethyl Acetate	8.63	43	386153	115.8255	ug/L	98
6) Methacrylonitrile	8.77	67	142494	103.9752	ug/L	99
7) Isobutyl Alcohol	8.81	43	32002	222.6651	ug/L	94
8) 1-Butanol	9.73	56	6562	97.0693	ug/L	93
9) Methyl methacrylate	10.96	41	422245	103.1565	ug/L	99
10) 2-Nitropropane	11.27	43	148207	104.2682	ug/L	96
13) Cyclohexanone	15.33	55	31305	123.0240	ug/L	97

(#) = qualifier out of range (m) = manual integration
8M376565.D A9FOOWT.M Wed Feb 01 15:38:28 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\012512\8M376565.D Vial: 12
Acq On : 25 Jan 2012 16:29 Operator: ADC
Sample : WG387881-08 100ug/L A9FOO ALT Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 1 15:38 2012 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\012512\8M376565.D Vial: 12
Acq On : 25 Jan 2012 16:29 Operator: ADC
Sample : WG387881-08 100ug/L A9FOO ALT Inst : HPMS8
Misc : 1,1 STD49721 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 01/25/12- HPMS8
Last Update : Wed Feb 01 15:35:09 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 75% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.000	25.000	0.0	99	0.00
2	T	Acetonitrile	100.000	94.473	5.5	90	0.00
3	T	3-Chloro-1-propene	100.000	93.873	6.1	92	0.00
4	T	2-Chloro-1,3-butadiene	100.000	106.364	-6.4	105	0.00
5	T	Ethyl Acetate	100.000	115.826	-15.8	110	0.00
6	T	Methacrylonitrile	100.000	103.975	-4.0	101	0.00
7	T	Isobutyl Alcohol	200.000	222.665	-11.3	103	0.00
8	T	1-Butanol	100.000	97.069	2.9	91	0.00
9	T	Methyl methacrylate	100.000	103.157	-3.2	98	0.00
10	T	2-Nitropropane	100.000	104.268	-4.3	98	0.00
11	I	Chlorobenzene-d5	25.000	25.000	0.0	102	0.00
12	I	1,4-Dichlorobenzene-d4	25.000	25.000	0.0	101	0.00
13	T	Cyclohexanone	100.000	123.024	-23.0	126	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M376565.D A9FOOWT.M Wed Feb 01 15:41:50 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383307.D Vial: 3
Acq On : 6 Nov 2012 8:48 Operator: ADC
Sample : WG413483-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:29 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	674084	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.96	117	538714	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	278103	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	0.00	111	0	0.0000	ug/L	
Spiked Amount 25.000	Range 86 - 118		Recovery =	0.00%#		
43) 1,2-Dichloroethane-d4	0.00	65	0	0.0000	ug/L	
Spiked Amount 25.000	Range 80 - 120		Recovery =	0.00%#		
58) Toluene-d8	0.00	98	0	0.0000	ug/L	
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.00%#		
80) p-Bromofluorobenzene	0.00	95	0	0.0000	ug/L	
Spiked Amount 25.000	Range 86 - 115		Recovery =	0.00%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	2720	0.2882	ug/L	89
3) Chloromethane	3.18	50	5811	0.3639	ug/L #	61
4) Vinyl Chloride	3.40	62	3414	0.2876	ug/L	81
5) 1,3-Butadiene	3.44	54	3180	0.3352	ug/L	75
6) Bromomethane	4.20	94	1530	0.2736	ug/L	62
7) Chloroethane	4.36	64	1908	0.3218	ug/L #	63
8) Trichlorofluoromethane	4.85	101	5154	0.2993	ug/L #	58
10) Isoprene	5.37	67	3170	0.2726	ug/L	91
12) 1,1,2-Trichloro-1,2,2-Trif	5.60	101	1227	0.1460	ug/L	87
14) 1,1-Dichloroethene	5.89	61	4612	0.2571	ug/L	98
16) Dimethyl Sulfide	6.14	62	2623	0.2735	ug/L	85
17) Iodomethane	6.37	142	1568	0.2143	ug/L #	51
19) Methylene Chloride	6.66	84	2445	0.3318	ug/L	99
20) Carbon Disulfide	6.69	76	6318	0.3228	ug/L	95
22) Methyl Tert Butyl Ether	6.89	73	4094	0.5089	ug/L	80
23) trans-1,2-Dichloroethene	7.12	61	4217	0.2572	ug/L	94
24) n-Hexane	7.24	57	4073	0.3064	ug/L	98
27) 1,1-Dichloroethane	7.73	63	5436	0.2969	ug/L #	85
31) 2,2-Dichloropropane	8.52	77	5271	0.3304	ug/L #	58
32) cis-1,2-Dichloroethene	8.56	96	2732	0.3231	ug/L	97
33) Chloroform	8.79	83	4212	0.2564	ug/L	96
35) Bromochloromethane	9.01	130	963	0.1980	ug/L #	20
38) 1,1,1-Trichloroethane	9.33	97	4584	0.2800	ug/L	100
39) Cyclohexane	9.38	56	6071	0.3124	ug/L #	74
40) 1,1-Dichloropropene	9.53	75	3671	0.2875	ug/L	83
42) Carbon Tetrachloride	9.67	117	4857	0.3187	ug/L	95
45) 1,2-Dichloroethane	9.81	62	3699	0.2690	ug/L #	83
46) Benzene	9.86	78	10391	0.3385	ug/L	89
47) Trichloroethene	10.64	130	2676	0.2933	ug/L	93
48) Methylcyclohexane	10.72	83	3057	0.2650	ug/L	89
49) 1,2-Dichloropropane	10.84	63	2546	0.2788	ug/L	93
50) Bromodichloromethane	11.12	83	2562	0.2082	ug/L #	63
52) Dibromomethane	11.19	93	577	0.1472	ug/L #	9
55) cis-1,3-Dichloropropene	11.77	75	3225	0.2438	ug/L	85
56) Dimethyl Disulfide	12.02	94	2855	0.2378	ug/L	86
59) Toluene	12.19	91	9919	0.2988	ug/L	95
60) Ethyl Methacrylate	12.31	69	1597	0.2633	ug/L #	55
62) trans-1,3-Dichloropropene	12.38	75	2729	0.2335	ug/L #	77
63) 1,1,2-Trichloroethane	12.57	97	823	0.1664	ug/L #	31
65) 1,3-Dichloropropane	12.87	76	2107	0.2222	ug/L	86
66) Tetrachloroethene	13.01	164	2178	0.2931	ug/L	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383307.D Vial: 3
Acq On : 6 Nov 2012 8:48 Operator: ADC
Sample : WG413483-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:29 2012 Quant Results File: 8260WTR.RES

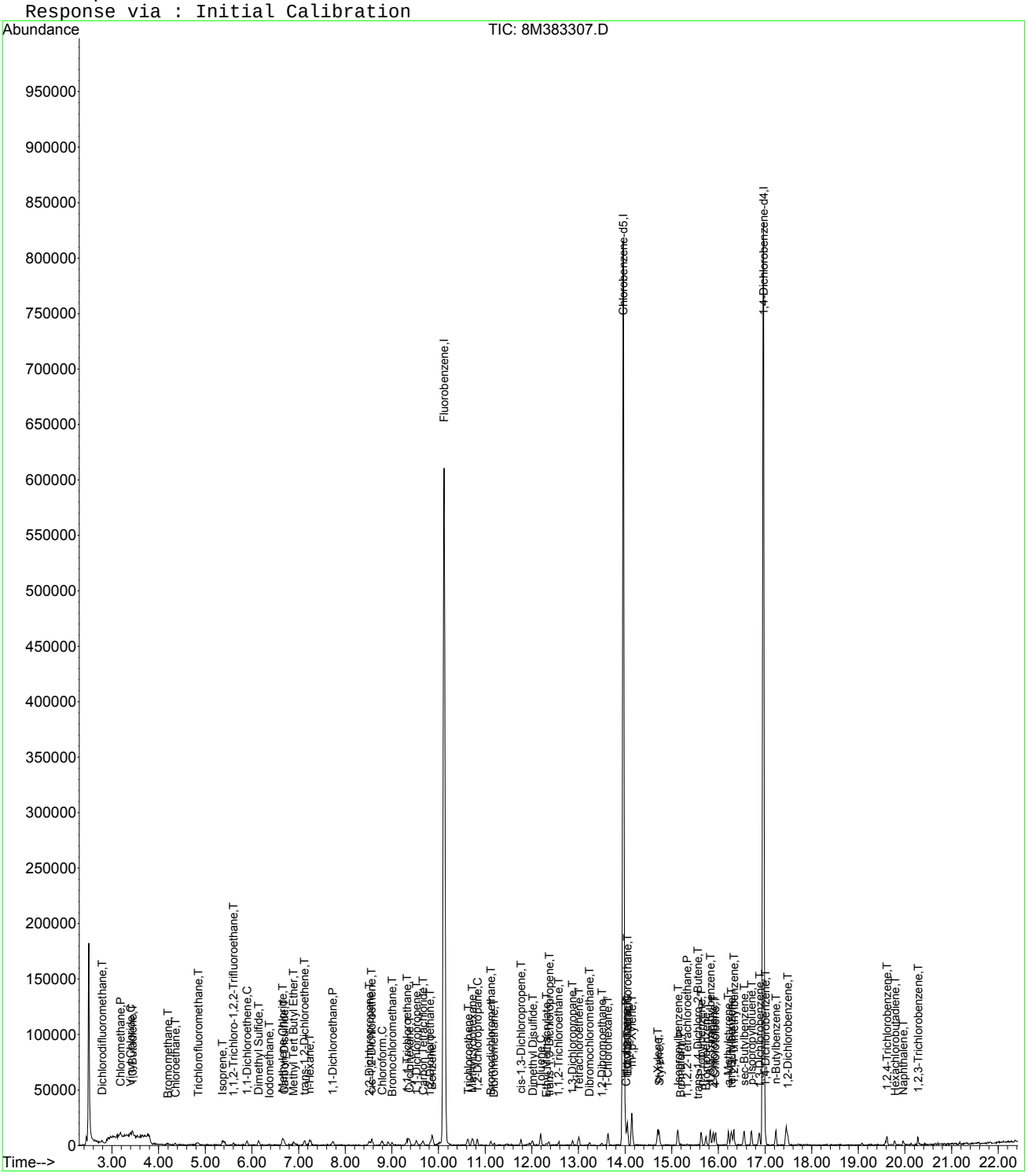
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
67)	Dibromochloromethane	13.23	129	1958	0.2323 ug/L		91
68)	1,2-Dibromoethane	13.50	107	1306	0.2098 ug/L		77
69)	1-Chlorohexane	13.63	91	3896	0.3552 ug/L		86
70)	Chlorobenzene	14.02	112	7313	0.3009 ug/L		96
71)	1,1,1,2-Tetrachloroethane	14.05	131	2705	0.2784 ug/L		90
72)	Ethylbenzene	14.05	106	3274	0.2392 ug/L	#	36
73)	m-,p-Xylene	14.14	106	11188	0.6957 ug/L		96
74)	o-Xylene	14.70	106	5182	0.3273 ug/L		85
75)	Styrene	14.73	104	6425	0.2510 ug/L		77
76)	Bromoform	15.19	173	1119	0.2335 ug/L	#	55
77)	Isopropylbenzene	15.14	105	15354	0.3566 ug/L		89
79)	1,1,2,2-Tetrachloroethane	15.33	83	788	0.1493 ug/L	#	92
82)	trans-1,4-Dichloro-2-Buten	15.56	53	520	0.1961 ug/L	#	30
83)	n-Propylbenzene	15.63	91	14172	0.3229 ug/L		93
84)	Bromobenzene	15.74	156	3281	0.3187 ug/L		91
85)	1,3,5-Trimethylbenzene	15.83	105	11533	0.3217 ug/L		100
86)	2-Chlorotoluene	15.89	91	10139	0.3296 ug/L		98
87)	4-Chlorotoluene	15.93	91	9527	0.3202 ug/L		92
88)	a-Methylstyrene	16.21	118	5052	0.2888 ug/L		100
89)	tert-Butylbenzene	16.28	134	1988	0.2690 ug/L		85
90)	1,2,4-Trimethylbenzene	16.34	105	11725	0.3221 ug/L		99
91)	sec-Butylbenzene	16.55	105	14129	0.3407 ug/L		89
92)	p-Isopropyltoluene	16.71	119	11837	0.3457 ug/L		92
93)	1,3-Dichlorobenzene	16.88	146	6098	0.3050 ug/L		93
94)	1,4-Dichlorobenzene	17.01	146	6156	0.3042 ug/L	#	1
95)	n-Butylbenzene	17.24	91	10801	0.3457 ug/L		96
96)	1,2-Dichlorobenzene	17.48	146	5389	0.3041 ug/L		98
98)	1,2,4-Trichlorobenzene	19.61	180	3611	0.3114 ug/L		87
99)	Hexachlorobutadiene	19.79	225	2145	0.3951 ug/L		93
100)	Naphthalene	19.97	128	4782	0.2455 ug/L	#	67
101)	1,2,3-Trichlorobenzene	20.29	180	2624	0.2670 ug/L		88

(#) = qualifier out of range (m) = manual integration
8M383307.D 8260WTR.M Tue Nov 06 16:34:46 2012 Page 2

Data File : C:\MSDCHEM\1\DATA\110612\8M383307.D Vial: 3
Acq On : 6 Nov 2012 8:48 Operator: ADC
Sample : WG413483-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:32 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383308.D Vial: 4
Acq On : 6 Nov 2012 9:18 Operator: ADC
Sample : WG413483-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.12	96	645926	25.00	ug/L		0.00
57) Chlorobenzene-d5	13.96	117	524347	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	269826	25.00	ug/L		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	0.00	111	0	0.0000	ug/L		
Spiked Amount 25.000	Range 86 - 118		Recovery =	0.00%#			
43) 1,2-Dichloroethane-d4	0.00	65	0	0.0000	ug/L		
Spiked Amount 25.000	Range 80 - 120		Recovery =	0.00%#			
58) Toluene-d8	0.00	98	0	0.0000	ug/L		
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.00%#			
80) p-Bromofluorobenzene	0.00	95	0	0.0000	ug/L		
Spiked Amount 25.000	Range 86 - 115		Recovery =	0.00%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.79	85	3611	0.3993	ug/L		83
3) Chloromethane	3.18	50	7563	0.4943	ug/L		95
4) Vinyl Chloride	3.40	62	5337	0.4692	ug/L		77
5) 1,3-Butadiene	3.44	54	3792	0.4172	ug/L	#	42
6) Bromomethane	4.19	94	1593	0.2973	ug/L	#	61
7) Chloroethane	4.34	64	1660	0.2922	ug/L	#	74
8) Trichlorofluoromethane	4.83	101	6235	0.3779	ug/L	#	95
10) Isoprene	5.41	67	4233	0.3799	ug/L		93
12) 1,1,2-Trichloro-1,2,2-Trif	5.60	101	1390	0.1726	ug/L		58
14) 1,1-Dichloroethene	5.89	61	7246	0.4215	ug/L		87
16) Dimethyl Sulfide	6.15	62	3171	0.3451	ug/L		88
17) Iodomethane	6.37	142	1830	0.2610	ug/L	#	66
18) Methyl acetate	6.42	43	686	0.1594	ug/L	#	71
19) Methylene Chloride	6.66	84	2620	0.3710	ug/L		89
20) Carbon Disulfide	6.69	76	7363	0.3926	ug/L		98
22) Methyl Tert Butyl Ether	6.91	73	4949	0.6420	ug/L		87
23) trans-1,2-Dichloroethene	7.12	61	5539	0.3526	ug/L		91
24) n-Hexane	7.25	57	5290	0.4153	ug/L		96
26) Vinyl Acetate	7.73	43	3382	0.2573	ug/L	#	83
27) 1,1-Dichloroethane	7.73	63	6522	0.3717	ug/L	#	91
31) 2,2-Dichloropropane	8.52	77	6463	0.4228	ug/L		90
32) cis-1,2-Dichloroethene	8.57	96	3068	0.3786	ug/L		99
33) Chloroform	8.79	83	6483	0.4118	ug/L		89
35) Bromochloromethane	9.00	130	1730	0.3712	ug/L	#	83
38) 1,1,1-Trichloroethane	9.34	97	5222	0.3329	ug/L		77
39) Cyclohexane	9.37	56	7565	0.4063	ug/L	#	92
40) 1,1-Dichloropropene	9.52	75	4747	0.3879	ug/L		81
42) Carbon Tetrachloride	9.67	117	5638	0.3861	ug/L	#	90
45) 1,2-Dichloroethane	9.82	62	4528	0.3436	ug/L	#	83
46) Benzene	9.86	78	12379	0.4209	ug/L		97
47) Trichloroethene	10.63	130	3643	0.4167	ug/L		93
48) Methylcyclohexane	10.73	83	3910	0.3537	ug/L		86
49) 1,2-Dichloropropane	10.83	63	3002	0.3431	ug/L		93
50) Bromodichloromethane	11.12	83	4043	0.3428	ug/L	#	84
52) Dibromomethane	11.18	93	977	0.2600	ug/L		69
53) 2-Chloroethyl Vinyl Ether	11.44	63	510	0.1412	ug/L	#	52
54) 4-Methyl-2-Pentanone	11.49	58	449	0.6021	ug/L	#	45
55) cis-1,3-Dichloropropene	11.77	75	5075	0.4004	ug/L		88
56) Dimethyl Disulfide	12.02	94	3652	0.3175	ug/L		100
59) Toluene	12.19	91	13907	0.4304	ug/L		98
60) Ethyl Methacrylate	12.30	69	1510	0.2558	ug/L		86

(#) = qualifier out of range (m) = manual integration
8M383308.D 8260WTR.M Tue Nov 06 16:35:12 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383308.D Vial: 4
Acq On : 6 Nov 2012 9:18 Operator: ADC
Sample : WG413483-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

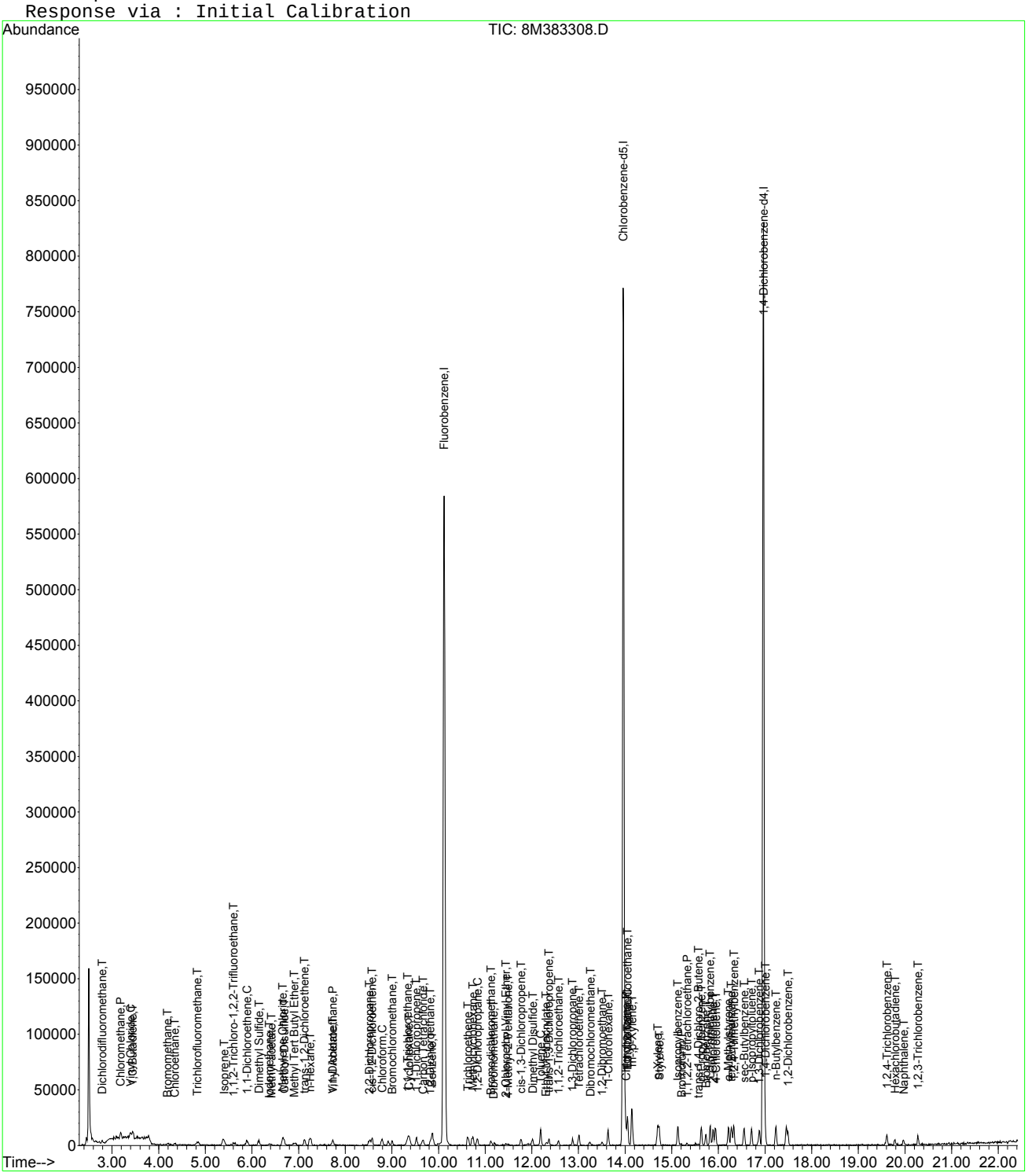
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
62)	trans-1,3-Dichloropropene	12.36	75	4117	0.3619 ug/L		88
63)	1,1,2-Trichloroethane	12.57	97	1328	0.2758 ug/L		95
65)	1,3-Dichloropropane	12.87	76	3402	0.3686 ug/L		96
66)	Tetrachloroethene	13.01	164	2644	0.3655 ug/L	#	76
67)	Dibromochloromethane	13.25	129	2912	0.3549 ug/L		87
68)	1,2-Dibromoethane	13.50	107	2857	0.4716 ug/L		77
69)	1-Chlorohexane	13.64	91	4648	0.4353 ug/L		94
70)	Chlorobenzene	14.02	112	10238	0.4329 ug/L		94
71)	1,1,1,2-Tetrachloroethane	14.05	131	3612	0.3819 ug/L		93
72)	Ethylbenzene	14.05	106	5749	0.4315 ug/L		93
73)	m-,p-Xylene	14.15	106	12210	0.7801 ug/L		87
74)	o-Xylene	14.70	106	5977	0.3878 ug/L		85
75)	Styrene	14.73	104	8391	0.3368 ug/L		83
76)	Bromoform	15.21	173	1275	0.2733 ug/L	#	26
77)	Isopropylbenzene	15.13	105	17786	0.4244 ug/L		95
79)	1,1,2,2-Tetrachloroethane	15.33	83	1892	0.3694 ug/L	#	58
82)	trans-1,4-Dichloro-2-Buten	15.57	53	1038	0.4034 ug/L	#	1
83)	n-Propylbenzene	15.63	91	19000	0.4462 ug/L		92
84)	Bromobenzene	15.74	156	4138	0.4143 ug/L		88
85)	1,3,5-Trimethylbenzene	15.82	105	14515	0.4173 ug/L		99
86)	2-Chlorotoluene	15.88	91	14939	0.5005 ug/L		84
87)	4-Chlorotoluene	15.94	91	12952	0.4487 ug/L		99
88)	a-Methylstyrene	16.21	118	6286	0.3704 ug/L		85
89)	tert-Butylbenzene	16.27	134	3519	0.4908 ug/L		72
90)	1,2,4-Trimethylbenzene	16.34	105	14435	0.4087 ug/L		92
91)	sec-Butylbenzene	16.55	105	17643	0.4385 ug/L		98
92)	p-Isopropyltoluene	16.71	119	12932	0.3892 ug/L		96
93)	1,3-Dichlorobenzene	16.87	146	8073	0.4162 ug/L		91
94)	1,4-Dichlorobenzene	17.01	146	8214	0.4184 ug/L		86
95)	n-Butylbenzene	17.23	91	14039	0.4631 ug/L		91
96)	1,2-Dichlorobenzene	17.49	146	6693	0.3893 ug/L		98
98)	1,2,4-Trichlorobenzene	19.61	180	4216	0.3747 ug/L		96
99)	Hexachlorobutadiene	19.79	225	2326	0.4416 ug/L		84
100)	Naphthalene	19.97	128	6940	0.3672 ug/L		88
101)	1,2,3-Trichlorobenzene	20.27	180	4050	0.4247 ug/L		91

(#) = qualifier out of range (m) = manual integration
8M383308.D 8260WTR.M Tue Nov 06 16:35:12 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383308.D Vial: 4
Acq On : 6 Nov 2012 9:18 Operator: ADC
Sample : WG413483-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:32 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383309.D Vial: 5
Acq On : 6 Nov 2012 9:47 Operator: ADC
Sample : WG413483-04 1.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.12	96	643046	25.00	ug/L		0.00
57) Chlorobenzene-d5	13.96	117	513324	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	268388	25.00	ug/L		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	9.07	111	3272	0.3742	ug/L		0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	1.48%#			
43) 1,2-Dichloroethane-d4	9.70	65	5228	0.5121	ug/L		0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	2.04%#			
58) Toluene-d8	12.10	98	13892	0.5161	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	2.08%#			
80) p-Bromofluorobenzene	15.46	95	6164	0.5481	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	2.20%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.79	85	8992	0.9988	ug/L		98
3) Chloromethane	3.18	50	17556	1.1525	ug/L		89
4) Vinyl Chloride	3.39	62	11463	1.0123	ug/L		88
5) 1,3-Butadiene	3.44	54	9693	1.0712	ug/L	#	73
6) Bromomethane	4.20	94	4336	0.8127	ug/L		94
7) Chloroethane	4.35	64	6021	1.0646	ug/L		94
8) Trichlorofluoromethane	4.84	101	16613	1.0114	ug/L	#	92
9) Diethyl ether	5.36	59	23926	4.7105	ug/L		96
10) Isoprene	5.39	67	11506	1.0373	ug/L		86
11) Acrolein	5.55	56	1482	2.1672	ug/L	#	62
12) 1,1,2-Trichloro-1,2,2-Trif	5.63	101	8026	1.0013	ug/L		99
13) Acetone	5.67	43	731	0.4461	ug/L	#	53
14) 1,1-Dichloroethene	5.90	61	15243	0.8907	ug/L		90
15) Tert-Butyl Alcohol	6.02	59	2881	8.3326	ug/L	#	70
16) Dimethyl Sulfide	6.13	62	9666	1.0567	ug/L		86
17) Iodomethane	6.39	142	5471	0.7837	ug/L		93
18) Methyl acetate	6.41	43	3729	0.8705	ug/L	#	71
19) Methylene Chloride	6.66	84	6745	0.9594	ug/L		90
20) Carbon Disulfide	6.69	76	20052	1.0741	ug/L		99
21) Acrylonitrile	6.81	53	4690	2.1807	ug/L		82
22) Methyl Tert Butyl Ether	6.92	73	14159	1.8450	ug/L		99
23) trans-1,2-Dichloroethene	7.12	61	15037	0.9614	ug/L		97
24) n-Hexane	7.25	57	13562	1.0696	ug/L		96
25) Diisopropyl ether	7.58	45	174274	5.0028	ug/L		99
26) Vinyl Acetate	7.72	43	10664	0.8151	ug/L	#	83
27) 1,1-Dichloroethane	7.73	63	18119	1.0372	ug/L		93
28) Ethyl-Tert-Butyl ether	8.16	59	136744	4.8040	ug/L		98
29) 2-Butanone	8.31	43	1838	0.7766	ug/L	#	67
30) Propionitrile	8.40	54	2106	5.8887	ug/L	#	73
31) 2,2-Dichloropropane	8.52	77	14872	0.9772	ug/L		95
32) cis-1,2-Dichloroethene	8.57	96	8166	1.0123	ug/L		89
33) Chloroform	8.79	83	15657	0.9989	ug/L		99
34) 1-Bromopropane	8.93	122	627	0.8439	ug/L	#	2
35) Bromochloromethane	9.01	130	4321	0.9314	ug/L		92
36) Tetrahydrofuran	9.06	42	6085	4.2127	ug/L		90
38) 1,1,1-Trichloroethane	9.33	97	15954	1.0216	ug/L		99
39) Cyclohexane	9.38	56	19955	1.0764	ug/L		92
40) 1,1-Dichloropropene	9.53	75	11933	0.9795	ug/L		94
41) Tert-Amyl-Methyl ether	9.66	73	76304	4.5906	ug/L		99
42) Carbon Tetrachloride	9.66	117	14669	1.0091	ug/L		97
45) 1,2-Dichloroethane	9.83	62	12824	0.9774	ug/L		89

(#) = qualifier out of range (m) = manual integration
8M383309.D 8260WTR.M Tue Nov 06 16:35:33 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383309.D Vial: 5
Acq On : 6 Nov 2012 9:47 Operator: ADC
Sample : WG413483-04 1.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

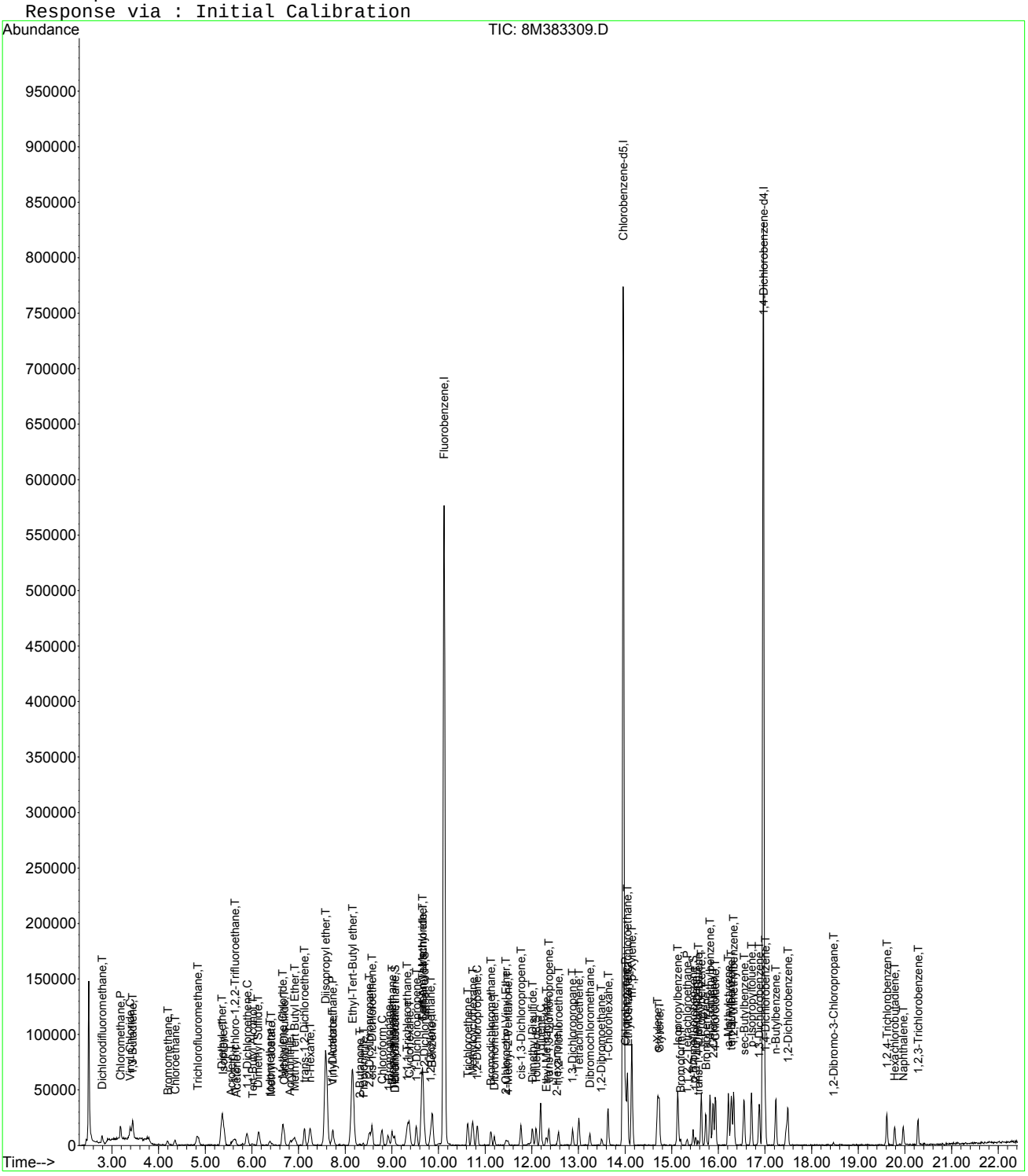
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Benzene	9.86	78	29976	1.0237	ug/L		96
47)	Trichloroethene	10.63	130	8979	1.0317	ug/L		96
48)	Methylcyclohexane	10.73	83	10574	0.9609	ug/L		88
49)	1,2-Dichloropropane	10.83	63	8615	0.9889	ug/L		95
50)	Bromodichloromethane	11.12	83	10865	0.9254	ug/L		97
52)	Dibromomethane	11.20	93	3511	0.9387	ug/L		92
53)	2-Chloroethyl Vinyl Ether	11.45	63	2549	0.7086	ug/L	#	52
54)	4-Methyl-2-Pentanone	11.49	58	1372	1.0177	ug/L	#	45
55)	cis-1,3-Dichloropropene	11.77	75	11793	0.9345	ug/L		99
56)	Dimethyl Disulfide	12.01	94	9574	0.8361	ug/L		100
59)	Toluene	12.19	91	32915	1.0406	ug/L		97
60)	Ethyl Methacrylate	12.31	69	4311	0.7460	ug/L		84
62)	trans-1,3-Dichloropropene	12.37	75	10952	0.9835	ug/L		90
63)	1,1,2-Trichloroethane	12.57	97	4446	0.9433	ug/L		93
64)	2-Hexanone	12.54	58	657	0.3311	ug/L	#	1
65)	1,3-Dichloropropane	12.87	76	8961	0.9916	ug/L		96
66)	Tetrachloroethene	13.01	164	6703	0.9466	ug/L		92
67)	Dibromochloromethane	13.24	129	7148	0.8900	ug/L		99
68)	1,2-Dibromoethane	13.49	107	5179	0.8733	ug/L		97
69)	1-Chlorohexane	13.64	91	10824	1.0355	ug/L		95
70)	Chlorobenzene	14.01	112	24542	1.0599	ug/L		75
71)	1,1,1,2-Tetrachloroethane	14.05	131	9102	0.9830	ug/L		94
72)	Ethylbenzene	14.06	106	13578	1.0411	ug/L		93
73)	m-,p-Xylene	14.14	106	32244	2.1043	ug/L		89
74)	o-Xylene	14.69	106	15249	1.0107	ug/L		93
75)	Styrene	14.73	104	24195	0.9919	ug/L		96
76)	Bromoform	15.19	173	3916	0.8575	ug/L		88
77)	Isopropylbenzene	15.13	105	44403	1.0822	ug/L		98
79)	1,1,2,2-Tetrachloroethane	15.33	83	5021	0.9856	ug/L		96
81)	1,2,3-Trichloropropane	15.51	110	1383	0.7648	ug/L	#	19
82)	trans-1,4-Dichloro-2-Buten	15.57	53	2140	0.8361	ug/L	#	1
83)	n-Propylbenzene	15.63	91	47212	1.1146	ug/L		95
84)	Bromobenzene	15.74	156	9909	0.9974	ug/L		89
85)	1,3,5-Trimethylbenzene	15.82	105	37731	1.0904	ug/L		99
86)	2-Chlorotoluene	15.89	91	32257	1.0864	ug/L		92
87)	4-Chlorotoluene	15.93	91	31762	1.1062	ug/L		94
88)	a-Methylstyrene	16.21	118	18335	1.0860	ug/L		93
89)	tert-Butylbenzene	16.27	134	6980	0.9787	ug/L		87
90)	1,2,4-Trimethylbenzene	16.33	105	38713	1.1021	ug/L		88
91)	sec-Butylbenzene	16.55	105	43886	1.0966	ug/L		97
92)	p-Isopropyltoluene	16.71	119	36838	1.1147	ug/L		99
93)	1,3-Dichlorobenzene	16.87	146	20940	1.0854	ug/L		98
94)	1,4-Dichlorobenzene	17.01	146	21315	1.0914	ug/L	#	69
95)	n-Butylbenzene	17.23	91	31333	1.0392	ug/L		97
96)	1,2-Dichlorobenzene	17.49	146	18455	1.0791	ug/L		98
97)	1,2-Dibromo-3-Chloropropan	18.47	75	593	0.5104	ug/L		74
98)	1,2,4-Trichlorobenzene	19.61	180	11043	0.9867	ug/L		98
99)	Hexachlorobutadiene	19.78	225	5149	0.9827	ug/L		92
100)	Naphthalene	19.97	128	18006	0.9577	ug/L		96
101)	1,2,3-Trichlorobenzene	20.29	180	10238	1.0794	ug/L		95

(#) = qualifier out of range (m) = manual integration
8M383309.D 8260WTR.M Tue Nov 06 16:35:33 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383309.D Vial: 5
Acq On : 6 Nov 2012 9:47 Operator: ADC
Sample : WG413483-04 1.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:32 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383310.D Vial: 6
Acq On : 6 Nov 2012 10:17 Operator: ADC
Sample : WG413483-05 2.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	627084	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.96	117	510848	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	265924	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.08	111	8014	0.9399	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	3.76%#		
43) 1,2-Dichloroethane-d4	9.71	65	9771	0.9814	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	3.92%#		
58) Toluene-d8	12.09	98	27088	1.0113	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	4.04%#		
80) p-Bromofluorobenzene	15.46	95	10873	0.9758	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	3.92%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	17986	2.0486	ug/L	94
3) Chloromethane	3.18	50	35348	2.3796	ug/L	96
4) Vinyl Chloride	3.39	62	22813	2.0659	ug/L	95
5) 1,3-Butadiene	3.44	54	19142	2.1692	ug/L	86
6) Bromomethane	4.19	94	9663	1.8574	ug/L	94
7) Chloroethane	4.35	64	11181	2.0272	ug/L	97
8) Trichlorofluoromethane	4.84	101	31268	1.9521	ug/L	99
9) Diethyl ether	5.35	59	117991	23.8211	ug/L	98
10) Isoprene	5.39	67	21594	1.9962	ug/L	97
11) Acrolein	5.56	56	7320	10.9770	ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	5.61	101	15708	2.0095	ug/L	94
13) Acetone	5.66	43	3080	1.9274	ug/L #	53
14) 1,1-Dichloroethene	5.89	61	32920	1.9726	ug/L	97
15) Tert-Butyl Alcohol	6.02	59	17969	53.2936	ug/L #	88
16) Dimethyl Sulfide	6.14	62	17496	1.9613	ug/L	95
17) Iodomethane	6.39	142	11634	1.7089	ug/L	99
18) Methyl acetate	6.42	43	8434	2.0190	ug/L #	80
19) Methylene Chloride	6.66	84	14387	2.0985	ug/L	99
20) Carbon Disulfide	6.69	76	39238	2.1553	ug/L	97
21) Acrylonitrile	6.83	53	21706	10.3494	ug/L	92
22) Methyl Tert Butyl Ether	6.91	73	29643	3.9609	ug/L	79
23) trans-1,2-Dichloroethene	7.12	61	31538	2.0677	ug/L	96
24) n-Hexane	7.26	57	25814	2.0877	ug/L	96
25) Diisopropyl ether	7.58	45	847824	24.9575	ug/L	99
26) Vinyl Acetate	7.72	43	24935	1.9544	ug/L #	86
27) 1,1-Dichloroethane	7.74	63	32802	1.9255	ug/L	99
28) Ethyl-Tert-Butyl ether	8.16	59	678502	24.4432	ug/L	99
29) 2-Butanone	8.30	43	4482	1.9420	ug/L #	79
30) Propionitrile	8.38	54	15583	23.1997	ug/L	99
31) 2,2-Dichloropropane	8.53	77	31166	2.1000	ug/L	97
32) cis-1,2-Dichloroethene	8.57	96	15301	1.9452	ug/L	94
33) Chloroform	8.79	83	30658	2.0058	ug/L	96
34) 1-Bromopropane	8.92	122	2530	2.1932	ug/L	100
35) Bromochloromethane	9.00	130	8818	1.9491	ug/L	87
36) Tetrahydrofuran	9.04	42	32465	23.0482	ug/L	98
38) 1,1,1-Trichloroethane	9.33	97	31334	2.0575	ug/L	97
39) Cyclohexane	9.37	56	35732	1.9765	ug/L	98
40) 1,1-Dichloropropene	9.52	75	25457	2.1428	ug/L	91
41) Tert-Amyl-Methyl ether	9.66	73	393707	24.2891	ug/L	100
42) Carbon Tetrachloride	9.66	117	28007	1.9756	ug/L	97
45) 1,2-Dichloroethane	9.82	62	26724	2.0887	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M383310.D 8260WTR.M Tue Nov 06 16:36:08 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383310.D Vial: 6
Acq On : 6 Nov 2012 10:17 Operator: ADC
Sample : WG413483-05 2.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

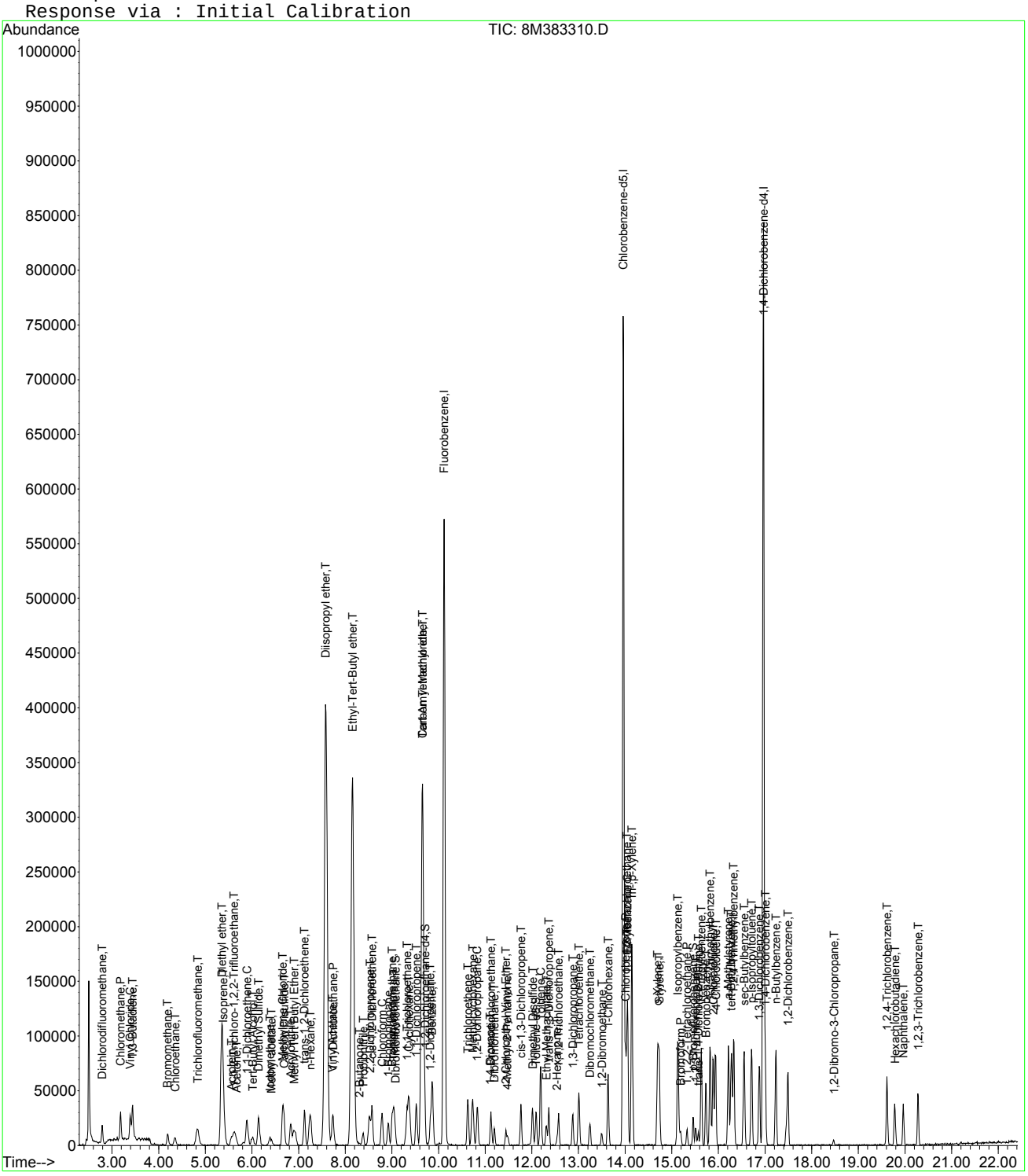
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Benzene	9.86	78	59942	2.0992	ug/L		99
47)	Trichloroethene	10.63	130	15392	1.8136	ug/L		83
48)	Methylcyclohexane	10.73	83	21832	2.0344	ug/L		95
49)	1,2-Dichloropropane	10.82	63	17223	2.0273	ug/L		100
50)	Bromodichloromethane	11.12	83	23827	2.0811	ug/L		98
51)	1,4-Dioxane	11.10	88	526	19.2861	ug/L	#	32
52)	Dibromomethane	11.20	93	7681	2.1059	ug/L		91
53)	2-Chloroethyl Vinyl Ether	11.44	63	6125	1.7462	ug/L		91
54)	4-Methyl-2-Pentanone	11.48	58	3958	2.2248	ug/L	#	71
55)	cis-1,3-Dichloropropene	11.77	75	23516	1.9109	ug/L		99
56)	Dimethyl Disulfide	12.02	94	20922	1.8736	ug/L		93
59)	Toluene	12.19	91	64999	2.0648	ug/L		98
60)	Ethyl Methacrylate	12.31	69	10851	1.8869	ug/L		94
62)	trans-1,3-Dichloropropene	12.36	75	21274	1.9197	ug/L		100
63)	1,1,2-Trichloroethane	12.57	97	9176	1.9563	ug/L		93
64)	2-Hexanone	12.54	58	3575	1.8102	ug/L		76
65)	1,3-Dichloropropane	12.88	76	17777	1.9767	ug/L		92
66)	Tetrachloroethene	13.01	164	14201	2.0152	ug/L		98
67)	Dibromochloromethane	13.24	129	14908	1.8651	ug/L		100
68)	1,2-Dibromoethane	13.50	107	11038	1.8703	ug/L		93
69)	1-Chlorohexane	13.64	91	20816	2.0011	ug/L		90
70)	Chlorobenzene	14.01	112	47292	2.0523	ug/L		85
71)	1,1,1,2-Tetrachloroethane	14.04	131	19125	2.0756	ug/L		92
72)	Ethylbenzene	14.05	106	27061	2.0850	ug/L		99
73)	m-,p-Xylene	14.14	106	63861	4.1878	ug/L		89
74)	o-Xylene	14.69	106	30388	2.0239	ug/L		88
75)	Styrene	14.73	104	47789	1.9688	ug/L		91
76)	Bromoform	15.19	173	7665	1.6866	ug/L		95
77)	Isopropylbenzene	15.13	105	90148	2.2078	ug/L		96
79)	1,1,2,2-Tetrachloroethane	15.32	83	9677	1.9171	ug/L		94
81)	1,2,3-Trichloropropane	15.52	110	3872	2.1610	ug/L		88
82)	trans-1,4-Dichloro-2-Buten	15.57	53	4999	1.9711	ug/L		89
83)	n-Propylbenzene	15.63	91	92035	2.1929	ug/L		98
84)	Bromobenzene	15.74	156	21068	2.1402	ug/L		93
85)	1,3,5-Trimethylbenzene	15.82	105	75066	2.1895	ug/L		96
86)	2-Chlorotoluene	15.89	91	64986	2.2090	ug/L		96
87)	4-Chlorotoluene	15.94	91	61407	2.1584	ug/L		96
88)	a-Methylstyrene	16.21	118	32203	1.9252	ug/L		99
89)	tert-Butylbenzene	16.27	134	14716	2.0826	ug/L		89
90)	1,2,4-Trimethylbenzene	16.32	105	76449	2.1965	ug/L		98
91)	sec-Butylbenzene	16.55	105	85530	2.1570	ug/L		98
92)	p-Isopropyltoluene	16.71	119	70257	2.1456	ug/L		98
93)	1,3-Dichlorobenzene	16.87	146	39081	2.0444	ug/L		96
94)	1,4-Dichlorobenzene	17.01	146	41799	2.1602	ug/L		89
95)	n-Butylbenzene	17.23	91	65484	2.1920	ug/L		95
96)	1,2-Dichlorobenzene	17.49	146	34834	2.0557	ug/L		99
97)	1,2-Dibromo-3-Chloropropan	18.48	75	1814	1.5757	ug/L		95
98)	1,2,4-Trichlorobenzene	19.61	180	23857	2.1513	ug/L		93
99)	Hexachlorobutadiene	19.79	225	12084	2.3277	ug/L		84
100)	Naphthalene	19.96	128	37750	2.0265	ug/L		94
101)	1,2,3-Trichlorobenzene	20.28	180	17536	1.8660	ug/L		90

