LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 20

2018

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LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

VOLUME 20

2018

A. Title: Final Meeting Minutes, Quarterly Restoration Advisory Board (RAB) Meeting, Longhorn Army Ammunition Plant, Karnack, Texas
Author(s): Bhate Environmental Associates, Inc.
Recipient: All Parties
Date: February 2018
Bate Stamp: 00864793 – 00864820

B. Title: Report - Draft Final 3rd Annual Remedial Action Operation Report (March to October 2016) LHAAP-35A (58), Shops Area, Longhorn Army Ammunition Plant, Karnack, Texas, Revised March 2018
Author(s): Bhate Environmental Associates, Inc.
Recipient: All Stakeholders
Date: March 8, 2018
Bate Stamp: 00864821 – 00866546

Subject: Final Minutes, Quarterly Restoration Advisory Board (RAB) Meeting
Longhorn Army Ammunition Plant (LHAAP)
Location of Meeting: Karnack Community Center, Karnack, Texas
Date of Meeting: January 18, 2018, 6:00 – 7:00 PM

Meeting Participants:

USACE:	Aaron Williams
USAEC:	Nick Smith
Bhate:	Kim Nemmers and Sally Smith
APTIM:	William (Bill) Foss
USEPA Region 6:	Rich Mayer, Dorelle Harrison
USGS:	Kent Becher
RAB:	Present: Paul Fortune; Judy VanDeventer; Tom Walker Absent: Ken Burkhalter; Lee Guice; Ted Kurz; Terry Britt; Charles Dixon; James Lambright; Richard Le Tourneau; John Pollard, Jr.; Nigel R. Shivers; Carol Fortune
Public:	Dan Murphy, Laura-Ashley Overdyke, Hattie Hackler, Beth Morgan, George Rice

An agenda for the RAB meeting, a color copy of the Bhate Environmental Associates, Inc. (Bhate) slide presentation, and handouts (see list at end of meeting minutes) were provided for meeting attendees.

Welcome and Introduction

Mr. Paul Fortune, RAB Co-Chair, called the meeting to order. Mr. Fortune noted two new persons were at the RAB Meeting. Ms. Beth Morgan is from Karnack, Texas and Hattie Hackler lives in Jefferson, Texas. Ms. Laura-Ashley Overdyke asked how Ms. Morgan and Ms. Hackler had found out about the meeting to which the response was Facebook.

Open Items

Mr. Aaron Williams mentioned that the Army is always looking for more people to join the RAB and that forms are available online. Mr. Williams then asked if there was interest in the Army having a tour of the LHAAP in April. Ms. Overdyke responded that she was interested and would publicize it. Ms. Hackler and Ms. Morgan also indicated interest. After some discussion, it was determined that the next RAB Meeting would be on April 19, 2018, from 4:00 to 5:00 pm, and then the tour would follow from 5:00 to 6:30 pm. Ms. Overdyke offered to set up an event page through the Caddo Lake Institute Facebook page and invite the public to the signup page for the tour. Mr. Williams stated that the Army would need to know a head count one month out.

Mr. Williams stated that everyone should have received the October 2017 meeting minutes. July 2017 RAB Meeting minutes were approved by Ms. Judy VanDeventer first, and then Mr. Tom Walker provided a second motion. Mr. Williams pointed out the link for the RAB applications and encouraged participation.

Defense Environmental Restoration

Overview of Sites

Ms. Kim Nemmers introduced Ms. Sally Smith who is Bhate's Corporate Health and Safety Manager and Mr. Bill Foss who is with APTIM, which is a subcontractor to Bhate. Ms. Nemmers explained which sites are under the Bhate contract and would be discussed in this RAB meeting.

Ms. Nemmers explained that the groundwater treatment plant and Site LHAAP-18/24 work together as the operating interim remedial action. There is another contract that will be awarded for three sites (LHAAP-18/24, LHAAP-29, and LHAAP-47) that require a Record of Decision (ROD).

Mr. Rich Mayer asked how many sites were under Bhate's contract to which Ms. Nemmers responded that she thought it was about 10 to 12 sites. Mr. Mayer then asked who will do the work following the final ROD at the three sites to be covered by the new contract. Mr. Williams responded that a new contract will need to be awarded for that additional work. Mr. Williams indicated that the ROD will determine what the new work will be so that it can be costed for award. Mr. George Rice then asked who is doing the work that Bhate is not. Ms. Nemmers replied that the contract was not yet awarded. Mr. Williams followed up by stating that the contract is anticipated to be awarded next week. Mr. Mayer asked if we would know who the contractor for the other sites were by the next meeting to which Mr. Williams said yes. Ms. VanDeventer requested that RAB Members be emailed after the contractor is selected. **Note:** Ms. Rose Zeiler emailed the notice of award with the contractor's name to the RAB Members on January 23, 2018.

Ms. Nemmers then discussed the documents that are being prepared and the field work that has been completed over the prior 3 months to move the sites forward. Ms. Nemmers explained that a ROD is being prepared to move site LHAAP-03 forward by moving the groundwater plume under LHAAP-58, which also requires an explanation of significant difference (ESD) for the prior ROD. The two Military Munitions Response Program (MMRP) sites have a land use control (LUC) remedial design (RD) being completed to allow for the land to be transferredto the United States Fish and Wildlife Service. Site LHAAP-58 has an ESD being prepared for additional remediation in a portion of the plume that has not received it. The Remedial Action Work Plan (RAWP) for Site LHAAP-58 was revised to include 2016 groundwater data and will allow for the remediation to be completed in the coming months. Site LHAAP-16 has a RAWP that is being prepared. Ms. Nemmers explained that Site LHAAP-16 currently uses groundwater extraction, and the remediation will include injections for bioremediation to advance the site and stop the groundwater extraction. Two sites (LHAAP-50 and LHAAP-58) have Year 3 Remedial Action-Operation (RA-O) Reports, which are groundwater reports, that will have the 2016 groundwater data included.

Ms. Nemmers then explained that mostly groundwater sampling has been completed in the past 3 months. In addition, three new wells were installed at LHAAP-04 in December 2017, which were sampled Monday and Tuesday of the prior week. Ms. Nemmers then explained that Mr.

Foss would discuss LHAAP-17 field work in detail. Ms. Nemmers pointed out that post-closure care activities were completed at the landfill which is Site LHAAP-19.

The 3 month look ahead was presented by Ms. Nemmers, who explained that many of the documents will be finalized in the coming month primarily. The only new document is the Quarterly Groundwater Treatment Plant Report, which will cover October to December 2017.

Similarly, the 3 month look ahead for field work has sites that will require sampling. In addition, we are continuing the LHAAP-17 Pre-Design Investigation (PDI) that will include an aquifer test and some additional groundwater sampling. Site LHAAP-58 will have two new monitoring wells installed followed by a baseline groundwater sampling event. Also, the Contingent Remedy for Site LHAAP-58, which is enhanced bioremediation within the western portion of the site, is planned to be implemented.

LHAAP-17

Mr. Foss introduced Site LHAAP-17 as a burning ground used for propellants, explosives, and similar materials. Mr. Foss then explained that there are two media being evaluated by the PDI. One is the soil that contains explosives, metals, and some dioxins. The other is the groundwater that contains perchlorate and chlorinated solvents, which is part of what was being treated at the site. Mr. Foss then explained that two groundwater zones are being evaluated which are the shallow and the intermediate. The shallow zone includes wells that are approximately 20 feet deep but some go as deep as 35 feet. The site also has an intermediate and a deep aquifer zone, but both of these zones have been clean each time that they were sampled. Only the shallow aquifer zone has contamination present.

The ROD in place for Site LHAAP-17 requires the PDI to be completed to obtain more site data ahead of the RD. The remedy selected is soil excavation of areas above the remedial goal and then groundwater extraction to remove the gross levels of perchlorate, which is defined as 20 parts per million (ppm), at which time the extraction will be stopped. The remedy for the groundwater will then become monitored natural attenuation (MNA), which basically means the natural degradation processes will be monitored.

Mr. Foss explained that there are three things currently being completed. Since the last groundwater sampling data was collected in 2009 and 2010, the first part of the PDI was to sample all the wells in November 2017 to determine the current site conditions. Second, a large number of soils samples were collected from the surface down to 7 to 15 feet to determine the extent of soil excavation. Approximately 50 soil borings were completed the week prior. The soil samples are currently at the laboratory being analyzed. A couple of the soils borings could not be completed due to standing water, but those samples will be collected once the area is dry. The third step is an aquifer pumping test completed to evaluate the well that will have the pump installed and to assist in the design of the extraction system. The test is being completed next week with Mr. Foss installing the transducers on the day following the RAB meeting. What that test is designed to do is to pump on one of the wells that is known to be a part of the extraction

system and then monitor the wells around it to see how those wells draw down with a given pumping rate.

Mr. Mayer asked Mr. Foss to explain what a transducer is. Mr. Foss responded that a transducer is a mechanical device that measures pressure that we use to calibrate the water pressure to depth. A transducer can be dropped into a well and be programmed to take regular measurements. Then the pump can be started in the selected well and measurements can be recorded frequently on nearby wells. One transducer will be in the well that is being pumped as well as nearby wells. At Site LHAAP-17, there will be transducers in wells up to 800 feet away from the well that is being pumped.