(#) = qualifier out of range (m) = manual integration
8M383310.D 8260WTR.M Tue Nov 06 16:36:08 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383310.D Vial: 6
Acq On : 6 Nov 2012 10:17 Operator: ADC
Sample : WG413483-05 2.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:32 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383311.D Vial: 7
Acq On : 6 Nov 2012 10:47 Operator: ADC
Sample : WG413483-06 5.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:31 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	632772	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.96	117	511238	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	269222	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.07	111	22079	2.5661	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 10.28%#			
43) 1,2-Dichloroethane-d4	9.71	65	25419	2.5302	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 10.12%#			
58) Toluene-d8	12.10	98	70129	2.6162	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 10.48%#			
80) p-Bromofluorobenzene	15.46	95	30826	2.7327	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 10.92%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	45359	5.1199	ug/L	95
3) Chloromethane	3.18	50	74238	4.9527	ug/L	99
4) Vinyl Chloride	3.39	62	55602	4.9899	ug/L	98
5) 1,3-Butadiene	3.44	54	46893	5.2662	ug/L	94
6) Bromomethane	4.20	94	23600	4.4955	ug/L	96
7) Chloroethane	4.34	64	28108	5.0505	ug/L	98
8) Trichlorofluoromethane	4.84	101	78270	4.8426	ug/L	99
9) Diethyl ether	5.36	59	245004	49.0190	ug/L	98
10) Isoprene	5.40	67	52388	4.7994	ug/L	99
11) Acrolein	5.55	56	18006	26.7590	ug/L	93
12) 1,1,2-Trichloro-1,2,2-Trif	5.62	101	37834	4.7966	ug/L	97
13) Acetone	5.65	43	7585	4.7039	ug/L	91
14) 1,1-Dichloroethene	5.90	61	82807	4.9172	ug/L	98
15) Tert-Butyl Alcohol	6.02	59	32248	94.7834	ug/L	94
16) Dimethyl Sulfide	6.14	62	43918	4.8790	ug/L	96
17) Iodomethane	6.38	142	31585	4.5978	ug/L	94
18) Methyl acetate	6.42	43	20639	4.8964	ug/L	91
19) Methylene Chloride	6.66	84	34685	5.0137	ug/L	100
20) Carbon Disulfide	6.68	76	92295	5.0240	ug/L	97
21) Acrylonitrile	6.82	53	49510	23.3942	ug/L	98
22) Methyl Tert Butyl Ether	6.92	73	74881	9.9157	ug/L	97
23) trans-1,2-Dichloroethene	7.12	61	79554	5.1688	ug/L	96
24) n-Hexane	7.25	57	63989	5.1285	ug/L	99
25) Diisopropyl ether	7.58	45	1766550	51.5348	ug/L	100
26) Vinyl Acetate	7.72	43	61563	4.7819	ug/L	97
27) 1,1-Dichloroethane	7.73	63	86797	5.0493	ug/L	99
28) Ethyl-Tert-Butyl ether	8.16	59	1436763	51.2945	ug/L	99
29) 2-Butanone	8.30	43	9563	4.1063	ug/L #	86
30) Propionitrile	8.37	54	34293	46.7450	ug/L	95
31) 2,2-Dichloropropane	8.52	77	71531	4.7765	ug/L	99
32) cis-1,2-Dichloroethene	8.58	96	39891	5.0256	ug/L	93
33) Chloroform	8.79	83	80231	5.2019	ug/L	96
34) 1-Bromopropane	8.92	122	6967	5.2696	ug/L	82
35) Bromochloromethane	9.00	130	22403	4.9074	ug/L	97
36) Tetrahydrofuran	9.04	42	69541	48.9261	ug/L	98
38) 1,1,1-Trichloroethane	9.33	97	79243	5.1565	ug/L	100
39) Cyclohexane	9.37	56	92082	5.0478	ug/L	99
40) 1,1-Dichloropropene	9.52	75	60932	5.0827	ug/L	99
41) Tert-Amyl-Methyl ether	9.66	73	827375	50.5847	ug/L	100
42) Carbon Tetrachloride	9.67	117	71529	5.0004	ug/L	99
45) 1,2-Dichloroethane	9.82	62	63131	4.8900	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M383311.D 8260WTR.M Tue Nov 06 16:36:39 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383311.D Vial: 7
Acq On : 6 Nov 2012 10:47 Operator: ADC
Sample : WG413483-06 5.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:32:31 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

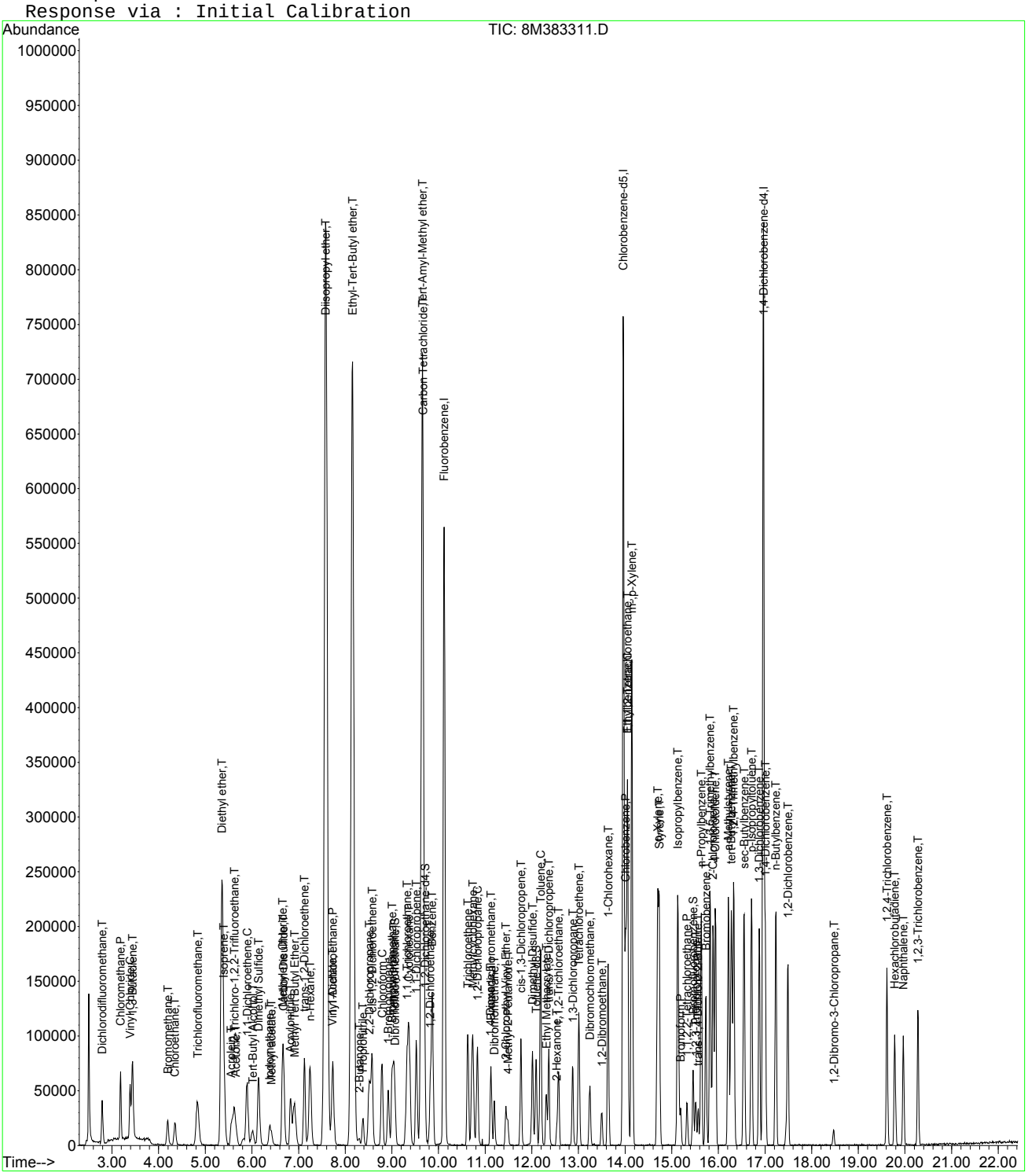
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.86	78	143725	4.9881	ug/L	99
47)	Trichloroethene	10.63	130	42074	4.9129	ug/L	99
48)	Methylcyclohexane	10.73	83	55855	5.1580	ug/L	97
49)	1,2-Dichloropropane	10.84	63	41911	4.8890	ug/L	97
50)	Bromodichloromethane	11.12	83	56014	4.8485	ug/L	98
51)	1,4-Dioxane	11.11	88	2643	96.0362	ug/L	80
52)	Dibromomethane	11.20	93	18222	4.9510	ug/L	98
53)	2-Chloroethyl Vinyl Ether	11.45	63	16751	4.7326	ug/L	99
54)	4-Methyl-2-Pentanone	11.49	58	7480	3.8166	ug/L	94
55)	cis-1,3-Dichloropropene	11.77	75	58100	4.6786	ug/L	97
56)	Dimethyl Disulfide	12.01	94	53439	4.7426	ug/L	94
59)	Toluene	12.19	91	160703	5.1011	ug/L	98
60)	Ethyl Methacrylate	12.31	69	26808	4.6582	ug/L	91
62)	trans-1,3-Dichloropropene	12.37	75	52966	4.7757	ug/L	97
63)	1,1,2-Trichloroethane	12.57	97	24011	5.1152	ug/L	98
64)	2-Hexanone	12.53	58	8506	4.3037	ug/L	94
65)	1,3-Dichloropropane	12.88	76	44349	4.9277	ug/L	96
66)	Tetrachloroethene	13.01	164	34888	4.9471	ug/L	93
67)	Dibromochloromethane	13.24	129	39486	4.9363	ug/L	96
68)	1,2-Dibromoethane	13.50	107	28530	4.8304	ug/L	95
69)	1-Chlorohexane	13.64	91	53853	5.1732	ug/L	96
70)	Chlorobenzene	14.01	112	117605	5.0998	ug/L	99
71)	1,1,1,2-Tetrachloroethane	14.05	131	45704	4.9563	ug/L	99
72)	Ethylbenzene	14.05	106	63303	4.8736	ug/L	97
73)	m-,p-Xylene	14.14	106	162362	10.6390	ug/L	98
74)	o-Xylene	14.70	106	75489	5.0239	ug/L	96
75)	Styrene	14.73	104	128561	5.2923	ug/L	96
76)	Bromoform	15.19	173	20494	4.5059	ug/L	97
77)	Isopropylbenzene	15.13	105	208078	5.0921	ug/L	100
79)	1,1,2,2-Tetrachloroethane	15.32	83	25521	4.9939	ug/L	99
81)	1,2,3-Trichloropropane	15.52	110	8399	4.6300	ug/L	77
82)	trans-1,4-Dichloro-2-Buten	15.56	53	13062	5.0873	ug/L	93
83)	n-Propylbenzene	15.63	91	225821	5.3148	ug/L	98
84)	Bromobenzene	15.74	156	48922	4.9090	ug/L	94
85)	1,3,5-Trimethylbenzene	15.82	105	184523	5.3162	ug/L	99
86)	2-Chlorotoluene	15.88	91	160395	5.3854	ug/L	97
87)	4-Chlorotoluene	15.93	91	149514	5.1909	ug/L	99
88)	a-Methylstyrene	16.21	118	90527	5.3456	ug/L	95
89)	tert-Butylbenzene	16.27	134	35958	5.0263	ug/L	98
90)	1,2,4-Trimethylbenzene	16.33	105	189841	5.3877	ug/L	100
91)	sec-Butylbenzene	16.55	105	217230	5.4112	ug/L	98
92)	p-Isopropyltoluene	16.71	119	178865	5.3955	ug/L	99
93)	1,3-Dichlorobenzene	16.87	146	101493	5.2443	ug/L	99
94)	1,4-Dichlorobenzene	17.01	146	99781	5.0935	ug/L	95
95)	n-Butylbenzene	17.22	91	163442	5.4040	ug/L	97
96)	1,2-Dichlorobenzene	17.49	146	89527	5.2187	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	18.48	75	5782	4.9608	ug/L	92
98)	1,2,4-Trichlorobenzene	19.61	180	59525	5.3020	ug/L	96
99)	Hexachlorobutadiene	19.78	225	26164	4.9780	ug/L	97
100)	Naphthalene	19.96	128	96581	5.1212	ug/L	100
101)	1,2,3-Trichlorobenzene	20.27	180	48613	5.1096	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M383311.D 8260WTR.M Tue Nov 06 16:36:39 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383311.D Vial: 7
Acq On : 6 Nov 2012 10:47 Operator: ADC
Sample : WG413483-06 5.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:32 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383312.D Vial: 8
Acq On : 6 Nov 2012 11:17 Operator: ADC
Sample : WG413483-07 20.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:36:57 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	636913	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.97	117	518444	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	280245	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.07	111	87526	10.1063	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 40.44%#			
43) 1,2-Dichloroethane-d4	9.71	65	108227	10.7029	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 42.80%#			
58) Toluene-d8	12.09	98	287373	10.5717	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 42.28%#			
80) p-Bromofluorobenzene	15.46	95	124000	10.5600	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 42.24%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	182432	20.4582	ug/L	99
3) Chloromethane	3.18	50	293825	19.4748	ug/L	98
4) Vinyl Chloride	3.39	62	222579	19.8453	ug/L	97
5) 1,3-Butadiene	3.44	54	196764	21.9536	ug/L	98
6) Bromomethane	4.20	94	102169	19.3352	ug/L	100
7) Chloroethane	4.35	64	114701	20.4757	ug/L	99
8) Trichlorofluoromethane	4.84	101	332899	20.4628	ug/L	99
9) Diethyl ether	5.35	59	411902	81.8753	ug/L	100
10) Isoprene	5.39	67	212856	19.3735	ug/L	95
11) Acrolein	5.55	56	27350	40.3809	ug/L	97
12) 1,1,2-Trichloro-1,2,2-Trif	5.62	101	156779	19.7470	ug/L	100
13) Acetone	5.66	43	34368	21.1750	ug/L	97
14) 1,1-Dichloroethene	5.89	61	341717	20.1599	ug/L	99
15) Tert-Butyl Alcohol	6.02	59	53478	156.1607	ug/L	97
16) Dimethyl Sulfide	6.14	62	178063	19.6530	ug/L	99
17) Iodomethane	6.38	142	144864	20.9507	ug/L	99
18) Methyl acetate	6.42	43	82736	19.5008	ug/L	98
19) Methylene Chloride	6.66	84	141184	20.2753	ug/L	100
20) Carbon Disulfide	6.69	76	363493	19.6579	ug/L	100
21) Acrylonitrile	6.83	53	84146	39.5017	ug/L	92
22) Methyl Tert Butyl Ether	6.92	73	316246	41.6049	ug/L	100
23) trans-1,2-Dichloroethene	7.12	61	311731	20.1223	ug/L	99
24) n-Hexane	7.25	57	249915	19.8994	ug/L	99
25) Diisopropyl ether	7.59	45	2857345	82.8141	ug/L	100
26) Vinyl Acetate	7.72	43	276296	21.3216	ug/L	99
27) 1,1-Dichloroethane	7.74	63	350388	20.2509	ug/L	99
28) Ethyl-Tert-Butyl ether	8.16	59	2335278	82.8307	ug/L	100
29) 2-Butanone	8.30	43	48715	20.7820	ug/L	98
30) Propionitrile	8.38	54	59012	77.6025	ug/L	100
31) 2,2-Dichloropropane	8.52	77	307140	20.3759	ug/L	96
32) cis-1,2-Dichloroethene	8.58	96	158114	19.7902	ug/L	100
33) Chloroform	8.79	83	318235	20.4990	ug/L	99
34) 1-Bromopropane	8.92	122	27613	19.5339	ug/L	99
35) Bromochloromethane	9.00	130	92044	20.0314	ug/L	96
36) Tetrahydrofuran	9.03	42	116191	81.2155	ug/L	99
38) 1,1,1-Trichloroethane	9.32	97	312556	20.2066	ug/L	100
39) Cyclohexane	9.37	56	368157	20.0506	ug/L	99
40) 1,1-Dichloropropene	9.52	75	233714	19.3687	ug/L	100
41) Tert-Amyl-Methyl ether	9.66	73	1361701	82.7115	ug/L	99
42) Carbon Tetrachloride	9.67	117	288633	20.0462	ug/L	99
45) 1,2-Dichloroethane	9.82	62	267145	20.5578	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M383312.D 8260WTR.M Tue Nov 06 16:36:57 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383312.D Vial: 8
Acq On : 6 Nov 2012 11:17 Operator: ADC
Sample : WG413483-07 20.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:36:57 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

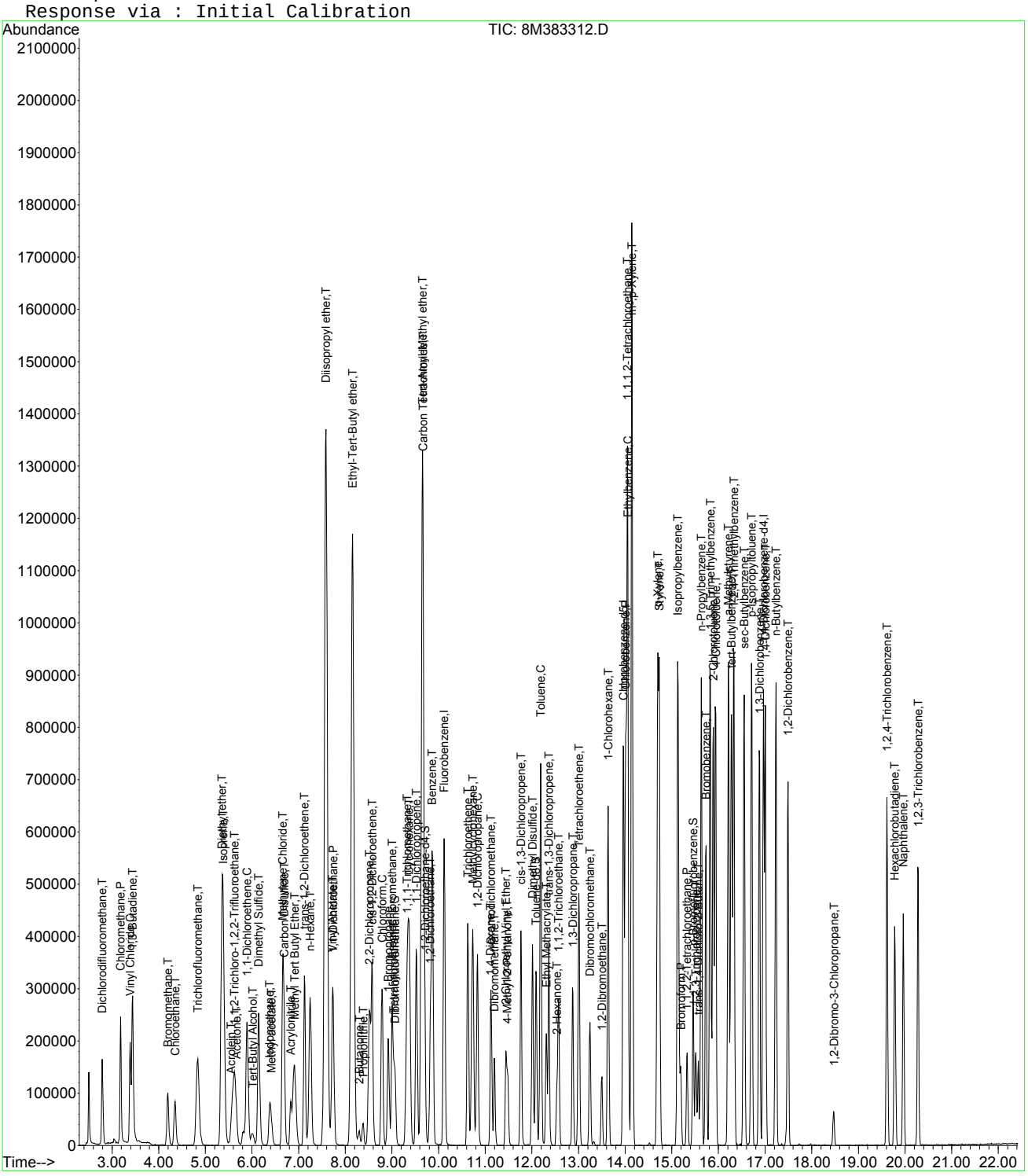
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.86	78	573571	19.7770	ug/L	100
47)	Trichloroethene	10.63	130	171587	19.9056	ug/L	98
48)	Methylcyclohexane	10.73	83	217157	19.9231	ug/L	99
49)	1,2-Dichloropropane	10.83	63	174378	20.2093	ug/L	100
50)	Bromodichloromethane	11.12	83	241690	20.7844	ug/L	99
51)	1,4-Dioxane	11.11	88	4370	157.7561	ug/L	77
52)	Dibromomethane	11.20	93	73949	19.9615	ug/L	97
53)	2-Chloroethyl Vinyl Ether	11.44	63	81876	22.9816	ug/L	100
54)	4-Methyl-2-Pentanone	11.48	58	52676	24.2963	ug/L	99
55)	cis-1,3-Dichloropropene	11.76	75	257767	20.6223	ug/L	100
56)	Dimethyl Disulfide	12.01	94	225771	19.9066	ug/L	99
59)	Toluene	12.19	91	643105	20.1299	ug/L	99
60)	Ethyl Methacrylate	12.31	69	121022	20.7367	ug/L	97
62)	trans-1,3-Dichloropropene	12.36	75	230632	20.5062	ug/L	99
63)	1,1,2-Trichloroethane	12.57	97	96196	20.2082	ug/L	97
64)	2-Hexanone	12.54	58	49120	24.5074	ug/L	87
65)	1,3-Dichloropropane	12.88	76	186024	20.3822	ug/L	98
66)	Tetrachloroethene	13.01	164	146131	20.4334	ug/L	98
67)	Dibromochloromethane	13.24	129	166272	20.4973	ug/L	97
68)	1,2-Dibromoethane	13.50	107	117814	19.6699	ug/L	96
69)	1-Chlorohexane	13.64	91	204390	19.3611	ug/L	96
70)	Chlorobenzene	14.01	112	462800	19.7898	ug/L	100
71)	1,1,1,2-Tetrachloroethane	14.05	131	187337	20.0331	ug/L	100
72)	Ethylbenzene	14.06	106	257782	19.5704	ug/L	99
73)	m-,p-Xylene	14.14	106	625430	40.4127	ug/L	96
74)	o-Xylene	14.70	106	308654	20.2558	ug/L	98
75)	Styrene	14.73	104	517673	21.0140	ug/L	100
76)	Bromoform	15.20	173	94437	20.4749	ug/L	99
77)	Isopropylbenzene	15.12	105	851865	20.5572	ug/L	99
79)	1,1,2,2-Tetrachloroethane	15.32	83	109990	20.6761	ug/L	99
81)	1,2,3-Trichloropropane	15.52	110	39016	20.6620	ug/L	95
82)	trans-1,4-Dichloro-2-Buten	15.57	53	54836	20.5172	ug/L	96
83)	n-Propylbenzene	15.63	91	901172	20.3752	ug/L	100
84)	Bromobenzene	15.73	156	202385	19.5091	ug/L	97
85)	1,3,5-Trimethylbenzene	15.83	105	739583	20.4698	ug/L	99
86)	2-Chlorotoluene	15.89	91	619708	19.9889	ug/L	98
87)	4-Chlorotoluene	15.94	91	608344	20.2901	ug/L	99
88)	a-Methylstyrene	16.21	118	353004	20.0249	ug/L	98
89)	tert-Butylbenzene	16.28	134	148574	19.9512	ug/L	92
90)	1,2,4-Trimethylbenzene	16.33	105	758119	20.6691	ug/L	99
91)	sec-Butylbenzene	16.55	105	856293	20.4913	ug/L	99
92)	p-Isopropyltoluene	16.71	119	723510	20.9662	ug/L	99
93)	1,3-Dichlorobenzene	16.88	146	405792	20.1431	ug/L	99
94)	1,4-Dichlorobenzene	17.01	146	406947	19.9563	ug/L	98
95)	n-Butylbenzene	17.23	91	641578	20.3784	ug/L	98
96)	1,2-Dichlorobenzene	17.49	146	359420	20.1274	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	18.47	75	24986	20.5941	ug/L	94
98)	1,2,4-Trichlorobenzene	19.61	180	242446	20.7456	ug/L	98
99)	Hexachlorobutadiene	19.78	225	107290	19.6104	ug/L	98
100)	Naphthalene	19.96	128	420252	21.4074	ug/L	98
101)	1,2,3-Trichlorobenzene	20.28	180	206854	20.8866	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M383312.D 8260WTR.M Tue Nov 06 16:36:57 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383312.D Vial: 8
Acq On : 6 Nov 2012 11:17 Operator: ADC
Sample : WG413483-07 20.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:36 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383313.D Vial: 9
Acq On : 6 Nov 2012 11:47 Operator: ADC
Sample : WG413483-08 50.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:36:58 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	643805	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.97	117	532726	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.96	152	290272	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.08	111	229706	26.2394	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 104.96%			
43) 1,2-Dichloroethane-d4	9.71	65	266213	26.0447	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 104.16%			
58) Toluene-d8	12.10	98	714337	25.5740	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.28%			
80) p-Bromofluorobenzene	15.46	95	311747	25.6317	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	463101	51.3769	ug/L	100
3) Chloromethane	3.18	50	741130	48.5966	ug/L	100
4) Vinyl Chloride	3.39	62	559257	49.3299	ug/L	100
5) 1,3-Butadiene	3.43	54	502582	55.4743	ug/L	100
6) Bromomethane	4.20	94	285750	53.4984	ug/L	100
7) Chloroethane	4.35	64	297044	52.4589	ug/L	100
8) Trichlorofluoromethane	4.84	101	854684	51.9738	ug/L	100
9) Diethyl ether	5.35	59	524661	103.1724	ug/L	100
10) Isoprene	5.38	67	571954	51.5002	ug/L	100
11) Acrolein	5.56	56	36393	53.1573	ug/L	100
12) 1,1,2-Trichloro-1,2,2-Trif	5.61	101	404406	50.3915	ug/L	100
13) Acetone	5.65	43	83934	51.1602	ug/L	100
14) 1,1-Dichloroethene	5.89	61	885327	51.6715	ug/L	100
15) Tert-Butyl Alcohol	6.01	59	70427	203.4518	ug/L	100
16) Dimethyl Sulfide	6.14	62	474486	51.8088	ug/L	100
17) Iodomethane	6.38	142	399154	57.1091	ug/L	100
18) Methyl acetate	6.42	43	215150	50.1678	ug/L	100
19) Methylene Chloride	6.66	84	359089	51.0163	ug/L	100
20) Carbon Disulfide	6.69	76	963515	51.5496	ug/L	100
21) Acrylonitrile	6.83	53	114761	53.2970	ug/L	100
22) Methyl Tert Butyl Ether	6.90	73	824473	107.3055	ug/L	100
23) trans-1,2-Dichloroethene	7.12	61	800570	51.1238	ug/L	100
24) n-Hexane	7.25	57	659579	51.9566	ug/L	100
25) Diisopropyl ether	7.59	45	3577785	102.5845	ug/L	100
26) Vinyl Acetate	7.72	43	664756	50.7498	ug/L	100
27) 1,1-Dichloroethane	7.74	63	890204	50.8992	ug/L	100
28) Ethyl-Tert-Butyl ether	8.16	59	2941901	103.2302	ug/L	100
29) 2-Butanone	8.29	43	121017	51.0736	ug/L	100
30) Propionitrile	8.37	54	76359	98.4260	ug/L	100
31) 2,2-Dichloropropane	8.52	77	772519	50.7008	ug/L	100
32) cis-1,2-Dichloroethene	8.58	96	404767	50.1199	ug/L	100
33) Chloroform	8.79	83	811074	51.6858	ug/L	100
34) 1-Bromopropane	8.93	122	75252	51.9627	ug/L	100
35) Bromochloromethane	9.00	130	243388	52.4012	ug/L	100
36) Tetrahydrofuran	9.03	42	151630	104.8521	ug/L	100
38) 1,1,1-Trichloroethane	9.32	97	818577	52.3540	ug/L	100
39) Cyclohexane	9.37	56	957976	51.6149	ug/L	100
40) 1,1-Dichloropropene	9.52	75	619206	50.7663	ug/L	100
41) Tert-Amyl-Methyl ether	9.65	73	1725507	103.6875	ug/L	100
42) Carbon Tetrachloride	9.67	117	751835	51.6576	ug/L	100
45) 1,2-Dichloroethane	9.82	62	693287	52.7799	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M383313.D 8260WTR.M Tue Nov 06 16:36:59 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383313.D Vial: 9
Acq On : 6 Nov 2012 11:47 Operator: ADC
Sample : WG413483-08 50.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:36:58 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

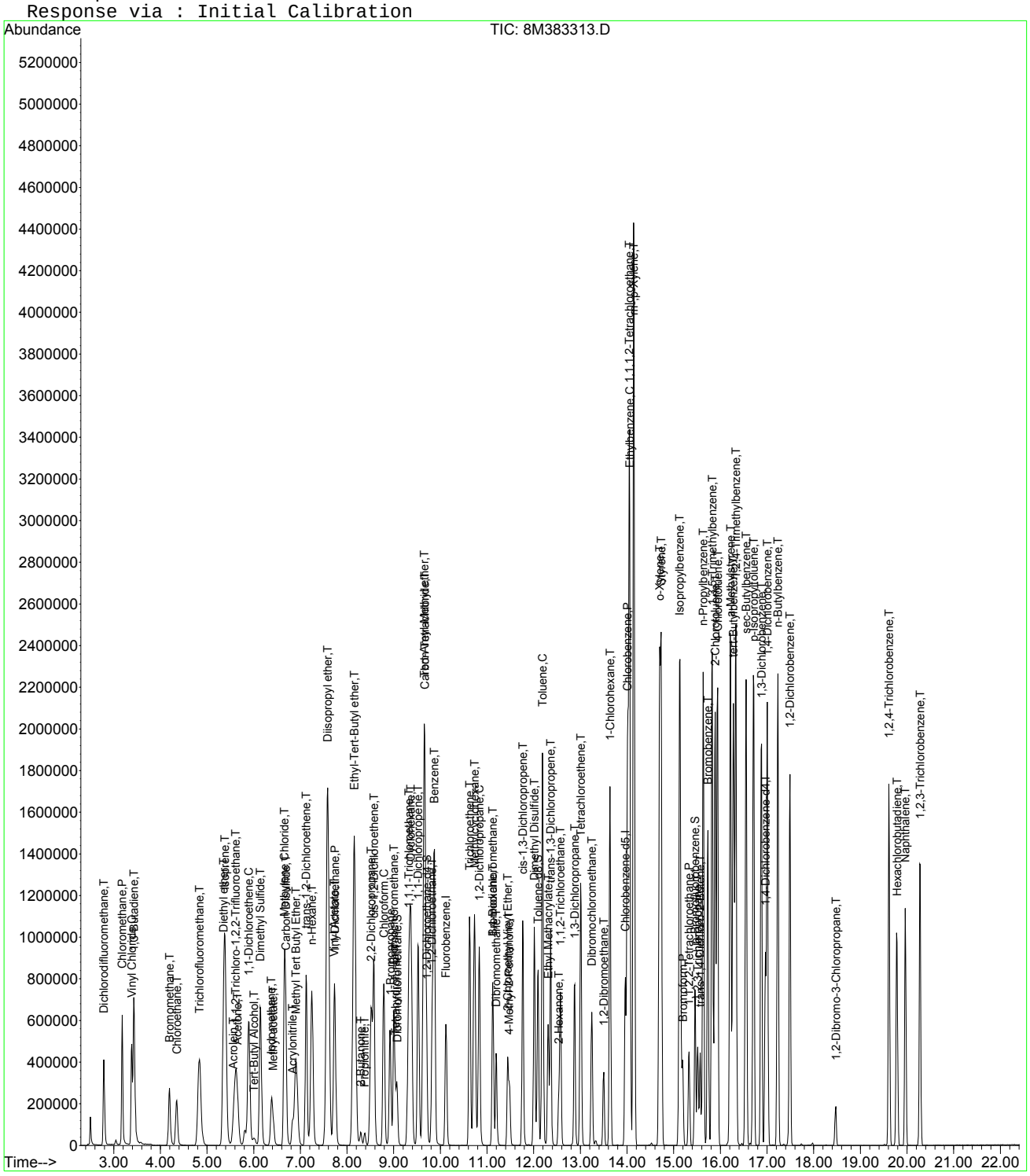
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.87	78	1490908	50.8569	ug/L	100
47)	Trichloroethene	10.63	130	444692	51.0360	ug/L	100
48)	Methylcyclohexane	10.73	83	571190	51.8430	ug/L	99
49)	1,2-Dichloropropane	10.83	63	452608	51.8929	ug/L	100
50)	Bromodichloromethane	11.12	83	629740	53.5755	ug/L	100
51)	1,4-Dioxane	11.12	88	5049	180.3167	ug/L	100
52)	Dibromomethane	11.20	93	204872	54.7103	ug/L	100
53)	2-Chloroethyl Vinyl Ether	11.44	63	195823	54.3767	ug/L	100
54)	4-Methyl-2-Pentanone	11.47	58	106069	48.0015	ug/L	100
55)	cis-1,3-Dichloropropene	11.76	75	662253	52.4155	ug/L	100
56)	Dimethyl Disulfide	12.01	94	625432	54.5549	ug/L	100
59)	Toluene	12.19	91	1646778	50.1641	ug/L	100
60)	Ethyl Methacrylate	12.31	69	326011	54.3632	ug/L	100
62)	trans-1,3-Dichloropropene	12.36	75	610867	52.8578	ug/L	100
63)	1,1,2-Trichloroethane	12.57	97	266289	54.4404	ug/L	100
64)	2-Hexanone	12.54	58	98713	47.9304	ug/L	100
65)	1,3-Dichloropropane	12.88	76	483418	51.5470	ug/L	100
66)	Tetrachloroethene	13.00	164	380403	51.7654	ug/L	100
67)	Dibromochloromethane	13.24	129	445157	53.4058	ug/L	100
68)	1,2-Dibromoethane	13.50	107	306593	49.8157	ug/L	100
69)	1-Chlorohexane	13.64	91	556656	51.3162	ug/L	100
70)	Chlorobenzene	14.01	112	1192122	49.6098	ug/L	100
71)	1,1,1,2-Tetrachloroethane	14.05	131	490692	51.0659	ug/L	100
72)	Ethylbenzene	14.06	106	661842	48.8989	ug/L	100
73)	m-,p-Xylene	14.14	106	1638828	103.0555	ug/L	100
74)	o-Xylene	14.70	106	798364	50.9890	ug/L	100
75)	Styrene	14.73	104	1339941	52.9342	ug/L	100
76)	Bromoform	15.20	173	247216	52.1619	ug/L	100
77)	Isopropylbenzene	15.12	105	2167276	50.8986	ug/L	100
79)	1,1,2,2-Tetrachloroethane	15.33	83	279270	50.6841	ug/L	100
81)	1,2,3-Trichloropropane	15.52	110	105183	53.7783	ug/L	100
82)	trans-1,4-Dichloro-2-Buten	15.57	53	149176	53.8871	ug/L	100
83)	n-Propylbenzene	15.63	91	2311888	50.4654	ug/L	100
84)	Bromobenzene	15.73	156	529585	49.2864	ug/L	100
85)	1,3,5-Trimethylbenzene	15.83	105	1894142	50.6141	ug/L	100
86)	2-Chlorotoluene	15.89	91	1534789	47.7952	ug/L	100
87)	4-Chlorotoluene	15.94	91	1569899	50.5522	ug/L	100
88)	a-Methylstyrene	16.22	118	948097	51.9251	ug/L	100
89)	tert-Butylbenzene	16.28	134	364954	47.3148	ug/L	100
90)	1,2,4-Trimethylbenzene	16.33	105	1934957	50.9317	ug/L	100
91)	sec-Butylbenzene	16.55	105	2186902	50.5254	ug/L	100
92)	p-Isopropyltoluene	16.72	119	1820002	50.9191	ug/L	100
93)	1,3-Dichlorobenzene	16.88	146	1032474	49.4806	ug/L	100
94)	1,4-Dichlorobenzene	17.01	146	1033766	48.9437	ug/L	100
95)	n-Butylbenzene	17.23	91	1617418	49.5993	ug/L	100
96)	1,2-Dichlorobenzene	17.49	146	936782	50.6472	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	18.47	75	66717	53.0903	ug/L	100
98)	1,2,4-Trichlorobenzene	19.61	180	609092	50.3183	ug/L	100
99)	Hexachlorobutadiene	19.79	225	272762	48.1332	ug/L	100
100)	Naphthalene	19.96	128	1069688	52.6070	ug/L	100
101)	1,2,3-Trichlorobenzene	20.28	180	519564	50.6497	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M383313.D 8260WTR.M Tue Nov 06 16:36:59 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383313.D Vial: 9
Acq On : 6 Nov 2012 11:47 Operator: ADC
Sample : WG413483-08 50.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:36 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383314.D Vial: 10
Acq On : 6 Nov 2012 12:17 Operator: ADC
Sample : WG413483-09 100.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:37:00 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	676957	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.96	117	557828	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	304126	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.07	111	454122	49.3342	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 197.32%#			
43) 1,2-Dichloroethane-d4	9.70	65	521537	48.5254	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 194.12%#			
58) Toluene-d8	12.09	98	1409231	48.1817	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 192.72%#			
80) p-Bromofluorobenzene	15.46	95	614205	48.1993	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 192.80%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	931827	98.3153	ug/L	99
3) Chloromethane	3.18	50	1487118	92.7363	ug/L	99
4) Vinyl Chloride	3.38	62	1142726	95.8592	ug/L	99
5) 1,3-Butadiene	3.42	54	872345	91.5728	ug/L	96
6) Bromomethane	4.19	94	598803	106.6182	ug/L	98
7) Chloroethane	4.35	64	611235	102.6596	ug/L	99
8) Trichlorofluoromethane	4.83	101	1754546	101.4699	ug/L	99
9) Diethyl ether	5.35	59	1101102	205.9233	ug/L	98
10) Isoprene	5.39	67	1153419	98.7707	ug/L	99
11) Acrolein	5.55	56	74511	103.5043	ug/L	97
12) 1,1,2-Trichloro-1,2,2-Trif	5.62	101	846503	100.3140	ug/L	99
13) Acetone	5.66	43	165381	95.8678	ug/L	93
14) 1,1-Dichloroethene	5.90	61	1813241	100.6459	ug/L	98
15) Tert-Butyl Alcohol	6.01	59	140286	385.4162	ug/L	96
16) Dimethyl Sulfide	6.14	62	957735	99.4532	ug/L	98
17) Iodomethane	6.38	142	797785	108.5535	ug/L	99
18) Methyl acetate	6.41	43	439948	97.5615	ug/L	99
19) Methylene Chloride	6.66	84	733377	99.0895	ug/L	98
20) Carbon Disulfide	6.68	76	1881188	95.7177	ug/L	99
21) Acrylonitrile	6.83	53	234193	103.4369	ug/L	99
22) Methyl Tert Butyl Ether	6.91	73	1687049	208.8173	ug/L	100
23) trans-1,2-Dichloroethene	7.13	61	1663080	101.0021	ug/L	98
24) n-Hexane	7.25	57	1284352	96.2169	ug/L	100
25) Diisopropyl ether	7.58	45	7158479	195.2008	ug/L	99
26) Vinyl Acetate	7.73	43	1389895	100.9130	ug/L	100
27) 1,1-Dichloroethane	7.74	63	1820550	98.9958	ug/L	99
28) Ethyl-Tert-Butyl ether	8.15	59	5889409	196.5367	ug/L	99
29) 2-Butanone	8.29	43	244006	97.9363	ug/L	97
30) Propionitrile	8.38	54	154826	186.7687	ug/L	99
31) 2,2-Dichloropropane	8.52	77	1583732	98.8509	ug/L	100
32) cis-1,2-Dichloroethene	8.57	96	844088	99.3999	ug/L	97
33) Chloroform	8.79	83	1666354	100.9884	ug/L	100
34) 1-Bromopropane	8.93	122	151597	99.1746	ug/L	99
35) Bromochloromethane	9.01	130	490370	100.4059	ug/L	99
36) Tetrahydrofuran	9.04	42	312931	205.7946	ug/L	99
38) 1,1,1-Trichloroethane	9.33	97	1673290	101.7783	ug/L	100
39) Cyclohexane	9.37	56	1889117	96.7993	ug/L	100
40) 1,1-Dichloropropene	9.53	75	1264951	98.6296	ug/L	99
41) Tert-Amyl-Methyl ether	9.66	73	3486844	199.2671	ug/L	99
42) Carbon Tetrachloride	9.66	117	1534596	100.2765	ug/L	99
45) 1,2-Dichloroethane	9.82	62	1398491	101.2531	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M383314.D 8260WTR.M Tue Nov 06 16:37:00 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383314.D Vial: 10
Acq On : 6 Nov 2012 12:17 Operator: ADC
Sample : WG413483-09 100.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:37:00 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

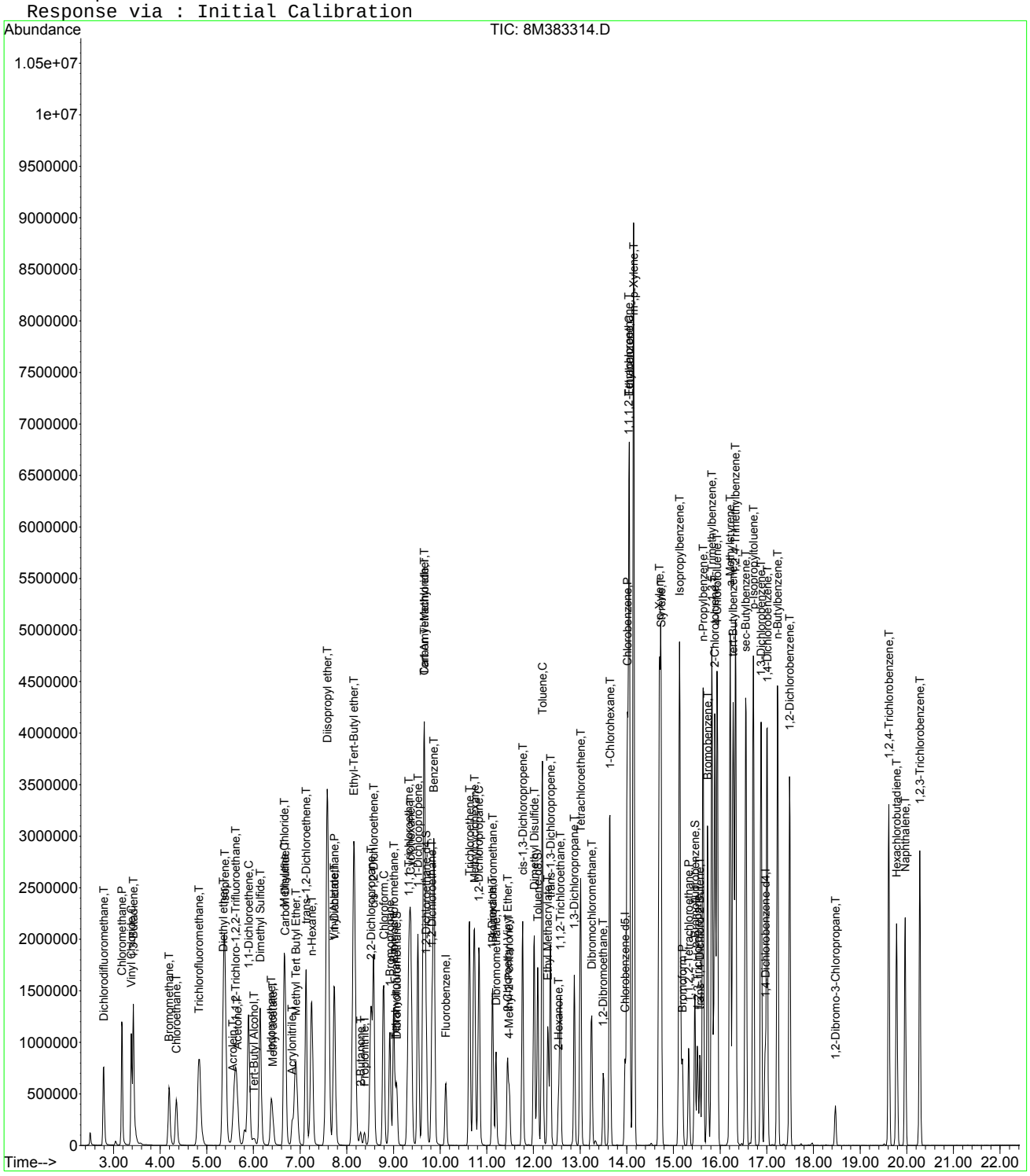
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	Benzene	9.87	78	2995919	97.1902 ug/L	99
47)	Trichloroethene	10.63	130	912432	99.5890 ug/L	100
48)	Methylcyclohexane	10.73	83	1135843	98.0439 ug/L	99
49)	1,2-Dichloropropane	10.83	63	929194	101.3177 ug/L	100
50)	Bromodichloromethane	11.13	83	1257596	101.7511 ug/L	98
51)	1,4-Dioxane	11.12	88	12408	421.4301 ug/L	70
52)	Dibromomethane	11.20	93	415938	105.6351 ug/L	99
53)	2-Chloroethyl Vinyl Ether	11.45	63	393817	104.0009 ug/L	98
54)	4-Methyl-2-Pentanone	11.48	58	218760	93.7657 ug/L	98
55)	cis-1,3-Dichloropropene	11.77	75	1337330	100.6625 ug/L	100
56)	Dimethyl Disulfide	12.02	94	1259845	104.5115 ug/L	100
59)	Toluene	12.19	91	3334937	97.0172 ug/L	100
60)	Ethyl Methacrylate	12.31	69	659462	105.0186 ug/L	98
62)	trans-1,3-Dichloropropene	12.37	75	1226257	101.3322 ug/L	99
63)	1,1,2-Trichloroethane	12.58	97	529004	103.2834 ug/L	98
64)	2-Hexanone	12.53	58	202063	93.6972 ug/L	95
65)	1,3-Dichloropropane	12.88	76	961893	97.9515 ug/L	100
66)	Tetrachloroethene	13.01	164	769995	100.0661 ug/L	99
67)	Dibromochloromethane	13.25	129	895838	102.6380 ug/L	98
68)	1,2-Dibromoethane	13.50	107	624616	96.9216 ug/L	98
69)	1-Chlorohexane	13.64	91	1090462	96.0024 ug/L	100
70)	Chlorobenzene	14.01	112	2418571	96.1190 ug/L	100
71)	1,1,1,2-Tetrachloroethane	14.04	131	1014947	100.8717 ug/L	98
72)	Ethylbenzene	14.05	106	1357517	95.7842 ug/L	95
73)	m-,p-Xylene	14.15	106	3261011	195.8364 ug/L	98
74)	o-Xylene	14.69	106	1623007	98.9919 ug/L	97
75)	Styrene	14.74	104	2719739	102.6081 ug/L	100
76)	Bromoform	15.19	173	513761	103.5241 ug/L	99
77)	Isopropylbenzene	15.13	105	4292527	96.2739 ug/L	99
79)	1,1,2,2-Tetrachloroethane	15.33	83	571214	98.9459 ug/L	100
81)	1,2,3-Trichloropropane	15.52	110	207115	101.0706 ug/L	96
82)	trans-1,4-Dichloro-2-Buten	15.56	53	297174	102.4585 ug/L	94
83)	n-Propylbenzene	15.64	91	4570139	95.2156 ug/L	98
84)	Bromobenzene	15.73	156	1085876	96.4546 ug/L	99
85)	1,3,5-Trimethylbenzene	15.82	105	3785809	96.5537 ug/L	99
86)	2-Chlorotoluene	15.88	91	3098766	92.1034 ug/L	97
87)	4-Chlorotoluene	15.94	91	2961072	91.0058 ug/L	98
88)	a-Methylstyrene	16.21	118	1900587	99.3491 ug/L	100
89)	tert-Butylbenzene	16.28	134	765658	94.7426 ug/L	89
90)	1,2,4-Trimethylbenzene	16.33	105	3839615	96.4620 ug/L	99
91)	sec-Butylbenzene	16.55	105	4310996	95.0626 ug/L	98
92)	p-Isopropyltoluene	16.71	119	3637945	97.1441 ug/L	98
93)	1,3-Dichlorobenzene	16.88	146	2101423	96.1215 ug/L	100
94)	1,4-Dichlorobenzene	17.01	146	2106249	95.1778 ug/L	100
95)	n-Butylbenzene	17.23	91	3212127	94.0151 ug/L	99
96)	1,2-Dichlorobenzene	17.49	146	1873380	96.6707 ug/L	99
97)	1,2-Dibromo-3-Chloropropan	18.47	75	130636	99.2186 ug/L	96
98)	1,2,4-Trichlorobenzene	19.62	180	1234763	97.3594 ug/L	98
99)	Hexachlorobutadiene	19.78	225	566036	95.3358 ug/L	98
100)	Naphthalene	19.97	128	2111592	99.1170 ug/L	100
101)	1,2,3-Trichlorobenzene	20.28	180	1050977	97.7873 ug/L	99

(#) = qualifier out of range (m) = manual integration
8M383314.D 8260WTR.M Tue Nov 06 16:37:01 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383314.D Vial: 10
Acq On : 6 Nov 2012 12:17 Operator: ADC
Sample : WG413483-09 100.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:37 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383315.D Vial: 11
Acq On : 6 Nov 2012 12:48 Operator: ADC
Sample : WG413483-10 200.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:37:01 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	693892	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.96	117	572030	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	321758	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.07	111	936597	99.2653	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 397.08%#			
43) 1,2-Dichloroethane-d4	9.71	65	1063186	96.5077	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 386.04%#			
58) Toluene-d8	12.09	98	2889603	96.3428	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 385.36%#			
80) p-Bromofluorobenzene	15.46	95	1263431	93.7136	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 374.84%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	1808176	186.1211	ug/L	98
3) Chloromethane	3.18	50	2883446	175.4225	ug/L	98
4) Vinyl Chloride	3.38	62	2178047	178.2494	ug/L	99
5) 1,3-Butadiene	3.42	54	1581676	161.9813	ug/L	93
6) Bromomethane	4.19	94	1228007	213.3131	ug/L	97
7) Chloroethane	4.34	64	1211577	198.5233	ug/L	99
8) Trichlorofluoromethane	4.84	101	3443826	194.3045	ug/L	99
9) Diethyl ether	5.36	59	2629	0.4797	ug/L #	50
10) Isoprene	5.39	67	2454686	205.0719	ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	5.62	101	1677763	193.9693	ug/L	99
13) Acetone	5.66	43	348145	196.8869	ug/L	93
14) 1,1-Dichloroethene	5.90	61	3619730	196.0136	ug/L	97
15) Tert-Butyl Alcohol	6.00	59	1126	3.0180	ug/L #	1
16) Dimethyl Sulfide	6.14	62	1962911	198.8581	ug/L	97
17) Iodomethane	6.38	142	1665615	221.1066	ug/L	99
18) Methyl acetate	6.41	43	926949	200.5406	ug/L	99
19) Methylene Chloride	6.66	84	1465220	193.1400	ug/L	95
20) Carbon Disulfide	6.68	76	3888768	193.0374	ug/L	99
21) Acrylonitrile	6.91	53	47832	20.6105	ug/L #	30
22) Methyl Tert Butyl Ether	6.91	73	3523238	425.4515	ug/L	100
23) trans-1,2-Dichloroethene	7.13	61	3259471	193.1229	ug/L	98
24) n-Hexane	7.25	57	2615378	191.1485	ug/L	99
25) Diisopropyl ether	7.59	45	4791	0.1275	ug/L #	65
26) Vinyl Acetate	7.73	43	2738807	193.9974	ug/L	99
27) 1,1-Dichloroethane	7.74	63	3622470	192.1712	ug/L	98
28) Ethyl-Tert-Butyl ether	8.16	59	4044	0.1317	ug/L #	57
29) 2-Butanone	8.29	43	527658	206.6164	ug/L	96
30) Propionitrile	8.39	54	261	3.5628	ug/L #	53
31) 2,2-Dichloropropane	8.52	77	3070032	186.9438	ug/L	100
32) cis-1,2-Dichloroethene	8.57	96	1684295	193.5021	ug/L	95
33) Chloroform	8.79	83	3245129	191.8693	ug/L	100
34) 1-Bromopropane	8.92	122	315062	200.6576	ug/L	99
35) Bromochloromethane	9.01	130	997502	199.2593	ug/L	97
36) Tetrahydrofuran	9.05	42	1750	1.1228	ug/L #	50
38) 1,1,1-Trichloroethane	9.33	97	3275247	194.3557	ug/L	100
39) Cyclohexane	9.37	56	3928821	196.4015	ug/L	98
40) 1,1-Dichloropropene	9.52	75	2496660	189.9163	ug/L	99
42) Carbon Tetrachloride	9.67	117	3041910	193.9191	ug/L	100
45) 1,2-Dichloroethane	9.82	62	2776957	196.1495	ug/L	99
46) Benzene	9.87	78	5835182	184.6783	ug/L	99
47) Trichloroethene	10.63	130	1815797	193.3514	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383315.D Vial: 11
Acq On : 6 Nov 2012 12:48 Operator: ADC
Sample : WG413483-10 200.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:37:01 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

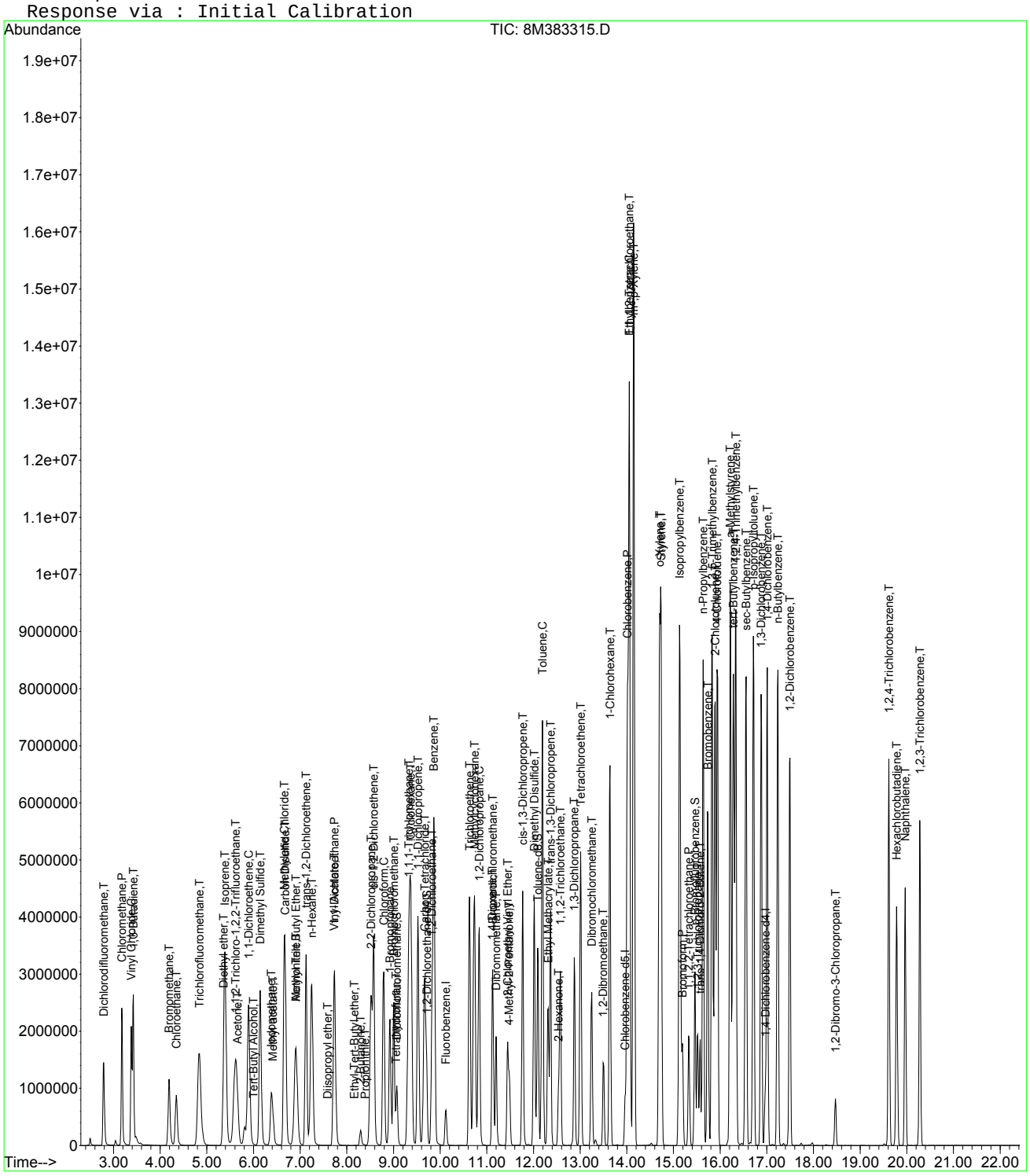
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48)	Methylcyclohexane	10.73	83	2368164	199.4267 ug/L	98
49)	1,2-Dichloropropane	10.84	63	1873787	199.3280 ug/L	98
50)	Bromodichloromethane	11.13	83	2516603	198.6469 ug/L	98
51)	1,4-Dioxane	11.12	88	6554	217.1698 ug/L #	43
52)	Dibromomethane	11.20	93	842905	208.8467 ug/L	97
53)	2-Chloroethyl Vinyl Ether	11.45	63	833918	214.8499 ug/L	97
54)	4-Methyl-2-Pentanone	11.48	58	472810	197.2666 ug/L	99
55)	cis-1,3-Dichloropropene	11.77	75	2688009	197.3918 ug/L	98
56)	Dimethyl Disulfide	12.02	94	2655850	214.9412 ug/L	100
59)	Toluene	12.19	91	6411294	181.8815 ug/L	98
60)	Ethyl Methacrylate	12.32	69	1405804	218.3146 ug/L	97
62)	trans-1,3-Dichloropropene	12.37	75	2475940	199.5206 ug/L	97
63)	1,1,2-Trichloroethane	12.57	97	1094726	208.4293 ug/L	98
64)	2-Hexanone	12.53	58	441274	199.5399 ug/L	93
65)	1,3-Dichloropropane	12.87	76	1978337	196.4563 ug/L	98
66)	Tetrachloroethene	13.01	164	1560180	197.7221 ug/L	98
67)	Dibromochloromethane	13.25	129	1845020	206.1396 ug/L	99
68)	1,2-Dibromoethane	13.49	107	1302247	197.0527 ug/L	99
69)	1-Chlorohexane	13.64	91	2232080	191.6297 ug/L	99
70)	Chlorobenzene	14.01	112	4702599	182.2510 ug/L	99
71)	1,1,1,2-Tetrachloroethane	14.05	131	1997882	193.6321 ug/L	99
72)	Ethylbenzene	14.05	106	2735602	188.2274 ug/L	86
73)	m-,p-Xylene	14.15	106	6239001	365.3741 ug/L	86
74)	o-Xylene	14.70	106	3209044	190.8695 ug/L	92
75)	Styrene	14.74	104	5299400	194.9676 ug/L	100
76)	Bromoform	15.19	173	1094620	215.0925 ug/L	99
77)	Isopropylbenzene	15.13	105	7996978	174.9052 ug/L	96
79)	1,1,2,2-Tetrachloroethane	15.32	83	1192918	195.3141 ug/L	100
81)	1,2,3-Trichloropropane	15.52	110	427489	197.1799 ug/L	86
82)	trans-1,4-Dichloro-2-Buten	15.57	53	622388	202.8256 ug/L	98
83)	n-Propylbenzene	15.64	91	8421402	165.8392 ug/L	94
84)	Bromobenzene	15.74	156	2168082	182.0298 ug/L	98
85)	1,3,5-Trimethylbenzene	15.83	105	7110470	171.4086 ug/L	95
86)	2-Chlorotoluene	15.89	91	5609282	157.5863 ug/L	93
87)	4-Chlorotoluene	15.93	91	5745900	166.9177 ug/L	95
88)	a-Methylstyrene	16.21	118	3808115	188.1526 ug/L	99
89)	tert-Butylbenzene	16.29	134	1511486	176.7823 ug/L	90
90)	1,2,4-Trimethylbenzene	16.34	105	7140139	169.5507 ug/L	94
91)	sec-Butylbenzene	16.56	105	8064373	168.0842 ug/L	95
92)	p-Isopropyltoluene	16.71	119	6835926	172.5369 ug/L	96
93)	1,3-Dichlorobenzene	16.88	146	4120371	178.1425 ug/L	100
94)	1,4-Dichlorobenzene	17.01	146	4131454	176.4628 ug/L	99
95)	n-Butylbenzene	17.24	91	6035679	166.9765 ug/L	97
96)	1,2-Dichlorobenzene	17.50	146	3703124	180.6181 ug/L	97
97)	1,2-Dibromo-3-Chloropropan	18.47	75	274837	197.3011 ug/L	94
98)	1,2,4-Trichlorobenzene	19.62	180	2468301	183.9572 ug/L	98
99)	Hexachlorobutadiene	19.78	225	1117411	177.8890 ug/L	99
100)	Naphthalene	19.97	128	4288148	190.2532 ug/L	99
101)	1,2,3-Trichlorobenzene	20.28	180	2139375	188.1483 ug/L	98

(#) = qualifier out of range (m) = manual integration
8M383315.D 8260WTR.M Tue Nov 06 16:37:02 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383315.D Vial: 11
Acq On : 6 Nov 2012 12:48 Operator: ADC
Sample : WG413483-10 200.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:37 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383316.D Vial: 12
Acq On : 6 Nov 2012 13:19 Operator: ADC
Sample : WG413483-11 300.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:37:03 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	719213	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.97	117	594518	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	330445	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.08	111	1458388	149.1256	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 596.52%#			
43) 1,2-Dichloroethane-d4	9.71	65	1610463	141.0386	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 564.16%#			
58) Toluene-d8	12.10	98	4424818	141.9483	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 567.80%#			
80) p-Bromofluorobenzene	15.46	95	1920151	138.6810	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 554.72%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	2986893	296.6258	ug/L	97
3) Chloromethane	3.17	50	4686779	275.0948	ug/L	96
4) Vinyl Chloride	3.38	62	3628653	286.5106	ug/L	99
5) 1,3-Butadiene	3.42	54	2118641	209.3337	ug/L	93
6) Bromomethane	4.19	94	2130205	357.0035	ug/L	97
7) Chloroethane	4.34	64	2066629	326.7062	ug/L	99
8) Trichlorofluoromethane	4.84	101	5788728	315.1078	ug/L	99
9) Diethyl ether	5.35	59	1767962	311.2106	ug/L	97
10) Isoprene	5.39	67	3695985	297.9030	ug/L	96
11) Acrolein	5.55	56	123542	161.5312	ug/L	92
12) 1,1,2-Trichloro-1,2,2-Trif	5.61	101	2868427	319.9488	ug/L	100
13) Acetone	5.65	43	572522	312.3799	ug/L	92
14) 1,1-Dichloroethene	5.89	61	6074143	317.3433	ug/L	96
15) Tert-Butyl Alcohol	6.02	59	261030	675.0091	ug/L	96
16) Dimethyl Sulfide	6.14	62	3005574	293.7680	ug/L	95
17) Iodomethane	6.38	142	2486448	318.4497	ug/L	97
18) Methyl acetate	6.42	43	1515603	316.3489	ug/L	98
19) Methylene Chloride	6.66	84	2525068	321.1270	ug/L	90
20) Carbon Disulfide	6.69	76	5798210	277.6884	ug/L	98
21) Acrylonitrile	6.83	53	460455	191.4223	ug/L	94
22) Methyl Tert Butyl Ether	6.91	73	6304382	734.4884	ug/L	99
23) trans-1,2-Dichloroethene	7.12	61	5696158	325.6140	ug/L	96
24) n-Hexane	7.25	57	3866915	272.6688	ug/L	99
25) Diisopropyl ether	7.59	45	10879597	279.2397	ug/L	97
26) Vinyl Acetate	7.72	43	4317131	295.0285	ug/L	98
27) 1,1-Dichloroethane	7.74	63	6328049	323.8826	ug/L	98
28) Ethyl-Tert-Butyl ether	8.16	59	9394580	295.0889	ug/L	97
29) 2-Butanone	8.29	43	875463	330.7383	ug/L	95
30) Propionitrile	8.38	54	285142	321.3694	ug/L	98
31) 2,2-Dichloropropane	8.52	77	5129553	301.3575	ug/L	99
32) cis-1,2-Dichloroethene	8.58	96	3004120	332.9808	ug/L	90
33) Chloroform	8.79	83	5500850	313.7890	ug/L	98
34) 1-Bromopropane	8.92	122	485900	298.3644	ug/L	98
35) Bromochloromethane	9.00	130	1765948	340.3431	ug/L	95
36) Tetrahydrofuran	9.05	42	559424	346.2821	ug/L	96
38) 1,1,1-Trichloroethane	9.33	97	5445329	311.7537	ug/L	99
39) Cyclohexane	9.37	56	5852678	282.2745	ug/L	97
40) 1,1-Dichloropropene	9.52	75	4264213	312.9508	ug/L	98
41) Tert-Amyl-Methyl ether	9.66	73	5782349	311.0362	ug/L	99
42) Carbon Tetrachloride	9.67	117	5023709	308.9820	ug/L	100
45) 1,2-Dichloroethane	9.82	62	4685977	319.3394	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M383316.D 8260WTR.M Tue Nov 06 16:37:04 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383316.D Vial: 12
Acq On : 6 Nov 2012 13:19 Operator: ADC
Sample : WG413483-11 300.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 06 16:37:03 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

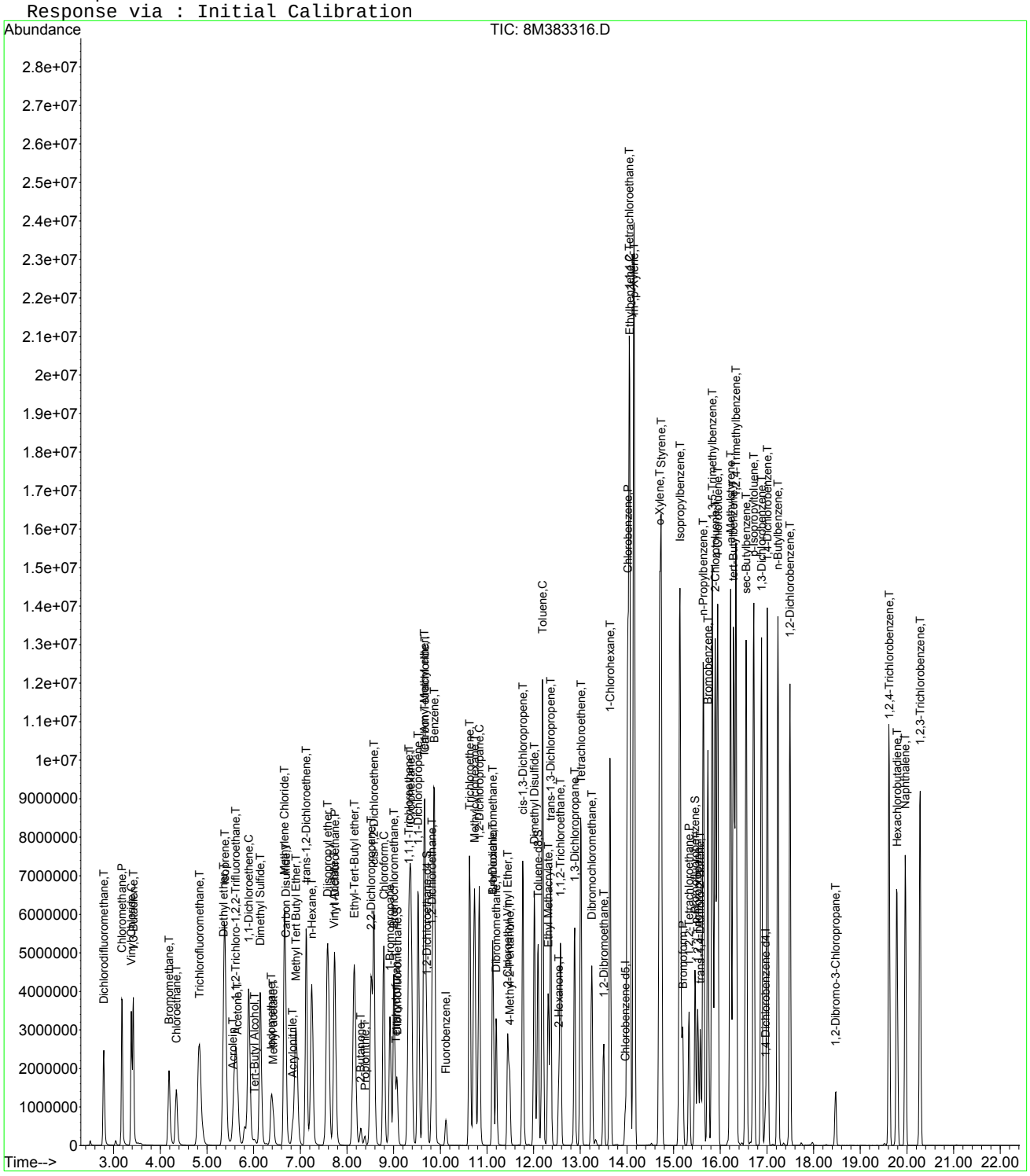
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.87	78	9584667	292.6664	ug/L	97
47)	Trichloroethene	10.63	130	3090839	317.5345	ug/L	100
48)	Methylcyclohexane	10.73	83	3588309	291.5384	ug/L	96
49)	1,2-Dichloropropane	10.83	63	3226622	331.1544	ug/L	99
50)	Bromodichloromethane	11.12	83	4277052	325.7211	ug/L	98
51)	1,4-Dioxane	11.12	88	20617	659.1023	ug/L	71
52)	Dibromomethane	11.20	93	1474832	352.5541	ug/L	96
53)	2-Chloroethyl Vinyl Ether	11.44	63	1352808	336.2654	ug/L	97
54)	4-Methyl-2-Pentanone	11.49	58	764791	307.6285	ug/L	98
55)	cis-1,3-Dichloropropene	11.77	75	4604550	326.2271	ug/L	97
56)	Dimethyl Disulfide	12.01	94	4119929	321.6920	ug/L	100
59)	Toluene	12.19	91	10347374	282.4404	ug/L	93
60)	Ethyl Methacrylate	12.31	69	2234619	333.8991	ug/L	94
62)	trans-1,3-Dichloropropene	12.36	75	4268932	330.9944	ug/L	96
63)	1,1,2-Trichloroethane	12.57	97	1951611	357.5200	ug/L	98
64)	2-Hexanone	12.54	58	703730	306.1832	ug/L	93
65)	1,3-Dichloropropane	12.88	76	3457617	330.3668	ug/L	97
66)	Tetrachloroethene	13.02	164	2697025	328.8663	ug/L	98
67)	Dibromochloromethane	13.24	129	3217129	345.8459	ug/L	99
68)	1,2-Dibromoethane	13.50	107	2291548	333.6351	ug/L	99
69)	1-Chlorohexane	13.64	91	3371597	278.5111	ug/L	96
70)	Chlorobenzene	14.02	112	7704738	287.3052	ug/L	97
71)	1,1,1,2-Tetrachloroethane	14.05	131	3324213	309.9917	ug/L	100
72)	Ethylbenzene	14.06	106	4564807	302.2082	ug/L	73
73)	m-,p-Xylene	14.15	106	9886055	557.0569	ug/L	72
74)	o-Xylene	14.70	106	5379117	307.8404	ug/L	83
75)	Styrene	14.73	104	8584740	303.8903	ug/L	98
76)	Bromoform	15.20	173	1936385	366.1065	ug/L	99
77)	Isopropylbenzene	15.14	105	12137401	255.4209	ug/L	90
79)	1,1,2,2-Tetrachloroethane	15.33	83	2107858	336.0427	ug/L	99
81)	1,2,3-Trichloropropane	15.52	110	750448	337.0454	ug/L	94
82)	trans-1,4-Dichloro-2-Buten	15.57	53	962997	305.5742	ug/L	93
83)	n-Propylbenzene	15.63	91	12533838	240.3350	ug/L	88
84)	Bromobenzene	15.74	156	3731070	305.0214	ug/L	94
85)	1,3,5-Trimethylbenzene	15.83	105	10864718	255.0252	ug/L	89
86)	2-Chlorotoluene	15.89	91	8954099	244.9420	ug/L	84
87)	4-Chlorotoluene	15.94	91	9381719	265.3731	ug/L	98
88)	a-Methylstyrene	16.22	118	5663632	272.4742	ug/L	99
89)	tert-Butylbenzene	16.28	134	2561977	291.7697	ug/L	82
90)	1,2,4-Trimethylbenzene	16.34	105	10844005	250.7338	ug/L	86
91)	sec-Butylbenzene	16.55	105	12125472	246.0849	ug/L	89
92)	p-Isopropyltoluene	16.72	119	10492729	257.8714	ug/L	91
93)	1,3-Dichlorobenzene	16.88	146	6800971	286.3073	ug/L	98
94)	1,4-Dichlorobenzene	17.01	146	6773823	281.7177	ug/L	98
95)	n-Butylbenzene	17.23	91	9357560	252.0706	ug/L	93
96)	1,2-Dichlorobenzene	17.49	146	6147924	291.9790	ug/L	96
97)	1,2-Dibromo-3-Chloropropan	18.47	75	493472	344.9427	ug/L	91
98)	1,2,4-Trichlorobenzene	19.62	180	4148663	301.0627	ug/L	98
99)	Hexachlorobutadiene	19.79	225	1873320	290.3878	ug/L	99
100)	Naphthalene	19.96	128	7096336	306.5678	ug/L	97
101)	1,2,3-Trichlorobenzene	20.28	180	3636076	311.3698	ug/L	99

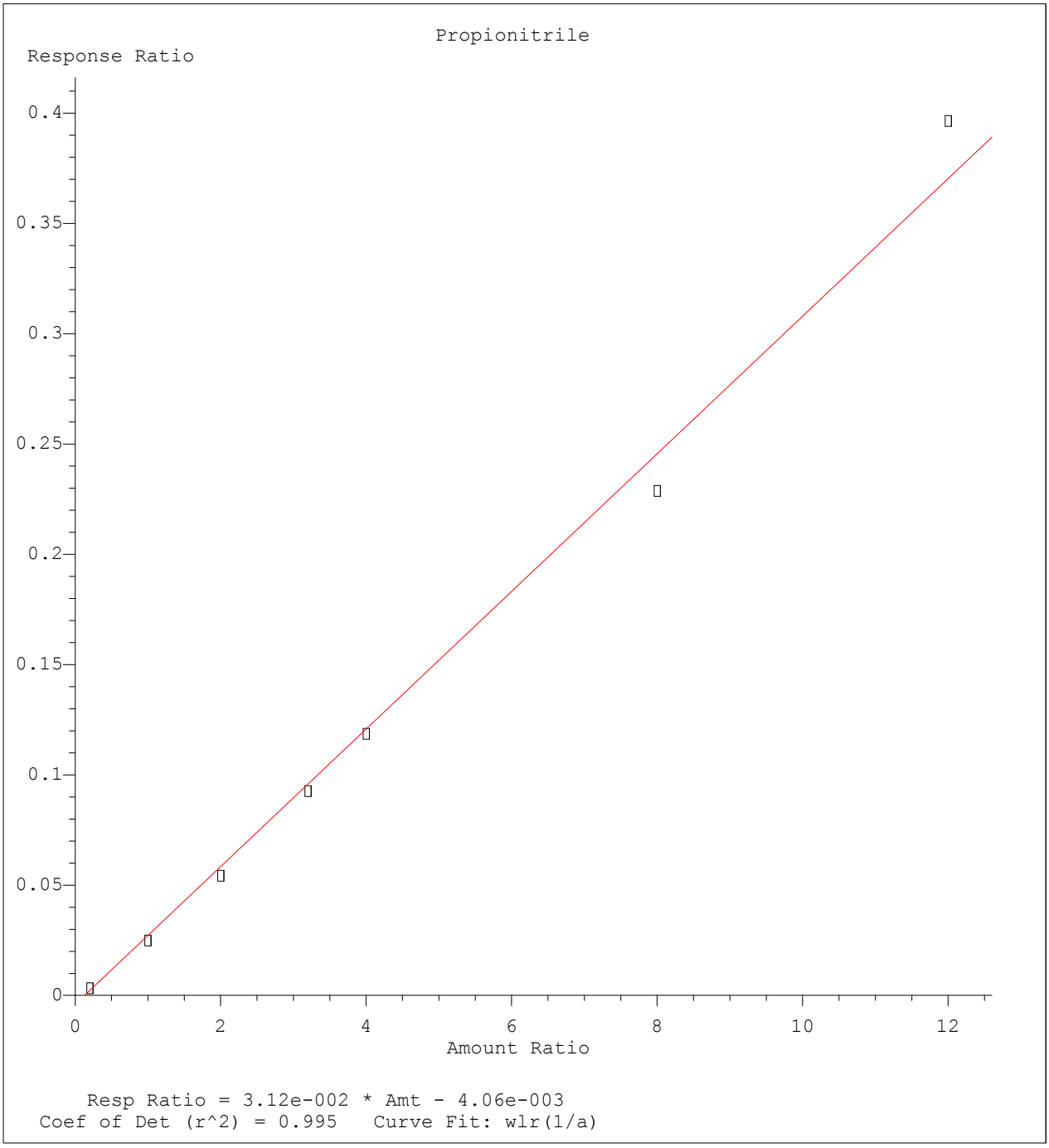
(#) = qualifier out of range (m) = manual integration
8M383316.D 8260WTR.M Tue Nov 06 16:37:04 2012 Page 2

Quantitation Report (Not Reviewed)

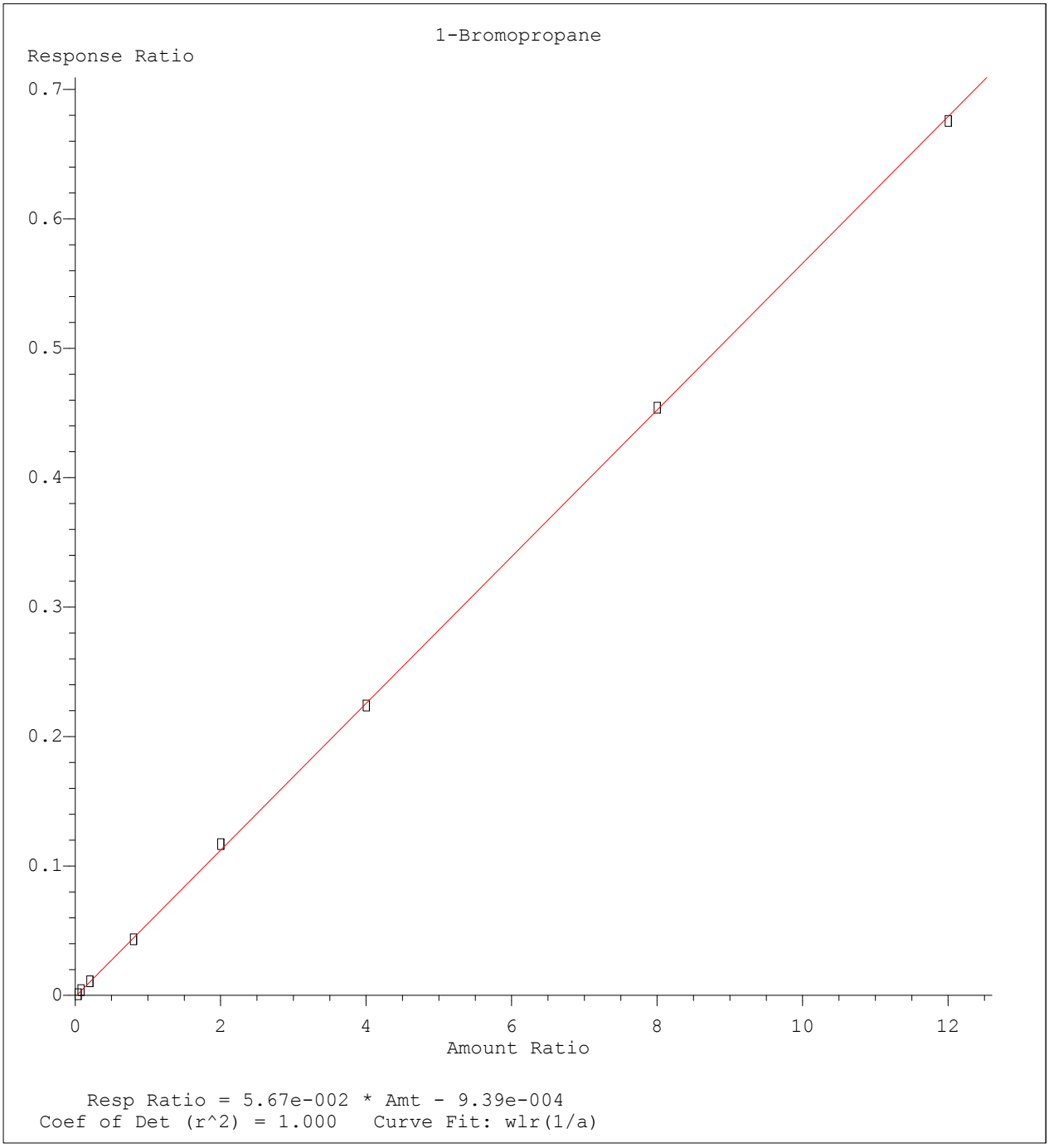
Data File : C:\MSDCHEM\1\DATA\110612\8M383316.D Vial: 12
Acq On : 6 Nov 2012 13:19 Operator: ADC
Sample : WG413483-11 300.0ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD54657 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 6 16:37 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Tue Nov 06 14:04:33 2012
Response via : Initial Calibration

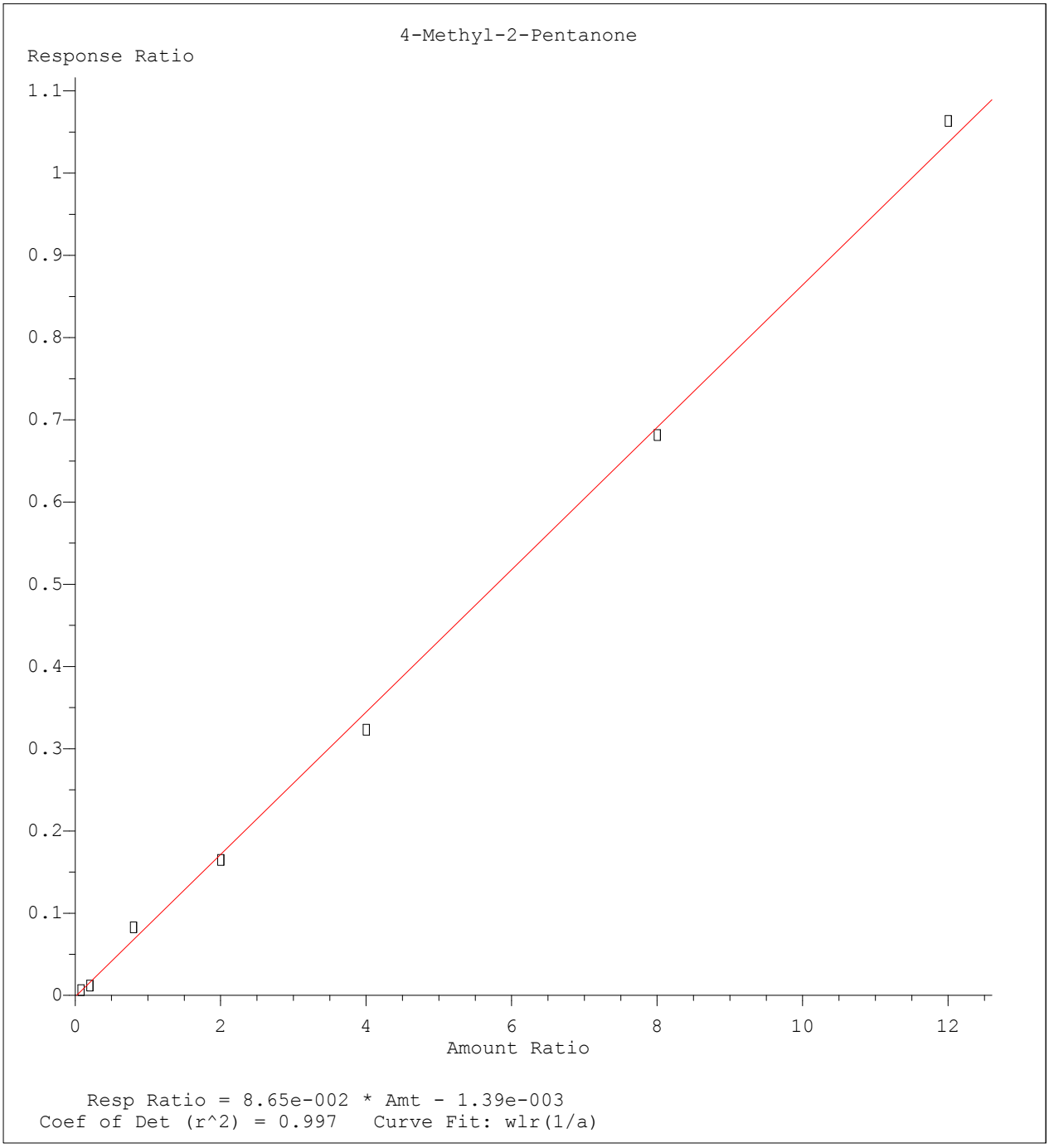




Method Name: C:\MSDCHEM\1\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Nov 06 14:04:33 2012



Method Name: C:\MSDCHEM\1\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Nov 06 14:04:33 2012



Method Name: C:\MSDCHEM\1\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Nov 06 14:04:33 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383324.D Vial: 5
Acq On : 6 Nov 2012 17:39 Operator: ADC
Sample : WG413483-12 50ug/L ALTSRC STD Inst : HPMS8
Misc : 1,1 STD54557 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 07 14:01:41 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Wed Nov 07 14:00:36 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.12	96	675682	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.96	117	559333	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.97	152	304141	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.07	111	219618	23.9035	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.60%			
43) 1,2-Dichloroethane-d4	9.71	65	246959	23.0212	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 92.08%			
58) Toluene-d8	12.09	98	690774	23.5540	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.20%			
80) p-Bromofluorobenzene	15.46	95	306102	24.0199	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.78	85	462665	48.9070	ug/L	99
3) Chloromethane	3.18	50	649409	40.5734	ug/L	98
4) Vinyl Chloride	3.38	62	474767	39.9017	ug/L	99
5) 1,3-Butadiene	3.41	54	325295	34.2117	ug/L	93
6) Bromomethane	4.19	94	239145	42.6607	ug/L	98
7) Chloroethane	4.34	64	296728	49.9308	ug/L	95
8) Trichlorofluoromethane	4.83	101	818929	47.4501	ug/L	99
9) Diethyl ether	5.36	59	626606	117.4062	ug/L	99
10) Isoprene	5.39	67	483460	41.4782	ug/L	96
11) Acrolein	5.55	56	97057	135.0777	ug/L	93
12) 1,1,2-Trichloro-1,2,2-Trif	5.62	101	415971	49.3873	ug/L	94
13) Acetone	5.66	43	95858	55.6717	ug/L	92
14) 1,1-Dichloroethene	5.90	61	802459	44.6254	ug/L	96
15) Tert-Butyl Alcohol	6.02	59	89439	246.1848	ug/L	98
16) Dimethyl Sulfide	6.14	62	509071	52.9628	ug/L	94
17) Iodomethane	6.38	142	418598	57.0655	ug/L	99
18) Methyl acetate	6.42	43	237825	52.8389	ug/L	99
19) Methylene Chloride	6.66	84	357790	48.4336	ug/L	97
20) Carbon Disulfide	6.68	76	1058213	53.9451	ug/L	99
21) Acrylonitrile	6.83	53	132591	58.6725	ug/L	98
22) Methyl Tert Butyl Ether	6.91	73	863243	53.5255	ug/L	99
23) trans-1,2-Dichloroethene	7.13	61	761859	46.3565	ug/L	98
24) n-Hexane	7.24	57	662992	49.7616	ug/L	100
25) Diisopropyl ether	7.58	45	3639284	99.4250	ug/L	99
26) Vinyl Acetate	7.73	43	872962	63.5008	ug/L	100
27) 1,1-Dichloroethane	7.74	63	832446	45.3512	ug/L	100
28) Ethyl-Tert-Butyl ether	8.16	59	2967052	99.2009	ug/L	100
29) 2-Butanone	8.29	43	137208	55.1749	ug/L	97
30) Propionitrile	8.38	54	88681	108.5686	ug/L	97
31) 2,2-Dichloropropane	8.52	77	720125	45.0325	ug/L	100
32) cis-1,2-Dichloroethene	8.57	96	402715	47.5133	ug/L	95
33) Chloroform	8.79	83	777379	47.2015	ug/L	100
34) 1-Bromopropane	8.92	122	92415	60.7330	ug/L	99
35) Bromochloromethane	9.01	130	246378	50.5424	ug/L	99
36) Tetrahydrofuran	9.04	42	183608	120.9750	ug/L	98
38) 1,1,1-Trichloroethane	9.33	97	746499	45.4917	ug/L	99
39) Cyclohexane	9.37	56	886425	45.5066	ug/L	97
40) 1,1-Dichloropropene	9.52	75	594051	46.4062	ug/L	100
41) Tert-Amyl-Methyl ether	9.66	73	1881993	107.7556	ug/L	100
42) Carbon Tetrachloride	9.67	117	687992	45.0409	ug/L	99
45) 1,2-Dichloroethane	9.82	62	699181	50.7174	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M383324.D 8260WTR.M Wed Nov 07 14:01:42 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383324.D Vial: 5
Acq On : 6 Nov 2012 17:39 Operator: ADC
Sample : WG413483-12 50ug/L ALTSRC STD Inst : HPMS8
Misc : 1,1 STD54557 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 07 14:01:41 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Wed Nov 07 14:00:36 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

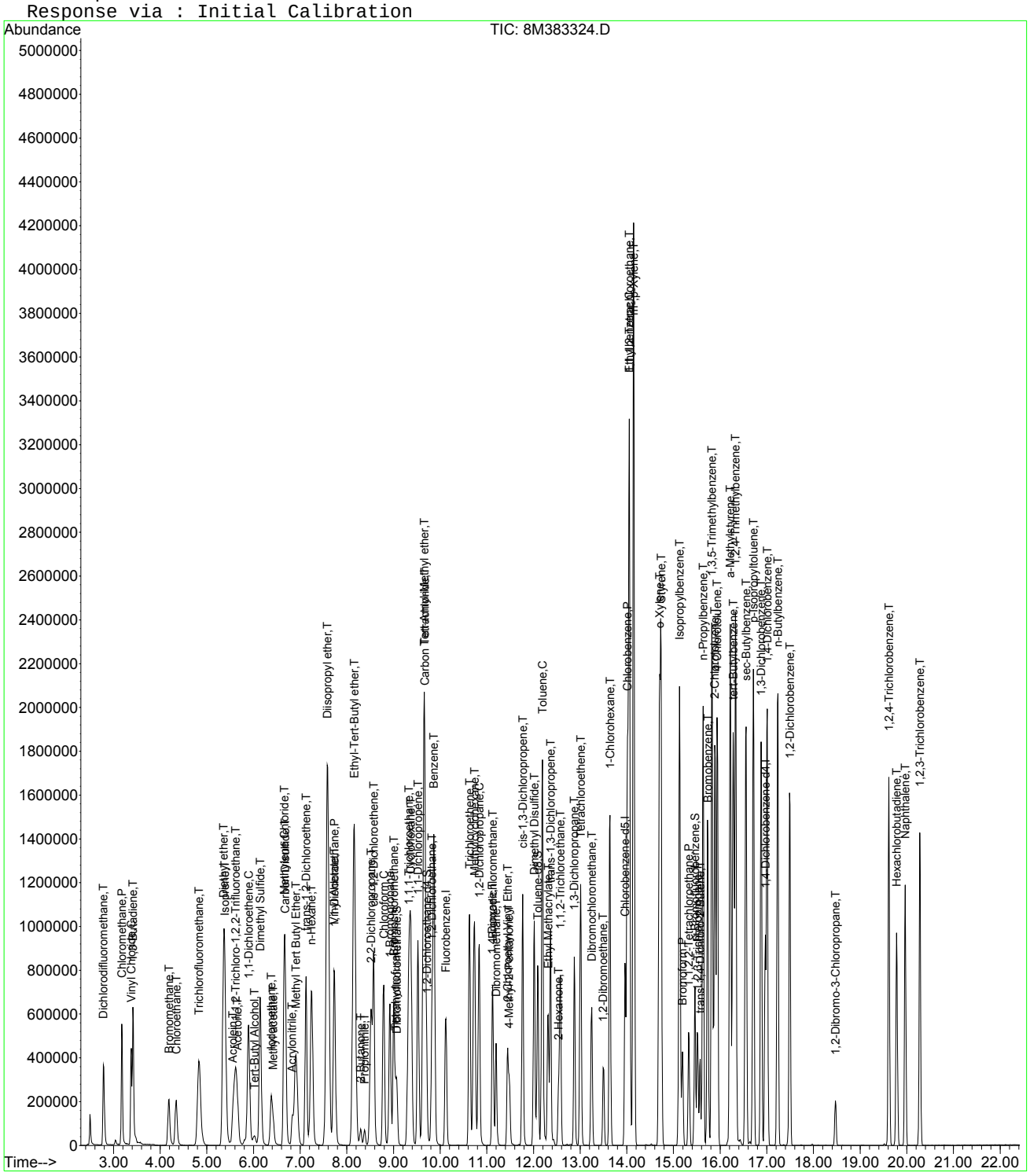
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.87	78	1461244	47.4935	ug/L	99
47)	Trichloroethene	10.63	130	454509	49.7018	ug/L	98
48)	Methylcyclohexane	10.73	83	566489	48.9906	ug/L	96
49)	1,2-Dichloropropane	10.84	63	465498	50.8529	ug/L	98
50)	Bromodichloromethane	11.13	83	598034	48.4778	ug/L	100
51)	1,4-Dioxane	11.12	88	4342	147.7517	ug/L	91
52)	Dibromomethane	11.20	93	209757	53.3722	ug/L	98
53)	2-Chloroethyl Vinyl Ether	11.45	63	212890	56.3270	ug/L	100
54)	4-Methyl-2-Pentanone	11.48	58	117174	50.5042	ug/L	97
55)	cis-1,3-Dichloropropene	11.77	75	704321	53.1152	ug/L	99
56)	Dimethyl Disulfide	12.02	94	636562	52.9062	ug/L	98
59)	Toluene	12.19	91	1605921	46.5924	ug/L	100
60)	Ethyl Methacrylate	12.32	69	362132	57.5140	ug/L	95
62)	trans-1,3-Dichloropropene	12.37	75	614518	50.6443	ug/L	99
63)	1,1,2-Trichloroethane	12.57	97	282259	54.9603	ug/L	97
64)	2-Hexanone	12.53	58	113396	52.4406	ug/L	93
65)	1,3-Dichloropropane	12.87	76	522590	53.0732	ug/L	96
66)	Tetrachloroethene	13.01	164	365594	47.3836	ug/L	98
67)	Dibromochloromethane	13.25	129	438716	50.1294	ug/L	100
68)	1,2-Dibromoethane	13.49	107	324179	50.1675	ug/L	99
69)	1-Chlorohexane	13.64	91	515987	45.3044	ug/L	96
70)	Chlorobenzene	14.01	112	1101729	43.6672	ug/L	97
71)	1,1,1,2-Tetrachloroethane	14.05	131	493187	48.8841	ug/L	99
72)	Ethylbenzene	14.05	106	652730	45.9316	ug/L	96
73)	m-,p-Xylene	14.15	106	1532376	91.7775	ug/L	99
74)	o-Xylene	14.70	106	731874	44.5190	ug/L	97
75)	Styrene	14.74	104	1335625	50.2538	ug/L	96
76)	Bromoform	15.19	173	272958	54.8537	ug/L	97
77)	Isopropylbenzene	15.13	105	1932183	43.2189	ug/L	100
79)	1,1,2,2-Tetrachloroethane	15.32	83	317824	55.0508	ug/L	99
81)	1,2,3-Trichloropropane	15.52	110	112424	54.8594	ug/L	85
82)	trans-1,4-Dichloro-2-Buten	15.57	53	135527	46.7242	ug/L	96
83)	n-Propylbenzene	15.64	91	2071355	43.1531	ug/L	98
84)	Bromobenzene	15.74	156	530354	47.1072	ug/L	99
85)	1,3,5-Trimethylbenzene	15.82	105	1881664	47.9878	ug/L	99
86)	2-Chlorotoluene	15.88	91	1475885	43.8650	ug/L	99
87)	4-Chlorotoluene	15.94	91	1334189	41.0030	ug/L	98
88)	a-Methylstyrene	16.21	118	921445	48.1642	ug/L	97
89)	tert-Butylbenzene	16.29	134	343917	42.5542	ug/L	88
90)	1,2,4-Trimethylbenzene	16.33	105	1887406	47.4147	ug/L	100
91)	sec-Butylbenzene	16.56	105	1951098	43.0219	ug/L	99
92)	p-Isopropyltoluene	16.71	119	1683777	44.9597	ug/L	99
93)	1,3-Dichlorobenzene	16.88	146	948520	43.3843	ug/L	99
94)	1,4-Dichlorobenzene	17.01	146	1028220	46.4612	ug/L	99
95)	n-Butylbenzene	17.24	91	1543407	45.1715	ug/L	99
96)	1,2-Dichlorobenzene	17.50	146	874392	45.1184	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	18.47	75	70257	53.3578	ug/L	94
98)	1,2,4-Trichlorobenzene	19.62	180	620224	48.9014	ug/L	97
99)	Hexachlorobutadiene	19.78	225	255090	42.9620	ug/L	99
100)	Naphthalene	19.97	128	1148650	53.9143	ug/L	100
101)	1,2,3-Trichlorobenzene	20.28	180	547517	50.9408	ug/L	97