Mr. Foss explained that one additional well was also installed at LHAAP-17 to better delineate the shallow groundwater zone plume. MNA is clearly a component of the remedy based upon observed decreases in perchlorate detected in the groundwater from the 2009 data to the recent groundwater data. In general, plume contraction is observed at LHAAP-17. One monitoring well, 17WW06, had an increase in perchlorate, which indicates that the plume mass has moved west. So, the new monitoring well was installed west of 17WW06 and is labeled as 17WW19. The new monitoring well was installed in December 2017 and was recently sampled. The results from the new monitoring well will determine if another well is needed based upon the plume moving further west. Mr. Foss stated that declining concentrations are observed from sampling event to sampling event throughout the site, providing good confidence that MNA is an appropriate remedy.

Mr. Foss explained that this information will be compiled into the PDI Report. The next report will be the RD with a RAWP for the extraction system and soil excavation, after the PDI Report. Mr. Mayer stated that it was interesting that there are no explosives in the groundwater, but explosives are detected in the soil. Mr. Foss said he would not speculate on why that is but stated that movement of chemicals varies by media and chemicals can be more attractive to microorganisms than others.

Mr. Rice asked if the northernmost extent is defined. Mr. Foss explained that there was no groundwater collected for analysis in 17WW12 because the well was dry in November 2017, as well as December 2017 and January 2018 when gauged. However, the well is being evaluated regularly so that when groundwater is present a sample can be collected. Mr. Foss also noted that the 2017 perchlorate detection in 18WW10 was likely associated with Site LHAAP-18/24 to the east based upon historical and recent data and additional monitoring well data not shown on the maps provided as part of the LHAAP 18/24 monitoring well network.

Groundwater Treatment Plant

Ms. Nemmers then discussed the groundwater treatment plant operations indicating that the lower volume of groundwater treated is due to drought conditions. Ms. Nemmers stated that there were no major issues, but the freezing cold weather has been a challenge for the treatment

plant operation that is being managed. Ms. Nemmers stated that a handout with the groundwater treatment plant information was available.

Surface Water Sampling

Ms. Nemmers explained that surface water samples were collected at the end of December 2017 and that the validated data was not yet available. Therefore, this data was not presented.

LHAAP-18/24, -29, and -47

Mr. Williams stated that the new contract for sites LHAAP-18/24, -29, and -47 was planned for award next week. This contract will allow LHAAP to get a decision document for these sites. The first deliverable under the new contract is a Proposed Plan for sites LHAAP-18/24 and -29. This document will require a public meeting which will include a notice in the newspaper. The meeting will allow the public to review the proposed remedy and ask questions. At the next RAB meeting, the Army should be able to provide a schedule for these sites.

Next RAB Meeting Schedule and Closing Remarks

The next RAB meeting will be held on **April 19, 2018,** with a **meeting from 4:00 to 5:00 pm** at the Karnack Community Center followed by the **tour from 5:00 to 6:30 pm**. Ms. Overdyke asked if the community is invited or just the RAB members. Mr. Williams stated that the community is invited, but a head count will be required one month ahead of the meeting. Ms. Overdyke stated that she could set the tour up as a Facebook event through the Caddo Lake Institute page so that people would have to register to attend. Ms. Overdyke noted that this would mean registration would need to be done by March 19, 2018.

Adjourn

Mr. Fortune adjourned the meeting.

January 2018 Meeting Attachments and Handouts:

- Meeting Agenda
- Color Copy of Bhate Presentation Slides
- Groundwater Treatment Plant (GWTP) – Processed Groundwater Volumes Handout

LONGHORN ARMY AMMUNITION PLANT
RESTORATION ADVISORY BOARD
Karnack, Texas
(479) 635-0110

AGENDA

DATE:	Thursday, January 18, 2018
TIME:	6:00 – 7:00 PM
PLACE:	Karnack Community Center, Karnack, Texas

06:00 **Welcome and Introduction**

06:05 **Open Items {RMZ}**
- RAB Administrative Issues
- Minutes (October 2017 RAB Meeting)
- Ongoing Outreach/Website

06:25 **Defense Environmental Restoration Program (DERP) Update {Bhate}**
- Documents and Field Work Completed in 4th Quarter 2017
- Three Month Lookahead
- Update on LHAAP-17 Pre-Design Investigation (PDI)
- Groundwater Treatment Plant (GWTP) Update

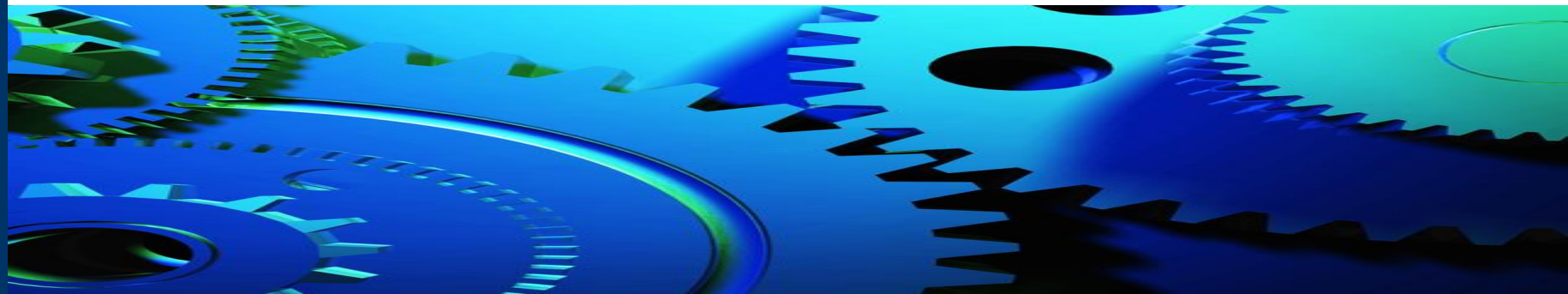
06:45 **Environmental Restoration Issues {RMZ}**
- Decision Document for LHAAP Sites -18/24, -29 and -47
- Schedule

06:50 **Next RAB Meeting Schedule and Closing Remarks {RMZ}**

07:00 **Adjourn {RMZ}**

Longhorn Army Ammunition Plant Quarterly Restoration Advisory Board Meeting

Karnack Community Center
January 18, 2018
6:00 PM CST



Restoration Advisory Board (RAB) Meeting

Agenda

06:00	Welcome and Introduction
06:05	Open Items {RMZ}
-	RAB Administrative Issues
-	Minutes (July 2017 RAB Meeting)
-	Ongoing Outreach/Website (2017 Volumes 1-6 loaded)
06:25	Defense Environmental Restoration Program (DERP) Update {Bhate}
-	Documents and Field Work Completed in 4th Quarter 2017
-	Three Month Lookahead
-	Update on LHAAP-17 Pre-Design Investigation (PDI)
-	Groundwater Treatment Plant (GWTP) Update
06:45	Update on Other Contract
06:50	Next RAB Meeting Schedule and Closing Remarks
07:00	Adjourn {RMZ}

Abbreviations and Acronyms

µg/L	micrograms per liter
CST	central standard time
COC	constituents of concern
DCE	dichloroethene
DERP	Defense Environmental Restoration Program
DNT	dinitrotoluene
DF	Draft Final
ESD	explanation of significant difference
GWTP	groundwater treatment plant
LHAAP	Longhorn Army Ammunition Plant
LUC	land use controls
MNA	monitored natural attenuation
MW	monitoring well
PCL	protective concentration level
PDI	pre-design investigation
RAB	Restoration Advisory Board
RA-O	Remedial Action - Operation
RAWP	Remedial Action Work Plan
RD	remedial design
ROD	Record of Decision
RTC	response to comment
TCE	trichloroethene
TNT	trinitrotoluene
TRRP	Texas Risk Reduction Program
VC	vinyl chloride

Restoration Advisory Board Meeting

RAB Administrative Issues

RAB Membership

RAB Tour

Restoration Advisory Board Meeting

Minutes from Past RAB Meetings

Discussion of October 2017 RAB Meeting minutes/motion to accept

The Army Wants You to be Informed

- The Army is committed to protecting human health and the environment; key to that commitment is engaging the community and increasing public participation in environmental restoration at LHAAP

- You are encouraged to:
  - Attend RAB Meetings and/or become a member of the RAB
  - Visit the Longhorn environmental website at www.longhornaap.com
  - Make suggestions for improving communication – the Army welcomes and appreciates community feedback