(#) = qualifier out of range (m) = manual integration
8M383324.D 8260WTR.M Wed Nov 07 14:01:42 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\110612\8M383324.D Vial: 5
Acq On : 6 Nov 2012 17:39 Operator: ADC
Sample : WG413483-12 50ug/L ALTSRC STD Inst : HPMS8
Misc : 1,1 STD54557 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 7 14:01 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Wed Nov 07 14:00:36 2012
Response via : Initial Calibration



8M383324.D 8260WTR.M Wed Nov 07 14:01:42 2012 Page 3

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\110612\8M383324.D Vial: 5
Acq On : 6 Nov 2012 17:39 Operator: ADC
Sample : WG413483-12 50ug/L ALTSRC STD Inst : HPMS8
Misc : 1,1 STD54557 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Wed Nov 07 14:00:36 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	105	0.00
2	T	Dichlorodifluoromethane	50.0000	48.9070	2.2	100	0.00
3	P	Chloromethane	50.0000	40.5734	18.9	88	0.00
4	C	Vinyl Chloride	50.0000	39.9017	20.2#	85	0.00
5	T	1,3-Butadiene	50.0000	34.2117	31.6#	65	-0.02
6	T	Bromomethane	50.0000	42.6607	14.7	84	0.00
7	T	Chloroethane	50.0000	49.9308	0.1	100	0.00
8	T	Trichlorofluoromethane	50.0000	47.4501	5.1	96	0.00
9	T	Diethyl ether	100.0000	117.4062	-17.4	119	0.00
10	T	Isoprene	50.0000	41.4782	17.0	85	0.00
11	T	Acrolein	50.0000	135.0777	-170.2#	267	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	49.3873	1.2	103	0.00
13	T	Acetone	50.0000	55.6717	-11.3	114	0.00
14	C	1,1-Dichloroethene	50.0000	44.6254	10.7	91	0.00
15	T	Tert-Butyl Alcohol	200.0000	246.1849	-23.1	127	0.01
16	T	Dimethyl Sulfide	50.0000	52.9628	-5.9	107	0.00
17	T	Iodomethane	50.0000	57.0655	-14.1	105	0.00
18	T	Methyl acetate	50.0000	52.8389	-5.7	111	0.00
19	T	Methylene Chloride	50.0000	48.4336	3.1	100	0.00
20	T	Carbon Disulfide	50.0000	53.9451	-7.9	110	0.00
21	T	Acrylonitrile	50.0000	58.6725	-17.3	116	0.00
22	T	Methyl Tert Butyl Ether	50.0000	53.5255	-7.1	105	0.00
23	T	trans-1,2-Dichloroethene	50.0000	46.3565	7.3	95	0.00
24	T	n-Hexane	50.0000	49.7616	0.5	101	0.00
25	T	Diisopropyl ether	100.0000	99.4250	0.6	102	0.00
26	T	Vinyl Acetate	50.0000	63.5008	-27.0#	131	0.00
27	P	1,1-Dichloroethane	50.0000	45.3512	9.3	94	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	99.2010	0.8	101	0.00
29	T	2-Butanone	50.0000	55.1749	-10.3	113	0.00
30	T	Propionitrile	100.0000	108.5686	-8.6	116	0.00
31	T	2,2-Dichloropropane	50.0000	45.0324	9.9	93	0.00
32	T	cis-1,2-Dichloroethene	50.0000	47.5133	5.0	99	0.00
33	C	Chloroform	50.0000	47.2015	5.6	96	0.00
34		1-Bromopropane	50.0000	60.7330	-21.5	123	0.00
35	T	Bromochloromethane	50.0000	50.5424	-1.1	101	0.00
36	T	Tetrahydrofuran	100.0000	120.9750	-21.0	121	0.00
37	S	Dibromofluoromethane	25.0000	23.9035	4.4	96	0.00
38	T	1,1,1-Trichloroethane	50.0000	45.4917	9.0	91	0.00
39	T	Cyclohexane	50.0000	45.5066	9.0	93	0.00
40	T	1,1-Dichloropropene	50.0000	46.4062	7.2	96	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	107.7556	-7.8	109	0.00
42	T	Carbon Tetrachloride	50.0000	45.0409	9.9	92	0.00
43	S	1,2-Dichloroethane-d4	25.0000	23.0212	7.9	93	0.00
44		Heptane	50.0000	0.0000	100.0#	0	-2.45#
45	T	1,2-Dichloroethane	50.0000	50.7174	-1.4	101	0.00
46	T	Benzene	50.0000	47.4935	5.0	98	0.00
47	T	Trichloroethene	50.0000	49.7018	0.6	102	0.00
48	T	Methylcyclohexane	50.0000	48.9906	2.0	99	0.00
49	C	1,2-Dichloropropane	50.0000	50.8529	-1.7	103	0.00
50	T	Bromodichloromethane	50.0000	48.4778	3.0	95	0.00
51	T	1,4-Dioxane	200.0000	147.7517	26.1#	86	0.00
52	T	Dibromomethane	50.0000	53.3722	-6.7	102	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	56.3270	-12.7	109	0.00
54	T	4-Methyl-2-Pentanone	50.0000	50.5042	-1.0	110	0.00
55	T	cis-1,3-Dichloropropene	50.0000	53.1152	-6.2	106	0.00

(#) = Out of Range
8M383324.D 8260WTR.M Wed Nov 07 14:01:44 2012 Page 1

Data File : C:\MSDCHEM\1\DATA\110612\8M383324.D Vial: 5
Acq On : 6 Nov 2012 17:39 Operator: ADC
Sample : WG413483-12 50ug/L ALTSRC STD Inst : HPMS8
Misc : 1,1 STD54557 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Wed Nov 07 14:00:36 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
56	T	Dimethyl Disulfide	50.0000	52.9062	-5.8	102	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	105	0.00
58	S	Toluene-d8	25.0000	23.5540	5.8	97	0.00
59	C	Toluene	50.0000	46.5924	6.8	98	0.00
60	T	Ethyl Methacrylate	50.0000	57.5140	-15.0	111	0.00
61		Paraldehyde	100.0000	0.0000	100.0#	0	-12.35#
62	T	trans-1,3-Dichloropropene	50.0000	50.6443	-1.3	101	0.00
63	T	1,1,2-Trichloroethane	50.0000	54.9603	-9.9	106	0.00
64	T	2-Hexanone	50.0000	52.4406	-4.9	115	0.00
65	T	1,3-Dichloropropane	50.0000	53.0732	-6.1	108	0.00
66	T	Tetrachloroethene	50.0000	47.3836	5.2	96	0.00
67	T	Dibromochloromethane	50.0000	50.1294	-0.3	99	0.00
68	T	1,2-Dibromoethane	50.0000	50.1675	-0.3	106	0.00
69	T	1-Chlorohexane	50.0000	45.3044	9.4	93	0.00
70	P	Chlorobenzene	50.0000	43.6672	12.7	92	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	48.8841	2.2	101	0.00
72	C	Ethylbenzene	50.0000	45.9316	8.1	99	0.00
73	T	m-,p-Xylene	100.0000	91.7775	8.2	94	0.00
74	T	o-Xylene	50.0000	44.5190	11.0	92	0.00
75	T	Styrene	50.0000	50.2538	-0.5	100	0.00
76	P	Bromoform	50.0000	54.8537	-9.7	110	0.00
77	T	Isopropylbenzene	50.0000	43.2189	13.6	89	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	105	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	55.0508	-10.1	114	0.00
80	S	p-Bromofluorobenzene	25.0000	24.0199	3.9	98	0.00
81	T	1,2,3-Trichloropropane	50.0000	54.8594	-9.7	107	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	46.7242	6.6	91	0.00
83	T	n-Propylbenzene	50.0000	43.1531	13.7	90	0.00
84	T	Bromobenzene	50.0000	47.1072	5.8	100	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	47.9878	4.0	99	0.00
86	T	2-Chlorotoluene	50.0000	43.8650	12.3	96	0.00
87	T	4-Chlorotoluene	50.0000	41.0030	18.0	85	0.00
88	T	a-Methylstyrene	50.0000	48.1642	3.7	97	0.00
89	T	tert-Butylbenzene	50.0000	42.5542	14.9	94	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	47.4147	5.2	98	0.00
91	T	sec-Butylbenzene	50.0000	43.0219	14.0	89	0.00
92	T	p-Isopropyltoluene	50.0000	44.9597	10.1	93	0.00
93	T	1,3-Dichlorobenzene	50.0000	43.3843	13.2	92	0.00
94	T	1,4-Dichlorobenzene	50.0000	46.4612	7.1	99	0.00
95	T	n-Butylbenzene	50.0000	45.1715	9.7	95	0.00
96	T	1,2-Dichlorobenzene	50.0000	45.1184	9.8	93	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	53.3578	-6.7	105	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	48.9014	2.2	102	0.00
99	T	Hexachlorobutadiene	50.0000	42.9620	14.1	94	0.00
100	T	Naphthalene	50.0000	53.9143	-7.8	107	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	50.9408	-1.9	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1
8M383324.D 8260WTR.M Wed Nov 07 14:01:44 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 16:15:04 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	490372	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	393392	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.88	152	222006	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	167246	25.0823	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.32%			
43) 1,2-Dichloroethane-d4	9.61	65	164175	21.0875	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 84.36%			
58) Toluene-d8	12.00	98	551569	26.7408	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 106.96%			
80) p-Bromofluorobenzene	15.37	95	229948	24.7198	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.88%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.73	85	264428	38.5149	ug/L	99
3) Chloromethane	3.11	50	467619	40.2561	ug/L	99
4) Vinyl Chloride	3.31	62	372462	43.1329	ug/L	99
5) 1,3-Butadiene	3.35	54	409792	59.3850	ug/L	97
6) Bromomethane	4.10	94	205036	50.3980	ug/L	95
7) Chloroethane	4.26	64	210282	48.7561	ug/L	94
8) Trichlorofluoromethane	4.73	101	551595	44.0381	ug/L	99
9) Diethyl ether	5.25	59	435199	112.3573	ug/L	93
10) Isoprene	5.28	67	479177	56.6464	ug/L	89
11) Acrolein	5.46	56	18320	35.1317	ug/L	97
12) 1,1,2-Trichloro-1,2,2-Trif	5.52	101	307303	50.2731	ug/L	100
13) Acetone	5.56	43	52926	42.3537	ug/L	85
14) 1,1-Dichloroethene	5.79	61	601427	46.0849	ug/L	93
15) Tert-Butyl Alcohol	5.91	59	48544	184.1139	ug/L	99
16) Dimethyl Sulfide	6.05	62	362220	51.9256	ug/L	85
17) Iodomethane	6.27	142	343100	64.4487	ug/L	91
18) Methyl acetate	6.32	43	136184	41.6907	ug/L	96
19) Methylene Chloride	6.55	84	255837	47.7198	ug/L	85
20) Carbon Disulfide	6.58	76	805292	56.5652	ug/L	99
21) Acrylonitrile	6.73	53	80753	49.2375	ug/L	98
22) Methyl Tert Butyl Ether	6.81	73	565162	48.2856	ug/L	99
23) trans-1,2-Dichloroethene	7.03	61	561124	47.0448	ug/L	93
24) n-Hexane	7.14	57	513553	53.1114	ug/L	95
25) Diisopropyl ether	7.49	45	2381869	89.6632	ug/L	97
26) Vinyl Acetate	7.63	43	487123	48.8247	ug/L	97
27) 1,1-Dichloroethane	7.64	63	633813	47.5785	ug/L	99
28) Ethyl-Tert-Butyl ether	8.06	59	2027297	93.3952	ug/L	98
29) 2-Butanone	8.20	43	79440	44.0167	ug/L	95
30) Propionitrile	8.28	54	52332	88.8884	ug/L	95
31) 2,2-Dichloropropane	8.43	77	546595	47.0977	ug/L	99
32) cis-1,2-Dichloroethene	8.48	96	304421	49.4890	ug/L	88
33) Chloroform	8.69	83	552710	46.2421	ug/L	99
34) 1-Bromopropane	8.83	122	57495	52.1221	ug/L	99
35) Bromochloromethane	8.91	130	176713	49.9505	ug/L	88
36) Tetrahydrofuran	8.94	42	101073	91.7605	ug/L	93
38) 1,1,1-Trichloroethane	9.23	97	536981	45.0898	ug/L	99
39) Cyclohexane	9.27	56	703766	49.7825	ug/L	93
40) 1,1-Dichloropropene	9.44	75	438520	47.2018	ug/L	98
41) Tert-Amyl-Methyl ether	9.56	73	1205135	95.0767	ug/L	94
42) Carbon Tetrachloride	9.57	117	499086	45.0211	ug/L	99
45) 1,2-Dichloroethane	9.74	62	421748	42.1538	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M384162.D 8260WTR.M Fri Dec 14 16:15:05 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 16:15:04 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

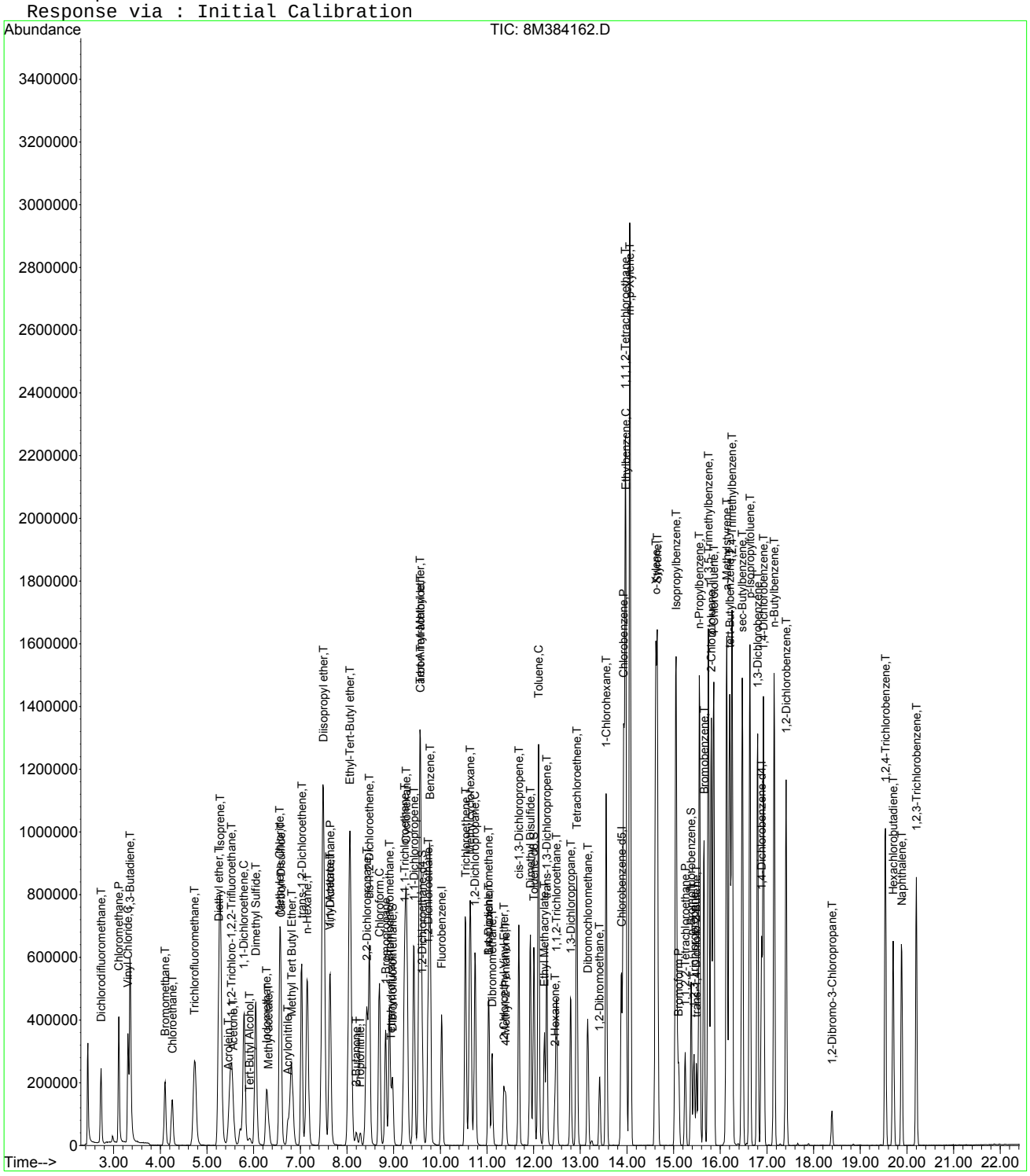
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.78	78	1070594	47.9460	ug/L	93
47)	Trichloroethene	10.55	130	329932	49.7131	ug/L	96
48)	Methylcyclohexane	10.64	83	459193	54.7184	ug/L	89
49)	1,2-Dichloropropane	10.74	63	323663	48.7200	ug/L	93
50)	Bromodichloromethane	11.03	83	402062	44.9083	ug/L	98
51)	1,4-Dioxane	11.03	88	5405	253.4282	ug/L	71
52)	Dibromomethane	11.11	93	135739	47.5904	ug/L	96
53)	2-Chloroethyl Vinyl Ether	11.36	63	90513	32.9981	ug/L	97
54)	4-Methyl-2-Pentanone	11.39	58	68989	41.0483	ug/L	97
55)	cis-1,3-Dichloropropene	11.68	75	454677	47.3148	ug/L	99
56)	Dimethyl Disulfide	11.93	94	458265	52.4806	ug/L	96
59)	Toluene	12.11	91	1190571	49.1124	ug/L	100
60)	Ethyl Methacrylate	12.23	69	221318	49.9768	ug/L	83
62)	trans-1,3-Dichloropropene	12.28	75	402017	47.1070	ug/L	100
63)	1,1,2-Trichloroethane	12.49	97	178325	49.3695	ug/L	97
64)	2-Hexanone	12.46	58	64750	42.5750	ug/L	89
65)	1,3-Dichloropropane	12.80	76	321851	46.4744	ug/L	84
66)	Tetrachloroethene	12.92	164	269806	49.7194	ug/L	95
67)	Dibromochloromethane	13.16	129	291595	47.3733	ug/L	98
68)	1,2-Dibromoethane	13.41	107	202684	44.5966	ug/L	98
69)	1-Chlorohexane	13.55	91	407662	50.8917	ug/L	87
70)	Chlorobenzene	13.93	112	863007	48.6339	ug/L	94
71)	1,1,1,2-Tetrachloroethane	13.97	131	332998	46.9291	ug/L	98
72)	Ethylbenzene	13.98	106	480173	48.0420	ug/L	94
73)	m-,p-Xylene	14.06	106	1172074	99.8093	ug/L	95
74)	o-Xylene	14.62	106	578078	49.9966	ug/L	92
75)	Styrene	14.65	104	959500	51.3303	ug/L	93
76)	Bromoform	15.10	173	158934	45.4121	ug/L	99
77)	Isopropylbenzene	15.05	105	1509435	48.0048	ug/L	98
79)	1,1,2,2-Tetrachloroethane	15.25	83	184877	43.8703	ug/L	99
81)	1,2,3-Trichloropropane	15.44	110	64144	42.8804	ug/L	93
82)	trans-1,4-Dichloro-2-Buten	15.49	53	79289	37.4489	ug/L	81
83)	n-Propylbenzene	15.55	91	1599611	45.6543	ug/L	97
84)	Bromobenzene	15.65	156	369969	45.0191	ug/L	95
85)	1,3,5-Trimethylbenzene	15.75	105	1312021	45.8395	ug/L	96
86)	2-Chlorotoluene	15.81	91	1044413	42.5254	ug/L	97
87)	4-Chlorotoluene	15.86	91	1071810	45.1260	ug/L	96
88)	a-Methylstyrene	16.14	118	682261	48.8557	ug/L	94
89)	tert-Butylbenzene	16.20	134	265185	44.9519	ug/L	90
90)	1,2,4-Trimethylbenzene	16.25	105	1338935	46.0805	ug/L	97
91)	sec-Butylbenzene	16.47	105	1530244	46.2255	ug/L	99
92)	p-Isopropyltoluene	16.63	119	1288458	47.1324	ug/L	99
93)	1,3-Dichlorobenzene	16.80	146	729548	45.7141	ug/L	98
94)	1,4-Dichlorobenzene	16.92	146	734620	45.4755	ug/L	97
95)	n-Butylbenzene	17.15	91	1104826	44.2984	ug/L	98
96)	1,2-Dichlorobenzene	17.41	146	640477	45.2753	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	18.39	75	37648	39.1707	ug/L	82
98)	1,2,4-Trichlorobenzene	19.54	180	408397	44.1129	ug/L	99
99)	Hexachlorobutadiene	19.71	225	182118	42.0198	ug/L	96
100)	Naphthalene	19.89	128	677428	43.5602	ug/L	99
101)	1,2,3-Trichlorobenzene	20.20	180	337098	42.9669	ug/L	97

(#) = qualifier out of range (m) = manual integration
8M384162.D 8260WTR.M Fri Dec 14 16:15:05 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 16:15 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.0000	1.0000	0.0	76	0.00
2	T	Dichlorodifluoromethane	0.3500	0.2696	23.0	57	0.00
3	P	Chloromethane	0.5922	0.4768	19.5	63	0.00
4	C	Vinyl Chloride	0.4402	0.3798	13.7	67	0.00
5	T	1,3-Butadiene	0.3518	0.4178	-18.8	82	-0.01
6	T	Bromomethane	0.2074	0.2091	-0.8	72	0.00
7	T	Chloroethane	0.2199	0.2144	2.5	71	0.00
8	T	Trichlorofluoromethane	0.6386	0.5624	11.9	65	0.00
9	T	Diethyl ether	0.1975	0.2219	-12.4	83	-0.01
10	T	Isoprene	0.4313	0.4886	-13.3	84	-0.01
11	T	Acrolein	0.0266	0.0187	29.7#	50	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.3116	0.3133	-0.5	76	0.00
13	T	Acetone	0.0637	0.0540	15.3	63	0.00
14	C	1,1-Dichloroethene	0.6653	0.6132	7.8	68	0.00
15	T	Tert-Butyl Alcohol	0.0134	0.0124	8.0	69	0.00
16	T	Dimethyl Sulfide	0.3556	0.3693	-3.8	76	0.00
17	T	Iodomethane	0.2714	0.3498	-28.9#	86	-0.01
18	T	Methyl acetate	0.1665	0.1389	16.6	63	-0.01
19	T	Methylene Chloride	0.2733	0.2609	4.6	71	-0.01
20	T	Carbon Disulfide	0.7258	0.8211	-13.1	84	0.00
21	T	Acrylonitrile	0.0836	0.0823	1.5	70	0.00
22	T	Methyl Tert Butyl Ether	0.5967	0.5763	3.4	69	0.00
23	T	trans-1,2-Dichloroethene	0.6081	0.5721	5.9	70	0.00
24	T	n-Hexane	0.4930	0.5236	-6.2	78	-0.01
25	T	Diisopropyl ether	1.3543	1.2143	10.3	67	0.00
26	T	Vinyl Acetate	0.5086	0.4967	2.3	73	0.00
27	P	1,1-Dichloroethane	0.6792	0.6463	4.8	71	0.00
28	T	Ethyl-Tert-Butyl ether	1.1066	1.0336	6.6	69	0.00
29	T	2-Butanone	0.0920	0.0810	12.0	66	-0.01
30	T	Propionitrile	0.0269	0.0267	1.0	69	-0.01
31	T	2,2-Dichloropropane	0.5917	0.5573	5.8	71	0.00
32	T	cis-1,2-Dichloroethene	0.3136	0.3104	1.0	75	-0.01
33	C	Chloroform	0.6094	0.5636	7.5	68	0.00
34		1-Bromopropane	0.0514	0.0586	-14.0	76	0.00
35	T	Bromochloromethane	0.1804	0.1802	0.1	73	0.00
36	T	Tetrahydrofuran	0.0562	0.0515	8.2	67	0.00
37	S	Dibromofluoromethane	0.3399	0.3411	-0.3	73	0.00
38	T	1,1,1-Trichloroethane	0.6071	0.5475	9.8	66	0.00
39	T	Cyclohexane	0.7207	0.7176	0.4	73	0.00
40	T	1,1-Dichloropropene	0.4736	0.4471	5.6	71	0.00
41	T	Tert-Amyl-Methyl ether	0.6462	0.6144	4.9	70	0.00
42	T	Carbon Tetrachloride	0.5652	0.5089	10.0	66	0.00
43	S	1,2-Dichloroethane-d4	0.3969	0.3348	15.6	62	0.00
44		Heptane	0.0000	0.0000	0.0	0#	-2.45#
45	T	1,2-Dichloroethane	0.5101	0.4300	15.7	61	0.00
46	T	Benzene	1.1384	1.0916	4.1	72	0.00
47	T	Trichloroethene	0.3383	0.3364	0.6	74	0.00
48	T	Methylcyclohexane	0.4278	0.4682	-9.4	80	0.00
49	C	1,2-Dichloropropane	0.3387	0.3300	2.6	72	-0.01
50	T	Bromodichloromethane	0.4564	0.4100	10.2	64	-0.01
51	T	1,4-Dioxane	0.0011	0.0014	-26.6#	107	0.00
52	T	Dibromomethane	0.1454	0.1384	4.8	66	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1398	0.0923	34.0#	46#	0.00
54	T	4-Methyl-2-Pentanone	0.0826	0.0703	14.9	65	-0.01
55	T	cis-1,3-Dichloropropene	0.4899	0.4636	5.4	69	0.00

(#) = Out of Range
8M384162.D 8260WTR.M Fri Dec 14 16:18:48 2012 Page 1

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	T	Dimethyl Disulfide	0.4452	0.4673	-5.0	73	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	74	0.00
58	S	Toluene-d8	1.3108	1.4021	-7.0	77	0.00
59	C	Toluene	1.5406	1.5132	1.8	72	0.00
60	T	Ethyl Methacrylate	0.2814	0.2813	0.0	68	0.00
61		Paraldehyde	0.0000	0.0000	0.0	0#	-12.35#
62	T	trans-1,3-Dichloropropene	0.5423	0.5110	5.8	66	0.00
63	T	1,1,2-Trichloroethane	0.2296	0.2266	1.3	67	0.00
64	T	2-Hexanone	0.0967	0.0823	14.8	66	0.00
65	T	1,3-Dichloropropane	0.4401	0.4091	7.1	67	0.00
66	T	Tetrachloroethene	0.3449	0.3429	0.6	71	0.00
67	T	Dibromochloromethane	0.3912	0.3706	5.3	66	0.00
68	T	1,2-Dibromoethane	0.2888	0.2576	10.8	66	-0.01
69	T	1-Chlorohexane	0.5091	0.5181	-1.8	73	0.00
70	P	Chlorobenzene	1.1277	1.0969	2.7	72	0.00
71	T	1,1,1,2-Tetrachloroethane	0.4509	0.4232	6.1	68	0.00
72	C	Ethylbenzene	0.6352	0.6103	3.9	73	0.00
73	T	m-,p-Xylene	0.7463	0.7449	0.2	72	-0.01
74	T	o-Xylene	0.7348	0.7347	0.0	72	0.00
75	T	Styrene	1.1879	1.2195	-2.7	72	0.00
76	P	Bromoform	0.2224	0.2020	9.2	64	0.00
77	T	Isopropylbenzene	1.9982	1.9185	4.0	70	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	76	0.00
79	P	1,1,2,2-Tetrachloroethane	0.4746	0.4164	12.3	66	0.00
80	S	p-Bromofluorobenzene	1.0475	1.0358	1.1	74	0.00
81	T	1,2,3-Trichloropropane	0.1684	0.1445	14.2	61	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.2384	0.1786	25.1#	53	0.00
83	T	n-Propylbenzene	3.9455	3.6026	8.7	69	-0.01
84	T	Bromobenzene	0.9254	0.8332	10.0	70	0.00
85	T	1,3,5-Trimethylbenzene	3.2231	2.9549	8.3	69	0.00
86	T	2-Chlorotoluene	2.7657	2.3522	14.9	68	0.00
87	T	4-Chlorotoluene	2.6747	2.4139	9.7	68	0.00
88	T	a-Methylstyrene	1.5726	1.5366	2.3	72	0.00
89	T	tert-Butylbenzene	0.6643	0.5972	10.1	73	0.00
90	T	1,2,4-Trimethylbenzene	3.2720	3.0155	7.8	69	0.00
91	T	sec-Butylbenzene	3.7278	3.4464	7.5	70	0.00
92	T	p-Isopropyltoluene	3.0784	2.9019	5.7	71	0.00
93	T	1,3-Dichlorobenzene	1.7971	1.6431	8.6	71	0.00
94	T	1,4-Dichlorobenzene	1.8191	1.6545	9.0	71	0.00
95	T	n-Butylbenzene	2.8085	2.4883	11.4	68	0.00
96	T	1,2-Dichlorobenzene	1.5930	1.4425	9.4	68	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.1082	0.0848	21.7	56	0.00
98	T	1,2,4-Trichlorobenzene	1.0425	0.9198	11.8	67	0.00
99	T	Hexachlorobutadiene	0.4881	0.4102	16.0	67	0.00
100	T	Naphthalene	1.7513	1.5257	12.9	63	0.00
101	T	1,2,3-Trichlorobenzene	0.8835	0.7592	14.1	65	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M384162.D 8260WTR.M Fri Dec 14 16:18:48 2012 Page 2

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	76	0.00
2	T	Dichlorodifluoromethane	50.0000	38.5149	23.0	57	0.00
3	P	Chloromethane	50.0000	40.2561	19.5	63	0.00
4	C	Vinyl Chloride	50.0000	43.1330	13.7	67	0.00
5	T	1,3-Butadiene	50.0000	59.3850	-18.8	82	-0.01
6	T	Bromomethane	50.0000	50.3980	-0.8	72	0.00
7	T	Chloroethane	50.0000	48.7561	2.5	71	0.00
8	T	Trichlorofluoromethane	50.0000	44.0381	11.9	65	0.00
9	T	Diethyl ether	100.0000	112.3573	-12.4	83	-0.01
10	T	Isoprene	50.0000	56.6464	-13.3	84	-0.01
11	T	Acrolein	50.0000	35.1317	29.7#	50	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	50.2731	-0.5	76	0.00
13	T	Acetone	50.0000	42.3537	15.3	63	0.00
14	C	1,1-Dichloroethene	50.0000	46.0849	7.8	68	0.00
15	T	Tert-Butyl Alcohol	200.0000	184.1139	7.9	69	0.00
16	T	Dimethyl Sulfide	50.0000	51.9256	-3.9	76	0.00
17	T	Iodomethane	50.0000	64.4487	-28.9#	86	-0.01
18	T	Methyl acetate	50.0000	41.6907	16.6	63	-0.01
19	T	Methylene Chloride	50.0000	47.7198	4.6	71	-0.01
20	T	Carbon Disulfide	50.0000	56.5652	-13.1	84	0.00
21	T	Acrylonitrile	50.0000	49.2375	1.5	70	0.00
22	T	Methyl Tert Butyl Ether	50.0000	48.2856	3.4	69	0.00
23	T	trans-1,2-Dichloroethene	50.0000	47.0448	5.9	70	0.00
24	T	n-Hexane	50.0000	53.1114	-6.2	78	-0.01
25	T	Diisopropyl ether	100.0000	89.6632	10.3	67	0.00
26	T	Vinyl Acetate	50.0000	48.8247	2.4	73	0.00
27	P	1,1-Dichloroethane	50.0000	47.5785	4.8	71	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	93.3952	6.6	69	0.00
29	T	2-Butanone	50.0000	44.0167	12.0	66	-0.01
30	T	Propionitrile	100.0000	88.8885	11.1	69	-0.01
31	T	2,2-Dichloropropane	50.0000	47.0977	5.8	71	0.00
32	T	cis-1,2-Dichloroethene	50.0000	49.4890	1.0	75	-0.01
33	C	Chloroform	50.0000	46.2421	7.5	68	0.00
34		1-Bromopropane	50.0000	52.1221	-4.2	76	0.00
35	T	Bromochloromethane	50.0000	49.9504	0.1	73	0.00
36	T	Tetrahydrofuran	100.0000	91.7605	8.2	67	0.00
37	S	Dibromofluoromethane	25.0000	25.0823	-0.3	73	0.00
38	T	1,1,1-Trichloroethane	50.0000	45.0898	9.8	66	0.00
39	T	Cyclohexane	50.0000	49.7826	0.4	73	0.00
40	T	1,1-Dichloropropene	50.0000	47.2018	5.6	71	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	95.0767	4.9	70	0.00
42	T	Carbon Tetrachloride	50.0000	45.0211	10.0	66	0.00
43	S	1,2-Dichloroethane-d4	25.0000	21.0876	15.6	62	0.00
44		Heptane	50.0000	0.0000	100.0#	0	-2.45#
45	T	1,2-Dichloroethane	50.0000	42.1538	15.7	61	0.00
46	T	Benzene	50.0000	47.9460	4.1	72	0.00
47	T	Trichloroethene	50.0000	49.7131	0.6	74	0.00
48	T	Methylcyclohexane	50.0000	54.7184	-9.4	80	0.00
49	C	1,2-Dichloropropane	50.0000	48.7200	2.6	72	-0.01
50	T	Bromodichloromethane	50.0000	44.9083	10.2	64	-0.01
51	T	1,4-Dioxane	200.0000	253.4282	-26.7#	107	0.00
52	T	Dibromomethane	50.0000	47.5904	4.8	66	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	32.9981	34.0#	46	0.00
54	T	4-Methyl-2-Pentanone	50.0000	41.0483	17.9	65	-0.01
55	T	cis-1,3-Dichloropropene	50.0000	47.3148	5.4	69	0.00

(#) = Out of Range
8M384162.D 8260WTR.M Fri Dec 14 16:18:46 2012 Page 1

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\121412\8M384162.D Vial: 2
Acq On : 14 Dec 2012 15:52 Operator: ADC
Sample : WG416681-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD54685 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Multiple Level Calibration

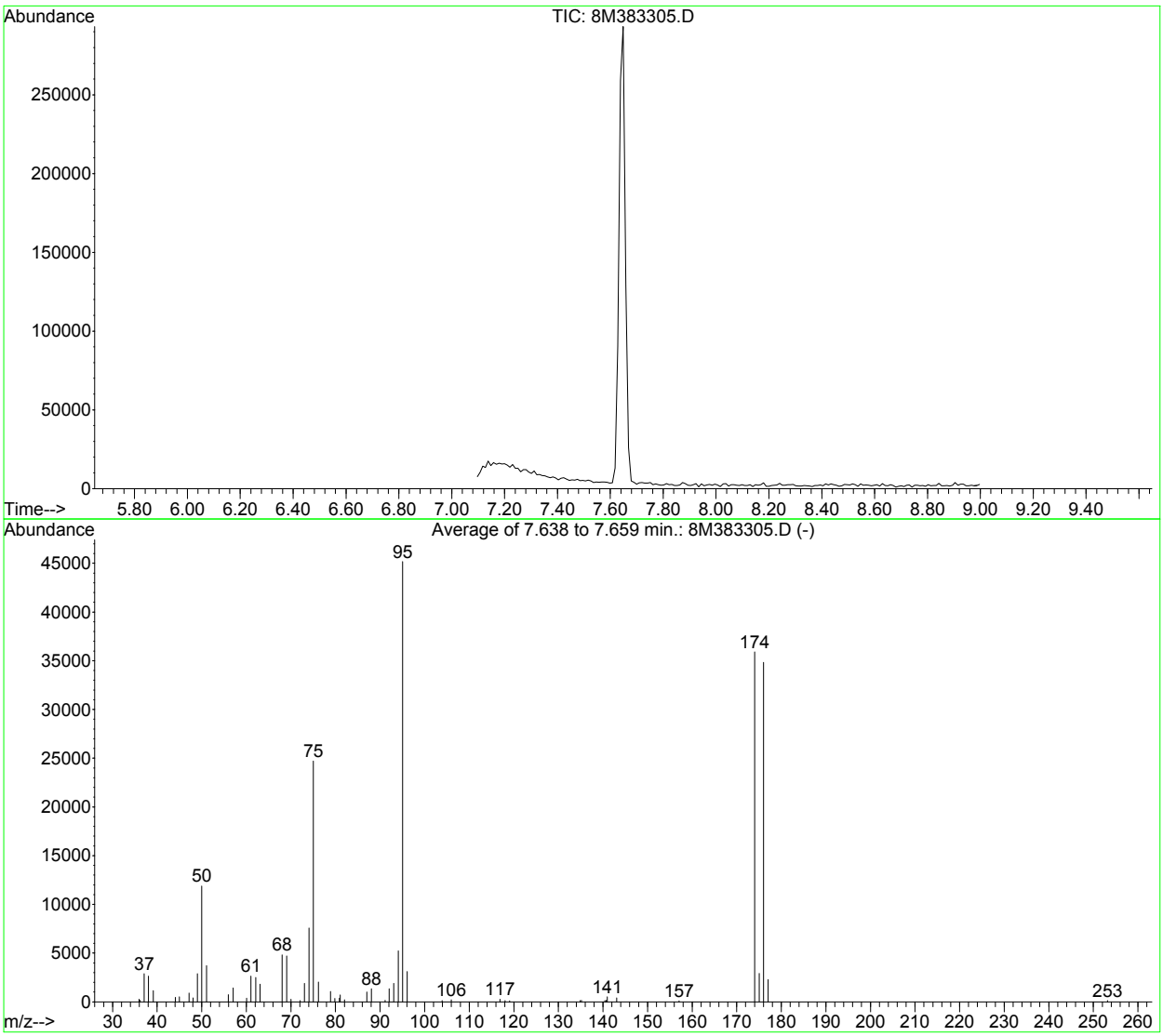
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
56	T	Dimethyl Disulfide	50.0000	52.4806	-5.0	73	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	74	0.00
58	S	Toluene-d8	25.0000	26.7408	-7.0	77	0.00
59	C	Toluene	50.0000	49.1124	1.8	72	0.00
60	T	Ethyl Methacrylate	50.0000	49.9768	0.0	68	0.00
61		Paraldehyde	100.0000	0.0000	100.0#	0	-12.35#
62	T	trans-1,3-Dichloropropene	50.0000	47.1070	5.8	66	0.00
63	T	1,1,2-Trichloroethane	50.0000	49.3695	1.3	67	0.00
64	T	2-Hexanone	50.0000	42.5750	14.9	66	0.00
65	T	1,3-Dichloropropane	50.0000	46.4744	7.1	67	0.00
66	T	Tetrachloroethene	50.0000	49.7193	0.6	71	0.00
67	T	Dibromochloromethane	50.0000	47.3733	5.3	66	0.00
68	T	1,2-Dibromoethane	50.0000	44.5966	10.8	66	-0.01
69	T	1-Chlorohexane	50.0000	50.8917	-1.8	73	0.00
70	P	Chlorobenzene	50.0000	48.6339	2.7	72	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	46.9291	6.1	68	0.00
72	C	Ethylbenzene	50.0000	48.0420	3.9	73	0.00
73	T	m-,p-Xylene	100.0000	99.8093	0.2	72	-0.01
74	T	o-Xylene	50.0000	49.9966	0.0	72	0.00
75	T	Styrene	50.0000	51.3303	-2.7	72	0.00
76	P	Bromoform	50.0000	45.4121	9.2	64	0.00
77	T	Isopropylbenzene	50.0000	48.0048	4.0	70	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	76	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	43.8703	12.3	66	0.00
80	S	p-Bromofluorobenzene	25.0000	24.7198	1.1	74	0.00
81	T	1,2,3-Trichloropropane	50.0000	42.8804	14.2	61	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	37.4489	25.1#	53	0.00
83	T	n-Propylbenzene	50.0000	45.6543	8.7	69	-0.01
84	T	Bromobenzene	50.0000	45.0191	10.0	70	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	45.8395	8.3	69	0.00
86	T	2-Chlorotoluene	50.0000	42.5254	14.9	68	0.00
87	T	4-Chlorotoluene	50.0000	45.1260	9.7	68	0.00
88	T	a-Methylstyrene	50.0000	48.8557	2.3	72	0.00
89	T	tert-Butylbenzene	50.0000	44.9519	10.1	73	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	46.0805	7.8	69	0.00
91	T	sec-Butylbenzene	50.0000	46.2255	7.5	70	0.00
92	T	p-Isopropyltoluene	50.0000	47.1324	5.7	71	0.00
93	T	1,3-Dichlorobenzene	50.0000	45.7141	8.6	71	0.00
94	T	1,4-Dichlorobenzene	50.0000	45.4755	9.0	71	0.00
95	T	n-Butylbenzene	50.0000	44.2984	11.4	68	0.00
96	T	1,2-Dichlorobenzene	50.0000	45.2753	9.4	68	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	39.1707	21.7	56	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	44.1129	11.8	67	0.00
99	T	Hexachlorobutadiene	50.0000	42.0198	16.0	67	0.00
100	T	Naphthalene	50.0000	43.5602	12.9	63	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	42.9669	14.1	65	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M384162.D 8260WTR.M Fri Dec 14 16:18:46 2012 Page 2

2.1.1.5 Raw QC Data

Data File : C:\MSDCHEM\1\DATA\110612\8M383305.D Vial: 1
Acq On : 6 Nov 2012 7:53 Operator: ADC
Sample : WG413483-01 BFB 50ng 8260 Inst : HPMS8
Misc : 1,1 STD54518 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 10/16/12 HPMS 8

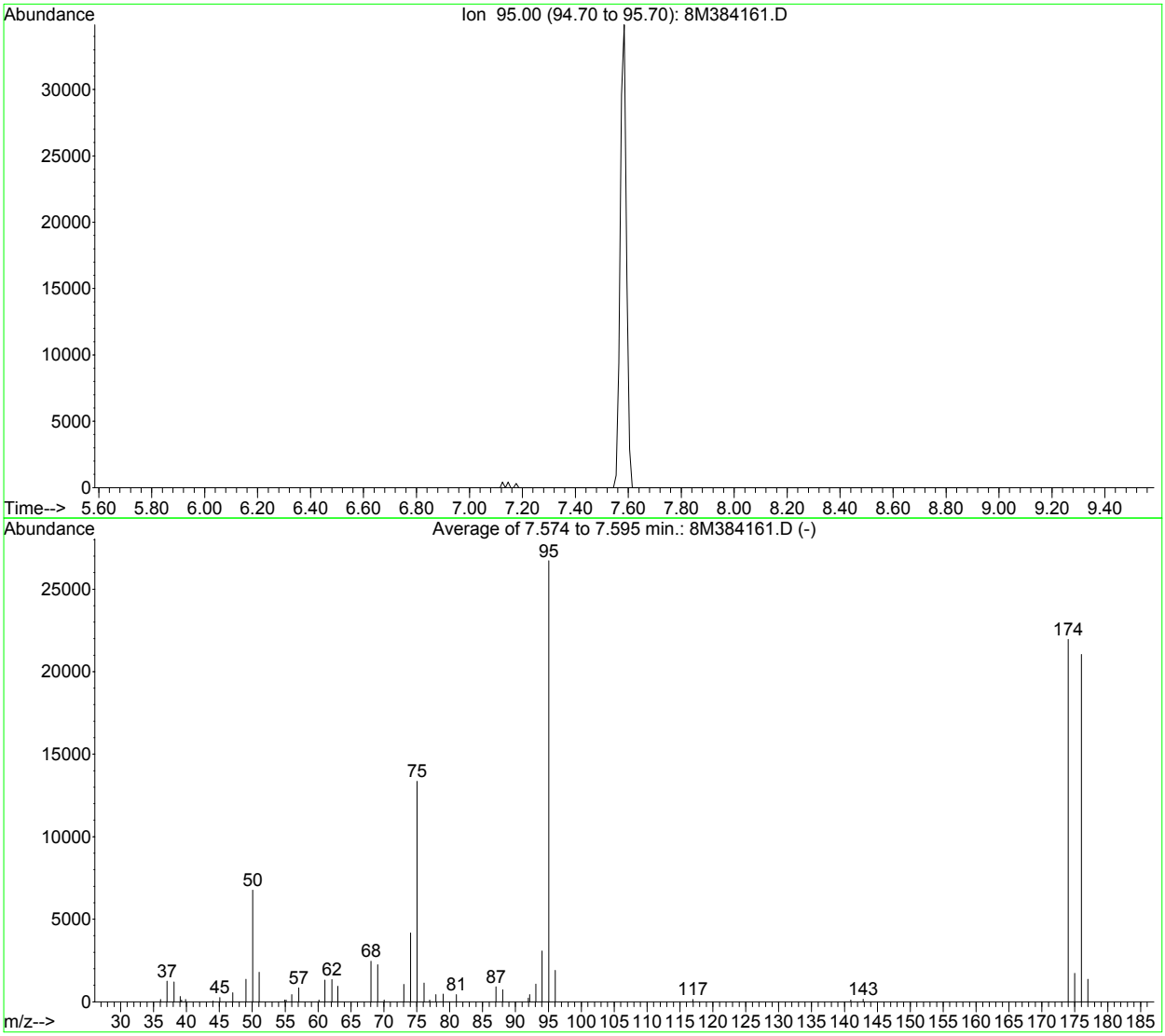


AutoFind: Scans 54, 55, 56; Background Corrected with Scan 49

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.3	11880	PASS
75	95	30	60	54.7	24693	PASS
95	95	100	100	100.0	45162	PASS
96	95	5	9	6.9	3096	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	79.5	35914	PASS
175	174	5	9	8.1	2922	PASS
176	174	95	101	97.0	34821	PASS
177	176	5	9	6.6	2283	PASS

8M383305.D 8260WT.M Tue Nov 06 08:04:48 2012

```
Data File : C:\MSDCHEM\1\DATA\121412\8M384161.D          Vial: 1
Acq On    : 14 Dec 2012  15:25                    Operator: ADC
Sample    : WG416681-01  50ng BFB STD 8260        Inst    : HPMS8
Misc      : 1,1 STD54518                          Multiplr: 1.00
MS Integration Params: RTEINT.P
Method    : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title     : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
```



AutoFind: Scans 48, 49, 50; Background Corrected with Scan 43

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.3	6771	PASS
75	95	30	60	50.0	13349	PASS
95	95	100	100	100.0	26715	PASS
96	95	5	9	7.1	1900	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	82.2	21957	PASS
175	174	5	9	7.8	1717	PASS
176	174	95	101	95.9	21048	PASS
177	176	5	9	6.5	1370	PASS

8M384161.D 8260WTR.M Fri Dec 14 16:19:04 2012

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384164.D Vial: 4
Acq On : 14 Dec 2012 16:53 Operator: ADC
Sample : WG416683-01 BLANK 12/14 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 08:50:30 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