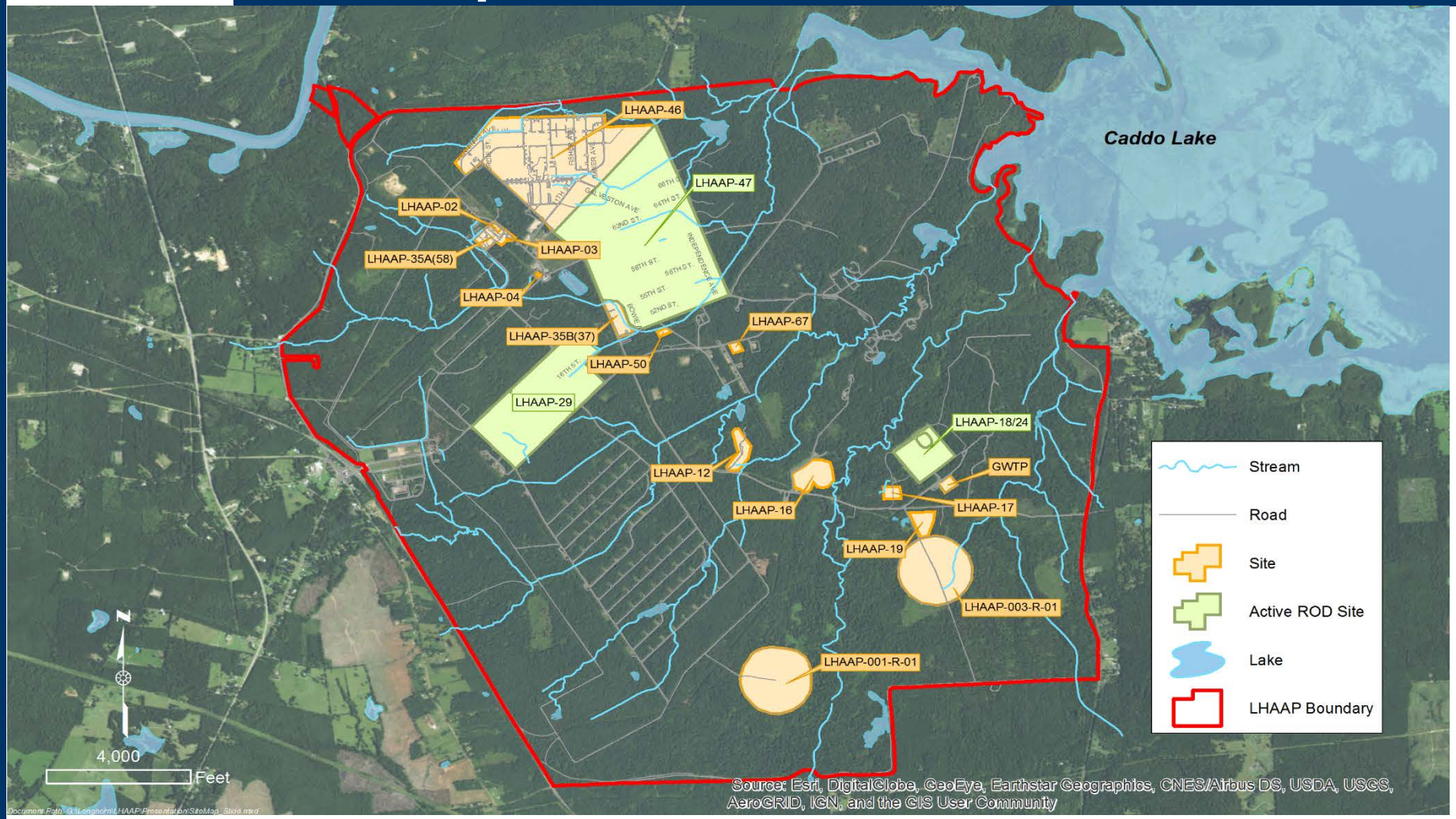
Restoration Advisory Board Meeting

Outreach

- Website Address: http://www.longhornaap.com/
- Website will be updated to indicate the upcoming field events at each site including groundwater sampling, monitoring well installations, soil sampling or remediation activities

Restoration Advisory Board Meeting

Site Map



Restoration Advisory Board Meeting

DOCUMENTS IN PROCESS

Site	Document
Basewide	Installation Wide Work Plan
LHAAP-03	Response to Comment (RTC) – Draft Final (DF) Record of Decision (ROD)
LHAAP-03/58	Explanation of Significant Difference (ESD) for LHAAP-03 groundwater indistinguishable from LHAAP-58
LHAAP-04	Remedial Design (RD)
LHAAP-16	Remedial Action Work Plan (RAWP)
LHAAP-50	Year 3 RA-O Report
LHAAP-58	ESD, Revised Final RAWP for Contingency Remedy, Year 3 RA-O Report
LHAAP001-R-01	Land Use Control (LUC) RD
LHAAP003-R-01	LUC RD

Restoration Advisory Board Meeting

Completed Field Work

Site	Activity
LHAAP-02	Groundwater Sampling – November 2017
LHAAP-04	Installed new wells (Dec 2017) and sampled all wells (Jan 2018)
LHAAP-12	RA-O Sampling – December 2017
LHAAP-17	Pre-Design Investigation (PDI) – Sampled Existing Groundwater Wells (Nov 2017), installed shallow well (Dec 2017) and piezometers; initiated soil sampling (Jan 2018)
LHAAP-19	Cap and LUC Inspection
LHAAP-37	RA-O Sampling – November 2017
LHAAP-50	RA-O Sampling – November 2017
LHAAP-58	RA-O Sampling - November 2017
LHAAP-67	RA-O Sampling – December 2017
LHAAP001-R-01	Confirmation Groundwater Sampling – November 2017
LHAAP-18/24	RA-O Sampling – December 2017

Restoration Advisory Board Meeting

3 Month Lookahead- Documents

Site	Document
LHAAP-03	Response to Comment (RTC) – Draft Final (DF) Record of Decision (ROD)
LHAAP-03/58	Explanation of Significant Difference (ESD)
LHAAP-04	Remedial Design (RD)/Remedial Action Work Plan (RAWP)
LHAAP-16	Remedial Action Work Plan (RAWP)
LHAAP-50	Year 3 RA-O Report
LHAAP-58	Final ESD,Revised RAWP and Year 3 RA-O Report
LHAAP001-R-01	Final Land Use Control (LUC) RD
LHAAP003-R-01	Final LUC RD
GWTP	Draft Quarterly Report

Restoration Advisory Board Meeting

3 Month Lookahead- Field Work

Site	Activity
LHAAP-02	Groundwater Sampling
LHAAP-12	RA-O Sampling
LHAAP-17	Pre-Design Investigation (PDI) –conduct pumping tests; complete soil sampling; complete additional groundwater sampling
LHAAP-37	RA-O Sampling
LHAAP-50	RA-O Sampling
LHAAP-58	Install two new wells, Baseline Sampling, Remedial Action Implementation for Western Plume area
LHAAP-67	RA-O Sampling
Surface Water	Collect Surface Water samples

LHAAP-17: No. 2 Flashing Area/Burning Ground

Groundwater zones: Shallow (10 to 35 Feet Below Ground Surface [ft bgs]), Intermediate (to 55 ft bgs) and Deep (to 150 ft bgs)

Constituents of Concern (COCs)

- Soil: Explosives (2,4-DNT, 2,6-DNT, and 2,4,6-TNT), barium, and dioxins
- Groundwater: Perchlorate, chlorinated solvents (TCE, 1,2-DCE, VC)

Proposed Remedy:

- Soil excavation
- Groundwater extraction to reduce perchlorate concentrations to less than 20,000 micrograms per liter (µg/L), an interim cleanup level. Once this level is reached, the remedial action will transition from extraction to monitored natural attenuation (MNA).

Scope of PDI:

- Conduct groundwater gauging and sampling and install up to 3 monitoring wells to define current groundwater plumes
- Conduct soil sampling to define soil contamination to design excavation
- Conduct aquifer pumping tests to collect data to design the extraction system