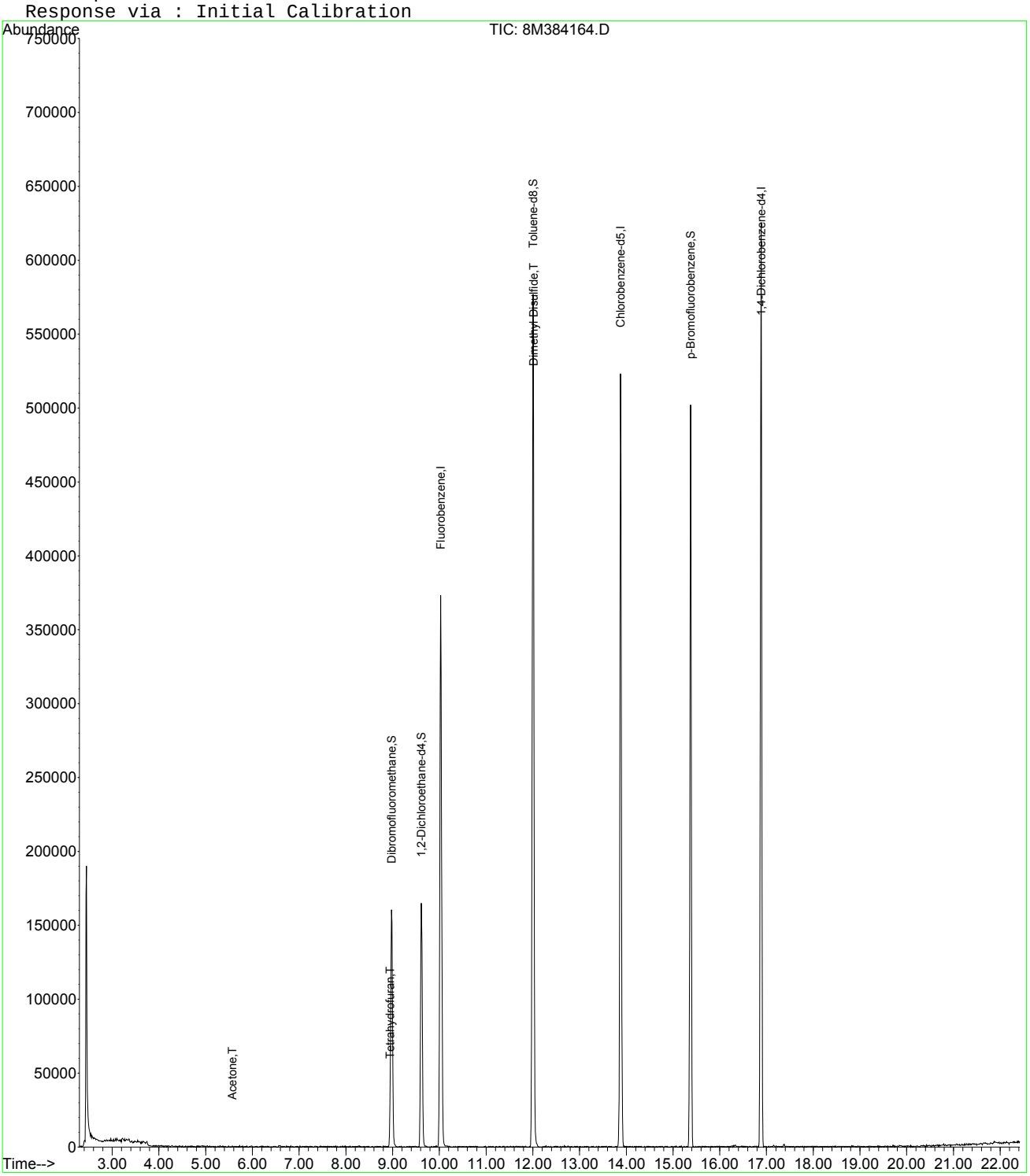
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	439518	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	372415	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.88	152	212427	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.97	111	153482	25.6813	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.72%			
43) 1,2-Dichloroethane-d4	9.62	65	156834	22.4754	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 89.92%			
58) Toluene-d8	12.00	98	517248	26.4894	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 105.96%			
80) p-Bromofluorobenzene	15.37	95	217368	24.4212	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.68%			
Target Compounds						Qvalue
13) Acetone	5.57	43	294	0.2625	ug/L #	53
36) Tetrahydrofuran	8.94	42	218	0.2208	ug/L #	50
56) Dimethyl Disulfide	12.01	94	15140	1.9344	ug/L #	22

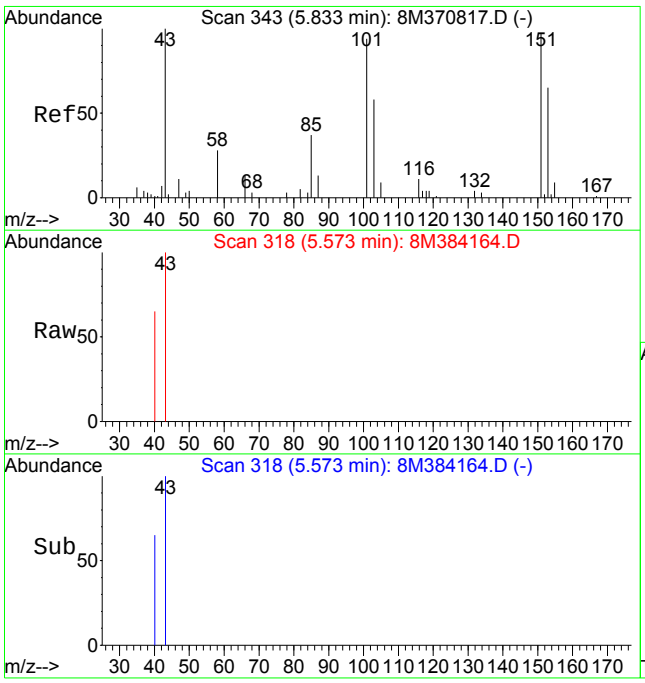
(#) = qualifier out of range (m) = manual integration
8M384164.D 8260WTR.M Mon Dec 17 08:50:31 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\121412\8M384164.D Vial: 4
Acq On : 14 Dec 2012 16:53 Operator: ADC
Sample : WG416683-01 BLANK 12/14 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 17 8:50 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration

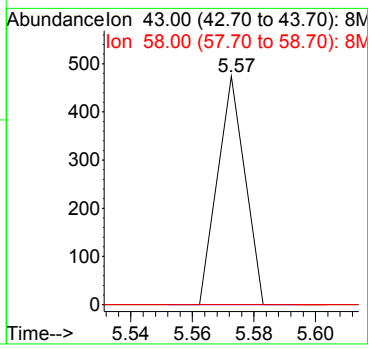


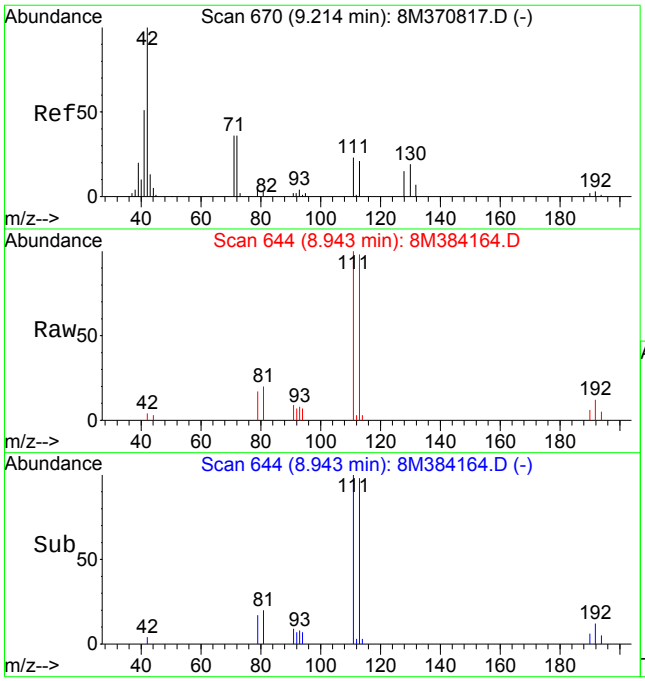


#13
Acetone
Concen: 0.26 ug/L
RT: 5.57 min Scan# 318
Delta R.T. 0.01 min
Lab File: 8M384164.D
Acq: 14 Dec 2012 16:53

Tgt Ion: 43 Resp: 294

Ion	Ratio	Lower	Upper
43	100		
58	0.0	13.4	31.4#

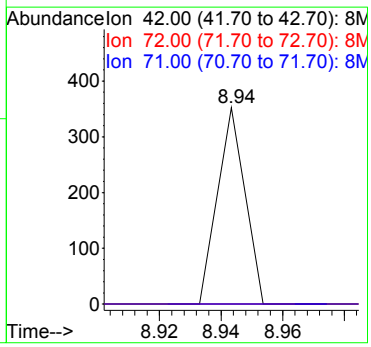


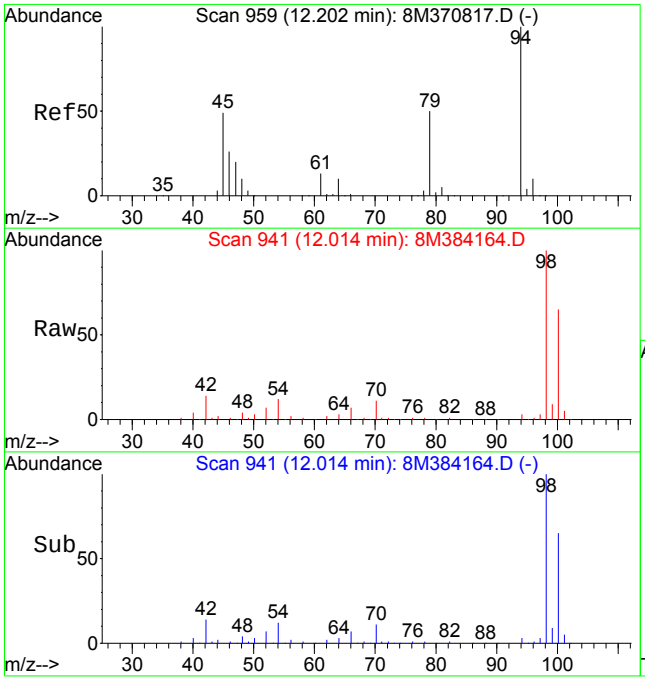


#36
Tetrahydrofuran
Concen: 0.22 ug/L
RT: 8.94 min Scan# 644
Delta R.T. 0.00 min
Lab File: 8M384164.D
Acq: 14 Dec 2012 16:53

Tgt Ion: 42 Resp: 218

Ion	Ratio	Lower	Upper
42	100		
72	0.0	15.0	35.0#
71	0.0	14.9	34.9#

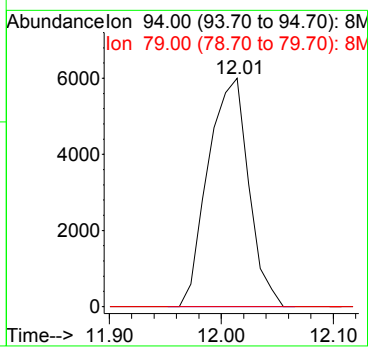




#56
Dimethyl Disulfide
Concen: 1.93 ug/L
RT: 12.01 min Scan# 941
Delta R.T. 0.08 min
Lab File: 8M384164.D
Acq: 14 Dec 2012 16:53

Tgt Ion: 94 Resp: 15140

Ion	Ratio	Lower	Upper
94	100		
79	0.0	34.6	80.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384165.D Vial: 5
Acq On : 14 Dec 2012 17:23 Operator: ADC
Sample : WG416683-02 20ug/L LCS 8260 Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 17:45:35 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.03	96	441789	25.00	ug/L	0.00
57) Chlorobenzene-d5	13.88	117	369776	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	16.89	152	213941	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.98	111	153620	25.5723	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.28%			
43) 1,2-Dichloroethane-d4	9.62	65	155501	22.1699	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 88.68%			
58) Toluene-d8	12.00	98	497380	25.6537	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.60%			
80) p-Bromofluorobenzene	15.38	95	216506	24.1522	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.73	85	89960	14.5439	ug/L	99
3) Chloromethane	3.11	50	147391	14.0839	ug/L	97
4) Vinyl Chloride	3.30	62	111998	14.3962	ug/L	99
5) 1,3-Butadiene	3.34	54	71448	11.4925	ug/L	92
6) Bromomethane	4.10	94	61233	16.7063	ug/L	98
7) Chloroethane	4.25	64	69166	17.8004	ug/L	91
8) Trichlorofluoromethane	4.74	101	181531	16.0868	ug/L	99
9) Diethyl ether	5.25	59	393956	112.8942	ug/L	93
10) Isoprene	5.28	67	137691	18.0673	ug/L	86
11) Acrolein	5.45	56	59656	126.9809	ug/L	100
12) 1,1,2-Trichloro-1,2,2-Trif	5.51	101	103833	18.8545	ug/L	97
13) Acetone	5.55	43	22334	19.8381	ug/L	90
14) 1,1-Dichloroethene	5.79	61	192374	16.3619	ug/L	92
15) Tert-Butyl Alcohol	5.93	59	60747	255.7329	ug/L	92
16) Dimethyl Sulfide	6.04	62	123613	19.6691	ug/L	82
17) Iodomethane	6.28	142	99216	20.6864	ug/L	93
18) Methyl acetate	6.32	43	67071	22.7907	ug/L	97
19) Methylene Chloride	6.56	84	90709	18.7801	ug/L	83
20) Carbon Disulfide	6.58	76	300740	23.4476	ug/L	100
21) Acrylonitrile	6.73	53	31103	21.0499	ug/L	98
22) Methyl Tert Butyl Ether	6.80	73	223412	21.1866	ug/L	97
23) trans-1,2-Dichloroethene	7.02	61	194248	18.0767	ug/L	95
24) n-Hexane	7.15	57	165660	19.0165	ug/L	93
25) Diisopropyl ether	7.49	45	2133671	89.1527	ug/L	98
26) Vinyl Acetate	7.63	43	131655	14.6470	ug/L	99
27) 1,1-Dichloroethane	7.64	63	218336	18.1922	ug/L	99
28) Ethyl-Tert-Butyl ether	8.07	59	1865464	95.3905	ug/L	97
29) 2-Butanone	8.20	43	31002	19.0669	ug/L	94
30) Propionitrile	8.28	54	53040	99.5906	ug/L	97
31) 2,2-Dichloropropane	8.43	77	161579	15.4536	ug/L	99
32) cis-1,2-Dichloroethene	8.48	96	108120	19.5097	ug/L	87
33) Chloroform	8.70	83	202375	18.7935	ug/L	99
34) 1-Bromopropane	8.83	122	27017	27.3837	ug/L	100
35) Bromochloromethane	8.91	130	64698	20.2989	ug/L	88
36) Tetrahydrofuran	8.94	42	98448	99.2061	ug/L	91
38) 1,1,1-Trichloroethane	9.23	97	186442	17.3770	ug/L	98
39) Cyclohexane	9.28	56	236518	18.5705	ug/L	94
40) 1,1-Dichloropropene	9.43	75	152380	18.2057	ug/L	99
41) Tert-Amyl-Methyl ether	9.56	73	1163046	101.8465	ug/L	95
42) Carbon Tetrachloride	9.56	117	166814	16.7026	ug/L	100
45) 1,2-Dichloroethane	9.73	62	161176	17.8811	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M384165.D 8260WTR.M Fri Dec 14 17:45:36 2012 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384165.D Vial: 5
Acq On : 14 Dec 2012 17:23 Operator: ADC
Sample : WG416683-02 20ug/L LCS 8260 Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 17:45:35 2012 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration
DataAcq Meth : 8260WTR

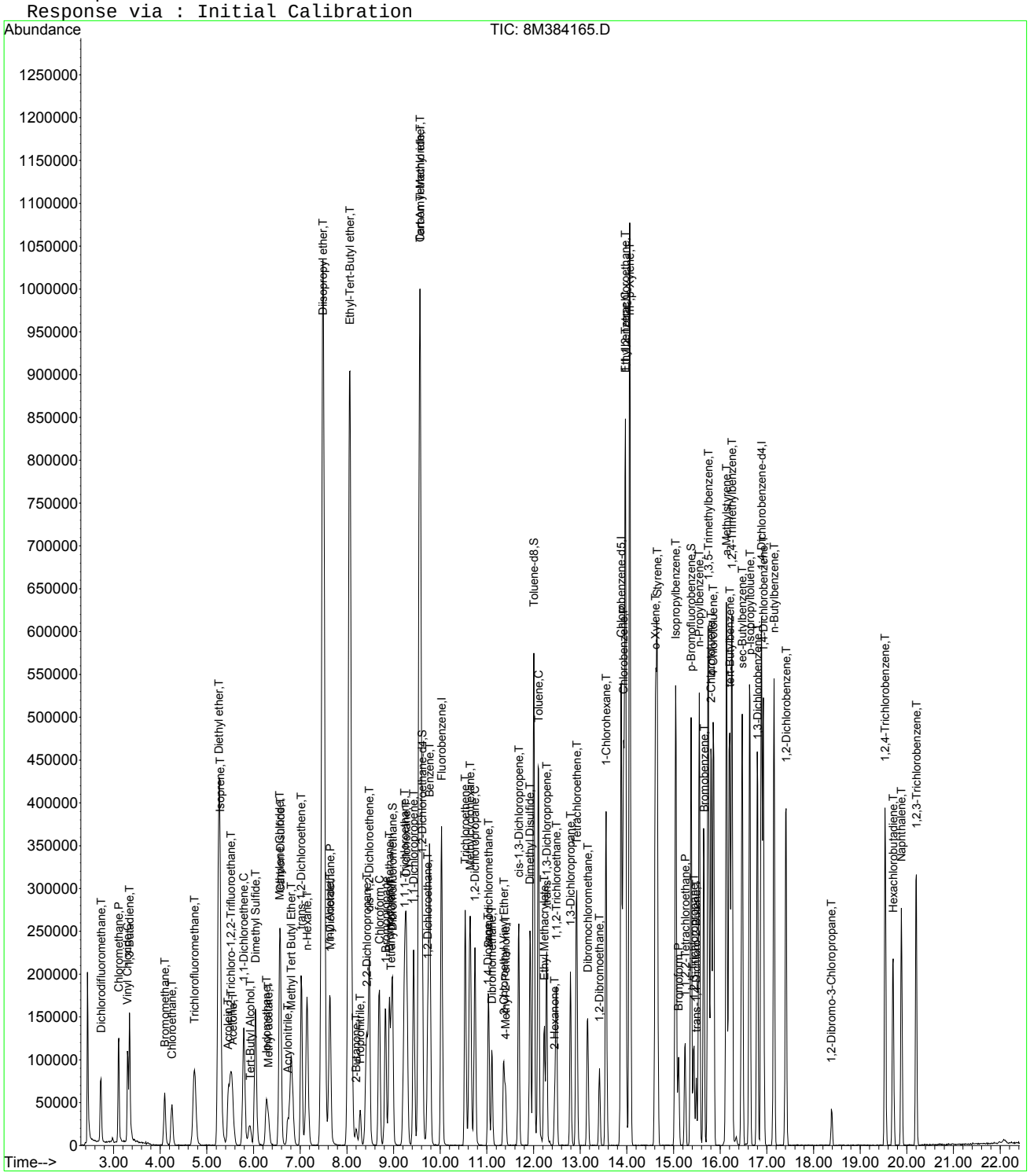
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	9.77	78	385209	19.1485	ug/L	92
47)	Trichloroethene	10.54	130	120055	20.0788	ug/L	98
48)	Methylcyclohexane	10.64	83	154692	20.4605	ug/L	92
49)	1,2-Dichloropropane	10.74	63	120451	20.1250	ug/L	92
50)	Bromodichloromethane	11.03	83	148329	18.3895	ug/L	100
51)	1,4-Dioxane	11.02	88	3331	173.3583	ug/L	82
52)	Dibromomethane	11.11	93	52399	20.3915	ug/L	95
53)	2-Chloroethyl Vinyl Ether	11.36	63	50818	20.5639	ug/L	96
54)	4-Methyl-2-Pentanone	11.39	58	28000	18.7125	ug/L	97
55)	cis-1,3-Dichloropropene	11.68	75	175675	20.2915	ug/L	99
56)	Dimethyl Disulfide	11.92	94	173710	22.0810	ug/L	96
59)	Toluene	12.11	91	431644	18.9430	ug/L	99
60)	Ethyl Methacrylate	12.23	69	88477	21.2554	ug/L	87
62)	trans-1,3-Dichloropropene	12.28	75	149290	18.6105	ug/L	99
63)	1,1,2-Trichloroethane	12.49	97	72254	21.2812	ug/L	95
64)	2-Hexanone	12.45	58	24453	17.1054	ug/L	91
65)	1,3-Dichloropropane	12.79	76	127361	19.5651	ug/L	87
66)	Tetrachloroethene	12.93	164	99195	19.4469	ug/L	91
67)	Dibromochloromethane	13.16	129	111151	19.2112	ug/L	99
68)	1,2-Dibromoethane	13.41	107	81348	19.0421	ug/L	98
69)	1-Chlorohexane	13.56	91	141544	18.7986	ug/L	89
70)	Chlorobenzene	13.93	112	303623	18.2032	ug/L	94
71)	1,1,1,2-Tetrachloroethane	13.97	131	129883	19.4733	ug/L	99
72)	Ethylbenzene	13.97	106	179082	19.0617	ug/L	91
73)	m-,p-Xylene	14.06	106	419164	37.9740	ug/L	97
74)	o-Xylene	14.61	106	203973	18.7678	ug/L	92
75)	Styrene	14.65	104	363881	20.7098	ug/L	92
76)	Bromoform	15.11	173	65983	20.0574	ug/L	98
77)	Isopropylbenzene	15.04	105	516774	17.4847	ug/L	100
79)	1,1,2,2-Tetrachloroethane	15.25	83	76431	18.8204	ug/L	98
81)	1,2,3-Trichloropropane	15.44	110	26417	18.3255	ug/L	93
82)	trans-1,4-Dichloro-2-Buten	15.49	53	25694	12.5930	ug/L	83
83)	n-Propylbenzene	15.55	91	556676	16.4870	ug/L	99
84)	Bromobenzene	15.65	156	139097	17.5639	ug/L	96
85)	1,3,5-Trimethylbenzene	15.75	105	511218	18.5343	ug/L	98
86)	2-Chlorotoluene	15.80	91	385287	16.2791	ug/L	98
87)	4-Chlorotoluene	15.85	91	352731	15.4107	ug/L	96
88)	a-Methylstyrene	16.13	118	258802	19.2311	ug/L	97
89)	tert-Butylbenzene	16.20	134	88423	15.5538	ug/L	93
90)	1,2,4-Trimethylbenzene	16.25	105	517872	18.4948	ug/L	99
91)	sec-Butylbenzene	16.47	105	517399	16.2187	ug/L	99
92)	p-Isopropyltoluene	16.64	119	451498	17.1386	ug/L	100
93)	1,3-Dichlorobenzene	16.80	146	256902	16.7045	ug/L	97
94)	1,4-Dichlorobenzene	16.93	146	275417	17.6920	ug/L	98
95)	n-Butylbenzene	17.15	91	401102	16.6886	ug/L	98
96)	1,2-Dichlorobenzene	17.41	146	227176	16.6644	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	18.38	75	15109	16.3127	ug/L	85
98)	1,2,4-Trichlorobenzene	19.53	180	157082	17.6068	ug/L	97
99)	Hexachlorobutadiene	19.71	225	63165	15.1234	ug/L	95
100)	Naphthalene	19.88	128	279280	18.6353	ug/L	98
101)	1,2,3-Trichlorobenzene	20.20	180	131764	17.4279	ug/L	97

(#) = qualifier out of range (m) = manual integration
8M384165.D 8260WTR.M Fri Dec 14 17:45:36 2012 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\121412\8M384165.D Vial: 5
Acq On : 14 Dec 2012 17:23 Operator: ADC
Sample : WG416683-02 20ug/L LCS 8260 Inst : HPMS8
Misc : 1,1 STD55359 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 14 17:45 2012 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 11/06/12 HPMS 8
Last Update : Fri Nov 16 16:55:57 2012
Response via : Initial Calibration



2.2 General Chromatography Data

2.2.1 6850 LC/MS Data

2.2.1.1 Summary Data

Microbac

Lab Report #: L12120212
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Erin Long

Certificate of Analysis

Sample #:	L12120212-07	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	EB-031212-01	**Prep Method:**	6850	**Prep Date:**	12/07/2012 16:00
Matrix:	Water	**Analytical Method:**	6850	**Cal Date:**	12/05/2012 13:09
Workgroup #:	WG416116	**Analyst:**	JWR	**Run Date:**	12/07/2012 22:19
Collect Date:	12/03/2012 09:20	**Dilution:**	1	**File ID:**	1LM.LM18898
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Perchlorate	14797-73-0	0.200	U	0.400	0.200	0.100

U	Analyte was not detected. The concentration is below the reported LOD.

2.2.1.2 QC Summary Data

Example Calculation 6850 - Perchlorate

Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, y = mx + b

y = response ratio = response of analyte / response of internal standard (IS) = Rx/Ristd

x = amount ratio = concentration analyte/concentration internal standard (IS) = Cx / Cistd

m = slope from curve (1.45)

b = intercept from curve (-0.00242)

y = 1.45x + -0.00242

Step 2: Substitute the value for y

where y = 12600/226000 = 0.055752

Step 3: Solve for x

x = (y - b)/m = 0.0040119

Step 4: Solve for analyte concentration Cx

Cx = (Cis)(x) = (5 ug/L)(0.040119) = 0.200594 ug/L

Example Calculation - Water:

Slope from curve, m:	1.45
Intercept from curve, b:	-0.00242
Response of analyte, Rx:	12600
Response of Internal Standard , Ristd:	226000
Concentration of IS, Cistd (ug/L):	5.00
Response Ratio:	0.05575
Amount Ratio:	0.04012
Analyte Concentration, Cx (ug/L) :	0.200594

Example Calculation - Soil:

Analyte Concentration, Cx (ug/L):	0.20059
Amount of soil extracted (g):	5.00
Final volume of extract (mL):	50.00
Percent solids (Pct wt.)	100
Concentration in soil (ug/kg):	2.005938

Conductivity Probe Calibration Check: 1439 /1410 µs/cm

Perchlorate Conductivity Check

Working MCT Level: 10,000 µs/cm

Sample	Conductivity (µs/cm)	Pretreatment or Dilution Needed
WG416116-01 MCT	10,050	
-02 Blank	0.0	
-03 LCS	0.0	
L12120082-01	3,840	
-02	3,760	
-03	3,820	
-04	3,820	
-05 RS	3,760	
-06 MS	3,760	
-07 MSD	3,770	
L12120085-01	2,590	
L12120212-07	0.7	
L12120213-02	9,530	
-03	8,900	
-04	7,570	
-05	5,470	
-06	11,040	
-07	12,030	
-08	5,120	
-09	5,120	
-10	2,400	

John Richards
Analyst

12/10/12/1130
Date/Time

DCN#93289

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 120512_JWR.TXT

Analyst1: JWR Analyst2: NA

Method: 6850 SOP: HPLC06 Rev: 4

Maintenance Log ID: Syringe Filter Lot#: T0409122423

Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA

Analytical WG415733 (waters)

Internal STD: COA16478 Surrogate STD: NA Calibration STD STD54784

CCV STD: STD54784 LCS STD: STD54784 MS/MSD STD: STD54784

Comments: ICAL WG415786
ALT STD54786

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	1LM.LM18828	WG415786-01 CCB	1	1		12/05/12 10:57
2	1LM.LM18829	WG415786-02 STD (0.1 ug/L)	1	1	STD54784	12/05/12 11:16
3	1LM.LM18830	WG415786-03 STD (0.2 ug/L)	1	1	STD54784	12/05/12 11:35
4	1LM.LM18831	WG415786-04 STD (0.5 ug/L)	1	1	STD54784	12/05/12 11:53
5	1LM.LM18832	WG415786-05 STD (1.0 ug/L)	1	1	STD54784	12/05/12 12:12
6	1LM.LM18833	WG415786-06 STD (2.0 ug/L)	1	1	STD54784	12/05/12 12:31
7	1LM.LM18834	WG415786-07 STD (5.0 ug/L)	1	1	STD54784	12/05/12 12:50
8	1LM.LM18835	WG415786-08 STD (10 ug/L)	1	1	STD54784	12/05/12 13:09
9	1LM.LM18836	WG415786-09 SSCV (1.0 ug/L)	1	1	STD54786	12/05/12 13:28
10	1LM.LM18837	WG415734-01 CCB	1	1		12/05/12 14:16
11	1LM.LM18838	WG415734-02 CCV (1.0ug/L)	1	1	STD54784	12/05/12 14:35
12	1LM.LM18839	WG415733-07 QCMRL (0.2ug/L)	1	1	STD54784	12/05/12 14:54
13	1LM.LM18840	WG415733-01 MCT (0.2ug/L)	1	1	STD54784	12/05/12 15:13
14	1LM.LM18841	WG415733-02 BLANK	1	1		12/05/12 15:32
15	1LM.LM18842	WG415733-03 LCS (0.2ug/L)	1	1	STD54784	12/05/12 15:51
16	1LM.LM18843	L12110739-01 REF	1	1	STD54784	12/05/12 16:10
17	1LM.LM18844	L12110739-01 MS	1	1	STD54784	12/05/12 16:29
18	1LM.LM18845	L12110739-01 MSD	1	1	STD54784	12/05/12 16:48
19	1LM.LM18846	L12120061-01	1	1	STD54784	12/05/12 17:07
20	1LM.LM18847	L12120061-02	1	1	STD54784	12/05/12 17:25
21	1LM.LM18848	L12110808-01	1	1	STD54784	12/05/12 17:44
22	1LM.LM18849	L12110808-02 (2x)	1	2	STD54784	12/05/12 18:03
23	1LM.LM18850	Blank Rinse	1	1		12/05/12 18:22
24	1LM.LM18851	WG415734-03 CCV (1.0ug/L)	1	1	STD54784	12/05/12 18:41
25	1LM.LM18852	WG415733-08 QCMRL (0.2ug/L)	1	1	STD54784	12/05/12 19:00
26	1LM.LM18853	WG415734-04 CCB	1	1		12/05/12 19:19
27	1LM.LM18854	L12110808-03	1	1		12/05/12 19:38
28	1LM.LM18855	L12110808-04	1	1		12/05/12 19:57
29	1LM.LM18856	L12110808-05	1	1		12/05/12 20:16
30	1LM.LM18857	L12110808-06	1	1		12/05/12 20:35
31	1LM.LM18858	L12110808-07	1	1		12/05/12 20:54
32	1LM.LM18859	L12110808-08	1	1		12/05/12 21:13
33	1LM.LM18860	L12110808-09	1	1		12/05/12 21:32

Page: 1 Approved: 07-DEC-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 120512_JWR.TXT

Analyst1: JWR Analyst2: NA

Method: 6850 SOP: HPLC06 Rev: 4

Maintenance Log ID: Syringe Filter Lot#: T0409122423

Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA

Analytical WG415733 (waters)

Internal STD: COA16478 Surrogate STD: NA STD54784

CCV STD: STD54784 LCS STD: STD54784 STD54784

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	1LM.LM18861	L12110824-01	1	1		12/05/12 21:51
35	1LM.LM18862	L12110824-02	1	1		12/05/12 22:09
36	1LM.LM18863	L12110824-03	1	1		12/05/12 22:28
37	1LM.LM18864	Blank Rinse	1	1		12/05/12 22:47
38	1LM.LM18865	WG415734-05 CCV (1.0ug/L)	1	1	STD54784	12/05/12 23:06
39	1LM.LM18866	WG415733-09 QCMRL (0.2ug/L)	1	1	STD54784	12/05/12 23:25
40	1LM.LM18867	WG415734-06 CCB	1	1		12/05/12 23:44
41	1LM.LM18868	L12110824-04	1	1		12/06/12 00:03
42	1LM.LM18869	L12110824-05	1	1		12/06/12 00:22
43	1LM.LM18870	L12110824-06	1	1		12/06/12 00:41
44	1LM.LM18871	Blank Rinse	1	1		12/06/12 01:00
45	1LM.LM18872	WG415734-07 CCV (1.0ug/L)	1	1	STD54784	12/06/12 01:19
46	1LM.LM18873	WG415733-10 QCMRL (0.2ug/L)	1	1	STD54784	12/06/12 01:38
47	1LM.LM18874	WG415734-08 CCB	1	1		12/06/12 01:57

Comments

Seq.	Rerun	Dil.	Reason	Analytes
22				
	L12110808-02 (2x) : This sample was analyzed at a 2x dilution based on its screen results from 12/04/12.			

Page: 2 Approved: 07-DEC-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 120712_JWR.TXT

Analyst1: JWR Analyst2: NA

Method: 6850 SOP: HPLC06 Rev: 4

Maintenance Log ID: Syringe Filter Lot#: T0409122423

Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA

Analytical WG416116 (waters)

Internal STD: COA16478 Surrogate STD: NA Calibration STD STD54784

CCV STD: STD54784 LCS STD: STD54784 MS/MSD STD: STD54784

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	1LM.LM18881	WG416117-01 CCB	1	1		12/07/12 16:57
2	1LM.LM18882	WG416117-02 CCV (1.0ug/L)	1	1	STD54784	12/07/12 17:16
3	1LM.LM18883	WG416116-07 QCMRL (0.2ug/L)	1	1	STD54784	12/07/12 17:35
4	1LM.LM18884	WG416116-01 MCT (0.2ug/L)	1	1	STD54784	12/07/12 17:54
5	1LM.LM18885	WG416116-02 BLANK	1	1		12/07/12 18:13
6	1LM.LM18886	WG416116-03 LCS (0.2ug/L)	1	1	STD54784	12/07/12 18:32
7	1LM.LM18887	L12120082-01	1	1	STD54784	12/07/12 18:51
8	1LM.LM18888	L12120082-02	1	1	STD54784	12/07/12 19:10
9	1LM.LM18889	L12120082-03	1	1	STD54784	12/07/12 19:29
10	1LM.LM18890	L12120082-04	1	1	STD54784	12/07/12 19:48
11	1LM.LM18891	L12120082-05 RS	1	1	STD54784	12/07/12 20:07
12	1LM.LM18892	L12120082-06 MS	1	1	STD54784	12/07/12 20:26
13	1LM.LM18893	L12120082-07 MSD	1	1	STD54784	12/07/12 20:45
14	1LM.LM18894	Blank Rinse	1	1		12/07/12 21:03
15	1LM.LM18895	WG416117-03 CCV (1.0ug/L)	1	1	STD54784	12/07/12 21:22
16	1LM.LM18896	WG416116-08 QCMRL (0.2ug/L)	1	1	STD54784	12/07/12 21:41
17	1LM.LM18897	WG416117-04 CCB	1	1		12/07/12 22:00
18	1LM.LM18898	L12120212-07	1	1		12/07/12 22:19
19	1LM.LM18899	L12120085-01 (10,000x)	1	10000		12/07/12 22:38
20	1LM.LM18900	L12120213-02 (1000x)	1	1000		12/07/12 22:57
21	1LM.LM18901	L12120213-03 (10x)(NR)	1	10		12/07/12 23:16
22	1LM.LM18902	L12120213-04	1	1		12/07/12 23:35
23	1LM.LM18903	L12120213-05	1	1		12/07/12 23:54
24	1LM.LM18904	L12120213-06 (100x)	1	100		12/08/12 00:13
25	1LM.LM18905	L12120213-07 (100x)	1	100		12/08/12 00:32
26	1LM.LM18906	L12120213-08	1	1		12/08/12 00:51
27	1LM.LM18907	L12120213-09	1	1		12/08/12 01:10
28	1LM.LM18908	Blank Rinse	1	1		12/08/12 01:29
29	1LM.LM18909	WG416117-05 CCV (1.0ug/L)	1	1	STD54784	12/08/12 01:47
30	1LM.LM18910	WG416116-09 QCMRL (0.2ug/L)	1	1	STD54784	12/08/12 02:06
31	1LM.LM18911	WG416117-06 CCB	1	1		12/08/12 02:25
32	1LM.LM18912	L12120213-10	1	1		12/08/12 02:44
33	1LM.LM18913	Blank Rinse	1	1		12/08/12 03:03

Page: 1 Approved: 11-DEC-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 120712_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 4

Maintenance Log ID: Syringe Filter Lot#: T0409122423
Eluent ID#:
Column 1 ID: KP-RPPX250 Column 2 ID: NA
Workgroups: Analytical WG416116 (waters)
Internal STD: COA16478 Surrogate STD: NA STD54784
CCV STD: STD54784 LCS STD: STD54784 STD54784

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	1LM.LM18914	WG416117-07 CCV (1.0ug/L)	1	1	STD54784	12/08/12 03:22
35	1LM.LM18915	WG416116-10 QCMRL (0.2ug/L)	1	1	STD54784	12/08/12 03:41
36	1LM.LM18916	WG416117-08 CCB	1	1		12/08/12 04:00
37	1LM.LM18917	WG416117-09 CCV (1.0ug/L)	1	1	STD54784	12/10/12 11:06
38	1LM.LM18918	WG416116-11 QCMRL (0.2ug/L)	1	1	STD54784	12/10/12 11:25
39	1LM.LM18919	WG416117-10 CCB	1	1		12/10/12 11:44
40	1LM.LM18920	L12120213-03 Rerun 100x	1	100		12/10/12 12:03
41	1LM.LM18921	WG416117-11 CCV (1.0ug/L)	1	1	STD54784	12/10/12 12:22
42	1LM.LM18922	WG416116-12 QCMRL (0.2ug/L)	1	1	STD54784	12/10/12 12:41
43	1LM.LM18923	WG416117-12 CCB	1	1		12/10/12 13:00

Comments

Seq.	Rerun	Dil.	Reason	Analytes
19				
	L12120085-01 (10,000x) : This sample was analyzed at this dilution based on its historical results.			
20				
	L12120213-02 (1000x) : This sample was analyzed at this dilution based on its historical results.			
21	X	100	Over Calibration Range	
	L12120213-03 (10x)(NR) : This sample was analyzed at a 10x dilution based on its historical results.			
24				
	L12120213-06 (100x) : This sample was analyzed at this dilution based on its historical results.			
25				
	L12120213-07 (100x) : This sample was analyzed at this dilution based on its historical results.			

Page: 2 Approved: 11-DEC-12

Microbac Laboratories Inc.

Data Checklist

Date: 05-DEC-2012
Analyst: JWR
Analyst: NA
Method: 6850
Instrument: LCMS1
Curve Workgroup: WG415786
Runlog ID: 50364
Analytical Workgroups: 11-0739, 0808, 0824 12-0061 (WATERS)

ANALYTICAL	
System Performance Check	NA
DFTPP (GCMS)	NA
Endrin/DDT breakdown (8081/GCMS)	NA
Pentachlorophenol/benzidine tailing (GCMS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (GCMS)	X
Continuing calibration blank (CCB) (IC/LCMS)	X
Limit of quantitation verification (LOQV) (LCMS)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Interference check sample (ICS) (LCMS)	MCT
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	X
Library searches (GCMS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
06-DEC-2012

Secondary Reviewer:
07-DEC-2012

CHECKLIST1 - Modified 03/05/2008
Generated: DEC-07-2012 08:01:37

Microbac Laboratories Inc.

Data Checklist

Date: 07-DEC-2012
Analyst: JWR
Analyst: NA
Method: 6850
Instrument: LCMS1
Curve Workgroup: NA
Runlog ID: 50407
Analytical Workgroups: 12-0082, 0085, 0212, 0213 (WATERS)

ANALYTICAL	
System Performance Check	NA
DFTPP (GCMS)	NA
Endrin/DDT breakdown (8081/GCMS)	NA
Pentachlorophenol/benzidine tailing (GCMS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (GCMS)	X
Continuing calibration blank (CCB) (IC/LCMS)	X
Limit of quantitation verification (LOQV) (LCMS)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Interference check sample (ICS) (LCMS)	MCT
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	X
Library searches (GCMS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-DEC-2012

Secondary Reviewer:
11-DEC-2012

CHECKLIST1 - Modified 03/05/2008
Generated: DEC-11-2012 12:05:07

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6850 **AAB#:** WG416116

Login Number: L12120212

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
EB-031212-01	07	12/03/12					12/07/2012	4.3	28		12/07/12	.3	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2692658
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12120212
Work Group: WG416116
Blank File ID: 1LM.LM18885
Blank Sample ID: WG416116-02
Prep Date: 12/07/12 16:00
Instrument ID: LCMS1
Analyzed Date: 12/07/12 18:13
Method: 6850
Analyst: JWR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
QCMRL	WG416116-07	1LM.LM18883	12/07/12 17:35	01
MCT	WG416116-01	1LM.LM18884	12/07/12 17:54	01
LCS	WG416116-03	1LM.LM18886	12/07/12 18:32	01
QCMRL	WG416116-08	1LM.LM18896	12/07/12 21:41	01
EB-031212-01	L12120212-07	1LM.LM18898	12/07/12 22:19	01
QCMRL	WG416116-09	1LM.LM18910	12/08/12 02:06	01
QCMRL	WG416116-10	1LM.LM18915	12/08/12 03:41	01
QCMRL	WG416116-11	1LM.LM18918	12/10/12 11:25	01
QCMRL	WG416116-12	1LM.LM18922	12/10/12 12:41	01

Report Name: BLANK_SUMMARY
PDF File ID: 2692659
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12120212 Prep Date: 12/07/12 16:00 Sample ID: WG416116-02
Instrument ID: LCMS1 Run Date: 12/07/12 18:13 Prep Method: 6850
File ID: 1LM.LM18885 Analyst: JWR Method: 6850
Workgroup (AAB#): WG416116 Matrix: Water Units: ug/L
Contract #: Cal ID: LCMS1-05-DEC-12

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Perchlorate	0.100	0.400	0.100	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 2692660
11-DEC-2012 14:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12120212 **Run Date:** 12/07/2012 **Sample ID:** WG416116-03
Instrument ID: LCMS1 **Run Time:** 18:32 **Prep Method:** 6850
File ID: 1LM.LM18886 **Analyst:** JWR **Method:** 6850
Workgroup (AAB#): WG416116 **Matrix:** Water **Units:** ug/L
QC Key: DOD4 **Lot#:** STD54784 **Cal ID:** LCMS1-05-DEC-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Perchlorate	0.200	0.209	105	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2692661
Report generated: 12/11/2012 14:00

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12120212 **Instrument ID:** LCMS1

Analytical Method: 6850 **Initial Calibration Date:** 05-DEC-12 13:09

ICAL Workgroup: WG415786 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Perchlorate		1.142	6.17	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 2693763
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12120212
Analytical Method: 6850
Instrument ID: LCMS1
Initial Calibration Date: 05-DEC-12 13:09
Column ID: F

Analyte	WG415786-02			WG415786-03			WG415786-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Perchlorate	0.100	9190.00000	1.316	0.200	17100.0000	1.176	0.500	39000.0000	1.089

INT_CAL - Modified 03/06/2008
PDF File ID: 2693763
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12120212
Analytical Method: 6850
Instrument ID: LCMS1
Initial Calibration Date: 05-DEC-12 13:09
Column ID: F

Analyte	WG415786-05			WG415786-06			WG415786-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Perchlorate	1.00	80400.0000	1.105	2.00	161000.000	1.109	5.00	394000.000	1.104

INT_CAL - Modified 03/06/2008
PDF File ID: 2693763
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12120212
Analytical Method: 6850
Instrument ID: LCMS1
Initial Calibration Date: 05-DEC-12 13:09
Column ID: F

Analyte	WG415786-08		
	CONC	RESP	RF
Perchlorate	10.0	785000.000	1.092

INT_CAL - Modified 03/06/2008
PDF File ID: 2693763
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12120212 Run Date: 12/05/2012 Sample ID: WG415786-09
Instrument ID: LCMS1 Run Time: 13:28 Method: 6850
File ID: 1LM.LM18836 Analyst: JWR QC Key: DOD4
ICal Workgroup: WG415786 Cal ID: LCMS1 - 05-DEC-12

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Perchlorate		1.00	1.00	ug/L	1.12	0	15	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2693764
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12120212 Run Date: 12/07/2012 Sample ID: WG416117-01

Instrument ID: LCMS1 Run Time: 16:57 Method: 6850

File ID: 1LM.LM18881 Analyst: JWR Units: ug/L

Workgroup (AAB#): WG416116 Cal ID: LCMS1 - 05-DEC-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.400	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2692664
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12120212 Run Date: 12/07/2012 Sample ID: WG416117-04

Instrument ID: LCMS1 Run Time: 22:00 Method: 6850

File ID: 1LM.LM18897 Analyst: JWR Units: ug/L

Workgroup (AAB#): WG416116 Cal ID: LCMS1 - 05-DEC-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.400	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2692664
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12120212 Run Date: 12/08/2012 Sample ID: WG416117-06

Instrument ID: LCMS1 Run Time: 02:25 Method: 6850

File ID: 1LM.LM18911 Analyst: JWR Units: ug/L

Workgroup (AAB#): WG416116 Cal ID: LCMS1 - 05-DEC-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.400	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2692664
Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12120212 Run Date: 12/07/2012 Sample ID: WG416117-02

Instrument ID: LCMS1 Run Time: 17:16 Method: 6850

File ID: 1LM.LM18882 Analyst: JWR QC Key: DOD4

Workgroup (AAB#): WG416116 Cal ID: LCMS1 - 05-DEC-12

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		1.00	0.990	ug/L	1.10	1.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2692663

Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12120212 Run Date: 12/07/2012 Sample ID: WG416117-03

Instrument ID: LCMS1 Run Time: 21:22 Method: 6850

File ID: 1LM.LM18895 Analyst: JWR QC Key: DOD4

Workgroup (AAB#): WG416116 Cal ID: LCMS1 - 05-DEC-12

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		1.00	0.977	ug/L	1.09	2.30	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2692663

Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12120212 Run Date: 12/08/2012 Sample ID: WG416117-05

Instrument ID: LCMS1 Run Time: 01:47 Method: 6850

File ID: 1LM.LM18909 Analyst: JWR QC Key: DOD4

Workgroup (AAB#): WG416116 Cal ID: LCMS1 - 05-DEC-12

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		1.00	0.978	ug/L	1.09	2.20	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2692663

Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L12120212 Run Date: 12/07/2012 Sample ID: WG416116-07

Instrument ID: LCMS1 Run Time: 17:35 Prep Method: 6850

File ID: 1LM.LM18883 Analyst: JWR Method: 6850

Workgroup (AAB#): WG416116 Matrix: Water Units: ug/L

Contract #: Cal ID: LCMS1-05-DEC-12

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.200	0.188	94.0	70 - 130	

QCMRL - Modified 03/06/2007

PDF File ID: 2692662

Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L12120212 Run Date: 12/07/2012 Sample ID: WG416116-08

Instrument ID: LCMS1 Run Time: 21:41 Prep Method: 6850

File ID: 1LM.LM18896 Analyst: JWR Method: 6850

Workgroup (AAB#): WG416116 Matrix: Water Units: ug/L

Contract #: Cal ID: LCMS1-05-DEC-12

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.200	0.180	90.0	70 - 130	

QCMRL - Modified 03/06/2007

PDF File ID: 2692662

Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L12120212 Run Date: 12/08/2012 Sample ID: WG416116-09

Instrument ID: LCMS1 Run Time: 02:06 Prep Method: 6850

File ID: 1LM.LM18910 Analyst: JWR Method: 6850

Workgroup (AAB#): WG416116 Matrix: Water Units: ug/L

Contract #: Cal ID: LCMS1-05-DEC-12

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.200	0.196	98.0	70 - 130	

QCMRL - Modified 03/06/2007

PDF File ID: 2692662

Report generated 12/11/2012 14:00

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO AVERAGE OF ICAL)

Login Number: L12120212
Instrument ID: LCMS1
Workgroup (AAB#): WG416116

ICAL CCV Number: WG415786-05
CAL ID: LCMS1-05-DEC-12
Matrix: WATER

Sample Number	Dilution	Tag	IS-1
WG415786	NA	NA	359000
Upper Limit	NA	NA	538500
Lower Limit	NA	NA	179500
L12120212-07	1.00	01	373000
WG416116-02	1.00	01	365000
WG416116-03	1.00	01	360000

IS-1 - O18LP

Underline = Response outside limits

INTERNAL_STD_AVG_ICAL - Modified 03/10/2010
PDF File ID: 2692665
Report generated 12/11/2012 14:00

2.2.1.3 Sample Data

Data File	LM18898.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 10:19:41 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	L12120212-07	**Injection Vial**	14.00
Data File	LM18898.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 10:19:41 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	L12120212-07	**Dilution Factor**	1.00
Sample Comment	1,1 (EB)	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.730e+05	14.20	5.00	-

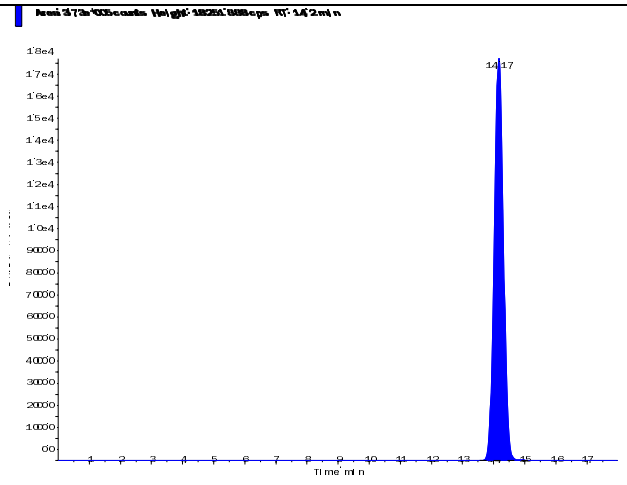
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.100e+03	14.30	N/A	< 0
Perchlorate conf	5.270e+02	14.10	N/A	< 0

O18LP (Internal Standard)

RT (Exp. RT): 14.20(13.90) min

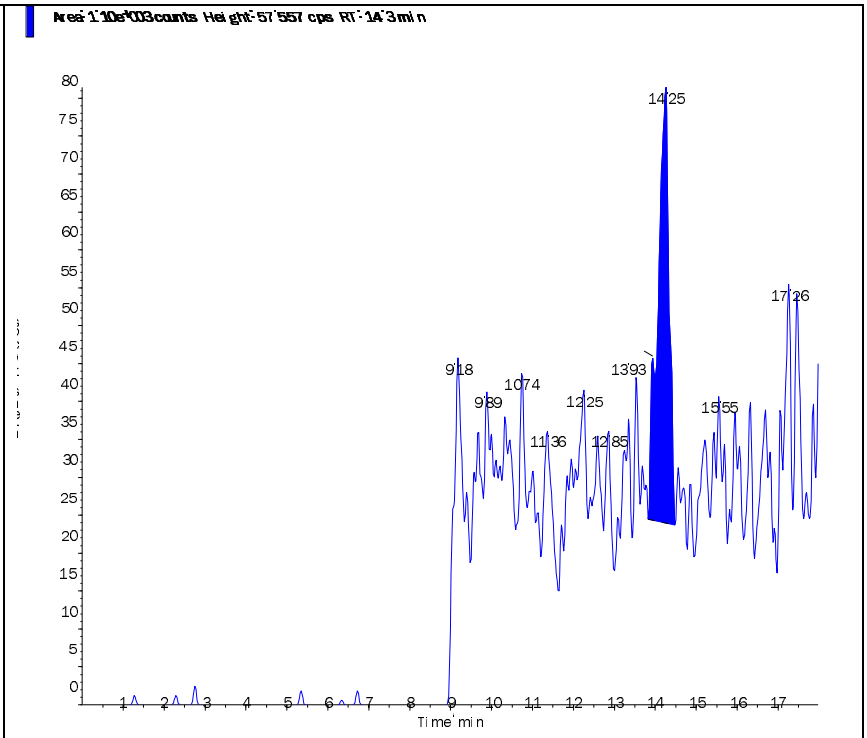
Concentration: 5.00 ug/L

Sample Type: (Unknown)



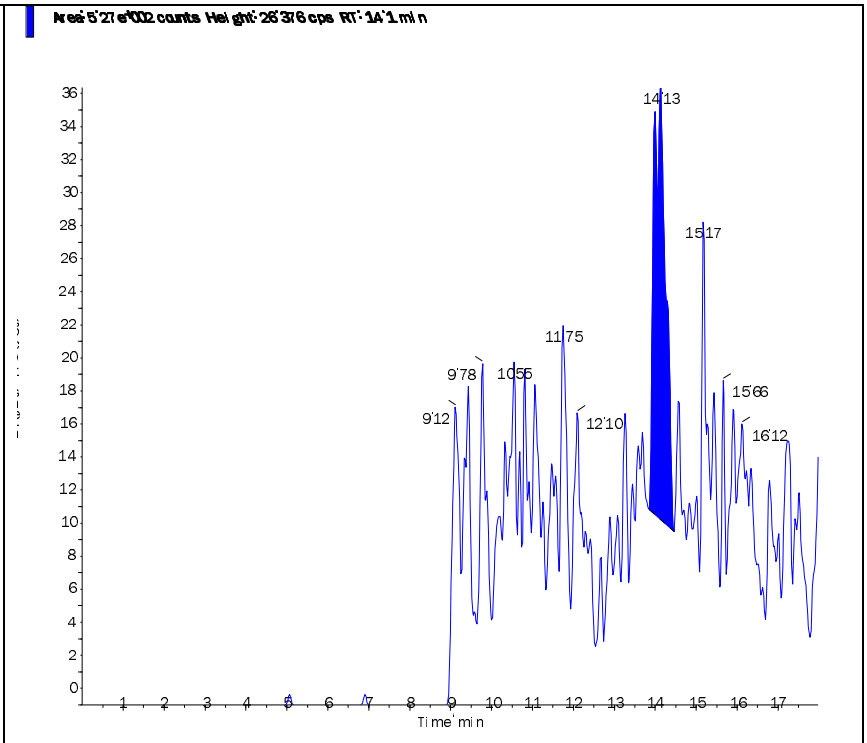
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	14.30 (14.00) min
Calculated conc:	< 0 ng/ml
Area Ratio:	0.003
Sample Type:	(Unknown)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	14.10 (13.90) min
Calculated conc:	< 0 ng/ml
Area Ratio:	0.001
Sample Type:	(Unknown)



2.2.1.4 Standards Data

Data File	LM18828.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 10:57:12 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

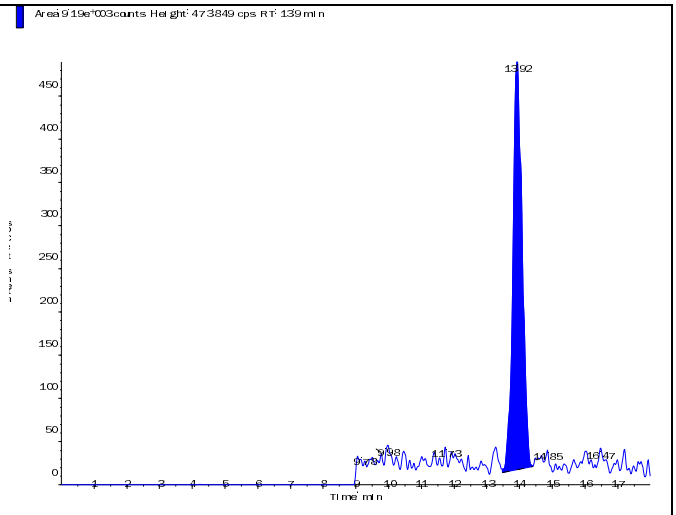
Sample Name	WG415786-01 CCB	**Injection Vial**	1.00
Data File	LM18828.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 10:57:12 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-01	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

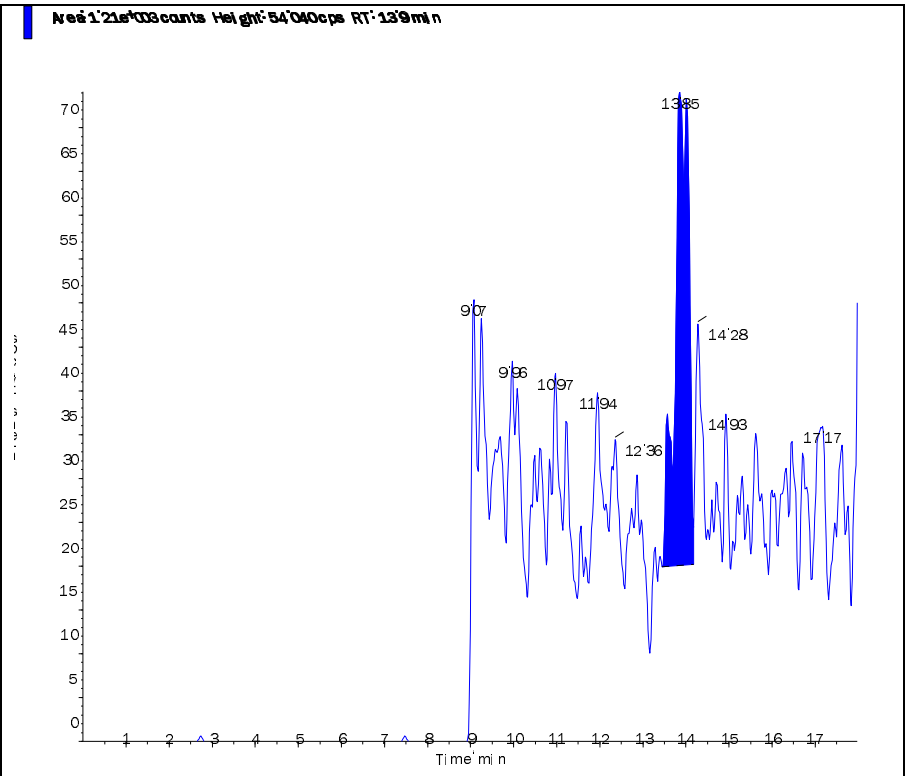
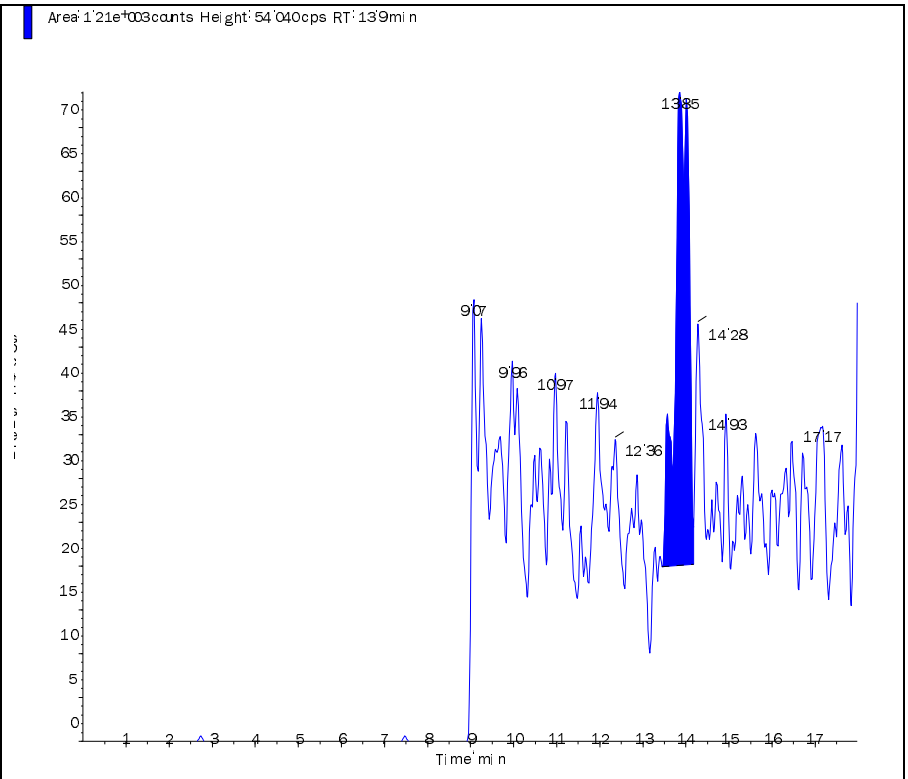
Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.440e+05	13.90	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.210e+03	13.90	N/A	< 0
Perchlorate conf	5.080e+02	13.90	N/A	< 0

O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



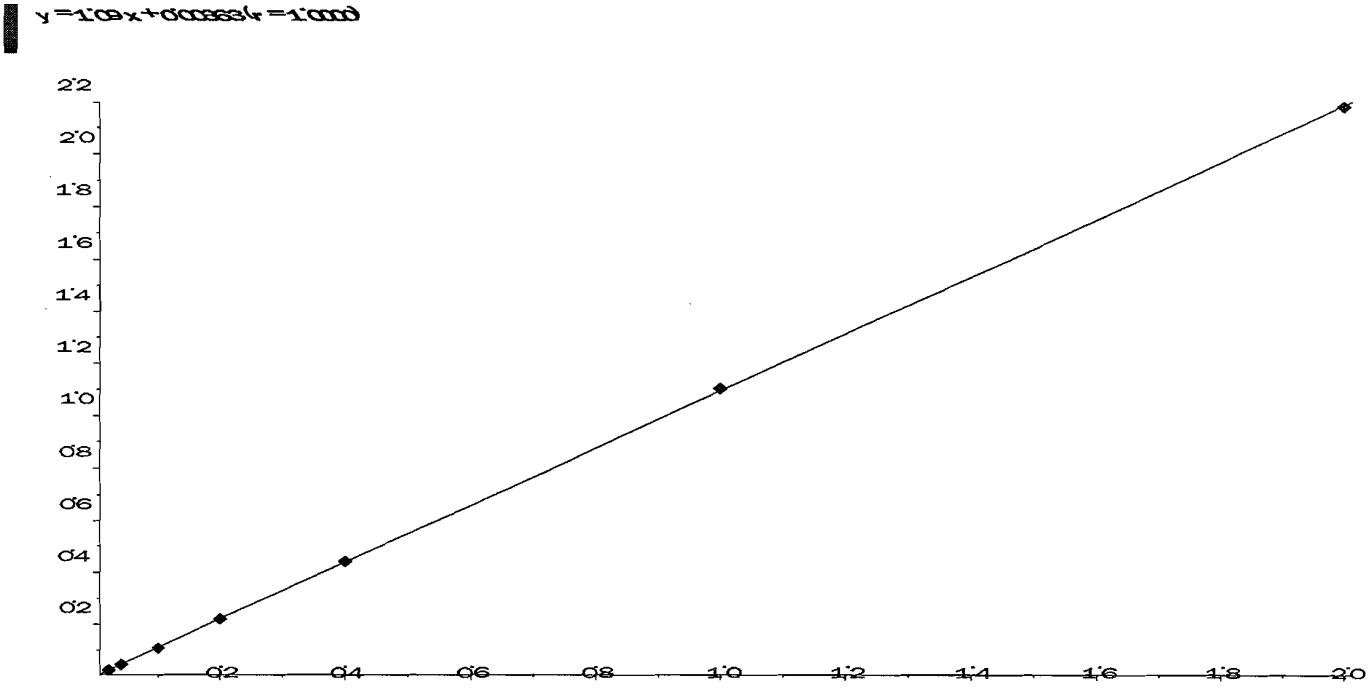
Perchlorate (98.8/83.3 amu) RT (Exp. RT): 13.90 (14.00) min Calculated conc: < 0 ng/ml Area Ratio: 0.004 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: < 0 ng/ml Area Ratio: 0.001 Sample Type: (Unknown)	

Analyte Name: **Perchlorate**
Internal Standard: O18LP

Data File	LM18828.wiff	**Result Table**	120512_JWR.rdb
Acquisition Date	12/5/2012 10:57:12 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Regression Equation: y = 1.09 x + 0.00363 (r = 1.0000)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.10	1	0.10	103.8	N/A	N/A
0.20	1	0.20	99.4	N/A	N/A
0.50	1	0.48	96.3	N/A	N/A
1.00	1	0.99	99.5	N/A	N/A
2.00	1	2.01	100.6	N/A	N/A
5.00	1	5.04	100.7	N/A	N/A
10.00	1	9.97	99.7	N/A	N/A

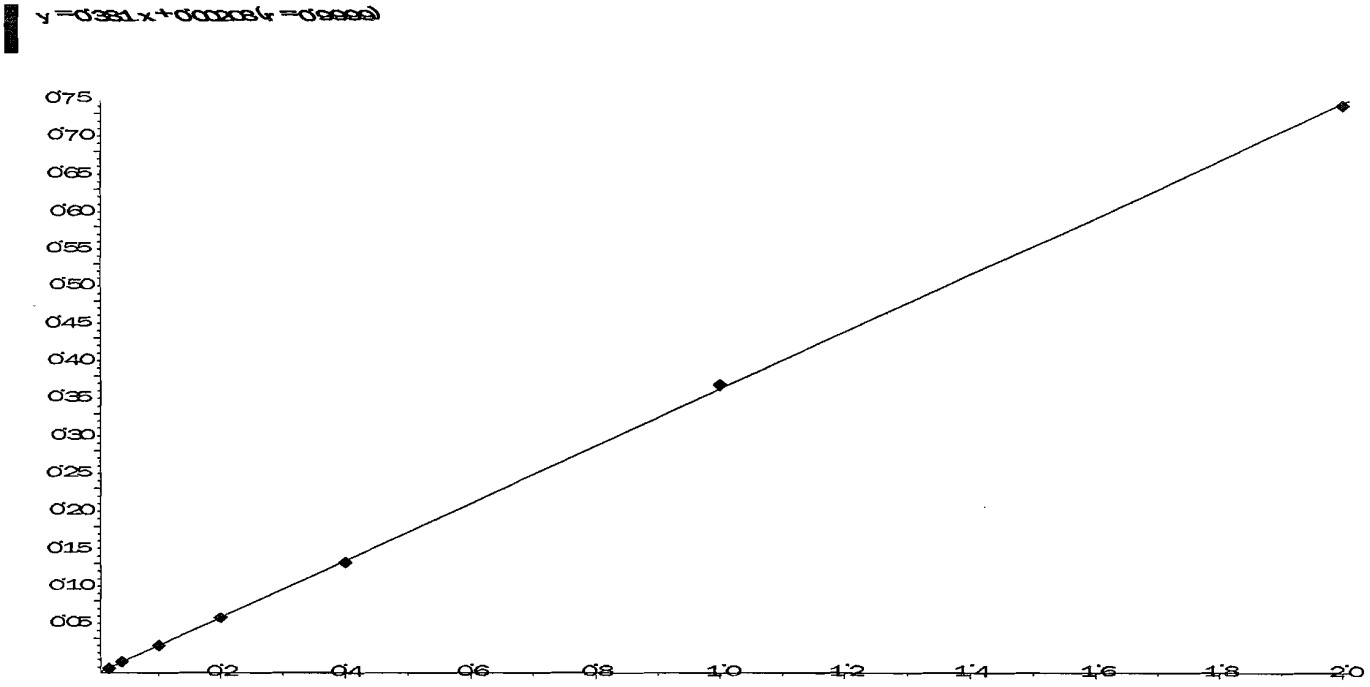


Analyte Name: **Perchlorate conf**
Internal Standard: O18LP

Data File	LM18828.wiff	**Result Table**	120512_JWR.rdb
Acquisition Date	12/5/2012 10:57:12 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Regression Equation: y = 0.381 x + 0.00203 (r = 0.9999)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.10	1	0.09	93.1	N/A	N/A
0.20	1	0.22	107.7	N/A	N/A
0.50	1	0.50	99.9	N/A	N/A
1.00	1	1.00	100.1	N/A	N/A
2.00	1	1.96	98.2	N/A	N/A
5.00	1	5.07	101.4	N/A	N/A
10.00	1	9.96	99.6	N/A	N/A



Data File	LM18829.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 11:16:06 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-02 STD (0.1 ug/L)	**Injection Vial**	2.00
Data File	LM18829.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 11:16:06 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-02	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.490e+05	13.90	5.00	-

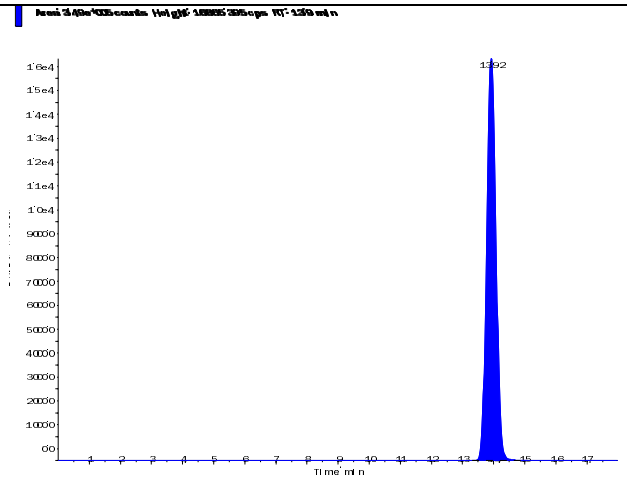
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	9.190e+03	13.90	0.10	0.104
Perchlorate conf	3.190e+03	13.90	0.10	0.0931

O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min

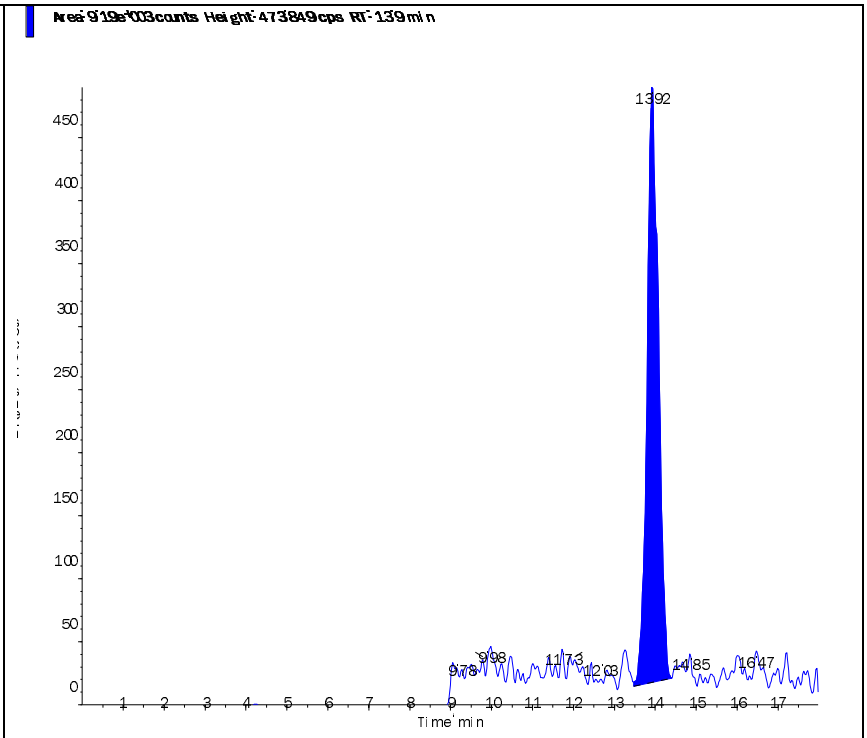
Concentration: 5.00 ug/L

Sample Type: (Standard)



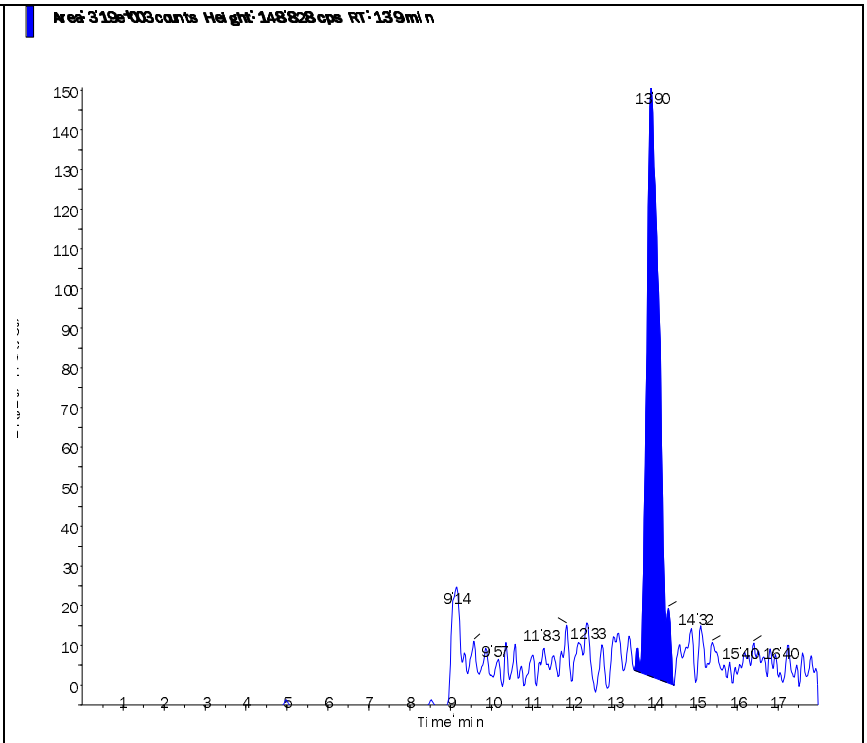
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	13.90 (14.00) min
Calculated conc:	0.104 ng/ml
Area Ratio:	0.026
Sample Type:	(Standard)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	13.90 (13.90) min
Calculated conc:	0.0931 ng/ml
Area Ratio:	0.009
Sample Type:	(Standard)



Data File	LM18830.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 11:35:02 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

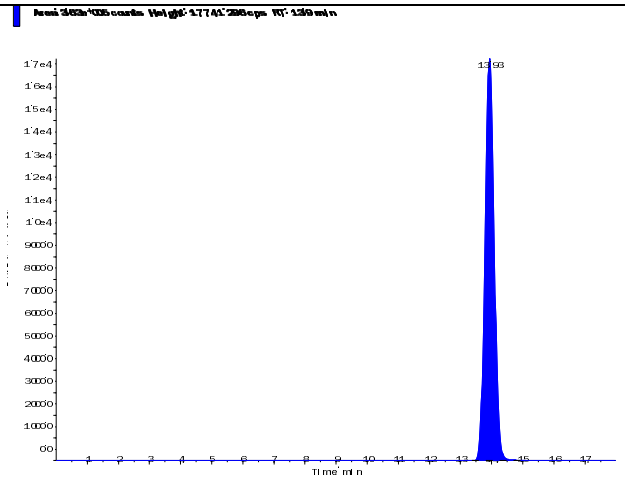
Sample Name	WG415786-03 STD (0.2 ug/L)	**Injection Vial**	3.00
Data File	LM18830.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 11:35:02 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-03	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.630e+05	13.90	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.710e+04	13.90	0.20	0.199
Perchlorate conf	6.680e+03	13.90	0.20	0.215

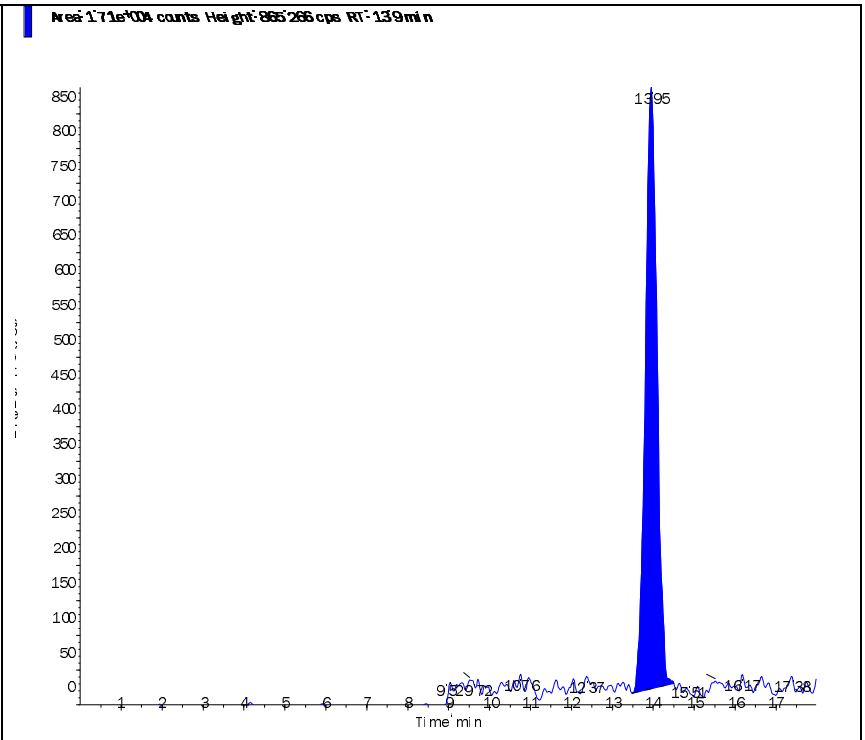
O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min
Concentration: 5.00 ug/L
Sample Type: (Standard)



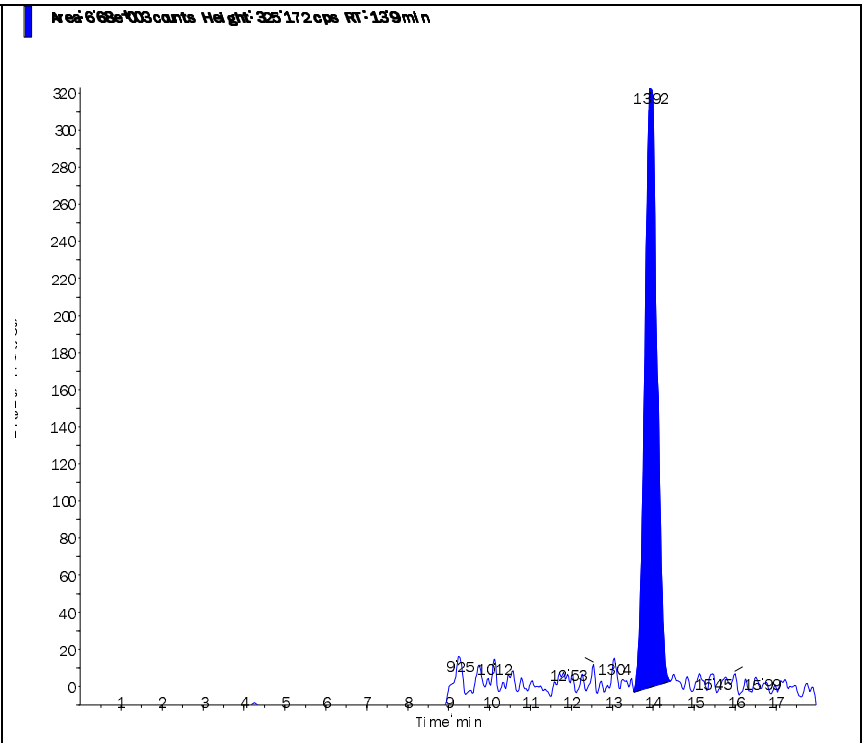
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	13.90 (14.00) min
Calculated conc:	0.199 ng/ml
Area Ratio:	0.047
Sample Type:	(Standard)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	13.90 (13.90) min
Calculated conc:	0.215 ng/ml
Area Ratio:	0.018
Sample Type:	(Standard)



Data File	LM18831.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 11:53:59 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-04 STD (0.5 ug/L)	**Injection Vial**	4.00
Data File	LM18831.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 11:53:59 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-04	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.590e+05	13.90	5.00	-

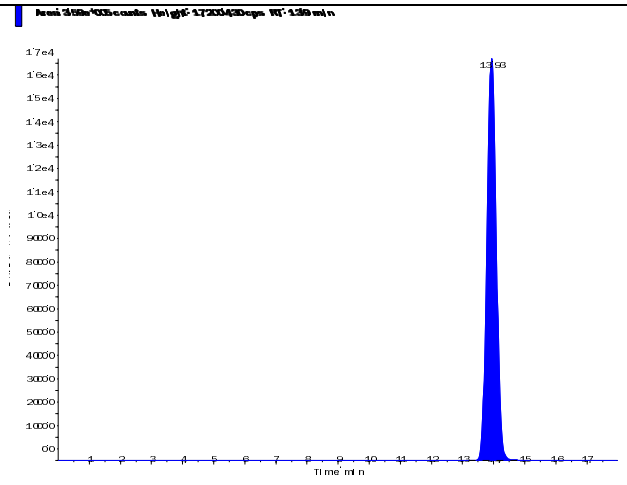
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	3.900e+04	13.90	0.50	0.482
Perchlorate conf	1.440e+04	13.90	0.50	0.499

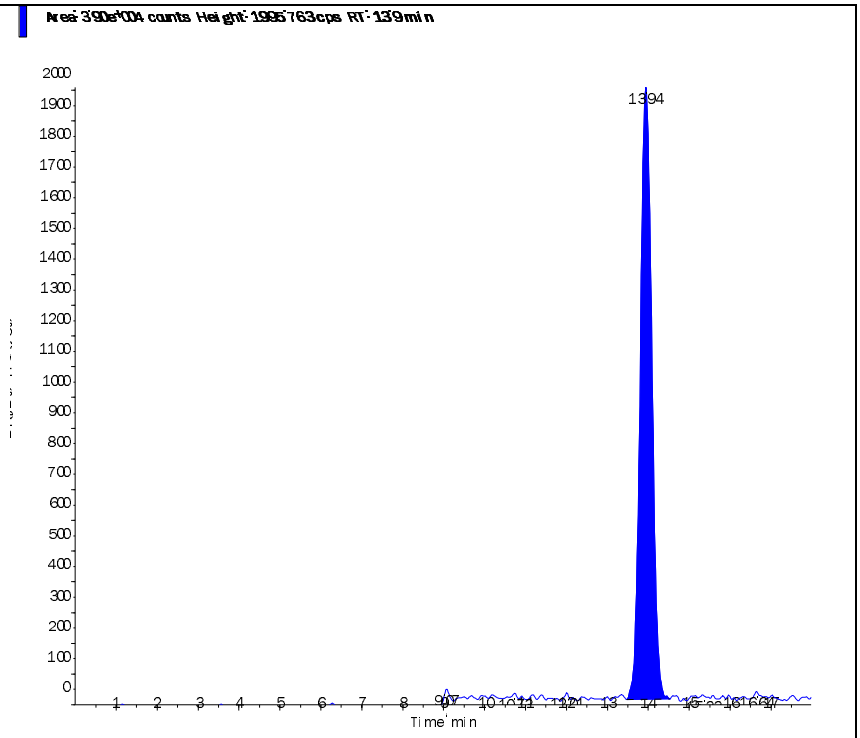
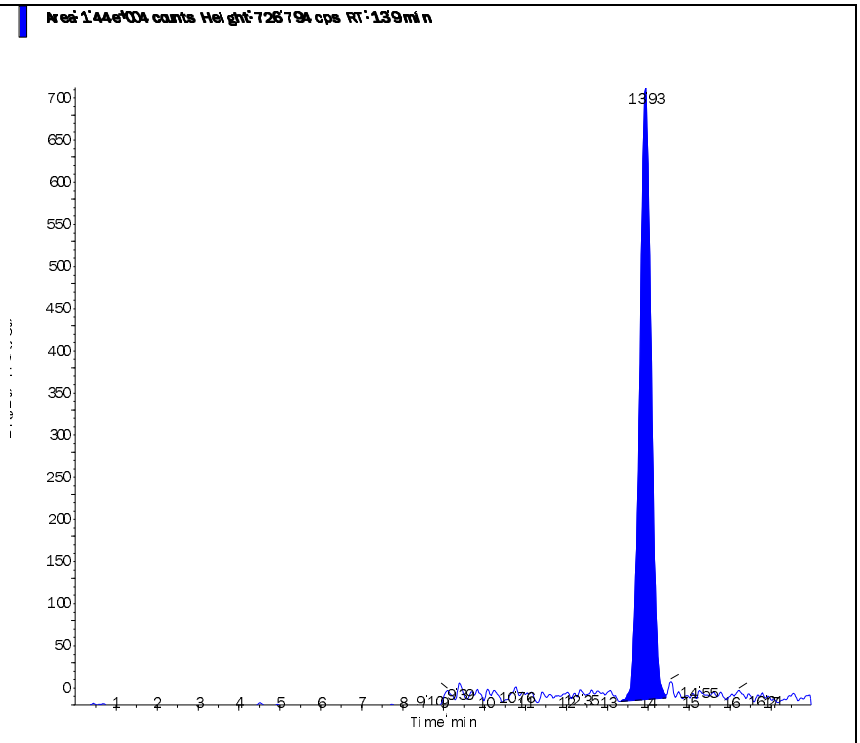
O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Standard)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 13.90 (14.00) min Calculated conc: 0.482 ng/ml Area Ratio: 0.109 Sample Type: (Standard)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: 0.499 ng/ml Area Ratio: 0.04 Sample Type: (Standard)	

Data File	LM18832.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 12:12:54 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-05 STD (1.0 ug/L)	**Injection Vial**	5.00
Data File	LM18832.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 12:12:54 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-05	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.640e+05	13.90	5.00	-

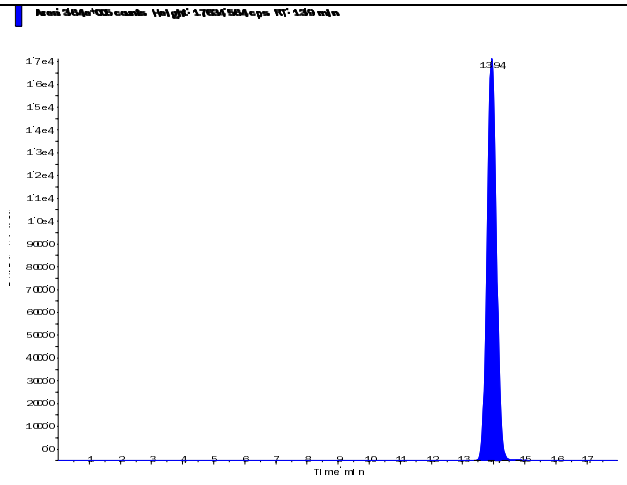
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	8.040e+04	14.00	1.00	0.995
Perchlorate conf	2.850e+04	13.90	1.00	1.00

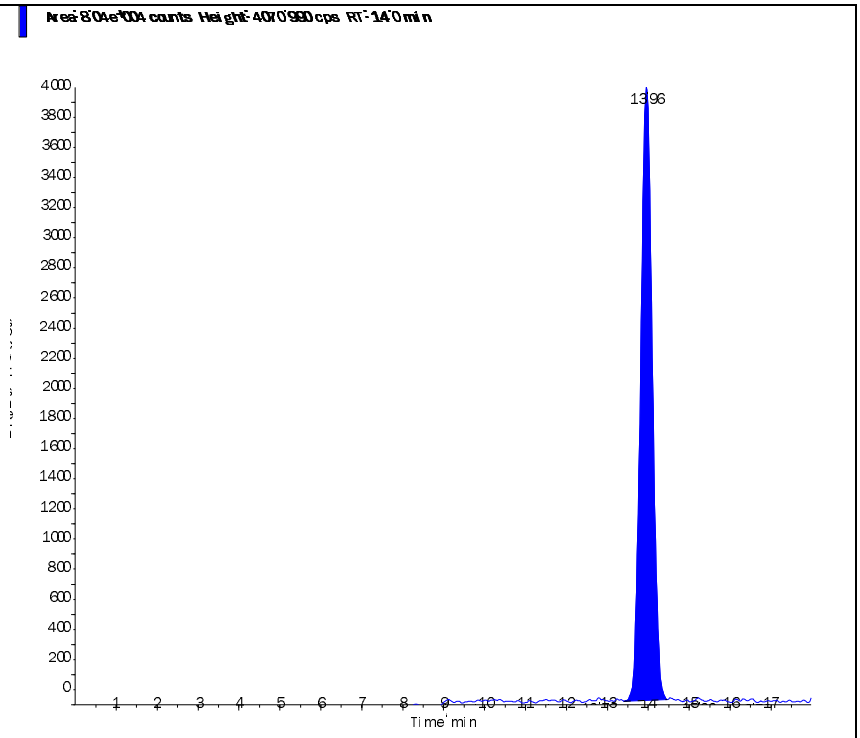
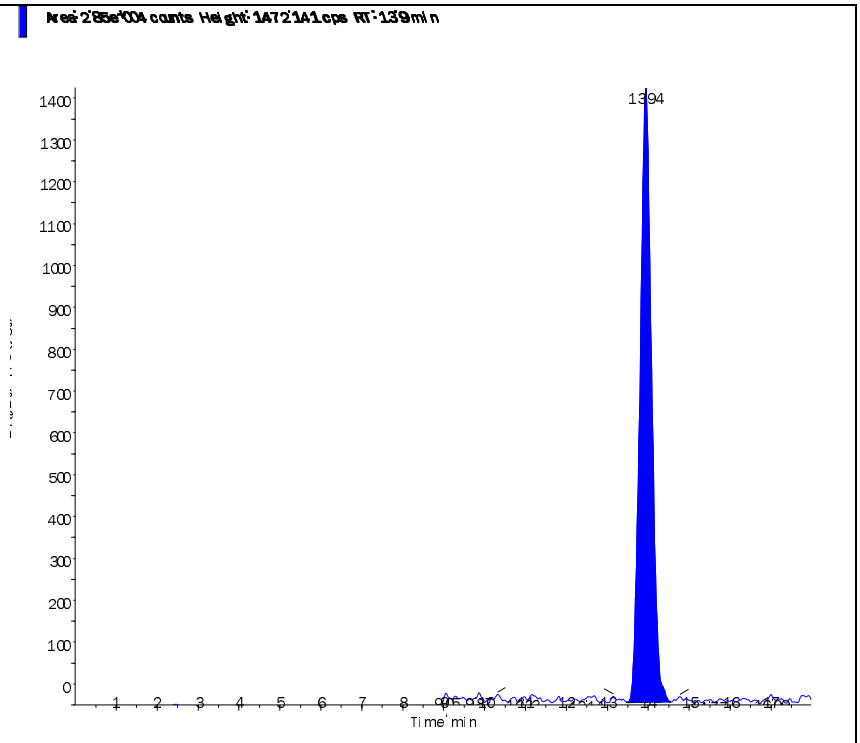
O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Standard)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.00 (14.00) min Calculated conc: 0.995 ng/ml Area Ratio: 0.221 Sample Type: (Standard)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: 1.00 ng/ml Area Ratio: 0.078 Sample Type: (Standard)	

Data File	LM18833.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 12:31:51 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-06 STD (2.0 ug/L)	**Injection Vial**	6.00
Data File	LM18833.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 12:31:51 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-06	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.630e+05	13.90	5.00	-

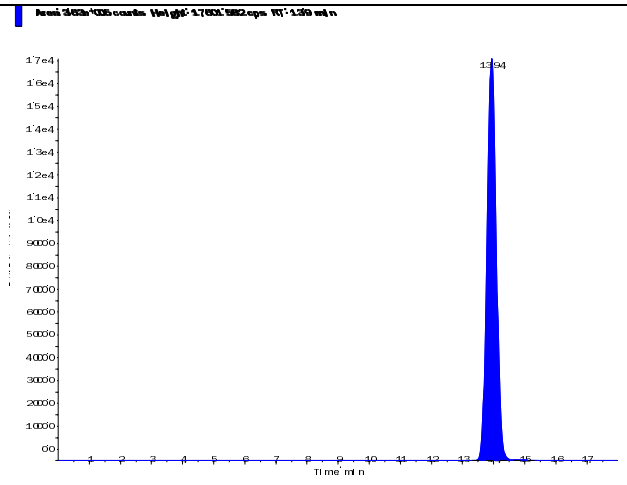
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.610e+05	14.00	2.00	2.01
Perchlorate conf	5.500e+04	13.90	2.00	1.96

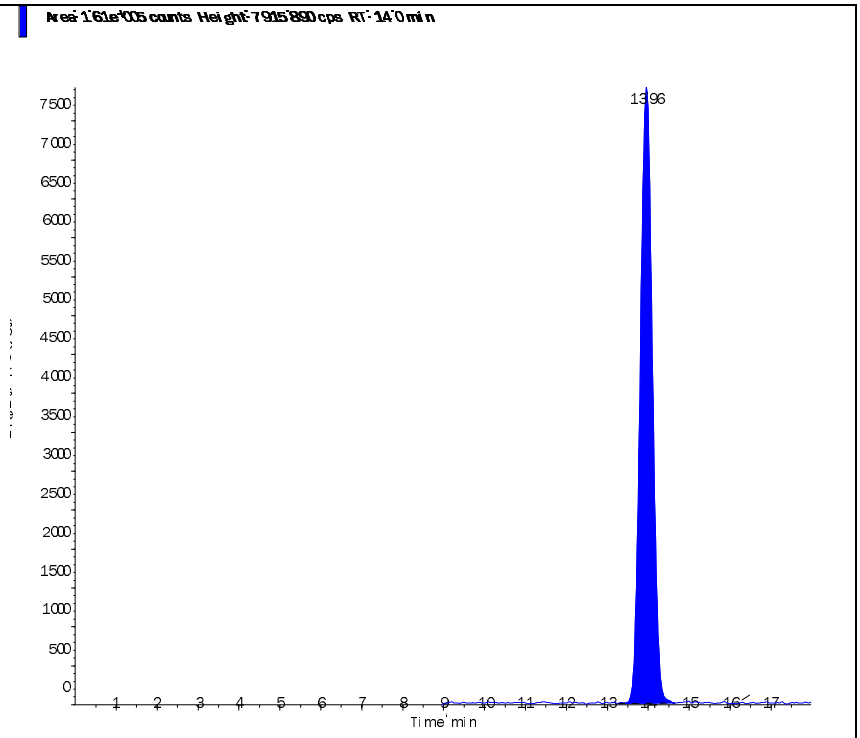
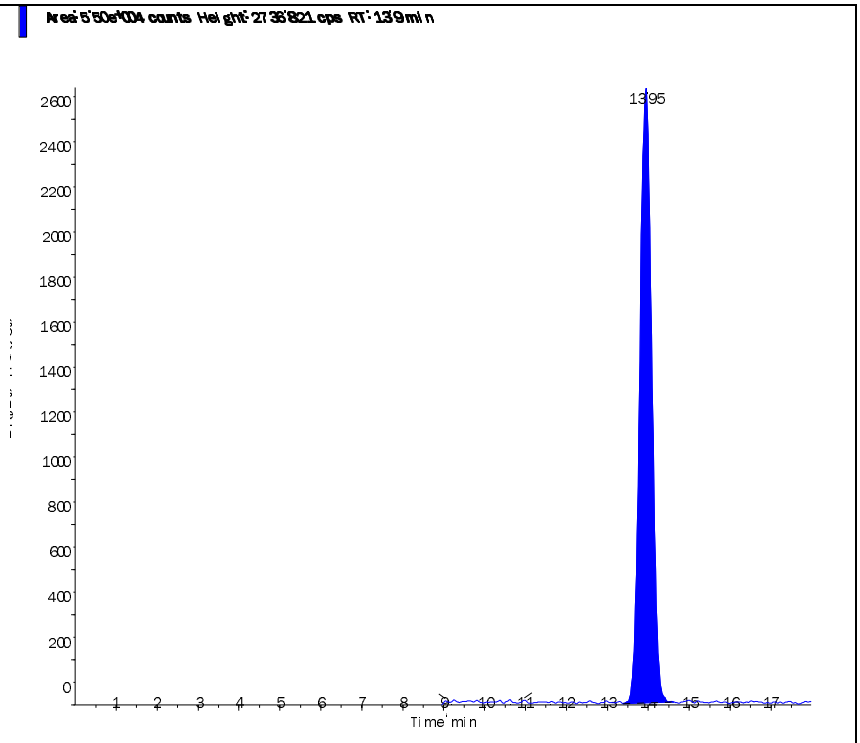
O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Standard)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.00 (14.00) min Calculated conc: 2.01 ng/ml Area Ratio: 0.443 Sample Type: (Standard)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: 1.96 ng/ml Area Ratio: 0.152 Sample Type: (Standard)	

Data File	LM18834.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 12:50:46 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-07 STD (5.0 ug/L)	**Injection Vial**	7.00
Data File	LM18834.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 12:50:46 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-07	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.570e+05	13.90	5.00	-

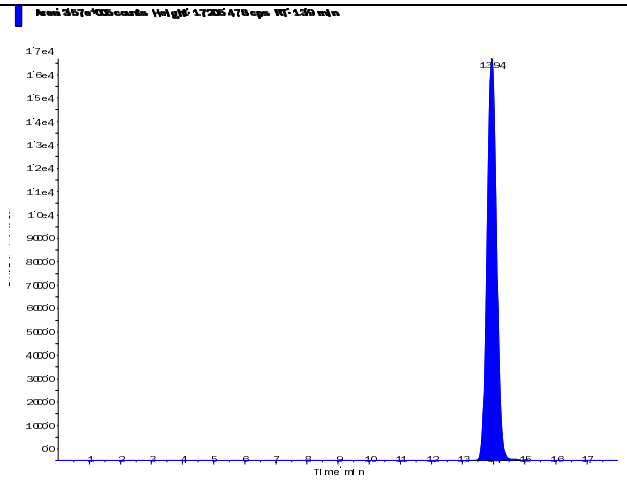
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	3.940e+05	14.00	5.00	5.04
Perchlorate conf	1.390e+05	13.90	5.00	5.07