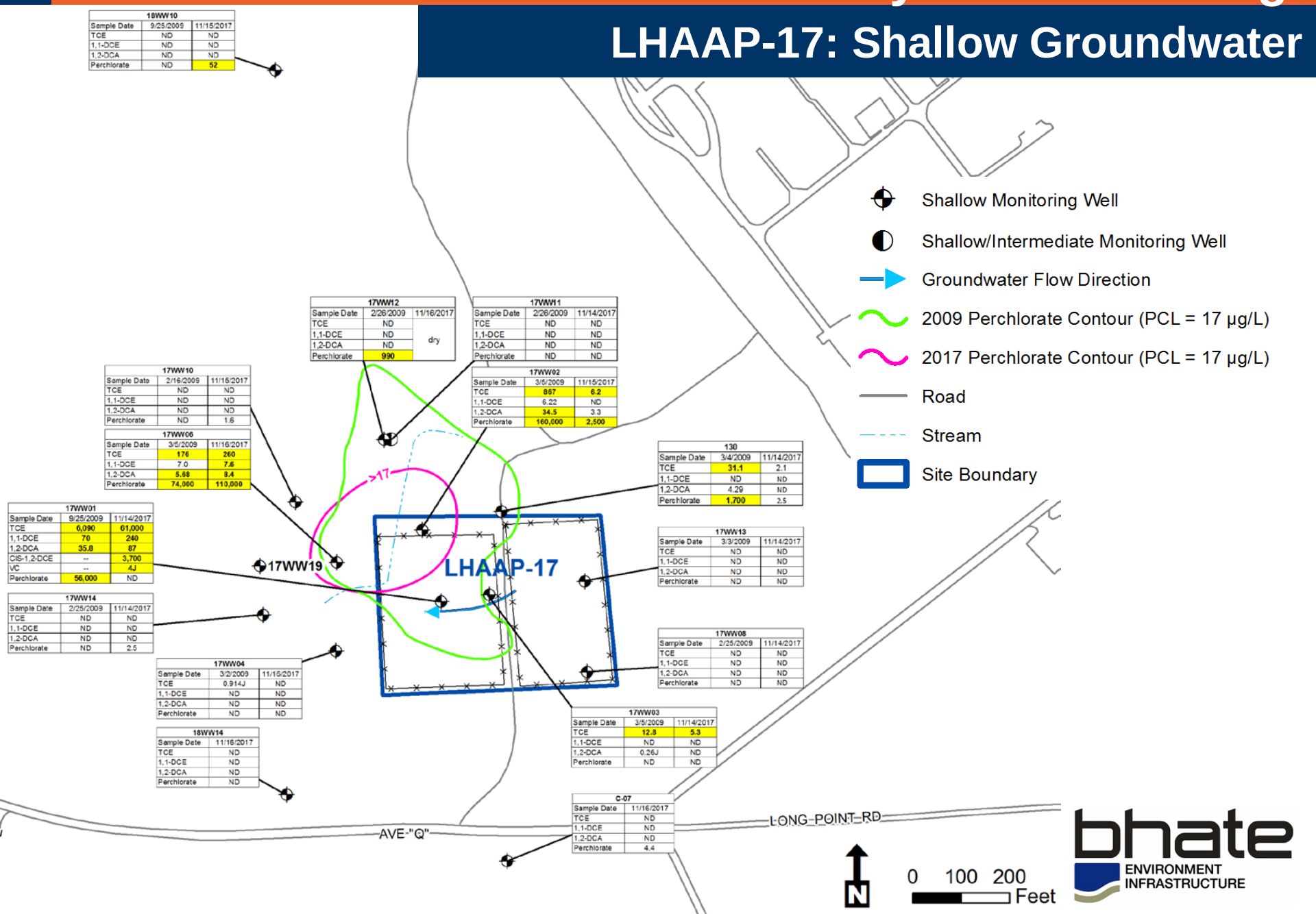
Restoration Advisory Board Meeting

LHAAP-17: Current Status

- Completed groundwater sampling of existing wells in November 2017
- Installed an additional shallow groundwater monitoring well in December 2017
- Initiated soil sampling in January 2018
- Preparing to sample new shallow well in January 2018
- Preparing for aquifer pumping test in January 2018