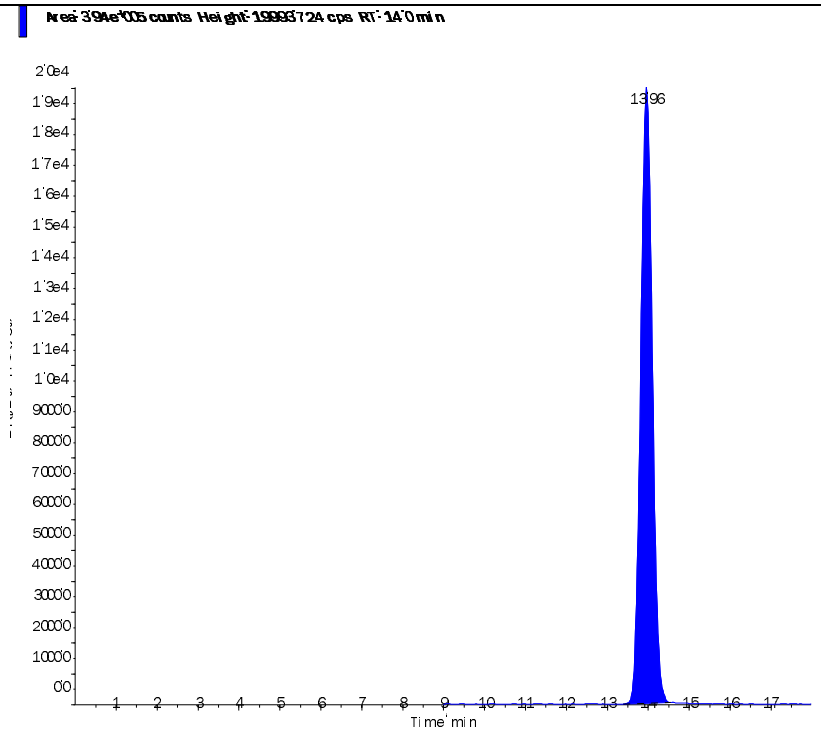
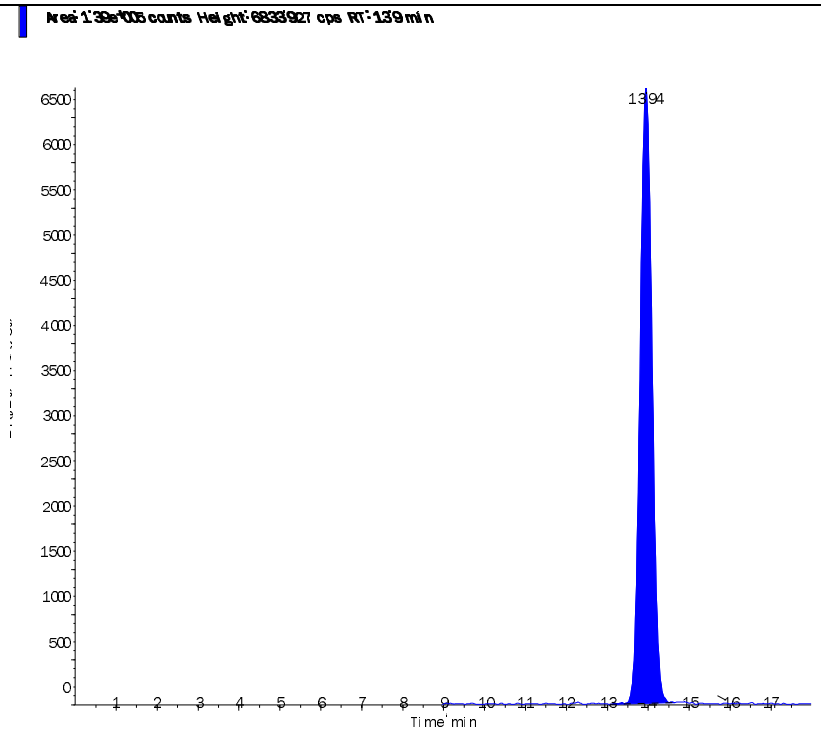
O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Standard)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.00 (14.00) min Calculated conc: 5.04 ng/ml Area Ratio: 1.104 Sample Type: (Standard)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: 5.07 ng/ml Area Ratio: 0.388 Sample Type: (Standard)	

Data File	LM18835.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/5/2012 1:09:42 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-08 STD (10 ug/L)	**Injection Vial**	8.00
Data File	LM18835.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 1:09:42 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Standard
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG415786-08	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.590e+05	13.90	5.00	-

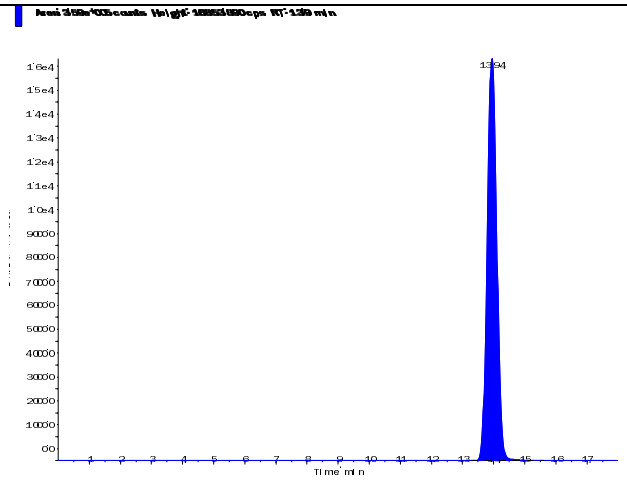
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	7.850e+05	14.00	10.00	9.97
Perchlorate conf	2.730e+05	13.90	10.00	9.96

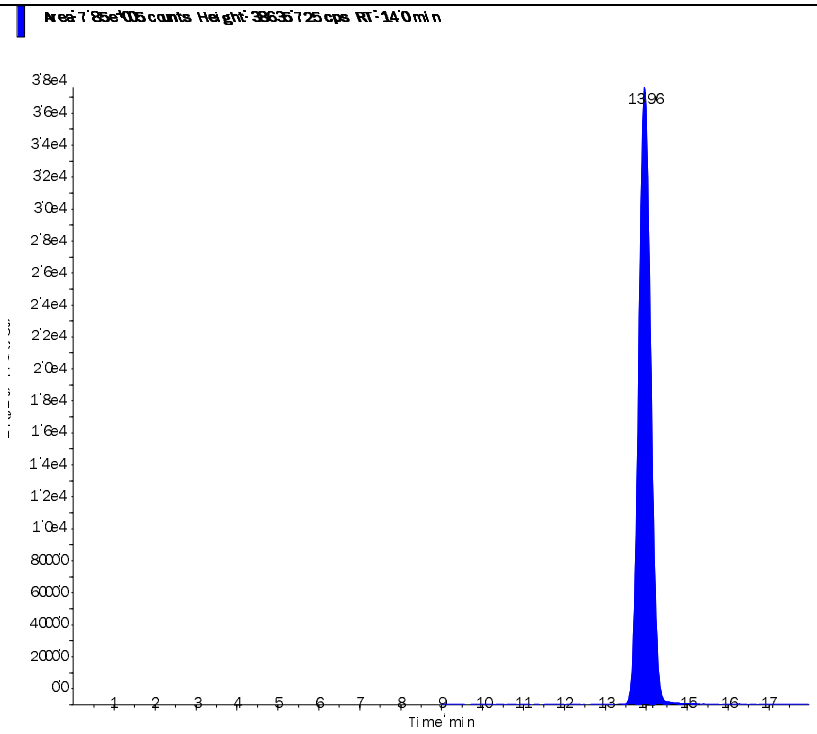
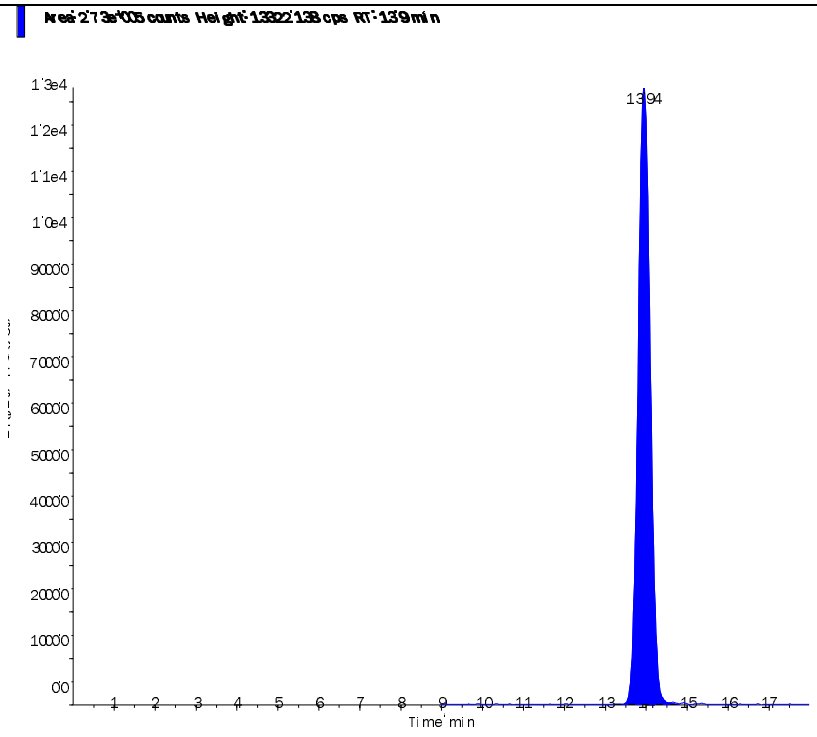
O18LP (Internal Standard)

RT (Exp. RT): 13.90(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Standard)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.00 (14.00) min Calculated conc: 9.97 ng/ml Area Ratio: 2.183 Sample Type: (Standard)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: 9.96 ng/ml Area Ratio: 0.761 Sample Type: (Standard)	

Data File	LM18836.wiff	**Result Table**	120512_JWR.rdb
Acquisition Date	12/5/2012 1:28:39 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG415786-09 SSCV (1.0 ug/L)	**Injection Vial**	9.00
Data File	LM18836.wiff	**Injection Volume**	10.00
Acquisition Date	12/5/2012 1:28:39 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Quality Control
Instrument Name	API 4000	**Result Table**	120512_JWR.rdb
Sample ID	WG415786-09	**Dilution Factor**	1.00
Sample Comment	1,1 STD54786	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.630e+05	14.00	5.00	-

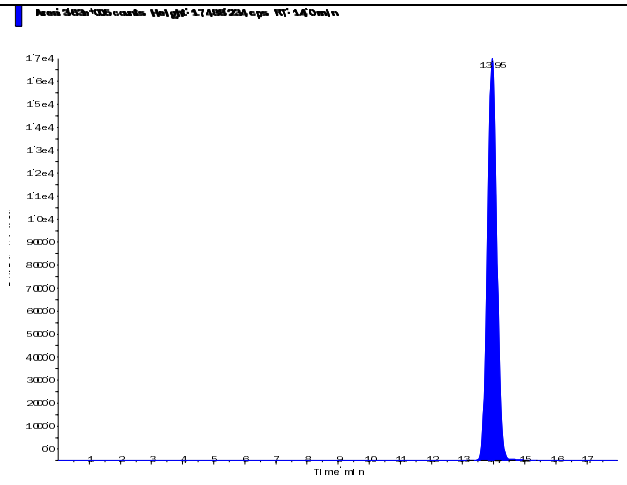
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	8.090e+04	14.00	1.00	1.00
Perchlorate conf	2.810e+04	13.90	1.00	0.992

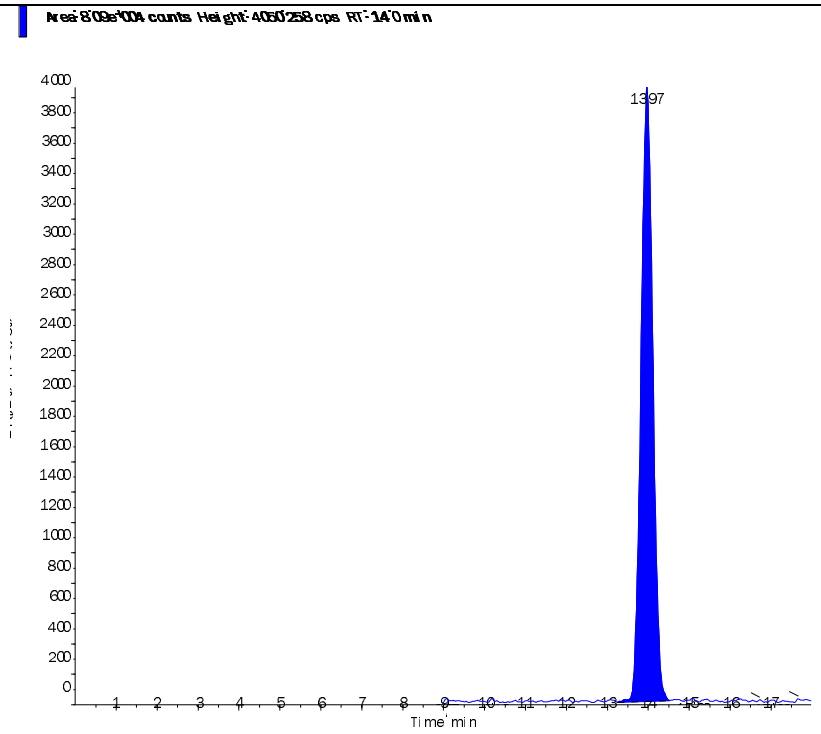
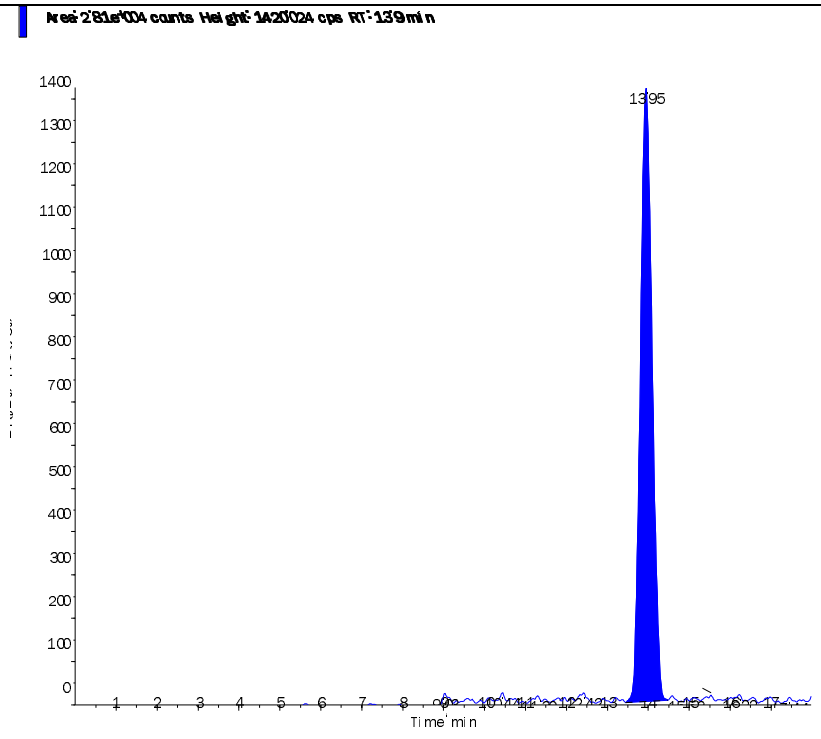
O18LP (Internal Standard)

RT (Exp. RT): 14.00(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Quality Control)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.00 (14.00) min Calculated conc: 1.00 ng/ml Area Ratio: 0.223 Sample Type: (Quality Control)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 13.90 (13.90) min Calculated conc: 0.992 ng/ml Area Ratio: 0.078 Sample Type: (Quality Control)	

Data File	LM18882.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 5:16:45 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416117-02 CCV (1.0ug/L)	**Injection Vial**	3.00
Data File	LM18882.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 5:16:45 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Quality Control
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416117-02	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.530e+05	14.10	5.00	-

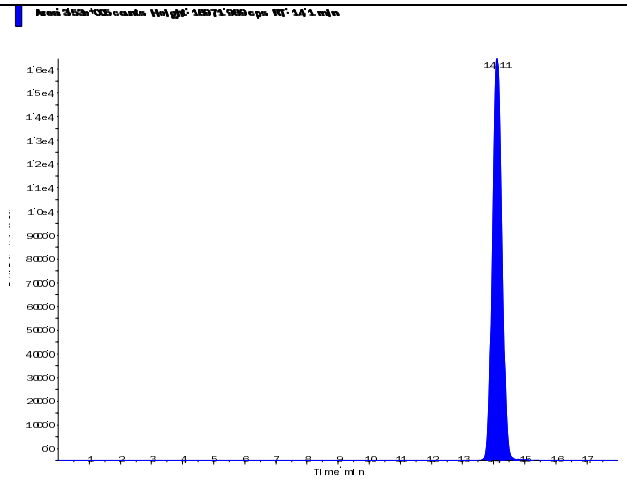
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	7.760e+04	14.10	1.00	0.99
Perchlorate conf	2.610e+04	14.10	1.00	0.946

O18LP (Internal Standard)

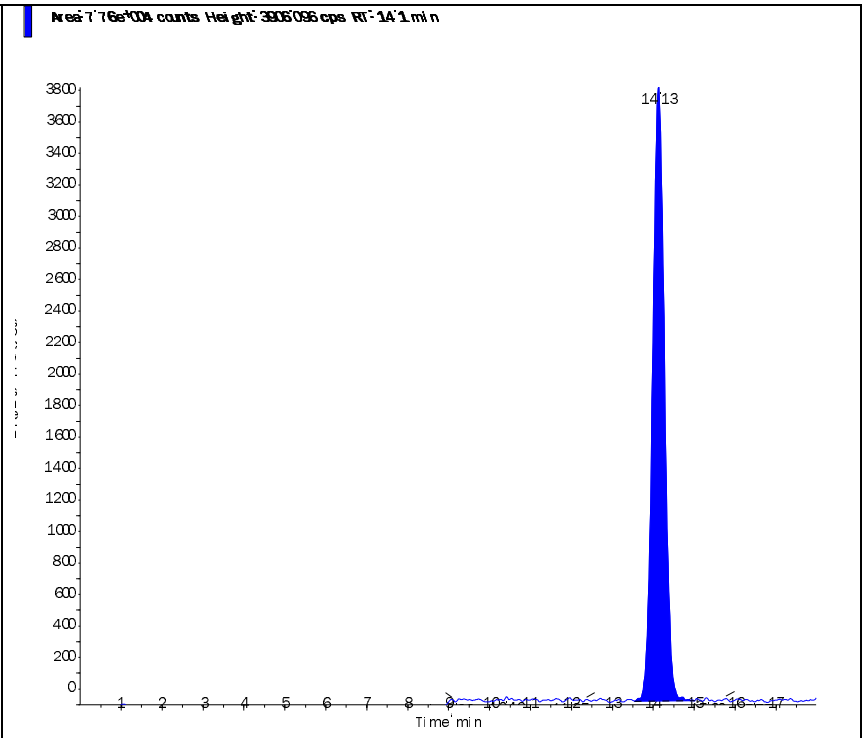
RT (Exp. RT): 14.10(13.90) min

Concentration: 5.00 ug/L

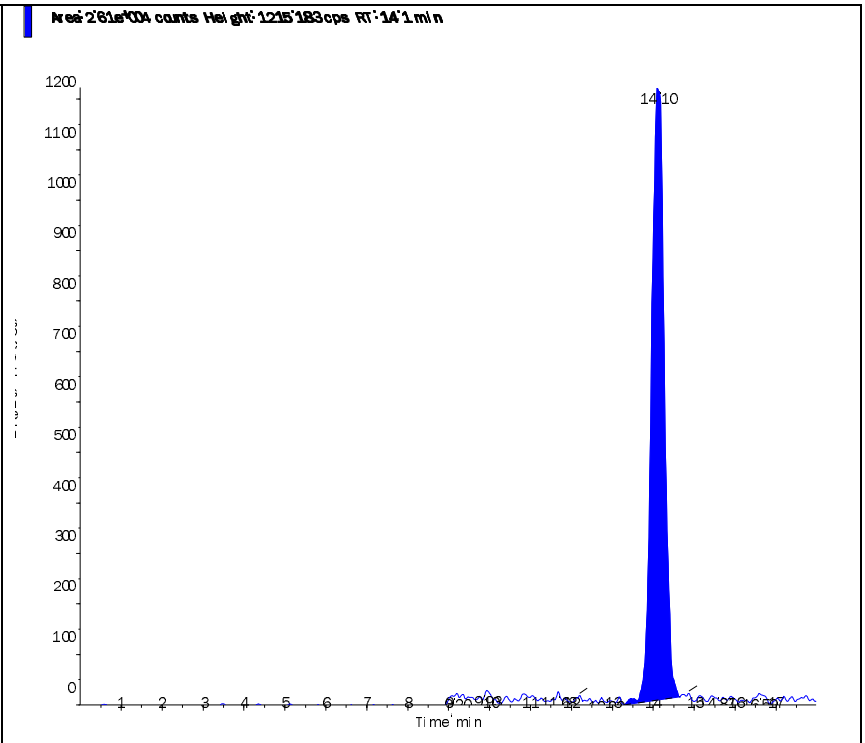
Sample Type: (Quality Control)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	 14.10 (14.00) min 0.99 ng/ml 0.22 (Quality Control)



Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	 14.10 (13.90) min 0.946 ng/ml 0.074 (Quality Control)



Data File	LM18895.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 9:22:50 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416117-03 CCV (1.0ug/L)	**Injection Vial**	3.00
Data File	LM18895.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 9:22:50 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Quality Control
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416117-03	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.560e+05	14.10	5.00	-

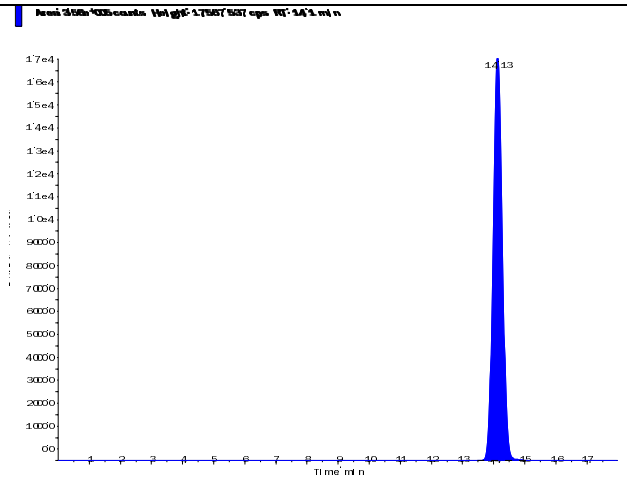
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	7.740e+04	14.20	1.00	0.977
Perchlorate conf	2.770e+04	14.10	1.00	0.993

O18LP (Internal Standard)

RT (Exp. RT): 14.10(13.90) min

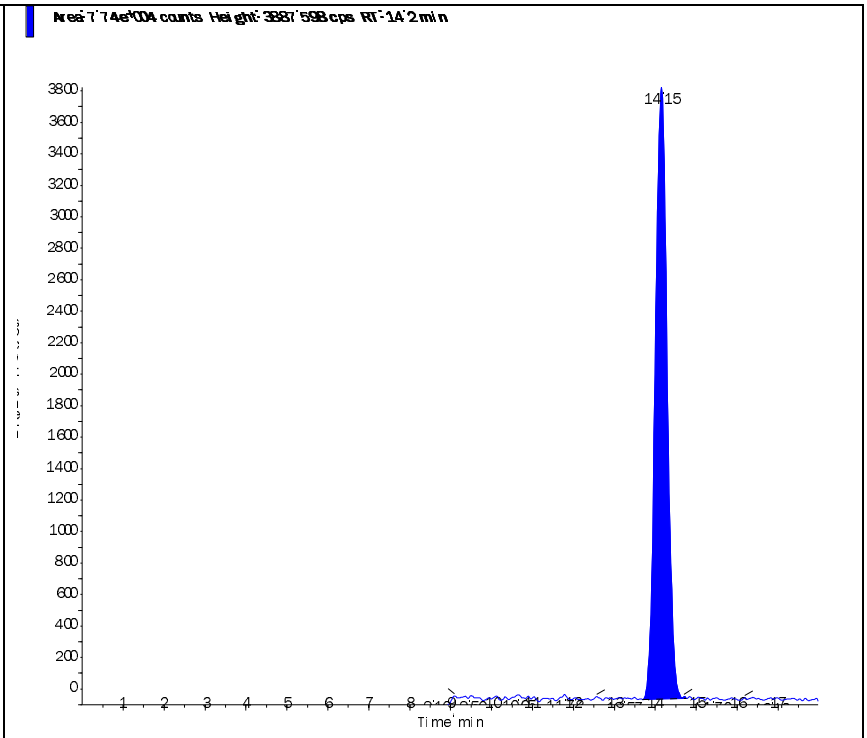
Concentration: 5.00 ug/L

Sample Type: (Quality Control)



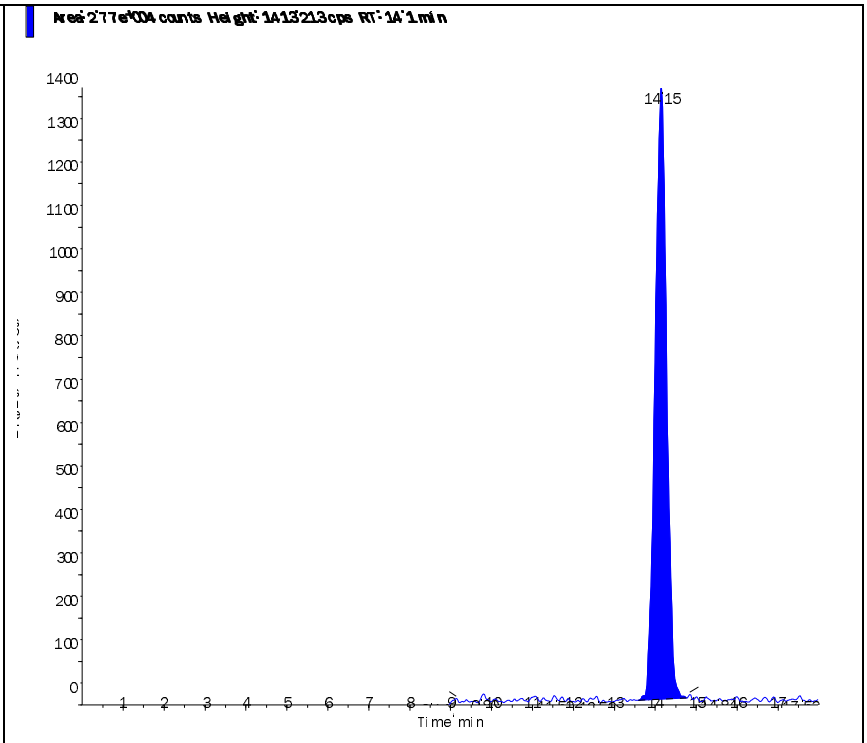
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	14.20 (14.00) min
Calculated conc:	0.977 ng/ml
Area Ratio:	0.217
Sample Type:	(Quality Control)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	14.10 (13.90) min
Calculated conc:	0.993 ng/ml
Area Ratio:	0.078
Sample Type:	(Quality Control)



Data File	LM18909.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/8/2012 1:47:58 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416117-05 CCV (1.0ug/L)	**Injection Vial**	3.00
Data File	LM18909.wiff	**Injection Volume**	10.00
Acquisition Date	12/8/2012 1:47:58 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Quality Control
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416117-05	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.470e+05	14.10	5.00	-

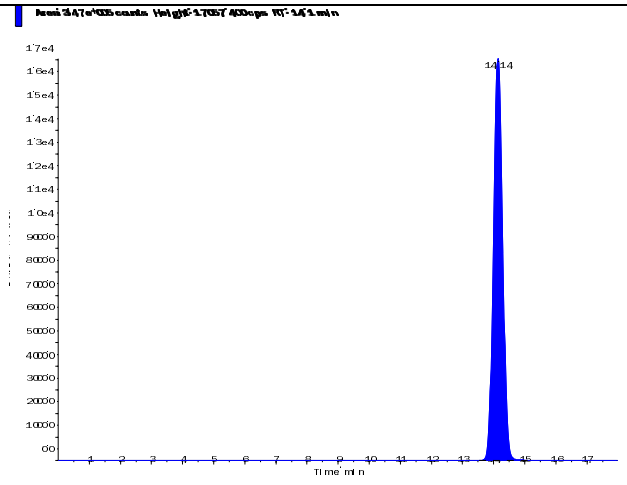
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	7.540e+04	14.20	1.00	0.978
Perchlorate conf	2.720e+04	14.10	1.00	1.00

O18LP (Internal Standard)

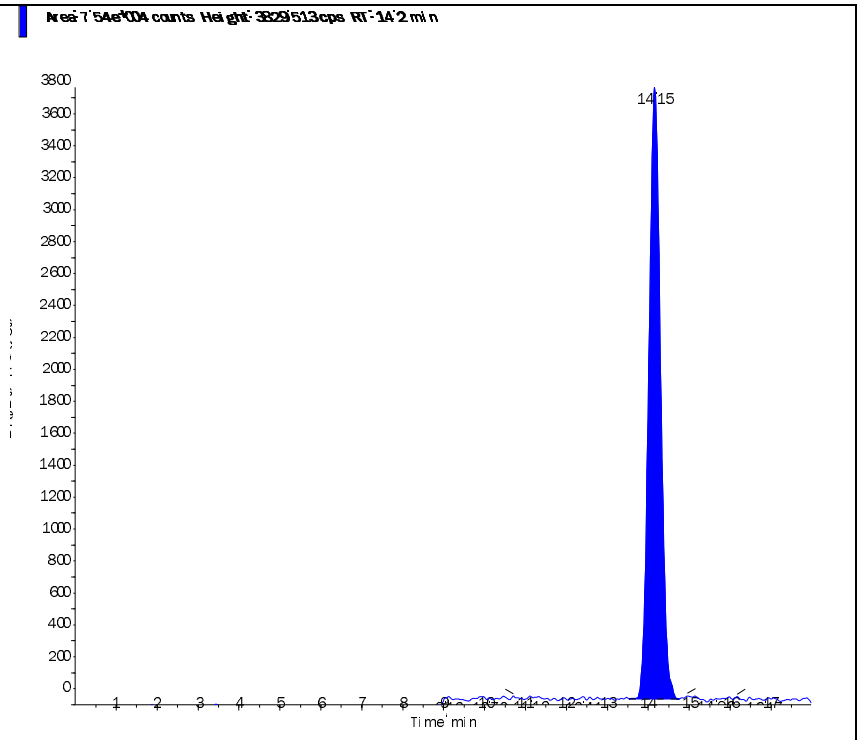
RT (Exp. RT): 14.10(13.90) min

Concentration: 5.00 ug/L

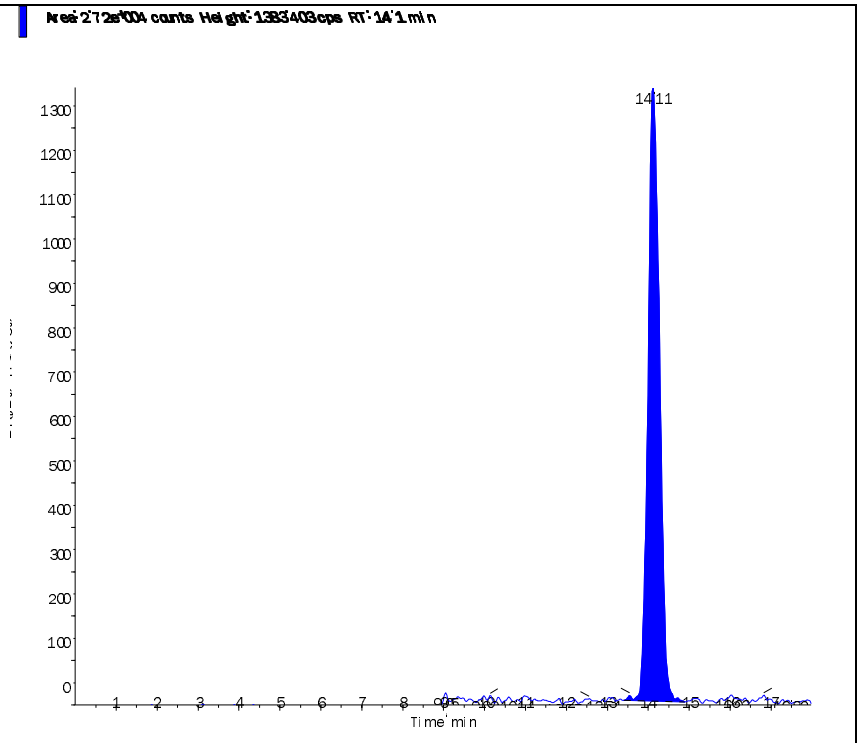
Sample Type: (Quality Control)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	14.20 (14.00) min 0.978 ng/ml 0.217 (Quality Control)



Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	14.10 (13.90) min 1.00 ng/ml 0.078 (Quality Control)



Data File	LM18883.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 5:35:37 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416116-07 QCMRL (0.2ug/L)	**Injection Vial**	2.00
Data File	LM18883.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 5:35:37 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416116-07	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.740e+05	14.10	5.00	-

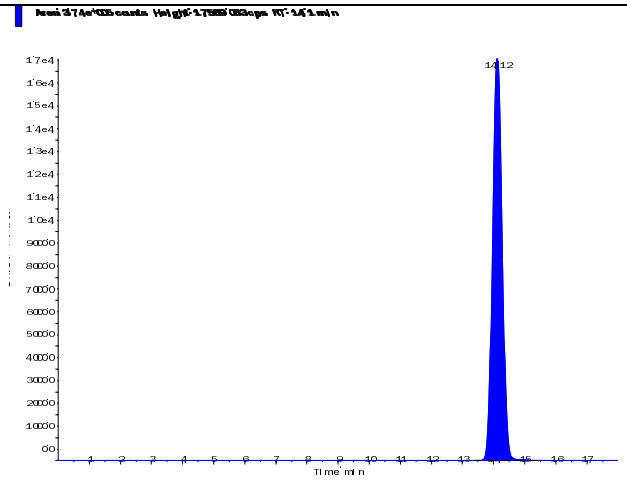
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.670e+04	14.10	N/A	0.188
Perchlorate conf	6.110e+03	14.10	N/A	0.188

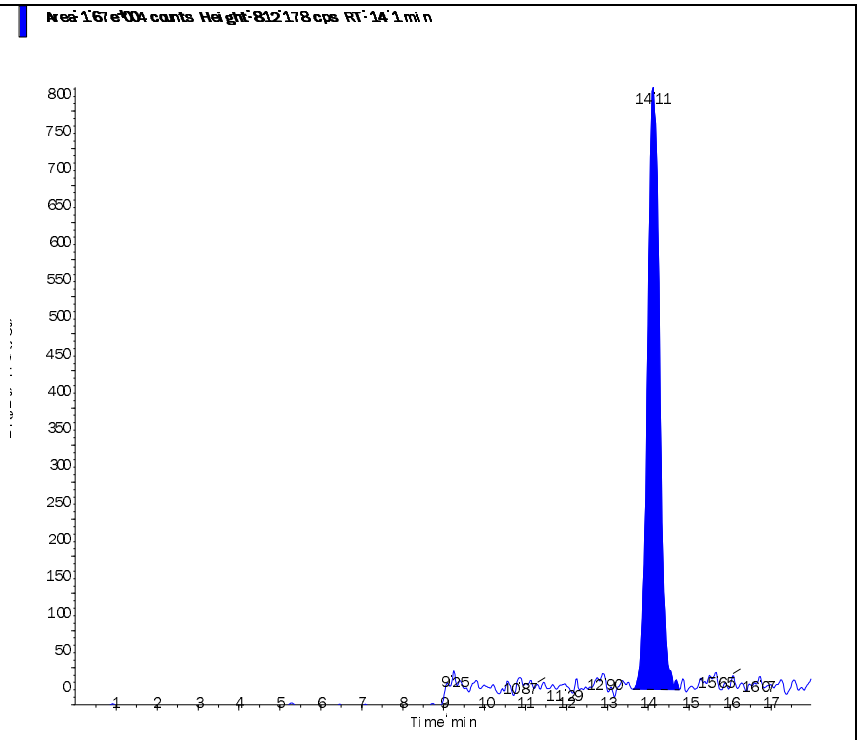
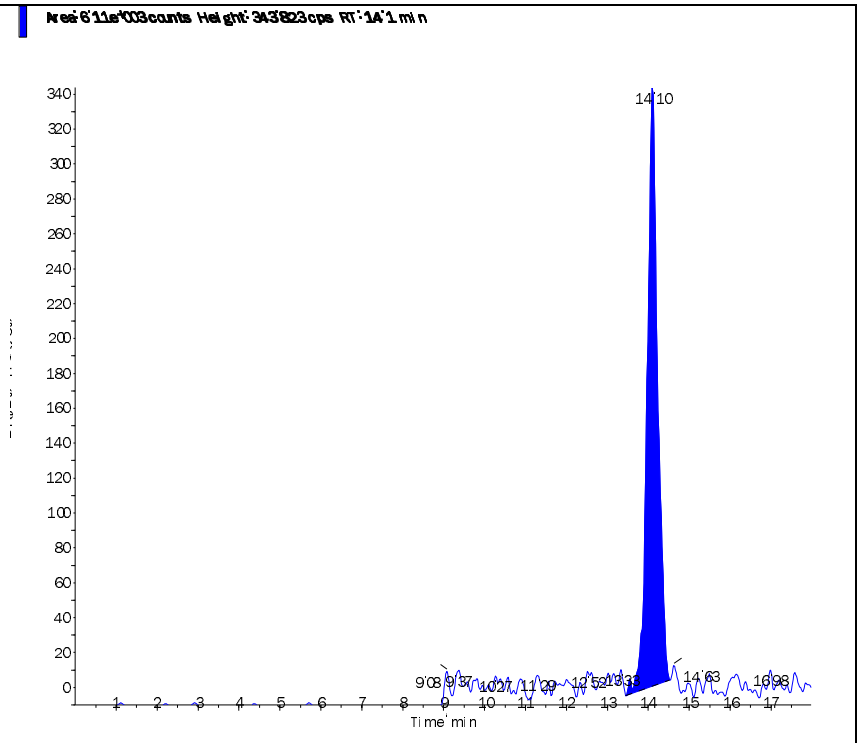
O18LP (Internal Standard)

RT (Exp. RT): 14.10(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.10 (14.00) min Calculated conc: 0.188 ng/ml Area Ratio: 0.045 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 14.10 (13.90) min Calculated conc: 0.188 ng/ml Area Ratio: 0.016 Sample Type: (Unknown)	

Data File	LM18896.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 9:41:47 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416116-08 QCMRL (0.2ug/L)	**Injection Vial**	2.00
Data File	LM18896.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 9:41:47 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416116-08	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.850e+05	14.20	5.00	-

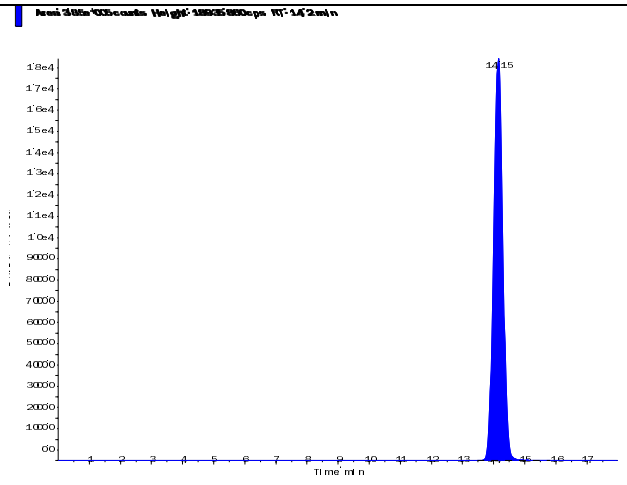
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.650e+04	14.20	N/A	0.18
Perchlorate conf	6.300e+03	14.20	N/A	0.188

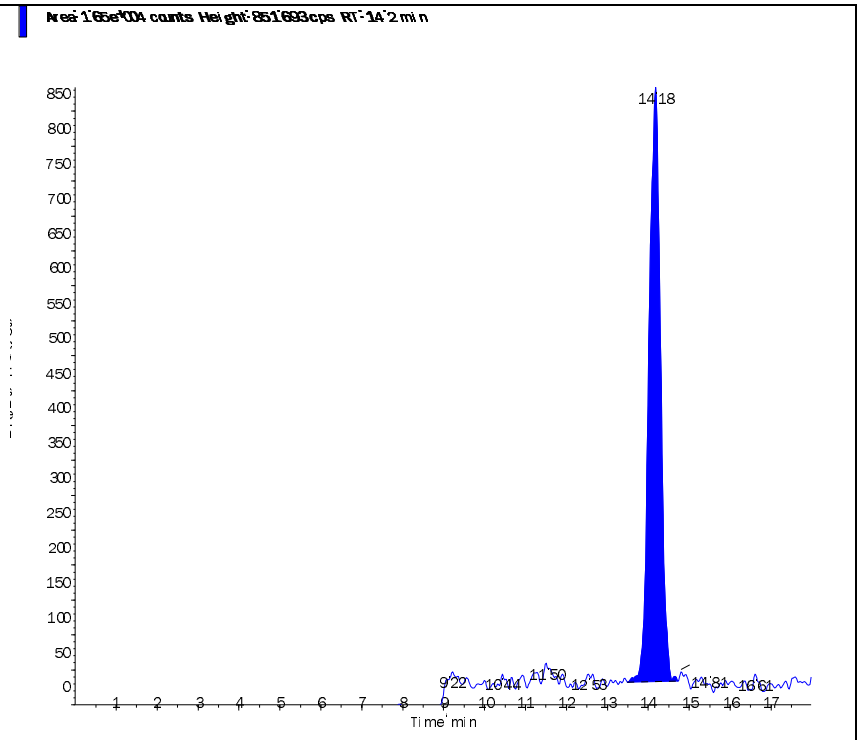
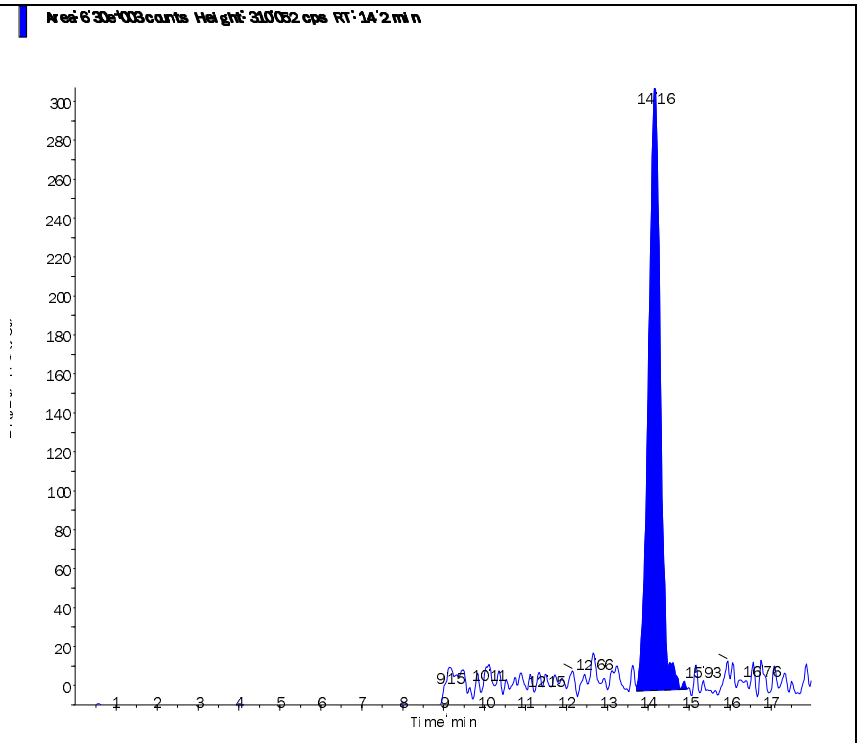
O18LP (Internal Standard)

RT (Exp. RT): 14.20(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.20 (14.00) min Calculated conc: 0.18 ng/ml Area Ratio: 0.043 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 14.20 (13.90) min Calculated conc: 0.188 ng/ml Area Ratio: 0.016 Sample Type: (Unknown)	

Data File	LM18910.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/8/2012 2:06:55 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416116-09 QCMRL (0.2ug/L)	**Injection Vial**	2.00
Data File	LM18910.wiff	**Injection Volume**	10.00
Acquisition Date	12/8/2012 2:06:55 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416116-09	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.620e+05	14.20	5.00	-

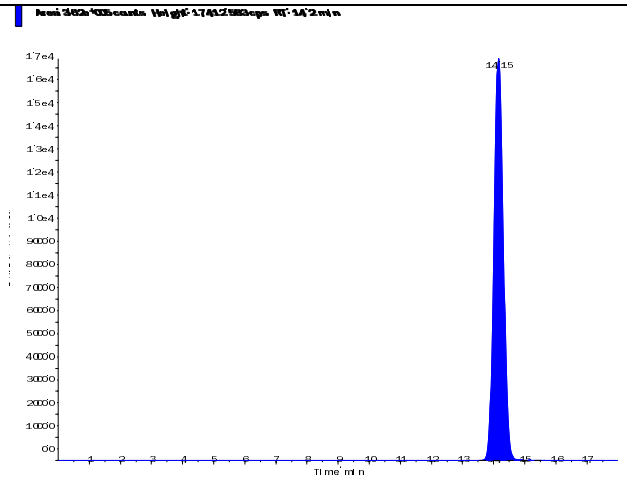
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.680e+04	14.20	N/A	0.196
Perchlorate conf	6.240e+03	14.20	N/A	0.20

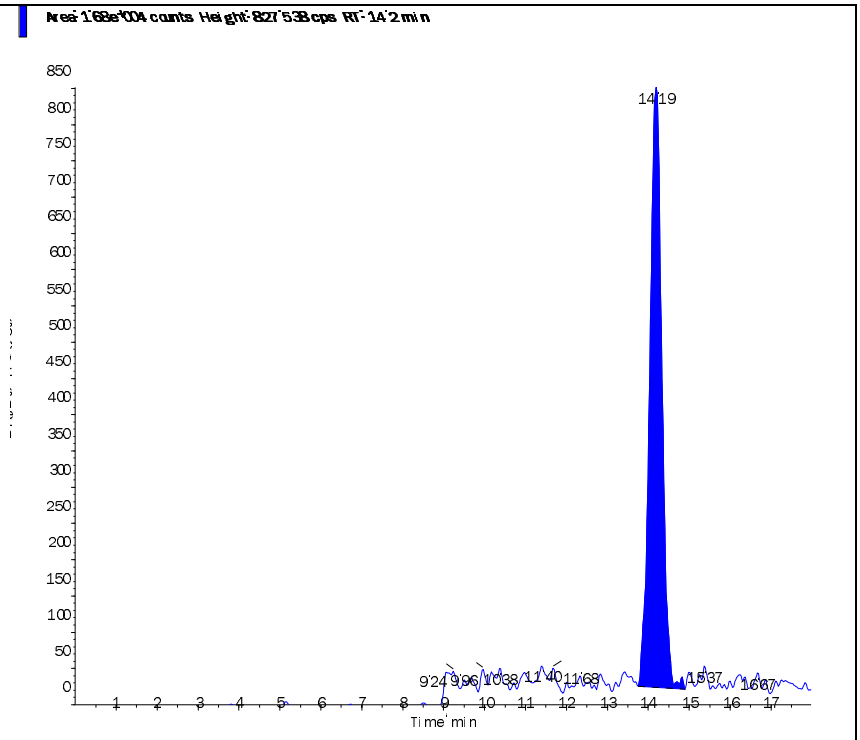
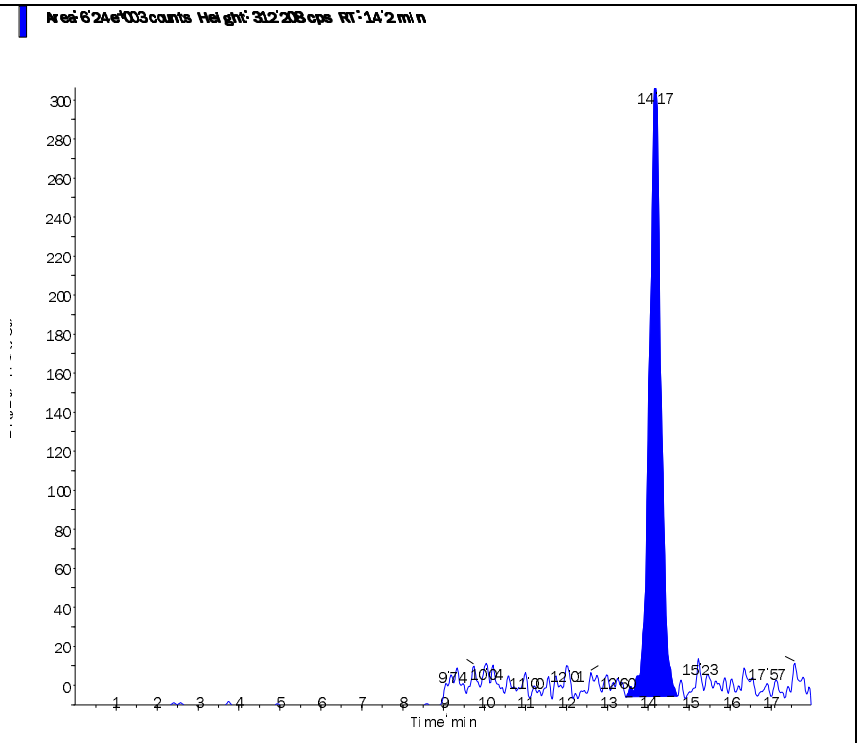
O18LP (Internal Standard)