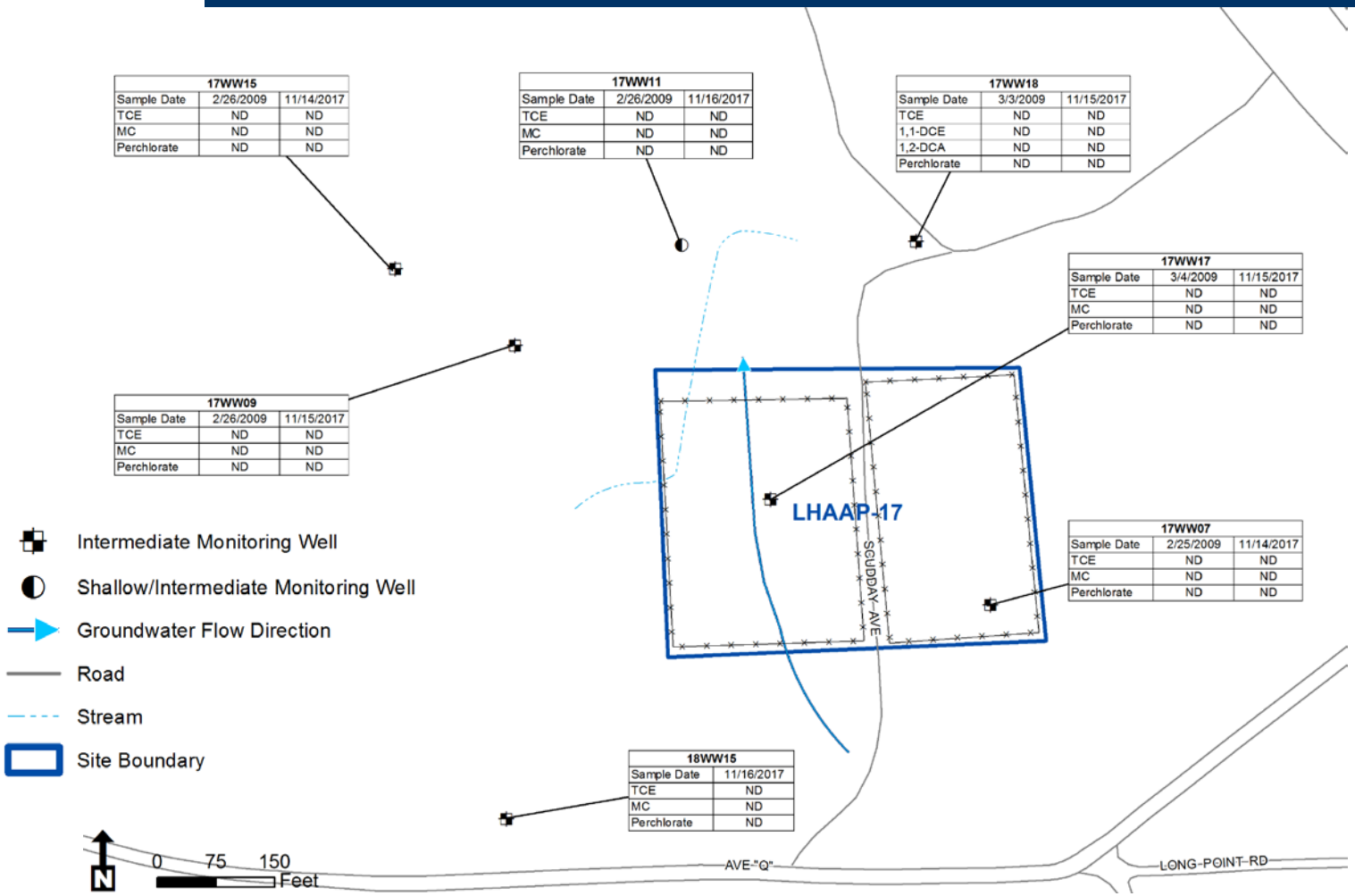
Restoration Advisory Board Meeting

LHAAP-17: Shallow Groundwater



Restoration Advisory Board Meeting

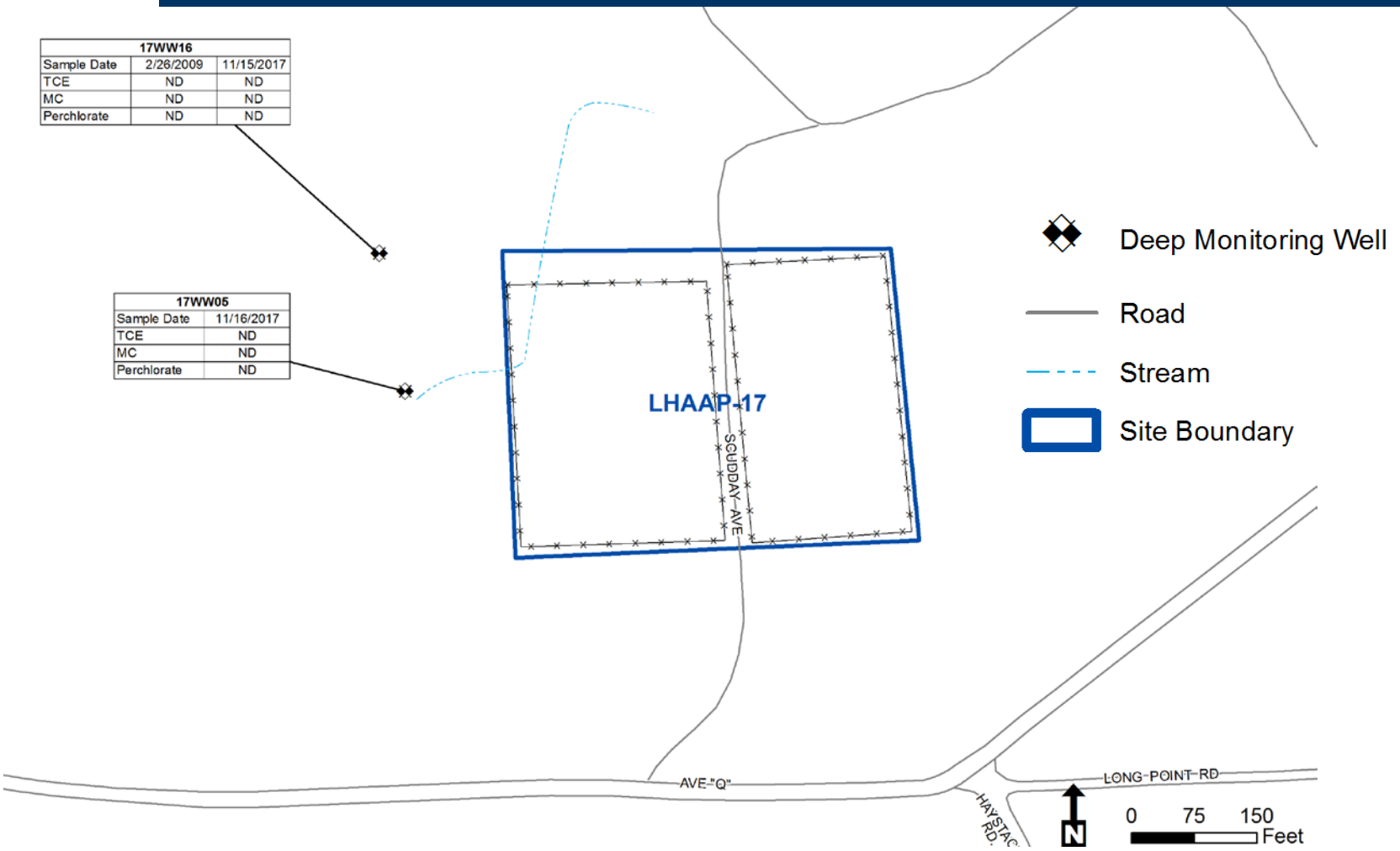
LHAAP-17: Intermediate Groundwater



bhate ENVIRONMENT INFRASTRUCTURE

Restoration Advisory Board Meeting

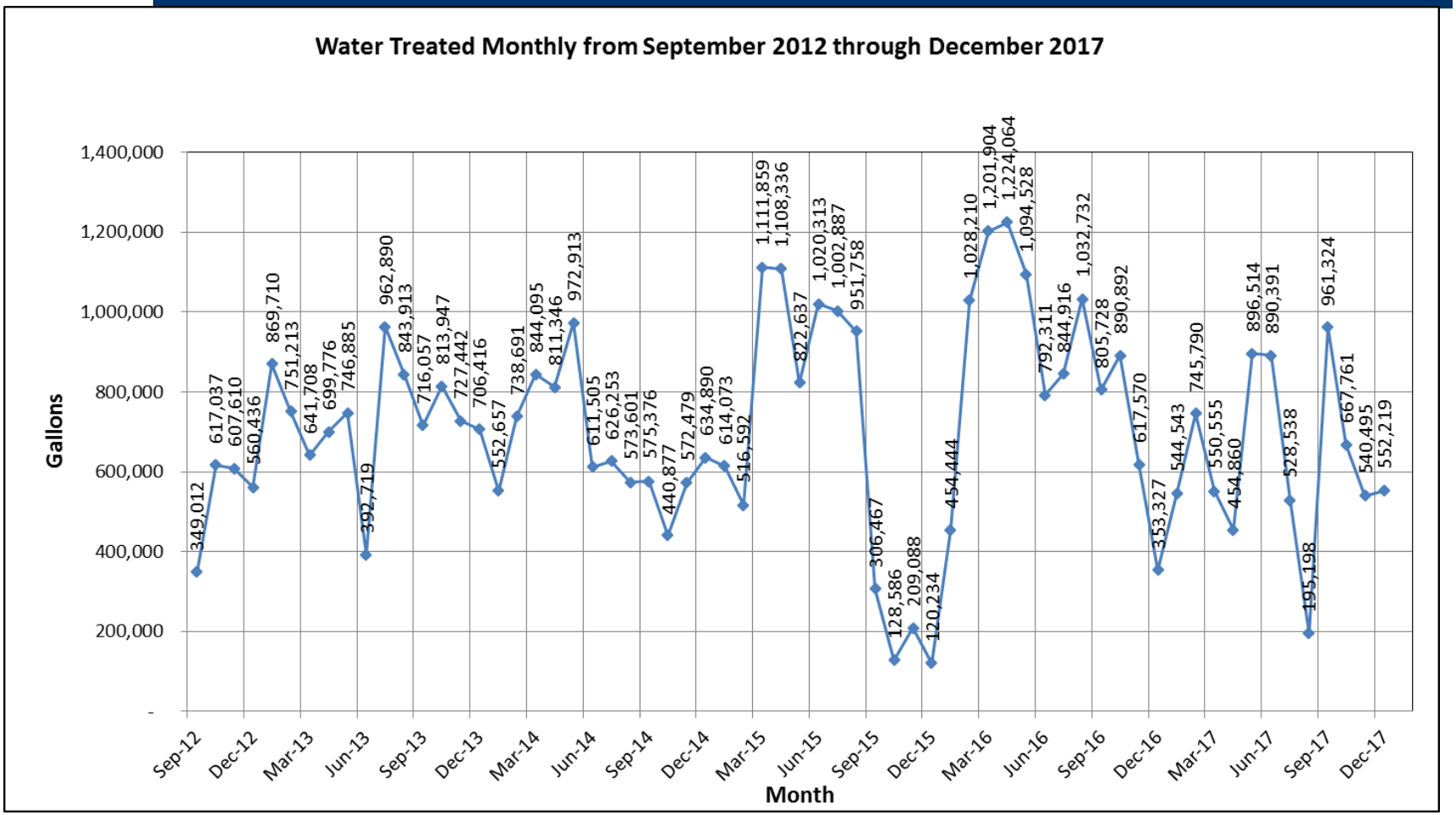
LHAAP-17: Deep Groundwater



bhate ENVIRONMENT INFRASTRUCTURE

Restoration Advisory Board Meeting

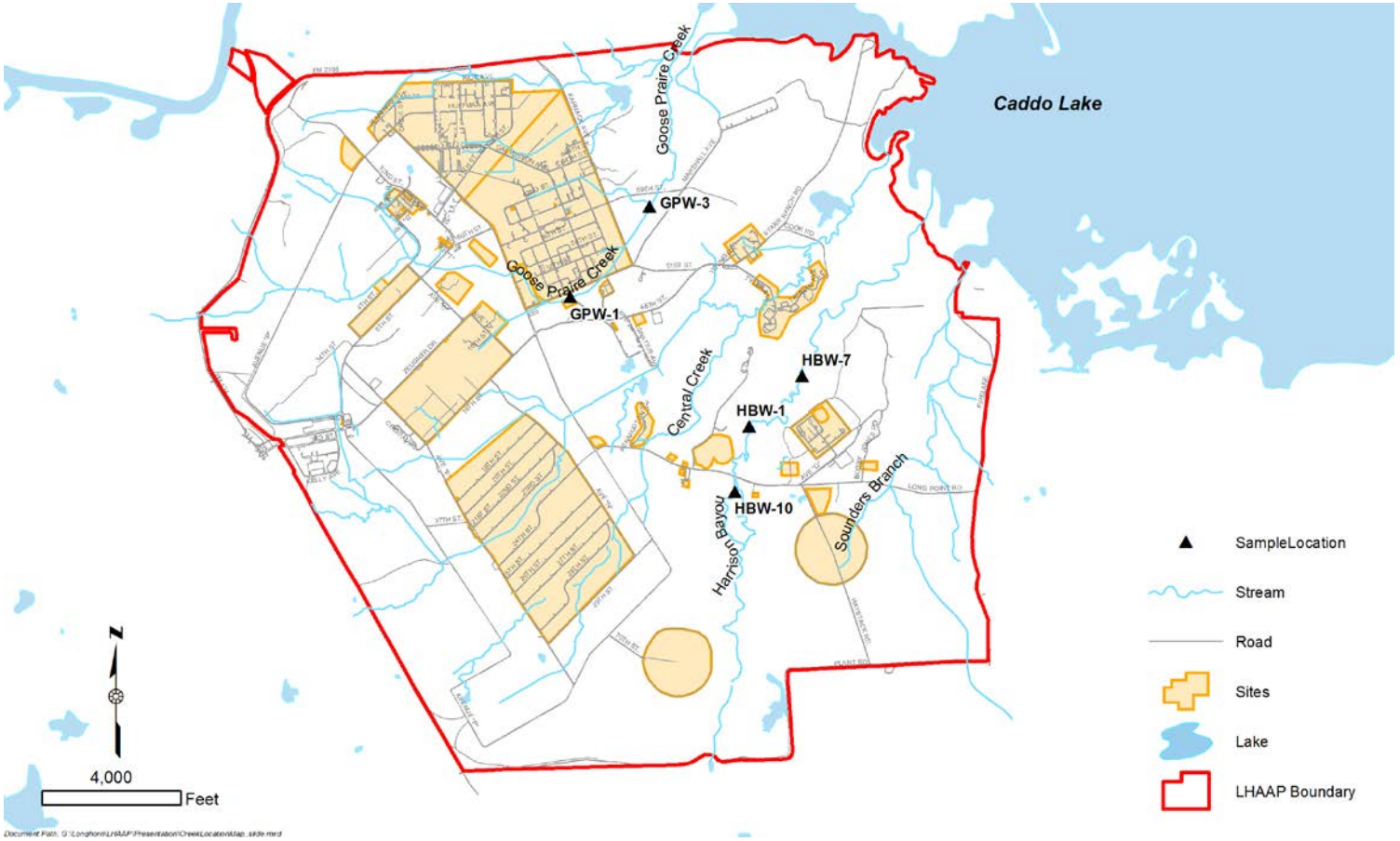
GWTP UPDATE



bhate ENVIRONMENT INFRASTRUCTURE

Restoration Advisory Board Meeting

Surface Water Sample Locations



bhate ENVIRONMENT INFRASTRUCTURE

Restoration Advisory Board Meeting

Next RAB Meeting Schedule & Closing Remarks

- Schedule April 2018 RAB Meeting
- Other Issues/Remarks

Groundwater Treatment Plant - Processed Groundwater Volumes

The amount of groundwater treated is determined by measuring the number of gallons of processed water.