RT (Exp. RT): 14.20(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.20 (14.00) min Calculated conc: 0.196 ng/ml Area Ratio: 0.046 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 14.20 (13.90) min Calculated conc: 0.20 ng/ml Area Ratio: 0.017 Sample Type: (Unknown)	

Data File	LM18881.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 4:57:52 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416117-01 CCB	**Injection Vial**	1.00
Data File	LM18881.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 4:57:52 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416117-01	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.500e+05	14.10	5.00	-

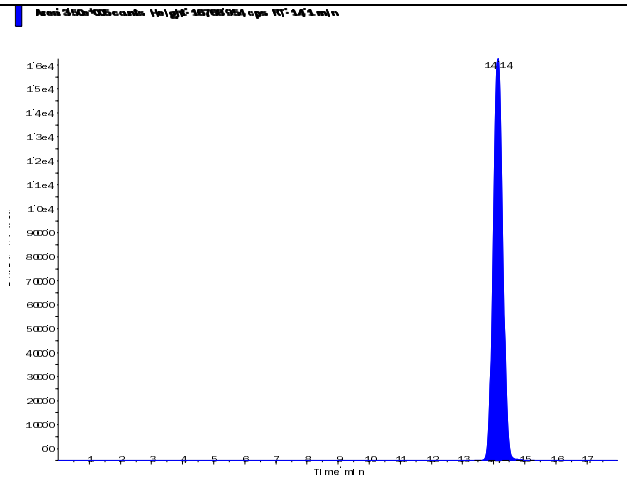
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.690e+03	14.10	N/A	0.0055
Perchlorate conf	4.280e+02	14.10	N/A	< 0

O18LP (Internal Standard)

RT (Exp. RT): 14.10(13.90) min

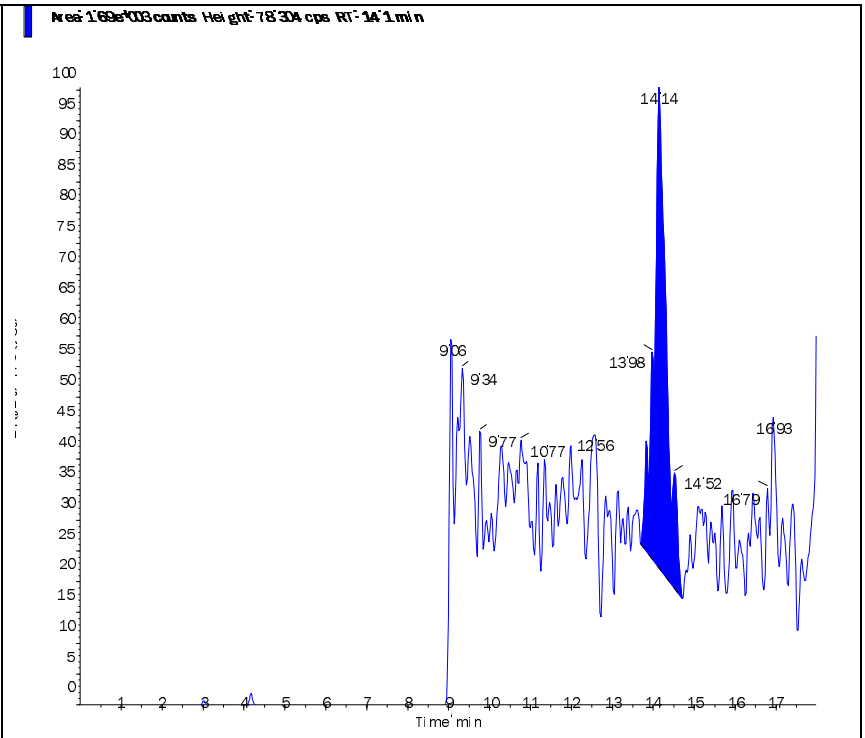
Concentration: 5.00 ug/L

Sample Type: (Unknown)



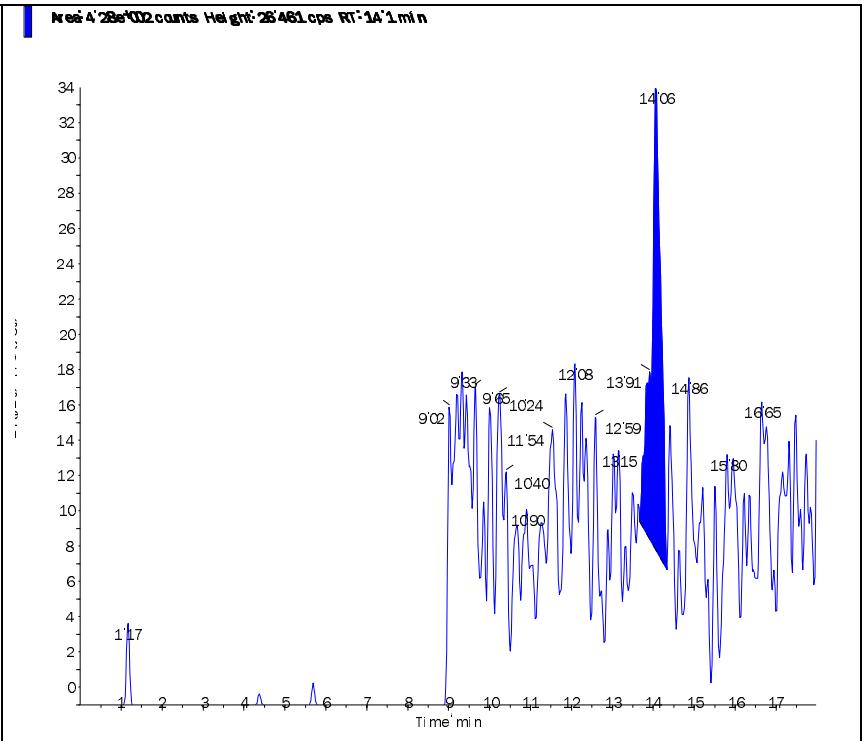
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	14.10 (14.00) min
Calculated conc:	0.0055 ng/ml
Area Ratio:	0.005
Sample Type:	(Unknown)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	14.10 (13.90) min
Calculated conc:	< 0 ng/ml
Area Ratio:	0.001
Sample Type:	(Unknown)



Data File	LM18897.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 10:00:42 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416117-04 CCB	**Injection Vial**	1.00
Data File	LM18897.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 10:00:42 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416117-04	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.730e+05	14.10	5.00	-

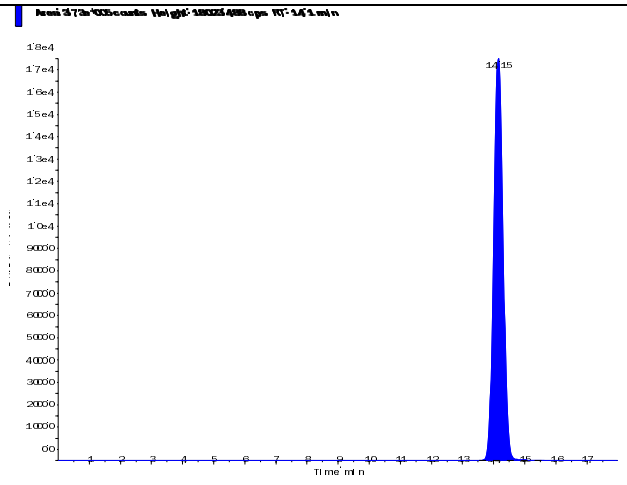
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	9.410e+02	14.20	N/A	< 0
Perchlorate conf	4.160e+02	14.20	N/A	< 0

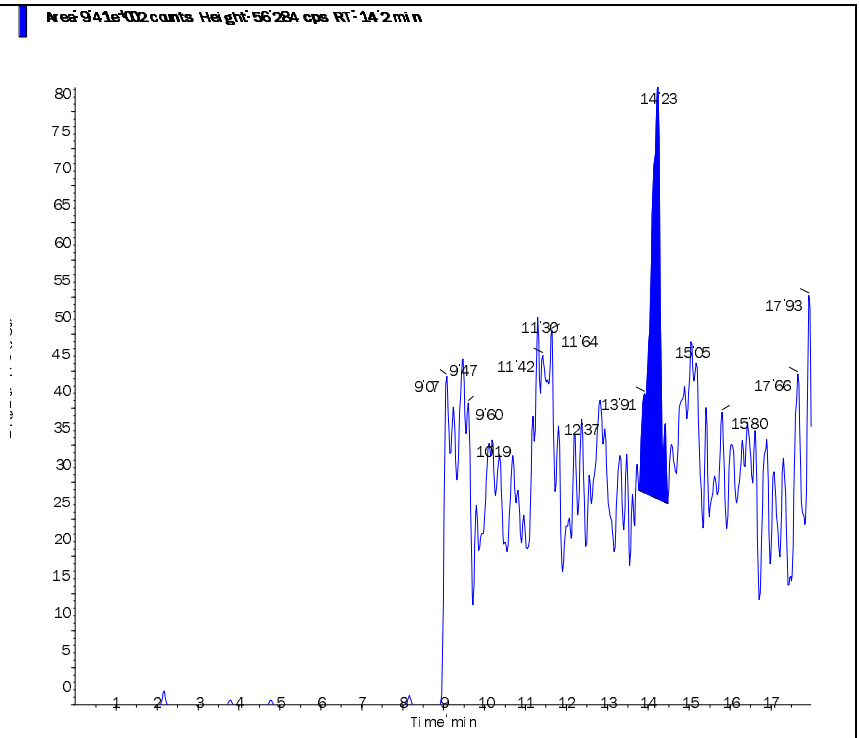
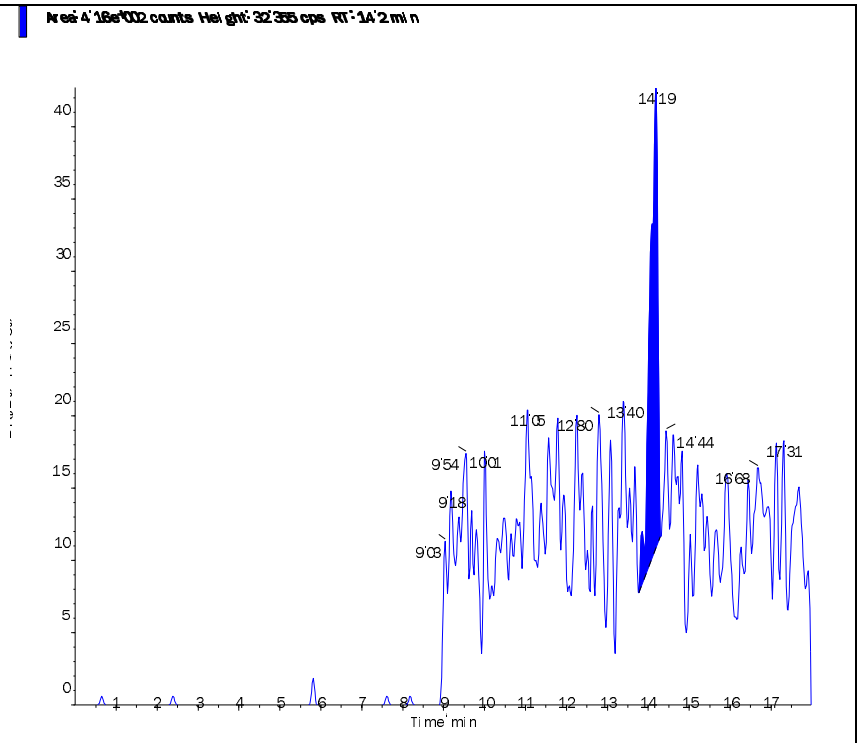
O18LP (Internal Standard)

RT (Exp. RT): 14.10(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.20 (14.00) min Calculated conc: < 0 ng/ml Area Ratio: 0.003 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 14.20 (13.90) min Calculated conc: < 0 ng/ml Area Ratio: 0.001 Sample Type: (Unknown)	

Data File	LM18911.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/8/2012 2:25:50 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416117-06 CCB	**Injection Vial**	1.00
Data File	LM18911.wiff	**Injection Volume**	10.00
Acquisition Date	12/8/2012 2:25:50 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416117-06	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.560e+05	14.20	5.00	-

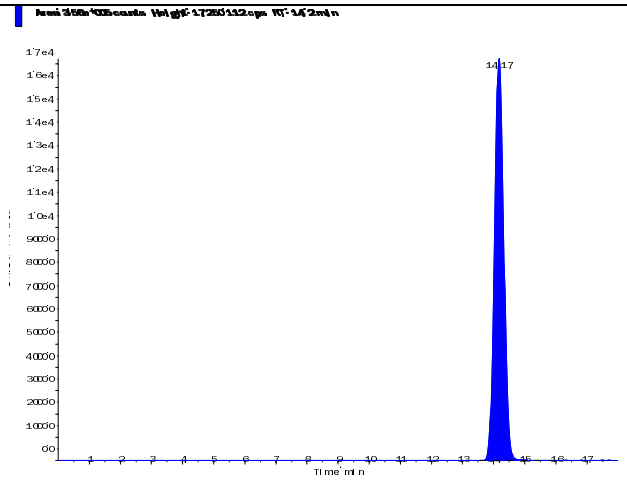
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.050e+03	14.20	N/A	< 0
Perchlorate conf	6.190e+02	14.20	N/A	< 0

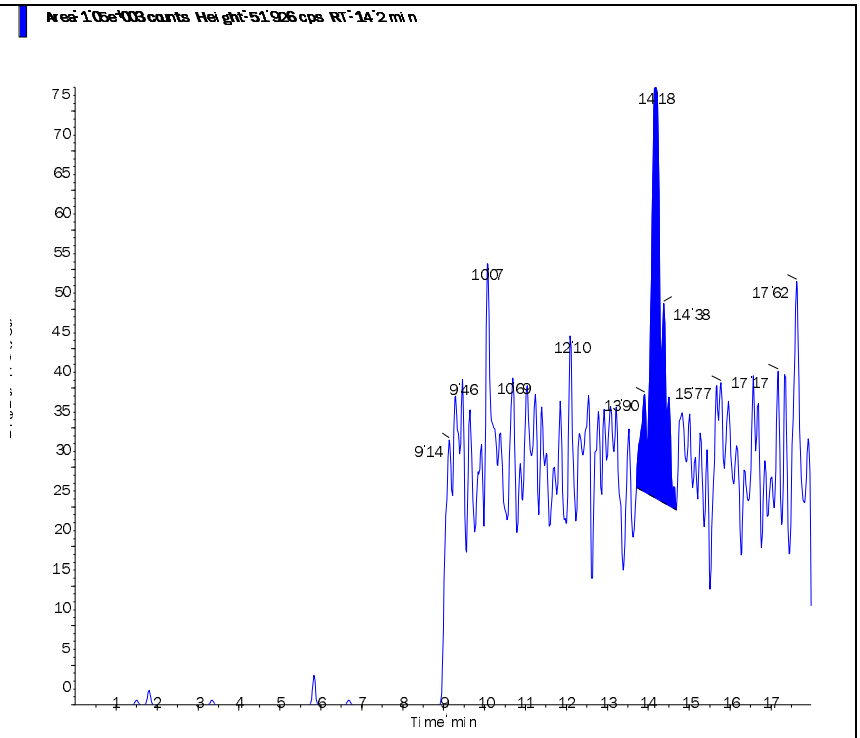
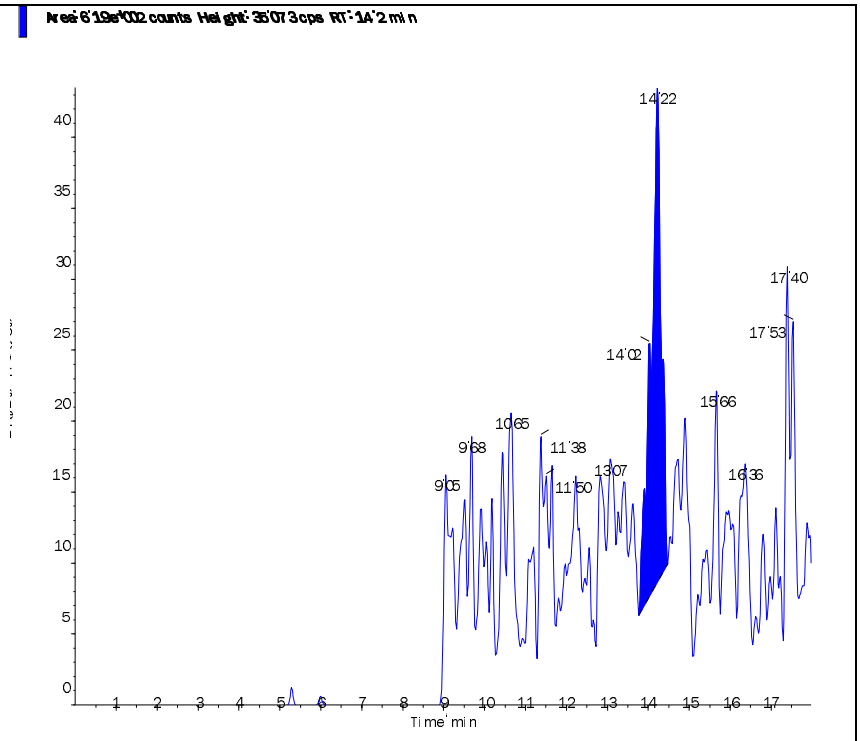
O18LP (Internal Standard)

RT (Exp. RT): 14.20(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.20 (14.00) min Calculated conc: < 0 ng/ml Area Ratio: 0.003 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 14.20 (13.90) min Calculated conc: < 0 ng/ml Area Ratio: 0.002 Sample Type: (Unknown)	

Data File	LM18884.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 5:54:34 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416116-01 MCT (0.2ug/L)	**Injection Vial**	4.00
Data File	LM18884.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 5:54:34 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416116-01	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.520e+05	11.70	5.00	-

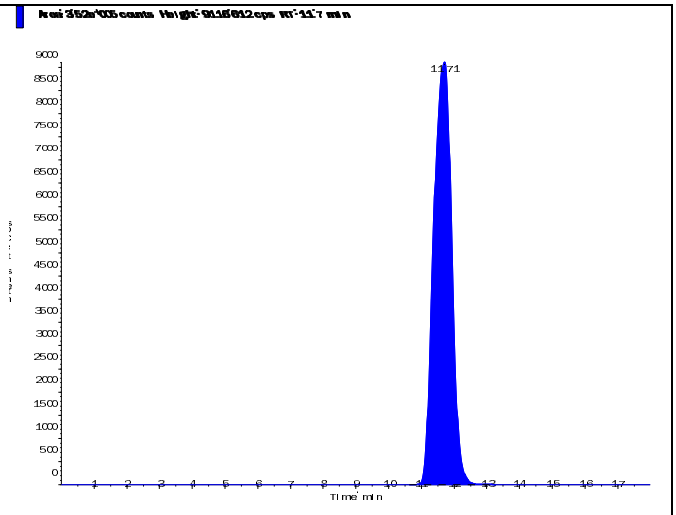
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.620e+04	11.60	N/A	0.194
Perchlorate conf	5.830e+03	11.60	N/A	0.191

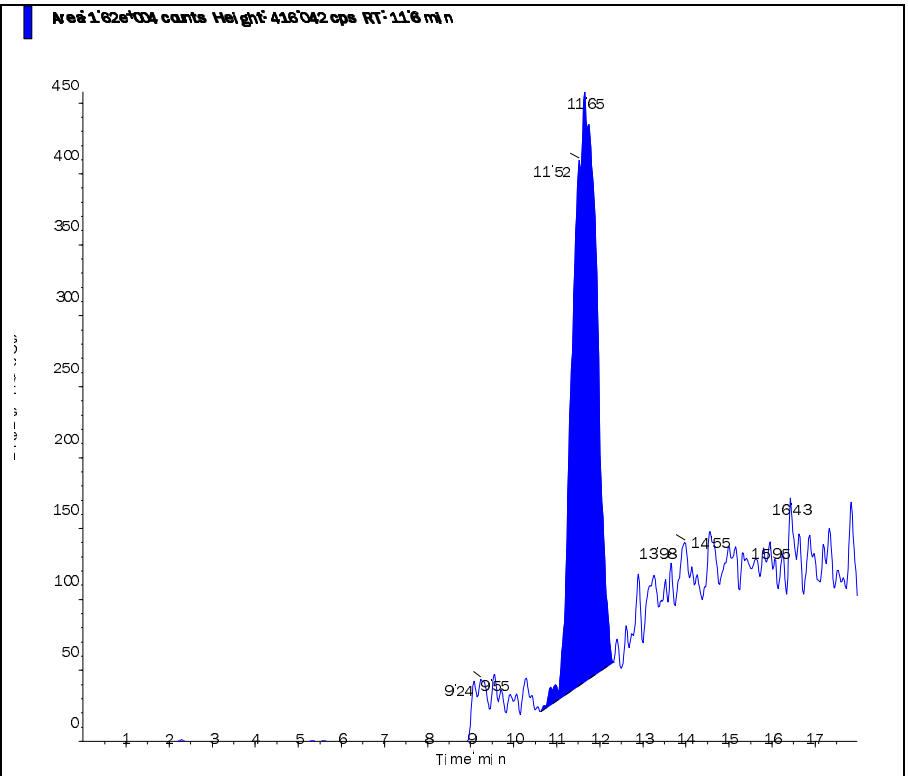
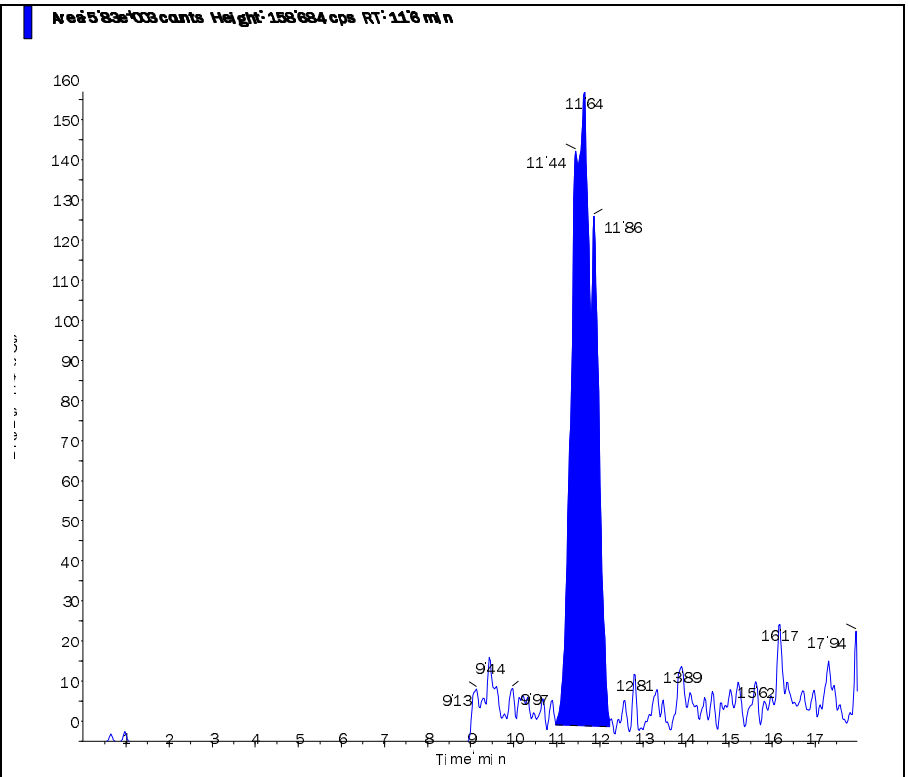
O18LP (Internal Standard)

RT (Exp. RT): 11.70(13.90) min

Concentration: 5.00 ug/L

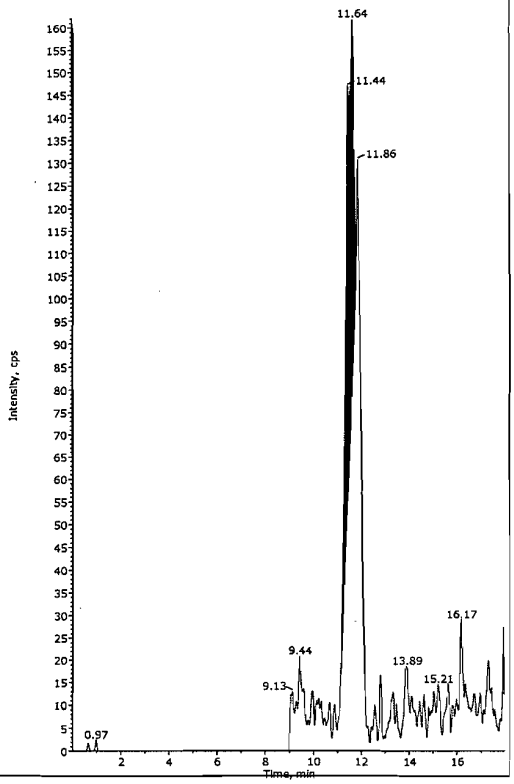
Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 11.60 (14.00) min Calculated conc: 0.194 ng/ml Area Ratio: 0.046 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 11.60 (13.90) min Calculated conc: 0.191 ng/ml Area Ratio: 0.017 Sample Type: (Unknown)	

Sample Name: "WG416116-01 MCT (0.2ug/L)" Sample ID: "WG416116-01" File: "LM18884.wiff"
Peak Name: "Perchlorate conf" Mass(es): "100.8/85.2 amu"
Comment: "1,1 STD54784" Annotation: ""

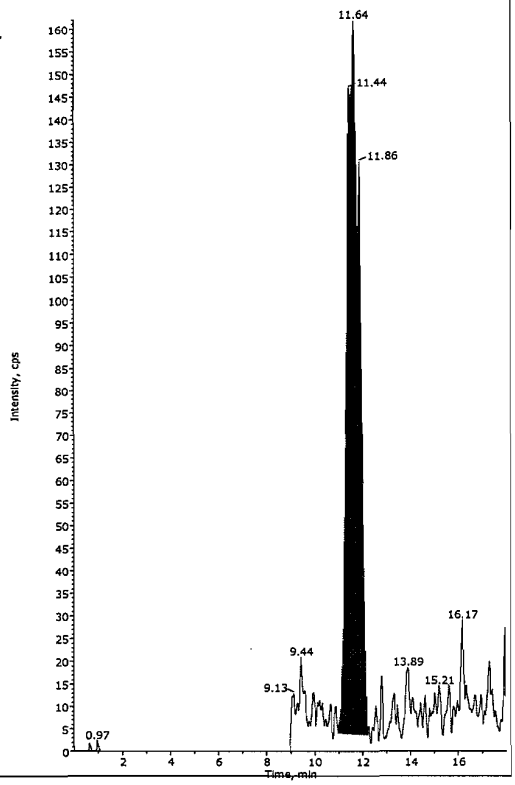
Sample Index:	1
Sample Type:	Unknown
Concentration:	N/A
Calculated Conc:	0.0464 ug/L
Acq. Date:	12/7/2012
Acq. Time:	5:54:34 PM
Modified:	No
Proc. Algorithm:	Analyst Classic
Bunching Factor:	3
Noise Threshold:	3.40 cps
Area Threshold:	12.01 cps
Num. Smooths:	5
Sep. Width:	0.20
Sep. Height:	0.01
Exp. Peak Ratio:	5.00
Exp. Adj. Ratio:	4.00
Exp. Val. Ratio:	3.00
RT Window:	30.000 sec
Expected RT:	13.9 min
Use Relative RT:	Yes
Int. Type:	Base To Base
Retention Time:	11.6 min
Area:	1.96e+003 counts
Height:	78.899 cps
Start Time:	11.098 min
End Time:	11.786 min



Collected by: N/A
Electronic Signature: no
Operator: lcms1

Sample Name: "WG416116-01 MCT (0.2ug/L)" Sample ID: "WG416116-01" File: "LM18884.wiff"
Peak Name: "Perchlorate conf" Mass(es): "100.8/85.2 amu"
Comment: "1,1 STD54784" Annotation: ""

Sample Index:	1
Sample Type:	Unknown
Concentration:	N/A
Calculated Conc:	0.191 ug/L
Acq. Date:	12/7/2012
Acq. Time:	5:54:34 PM
Modified:	Yes
Proc. Algorithm:	Analyst Classic
Bunching Factor:	3
Noise Threshold:	2.40 cps
Area Threshold:	12.01 cps
Num. Smooths:	5
Sep. Width:	0.20
Sep. Height:	0.01
Exp. Peak Ratio:	5.00
Exp. Adj. Ratio:	4.00
Exp. Val. Ratio:	3.00
RT Window:	30.000 sec
Expected RT:	13.9 min
Use Relative RT:	Yes
Int. Type:	Manual
Retention Time:	11.6 min
Area:	5.83e+003 counts
Height:	158.684 cps
Start Time:	10.976 min
End Time:	12.232 min



#4
JWR 12/10/12
mlk 12/11/12

Collected by: N/A
Electronic Signature: no
Operator: lcms1

2.2.1.5 Raw QC Data

Data File	LM18885.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 6:13:29 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416116-02 BLANK	**Injection Vial**	5.00
Data File	LM18885.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 6:13:29 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416116-02	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.650e+05	14.10	5.00	-

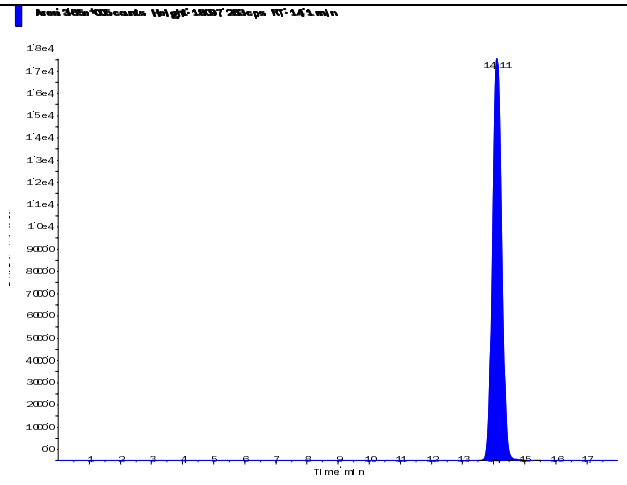
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.170e+03	14.20	N/A	< 0
Perchlorate conf	0.000e+00	0.00	N/A	No Peak

O18LP (Internal Standard)

RT (Exp. RT): 14.10(13.90) min

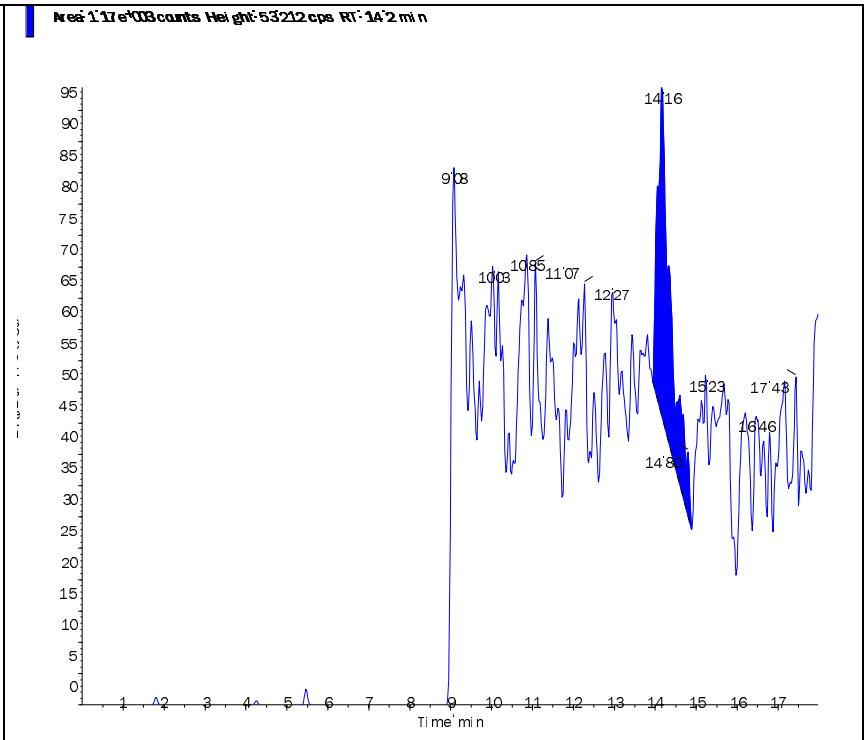
Concentration: 5.00 ug/L

Sample Type: (Unknown)



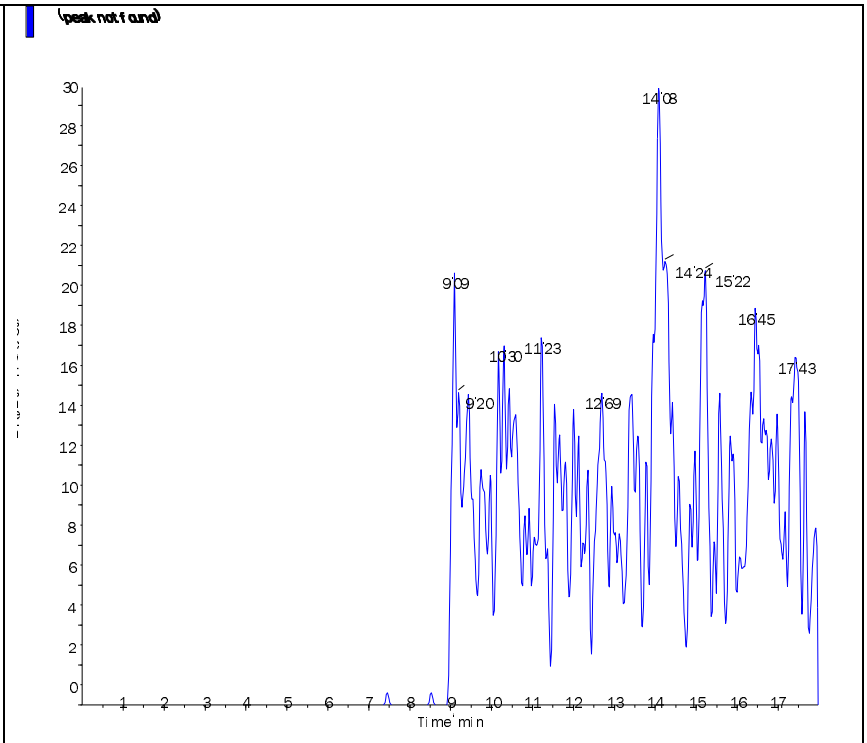
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	14.20 (14.00) min
Calculated conc:	< 0 ng/ml
Area Ratio:	0.003
Sample Type:	(Unknown)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	0.00 (13.90) min
Calculated conc:	No Peak ng/ml
Area Ratio:	0.00
Sample Type:	(Unknown)



Data File	LM18886.wiff	**Result Table**	120712_JWR.rdb
Acquisition Date	12/7/2012 6:32:25 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

Sample Name	WG416116-03 LCS (0.2ug/L)	**Injection Vial**	6.00
Data File	LM18886.wiff	**Injection Volume**	10.00
Acquisition Date	12/7/2012 6:32:25 PM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	120712_JWR.rdb
Sample ID	WG416116-03	**Dilution Factor**	1.00
Sample Comment	1,1 STD54784	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.600e+05	14.10	5.00	-

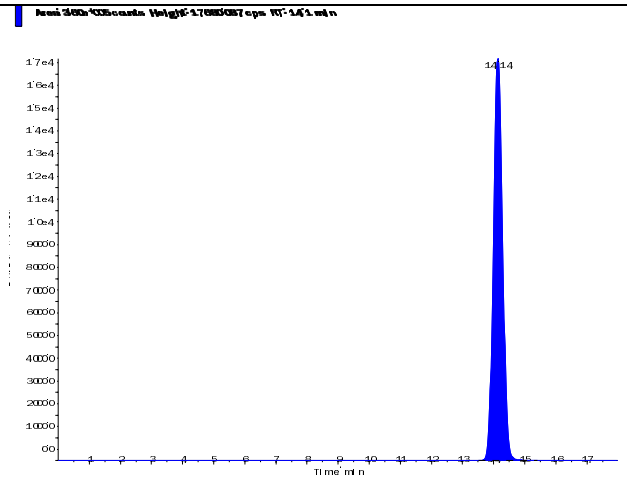
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.770e+04	14.20	N/A	0.209
Perchlorate conf	6.000e+03	14.10	N/A	0.192

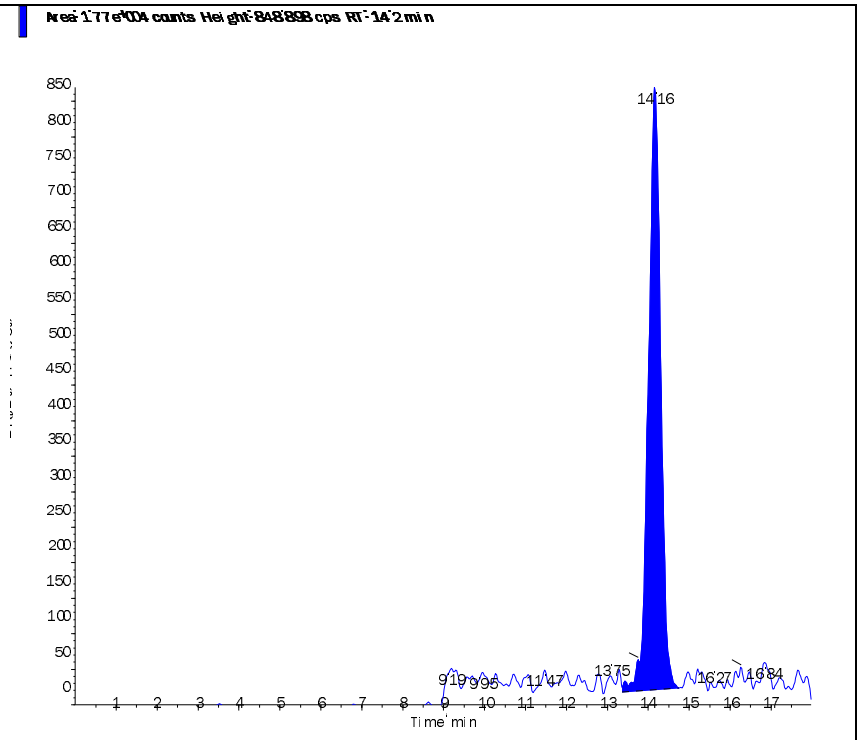
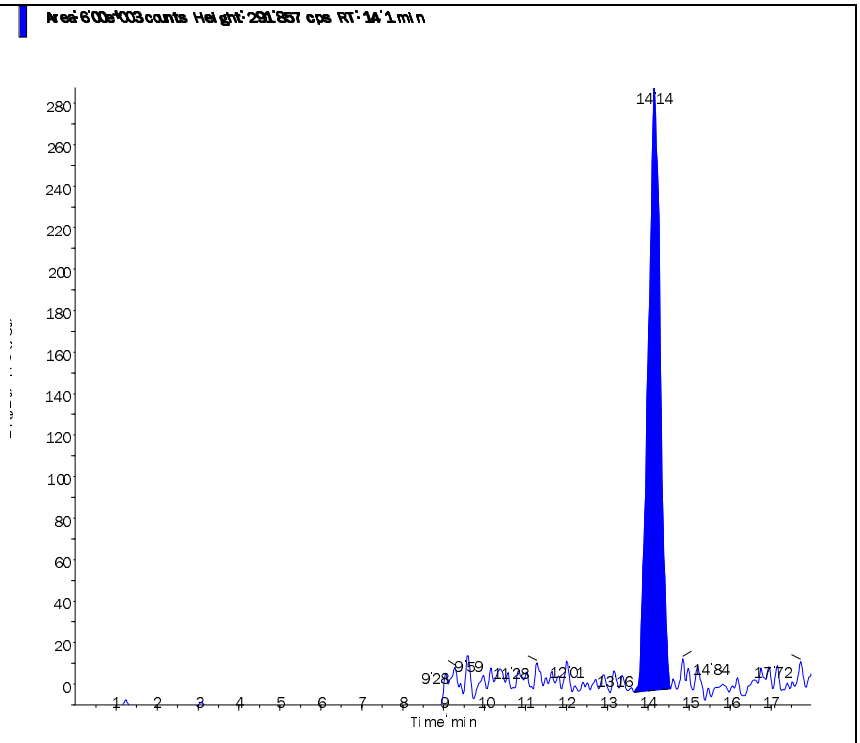
O18LP (Internal Standard)

RT (Exp. RT): 14.10(13.90) min

Concentration: 5.00 ug/L

Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 14.20 (14.00) min Calculated conc: 0.209 ng/ml Area Ratio: 0.049 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 14.10 (13.90) min Calculated conc: 0.192 ng/ml Area Ratio: 0.017 Sample Type: (Unknown)	

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
December 17, 2012

ADC – ANTHONY D. CANTER	AJF – AMANDA J. FICKIESEN	AML – TONY M. LONG
AZH – AFTER HOURS	BAF – BRICE A. FENTON	BLG – BRENDA L. GREENWALT
BRG – BRENDA R. GREGORY	CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS
CEB – CHAD E. BARNES	CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER
CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS	CSH – CHRIS S. HILL
CTB – CHRIS T. BUCINA	DDE – DEBRA D. ELLIOTT	DEV – DAVID E. VANDENBERG
DGB – DOUGLAS G. BUTCHER	DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER
DLP – DOROTHY L. PAYNE	DLR – DIANNA L. RAUCH	DSM – DAVID S. MOSSOR
ECL – ERIC C. LAWSON	EDL – ERIN D. LONG	ERP – ERIN R. PORTER
FJB – FRANCES J. BOLDEN	HAV – HEMA VILASAGAR	HJR – HOLLY J. REED
JBK – JEREMY B. KINNEY	JDH – JUSTIN D. HESSON	JKS – JANE K. SCHAAD
JLL – JOHN L. LENT	JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES
JYH – JI Y. HU	KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KRA – KATHY R. ALBERTSON	LKN – LINDA K. NEDEFF	LSB – LESLIE S. BUCINA
MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN	MES – MARY E. SCHILLING
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR	MSW – MATT S. WILSON
PDM – PIERCE D. MORRIS	QX – QIN XU	RAH – ROY A. HALSTEAD
REK – BOB E. KYER	RLB – BOB BUCHANAN	RS – ROSEMARY SCOTT
RWC – RODNEY W. CAMPBELL	SEP – SUZANNE J. PAUGH	SLM – STEPHANIE L. MOSSBURG
SLP – SHERI L. PFALZGRAF	TIP – TAE I. PARRISH	TMB – TIFFANY M. BAILEY
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER	WJB – WILL J. BEASLEY
WTD – WADE T. DELONG	XXX – UNAVAILABLE OR SUBCONTRACT	

Microbac Laboratories Inc.
List of Valid Qualifiers
December 17, 2012

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Greater than
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported LOD.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a c
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

AECOM Chain of Custody Record

COC Number: 1245

Laboratory: Microbac POC: Erin Long	**Project Manager:** Dave Wacker	**Mail to:** Linda Raabe
Address: 158 Starlite Dr.	**Phone/Fax Number:** 210-296-2000	AECOM
Marietta, OH 45750	**Sampler (print):** Jason Garrett / Altricia Smith	112 East Pecan Ste. 400
Phone: 800-373-4071		San Antonio, TX 78205
Client: AECOM	**Signature:** Altricia Smith	**Fed Ex Airbill No:**
Address: 112 East Pecan Ste. 400		
San Antonio, TX 78205	pH:	**Program:** DoD QSM
Turn Around Time: 14-day		
Project Name/Location: Longhorn AAP		
Project Number: 60256135		

Site Name	Sample ID/Location ID	SBD	SED	Date 2012	Time	Comp-	Grab	Matrix	Number of Containers	SW8260	Sucralose Perchlorate #5	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
LHAAP-12	12WW20-031212			12-03	1410		X	WG	3	X		N	001		031212	031212
	12WW20-031212D			12-03	1410		X	WG	3	X		FD	001		031212	031212
	12WW21-031212			12-03	1605		X	WG	3	X		N	001		031212	031212
	12WW21-031212MS			12-03	1605		X	WG	3	X		MS	001		031212	031212
	12WW21-031212SD			12-03	1605		X	WG	3	X		SD	001		031212	031212
	12WW23-031212			12-03	1710		X	WG	3	X		N	001		031212	031212
	EB-031212-01			12-03	0920		X	WQ	4	X	X #5	EB	001			031212
	TB-031212-01			12-03	0819			WQ	2	X		TB	001		031212	
	12WW22-041212			12-04	0800		X	WG	3	X		N	001		031212	03 04/1212

Comments:

Microbac OVD
Received: 12/05/2012 10:26
By: BOB BUCHANAN
221000030700
RF Buchanan

	Date	Time	
(Signature)	12/4/12	0740	
Relinquished by: (Signature)	Date	Time	

Date	Time	Relinquished by: (Signature)
Time		Remarks:

*Homogenize all composite samples prior to analysis

Distribution: White to Laboratory, Canary to Project Manager, Pink QA/QC Manager

Internal Chain of Custody Report

Login: L12120212
Account: 2551
Project: 2551.096
Samples: 8
Due Date: 14-DEC-2012

Samplenum	Container ID	Products
L12120212-01	133966	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Samplenum	Container ID	Products
L12120212-02	133967	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12120212
Account: 2551
Project: 2551.096
Samples: 8
Due Date: 14-DEC-2012

Samplenum	Container ID	Products
L12120212-03	133968	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Samplenum	Container ID	Products
L12120212-04	133969	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12120212
Account: 2551
Project: 2551.096
Samples: 8
Due Date: 14-DEC-2012

Samplenum	Container ID	Products
L12120212-05	133970	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Samplenum	Container ID	Products
L12120212-06	133971	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L12120212
Account: 2551
Project: 2551.096
Samples: 8
Due Date: 14-DEC-2012

Samplenum	Container ID	Products
L12120212-07	133972	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		07-DEC-2012 09:57	CLS		<2

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		07-DEC-2012 09:57	CLS		<2

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		07-DEC-2012 09:57	CLS		<2

Samplenum	Container ID	Products
L12120212-07	133993	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 10:09	CLS		
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 10:09	CLS		
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 10:09	CLS		
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Samplenum	Container ID	Products
L12120212-07	133994	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	07-DEC-2012 10:09	CLS		
2	ANALYZ	W1	SEM	07-DEC-2012 12:26	JWR	CLS	
3	STORE	SEM	A1	10-DEC-2012 12:44	CLS	JWR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12120212
Account: 2551
Project: 2551.096
Samples: 8
Due Date: 14-DEC-2012

Samplenum	Container ID	Products
L12120212-08	133973	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	07-DEC-2012 09:57	CLS		<2
2	ANALYZ	V1	ORG4	07-DEC-2012 14:29	JDH	CLS	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

NELAP Addendum - March 4, 2011

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Sulfate (SO4) - 9038
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)