Processed Water Data

(in gallons)

Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08
1,041,491	848,356	804,822	792,148	665,883	818,872	791,306	568,812	776,904	748,377	690,052	617,199

Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
655,059	619,274	726,118	552,299	598,144	433,800	488,807	526,958	387,644	0	414,853	735,716

Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10
808,322	636,306	727,492	391,898	695,343	802,656	894,731	962,121	1,257,977	1,314,924	1,041,495	1,136,547

Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
956,567	705,805	849,712	811,679	668,281	1,090,348	817,325	900,338	916,552	784,369	652,524	733,456

Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12
748,102	658,250	684,903	865,453	725,000*	730,000*	980,000*	630,000*	0	0	0	349,012

Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13
617,037	607,610	560,436	869,710	751,213	641,708	699,776	746,885	392,719	962,890	843,913	716,057

Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14
813,974	727,442	706,416	552,657	738,691	844,095	811,346	972,913	611,505	626,253	573,601	575,376

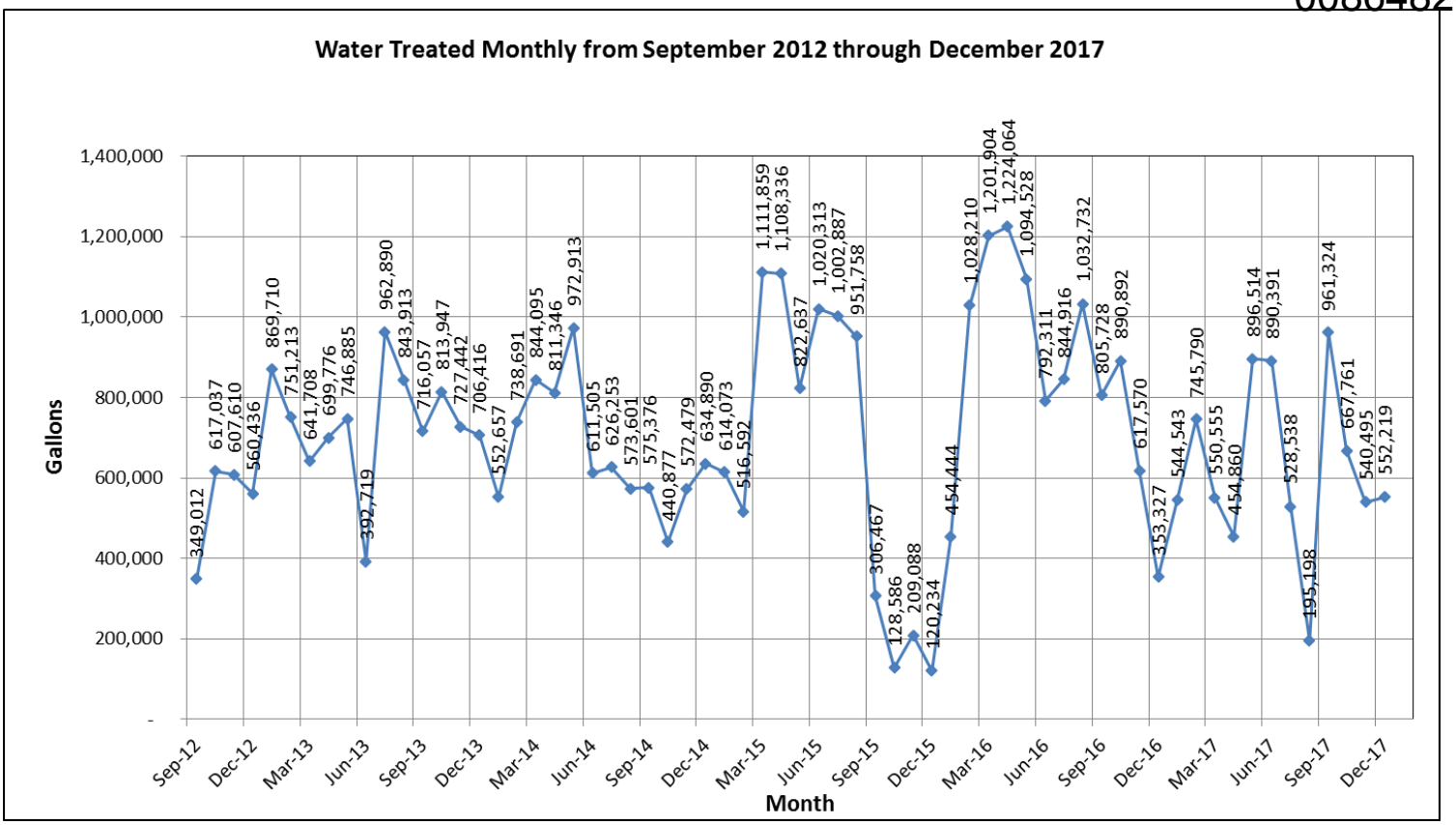
Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15
440,877	572,479	634,890	614,073	516,592	1,111,859	1,108,336	822,637	1,020,313	1,002,887	951,758	306,467

Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16
128,586	209,088	120,234	454,444	1,028,210	1,201,904	1,224,064	1,094,528	792,311	844,916	1,032,732	805,728

Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
890,892	617,570	353,327	544,543	745,790	550,555	454,860	896,514	890,391	528,538	195,198	961,324

Oct-17	Nov-17	Dec-17									
667,761	540,594	552,219									

*Indicates Estimate



Water Discharge Location and Volume (Gallons)

Month	Harrison Bayou	LHAAP-18/24 Sprinklers	INF Pond	INF Pond to Harrison Bayou	Contract Hauled Off-Site
Oct-16	0	642,876	0	0	0
Nov-16	0	576,898	0	0	0
Dec-16	0	236,688	0	0	0
Jan-17	0	0	0	0	0
Feb-17	0	0	0	0	14,355
Mar-17	127,242	0	0	0	14,400
Apr-17	113,038	0	236,821	0	0
May-17	205,665	0	534,155	0	0
Jun-17	467,830	0	294,550	490,574	0
Jul-17	0	0	528,538	0	0
Aug-17	0	0	195,197	0	0
Sep-17	0	0	309,980	651,434	0
Oct-17	0	0	667,761	0	0
Nov-17	0	0	540,495	0	0
Dec-17	0	0	552,219	560,350	0

DEPARTMENT OF THE ARMY
LONGHORN ARMY AMMUNITION PLANT
POST OFFICE BOX 220
RATCLIFF, AR 72951

April 30, 2018

DAIM-ODB-LO

Mr. Rich Mayer
US Environmental Protection Agency
Federal Facilities Section R6
1445 Ross Avenue
Dallas, TX 75202-2733

Re: Response to USEPA Follow-On Comments on the Draft Final 3rd Annual Remedial Action Operations Report (March to October 2016) LHAAP-35A (58), Shops Area Longhorn Army Ammunition Plant, Karnack, Texas, Revised March 2018

Dear Mr. Mayer,

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The subject document was prepared by Bhate Environmental Associates, Inc., (Bhate) on behalf of the Army as part of Bhate's Performance Based Remediation contract for the facility. I ask that Kim Nemmers, Bhate's Project Manager, be copied on any communications related to the project.

The point of contact for this action is the undersigned. I may be contacted at 479-635-0110, or by email at rose.m.zeiler.civ@mail.mil.

Sincerely,

Rose M. Zeiler, Ph.D.
Longhorn AAP Site Manager

Copies furnished:
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P. Bruckwicki, Caddo Lake NWR, TX
R. Smith, USACE, Tulsa District, OK
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April 30, 2018

DAIM-ODB-LO

Ms. April Palmie
Texas Commission on Environmental Quality Superfund Section, MC-136
12100 Park 35 Circle, Bldg D
Austin, TX 78753

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Responses to Comments on
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2		TCEQ concurs with abandonment of 35AWW07R and LHSMW04.	E	Per USEPA comment, 35AWW07R and LHSMW03 will be left in place but removed from the monitoring program at this time. LHSMW04 is not recommended for abandonment (believe TCEQ intended to refer to LHSMW03).					
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1	Figure 7	EPA would like to see a concentration trend chart for monitoring well LHSMW04, even though this well has been dry on several occasions in the past. The Army should consider replacing this well due to the number of dry sampling events.	D	Only five detections have been reported since 2007 for TCE and PCE due to the well not producing sufficient groundwater for sampling. Before 2007, groundwater did not have detections of TCE or PCE. Creating a trend chart with five data points over 10 years provides limited benefit. Boundary well 35AWW12, which is approximately 50 feet east of LHSMW04, has remained clean and has exhibited no increase in COC concentrations or new detections of COCs. LHSMW04 and 35AWW12 will continue to be monitored.	A	Agree. Table 3 (page 13 of 15) has all nine historical results for well LHSMW04 on the same page. The results indicate that there were no detections from 1994 until 2004. In 2007, PCE and TCE were detected at 6.4 and 4.6 ug/L. The last sampling event (4/13/16), PCE and TCE were detected at 397 and 86.1 ug/L. Is the plume moving closer to downgradient well 35WW12, which is currently "clean"?	E	Noted. It is difficult to draw a conclusion from the limited data set, with a long gap between sampling events. LHSMW04 and 35WW12 will continue to be monitored and any trends evaluated.	
2	Appendix E	While EPA has no concern about the graphs shown, EPA also requests that the information be summarized in in a Table format as has been provided in previous RAO reports for MNA sites at Longhorn.	C	This data is summarized in Tables 2 and 3 of the Report. The following sentence will be added to Section 4.1: "*Data used to generate the Mann-Kendall analysis is presented in Tables 2 and 3.*"					
3	1.4 Conceptual Site Model	It would be helpful and desired if a cartoon or pictorial conceptual model was also included.	C	Historically, these types of visual depictions have not been presented within the LHAAP RA-O Reports. However, the Conceptual Site Model (CSM) Figure 2-2 from the December 2009 Feasibility Study (also included in the ROD) can be referenced and presented within the report. The overall CSM has not changed.					
4		EPA agrees that the arsenic sampling should be continued. When will the arsenic sampling that was inadvertently "left out" be conducted? Also, the change in the surface water monitoring procedures will make the samples more meaningful/legitimate than past samples when it comes to the contaminated groundwater affecting the surface water.	C	As presented in the January 2018 validated data package and sampling plan through 2018, this data was collected in November 2017 and will be collected again in 2018. The arsenic sampling data will be presented in subsequent RA-O reports.					
5		EPA is ok with abandoning temporary well 1004TW006. EPA is also ok with removing wells 35AWW03 and 35AWW02 from the current monitoring program. However, 35AWW02 may need to be monitored in the future if the intermediate well indicates contamination. EPA is also ok with removing wells 35AWW07R and LHSMW03 from the current monitoring program.	C	Concur, 35AWW02, 35AWW03, 35AWW07R, and LHSMW03 will be removed from the RA-O monitoring program but will not be abandoned at this time. Temporary well 1004TW006 will be abandoned.					
6	General	1,4-dioxane should be added as a site contaminant for the Western Plume since monitoring well 35AWW20 contained 28 ug/L and 110 ug/L (duplicate sample) and monitoring	D	In accordance with DoD Policy Memorandum, 22 Aug 2016, "Revised Site Management Procedures – Update to DoD Manual 4715.20" on procedures for addressing emerging contaminants at DERP sites, the	A	Agree. EPA was not implying that a ROD amendment was needed. However, if further sampling results detect 1,4-dioxane above the TRRP residential PCLs, then the	E	The 1,4-dioxane data for LHSMW07 and 35AWW20 was collected in support of the Five Year Review for LHAAP-58 and	

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		well LHSMW07 had 1,4-dioxane at 120 ug/L in the November 2017 validated data results. Has this contaminant been detected in these wells in previous sampling events?		Army will continue to sample for 1,4-dioxane during 5 year reviews; however, the ROD and remedy will not be amended until it is shown that the emerging contaminant presents an unacceptable risk.		contaminant will need to be added via an ESD, as 1,4- dioxane is a listed as a hazardous substance.		was not presented in the 3rd Year RAO Report for which EPA submitted review comments. The data will be evaluated during the 2018 Five Year Review process to determine whether the LHAAP-58 remedy remains protective. The 1,4-dioxane concentrations at LHAAP-58 will be evaluated against the GW-Ind of 26 ug/L as required by the ROD. If sampling confirms that the remedy might not be protective, Longhorn will reevaluate the existing remedy, including the contingent remedy implemented in March 2018.	
7	Table 3	Monitoring well LHSMW04 located in the Eastern Plume seems to be on an upward concentration trend for PCE beginning in 2007 at 6.4 ug/L to the most recent result of 397 ug/L in 4/13/2016. Monitoring well 35AWW09 has also been on an upward trend in PCE since August 2013 beginning at 21 ug/L to the most recent result of 173 ug/l on 10/3/2016. The Army should consider conducting some injections in the area of these two wells, considering the success at monitoring wells 03WW01 and 35AWW08.	D	The Five-Year Review scheduled for 2018 will assess LHAAP-58 and make recommendations. Further, limited groundwater sampling events have been completed following the ERD treatment. As noted in Comment 9 below, the EISB is successful in the portion treated and is likely to provide benefit downgradient of the treatment zone over time.	A	Agree. Terry Burton, the Region 6 Superfund Technical Liaison, has a program that can calculate the revised cleanup time for the Eastern Plume.	E	Noted.	
8	General	It might be helpful if a revised timeframe calculation (to reach cleanup standards) be performed on the Eastern Plume, since one has not been conducted since the ROD was issued in 2010.	D	Given comment and response for No. 7, a revised calculation does not appear appropriate for the Eastern Plume at this time.					
9	General	Where EISB was performed in the Eastern Plume, it's apparent that more-reductive conditions are occurring with decreasing sulfate concentrations. It is also promising that Dehalococcoides cultures are increasing.	C	Concur.					
		END of EPA Comments							

DEPARTMENT OF THE ARMY
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March 8, 2018

DAIM-ODB-LO

Mr. Rich Mayer
US Environmental Protection Agency
Federal Facilities Section R6
1445 Ross Avenue
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Texas Commission on Environmental Quality Superfund Section, MC-136
12100 Park 35 Circle, Bldg D
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DRAFT FINAL
3RD ANNUAL REMEDIAL ACTION OPERATION REPORT (MARCH TO OCTOBER 2016)
LHAAP-35A (58) SHOPS AREA
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

March 2018

Prepared For:

U.S. Army Corps of Engineers
Tulsa District
1645 S 101 E Avenue
Tulsa, Oklahoma 74128-4609

Contract No: W9128F-13-D-0012
Delivery Order No: W912BV17F0150
Bhate Project No.: NWO1312.0150.012.0001.03

Prepared By:

1608 13th Avenue South, Suite 300
Birmingham, Alabama 35205
1-800-806-4001 • www.bhate.com

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3RD ANNUAL REMEDIAL ACTION OPERATION REPORT (MARCH 2016 – OCTOBER 2016) LHAAP-35A (58) SHOPS AREA LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

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Appendices

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Appendix C Monitoring Well Sample Collection Forms
Appendix D Laboratory Analytical Results (Provided on CD)
Appendix E Mann-Kendall Trend Test Results
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ACRONYMS AND ABBREVIATIONS

<	Less than
%	Percent
AECOM	AECOM Technical Services, Inc.
bgs	Below ground surface
Bhate	Bhate Environmental Associates, Inc.
COC	Contaminant of concern
CSM	Conceptual Site Model
DCA	Dichloroethane
DCE	Dichloroethene
DHC	Dehalococcoides
DO	Dissolved oxygen
EISB	Enhanced In-situ Bioremediation
ft	Feet (or foot)
J	Data qualifier denoting an estimated concentration
LHAAP	Longhorn Army Ammunition Plant
LUC	Land Use Control
MC	Methylene chloride
MCL	Maximum contaminant level
µg/L	Micrograms per liter
mg/L	Milligrams per liter
mL	Milliliter
MNA	Monitored Natural Attenuation
MSC	Medium-specific concentration
msl	Mean sea level
mV	Millivolt
No.	Number
ORP	Oxidation-reduction potential
PCE	Tetrachloroethene

PCB	Polychlorinated biphenyls
pH	Potential of hydrogen
RA(O)	Remedial Action Operation
RAO	Remedial Action Objective
RACR	Remedial Action Completion Report
RAWP	Remedial Action Work Plan
RD	Remedial Design
ROD	Record of Decision
SVOC	Semi-volatile Organic Compound
TAC	Texas Administrative Code
TCA	Trichloroethane
TCE	Trichloroethene
TOC	Total organic carbon
U.S.	United States
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
UU/UE	Unrestricted use and unlimited exposure
VC	Vinyl chloride
VOC	Volatile Organic Compound

1 INTRODUCTION

The United States (U.S.) Army Corps of Engineers (USACE), Tulsa District, contracted Bhate Environmental Associates, Inc. (Bhate), to perform remedial actions at multiple sites at the former Longhorn Army Ammunition Plant (LHAAP) in Karnack, Texas, under the Huntsville District's Architect-Engineer Indefinite Delivery Contract Number (No.) W9128F-13-D-0012, Task Order No. W912BV17F0150. Bhate is performing groundwater and surface water monitoring as part of Remedial Action Operations (RA(O)s) for the Enhanced In-situ Bioremediation (EISB) and Monitored Natural Attenuation (MNA) groundwater remedy at site LHAAP-35A (58). A Final Record of Decision (ROD) was executed for LHAAP-35A (58) in September 2010 (Shaw, September 2010). Groundwater monitoring at LHAAP-35A (58) is ongoing, as described in the Draft Final Remedial Action Completion Report (RACR) (AECOM, October 2015). This RA(O) report documents the 3rd year of RA(O) implementation and summarizes the results of inspections, maintenance, and sampling activities completed between March 2016 and October 2016 by AECOM Technical Services, Inc. (AECOM), the previous contractor at LHAAP. This 3rd Annual RA(O) Report encompasses the third year report findings and also provides analysis for 3 years of EISB and MNA data.

LHAAP is located in east-central Texas in the northeastern corner of Harrison County between State Highway 43 in Karnack, Texas, and the western shore of Caddo Lake (**Figure 1**). The nearest cities are Marshall, Texas, approximately 14 miles to the southwest, and Shreveport, Louisiana, approximately 40 miles to the east. Caddo Lake is a large freshwater lake that bounds LHAAP to the north and east. The eastern fence of the LHAAP installation is 3.5 miles from the Texas-Louisiana border (AECOM, May 2016).

1.1 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for LHAAP-35A (58), consistent with the reasonably anticipated future use of the site as a national wildlife refuge, are:

- Protection of human health by preventing human exposure to the contaminated groundwater;
- Protection of human health and the environment by preventing contaminated groundwater from migrating into nearby surface water; and,
- Returning groundwater to its potential beneficial use as a drinking water source, wherever practicable.

1.2 Performance Objectives

The LHAAP-35A (58) site has groundwater plumes in two distinct areas: 1) eastern plume and 2) western plume. The remedies selected for the two areas are as follows:

- Eastern Plume Area: Land Use Control (LUC); EISB in the area of highest levels of contamination; and MNA for the remainder of the plume, beyond the influence of the EISB treatment area.
- Western Plume Area: LUC and MNA.

The performance objectives at LHAAP-35A (58) consist of two components: physical inspections and groundwater/surface water monitoring. As a component of the LUC implementation, a civil survey of the LUC boundary was conducted in November 2014 and recorded in the Harrison County Courthouse in March 2015 (AECOM, May 2016). Physical inspections are conducted annually to confirm compliance with the LUC objectives of preventing human exposure to groundwater contamination at levels that pose an unacceptable risk to a future maintenance worker; and ensuring that there is no withdrawal or use of groundwater from the site for anything other than environmental monitoring and testing until the cleanup levels – maximum contaminant levels (MCLs) - are attained. Groundwater monitoring has been conducted at the site since October 2013, and LHAAP-35A (58) will be included in the facility-wide Longhorn Five-Year Review.

Groundwater and surface water monitoring is being performed to demonstrate that EISB of the eastern plume and MNA of the eastern and western plumes are effective remedies to:

- Detect changes in environmental conditions that may reduce the efficacy of the remedial processes,
- Identify potentially toxic and/or mobile transformation products,
- Verify that the plumes are not expanding,
- Verify that no unacceptable impacts to downgradient receptors are occurring, such as discharges of contaminated groundwater to surface water,
- Detect new releases of contaminants to the environment that could impact the effectiveness of the remedies, and
- Verify attainment of the RAOs.

Groundwater monitoring completed as part of the 2016 (Year 3)-RA(O) consisted of two semi-annual groundwater sampling events at 20 wells in the shallow zone and 2 wells in the intermediate zone, as specified in the Remedial Action Work Plan (RAWP) (AECOM, August 2013). Semi-annual surface water sampling at 35ASW03 located adjacent to the western groundwater plume in a ditch that runs parallel to 4th Street was also conducted. This report summarizes the LUC compliance inspection, monitoring well inspection, maintenance, and repair, results of groundwater and surface water sampling, and an evaluation of EISB and MNA.

1.3 Site Description

The LHAAP-35A (58) site, also known as the Shops Area, is located in the north-central portion of LHAAP and currently covers an area of approximately 11 acres (**Figure 1**) (Shaw, September 2010). The surface features include asphalt-paved roads, a parking area, and areas that are

wooded and overgrown with grasses and other vegetation (**Figure 2**). The topography is relatively flat with the surface drainage flowing into the tributaries of Goose Prairie Creek, which eventually discharges into Caddo Lake.

The Shops Area, which is now designated as LHAAP-35A (58), was established in 1942 as part of the installation's initial construction (Shaw, September 2011). The facility was used to provide plant-operated laundry, automotive, woodworking, metalworking, painting, refrigeration, and electrical services. The site was active throughout the LHAAP's mission and was deactivated along with the rest of the installation in 1996-1997. The LHAAP-35A (58) site boundary has changed over the years. Earlier investigations for LHAAP-35A (58) were performed in areas to the south that are no longer included within the site boundary (AECOM, May 2016). LHAAP-35A (58) encompasses the following sites:

- LHAAP-02, vacuum truck overnight parking
- LHAAP-03, the Paint Shop Building 722 (waste collection)
- LHAAP-60, Former Storage Building 714
- LHAAP-68, a mobile storage tank parking area
- LHAAP-69, service station with underground storage tanks

The following sites were within the historical LHAAP-35A (58) site boundary, but are not included within the current site boundary:

- LHAAP-04, former Pilot Wastewater Treatment Plant
- LHAAP-56, a vehicle wash rack & oil/water separator, Building 744-A
- LHAAP-59, Storage Building 725
- LHAAP-60, Building 411
- LHAAP-61, Water Treatment Plant
- LHAAP-66, 405-L Transformer Yard

The following sites are within the LUC boundary for LHAAP-35A (58):

- LHAAP-02, vacuum truck overnight parking
- LHAAP-03, the Paint Shop Building 722 (waste collection)
- LHAAP-56, a vehicle wash rack & oil/water separator, Building 744-A
- LHAAP-59, Storage Building 725
- LHAAP-60, Former Storage Building 714
- LHAAP-65, Former Building 209 (flammable materials storehouse)
- LHAAP-68, a mobile storage tank parking area
- LHAAP-69, service station with underground storage tanks

LHAAP-60, Building 411, which is located within the historical site boundary of LHAAP-35A (58) is included within the LUC boundary for LHAAP-04.

1.4 Conceptual Site Model

Much of the following conceptual site model information has previously been presented in the 2nd Annual RA(O) Report (January 2015 – October 2015) (AECOM, May 2016). **Figure 3** presents the Conceptual Site Model (CSM) from the Record of Decision (Shaw, September 2010). Between 1992 and 2008, multiple investigations were conducted in a phased approach to evaluate the nature and extent of contamination at the LHAAP-35A (58) site. The findings from these investigations were that the shallow zone groundwater was impacted with volatile organic compounds (VOCs), while the soil and former sump/waste rack sump areas (LHAAP-56) posed no unacceptable threat to human health or the environment (Shaw, September 2011). **Figure 2** shows the locations of all the shallow, intermediate, and deep zone monitoring wells, as well as surface water sampling locations, present at the site. The sources of contamination at LHAAP-35A (58) were surface spills associated with the variety of support services that occurred in the area. The spills resulted in minor soil contamination and the contaminants of concern (COCs) released to the surface soil subsequently migrated downward through leaching, to the groundwater.

Overland flow does not appear to be a complete pathway for migration of contaminants to surface water, as none of the COCs (VOCs, Semi-volatile Organic Compounds [SVOCs], explosives, pesticides, or polychlorinated biphenyls [PCBs]) were detected in water samples from the on-site ditch. Likewise, no VOCs, SVOCs, explosives, or pesticides were detected in samples of the ditch sediment. Some metals were detected in surface water and sediment at concentrations in the naturally occurring background range.

Investigation results indicate that the shallow zone groundwater is impacted with VOCs, but soil and former sump/waste rack areas pose no unacceptable risk to human health or the environment (Shaw, September 2011). There have been no previous remedial actions at LHAAP-35A (58). The nearest surface water body to LHAAP-35A (58) is a ditch that runs parallel to 4th Street on the western boundary of the site and flows to the southeast. The depth of groundwater in wells adjacent to the ditch is well below the bottom of the ditch at 18 to 25 feet below ground surface (ft bgs) (e.g., in wells 35AWW16, 35AWW18, and LHSMW07).

The potentially complete exposure pathways are groundwater use as drinking water and potential migration of impacted groundwater into surface water. Shallow groundwater is not used as drinking water at the refuge and this potential exposure pathway is eliminated from any hypothetical future receptor because LUCs are in place that prohibit the use of groundwater for any purpose other than for environmental monitoring and testing. **Figure 2** shows the groundwater use restrictions area established for this site.

The hydrogeology beneath the site, as presented in the Draft Final RACR (AECOM, October 2015), consists of three water-bearing zones; identified as shallow, intermediate, and deep.

The shallow zone extends to approximately 40 feet bgs. The lithology of the shallow zone is characterized by discontinuous layers of fine grained soils consisting of interbedded silt, sand, and clay. According to the groundwater gauging data conducted in October 2013 (First Performance Monitoring Sampling Event), the depth to groundwater ranged from 17.53 ft bgs to 30.13 ft bgs. Groundwater elevations in the shallow zone in October 2013 ranged from 184.21 ft above mean sea level (msl) to 202.32 ft above msl.

Data from boring log 35AWW02, which was drilled in the deep zone to a depth of 140 ft bgs, and 35AWW05, which was drilled in the intermediate zone to a depth of 75.75 ft bgs, indicate the soils in the intermediate and deep zones consist mostly of clay with the occasional presence of silt and sand layers. The occurrence of predominantly clay soil beneath the shallow zone impedes the vertical migration of groundwater, which is corroborated by the difference in groundwater elevations between the shallow zone and the intermediate and deep zones (AECOM, May 2016). Based on groundwater surface measurements obtained in October 2013, groundwater elevations for the shallow zone ranged from approximately 184 ft to 202 ft above msl. The elevation of intermediate zone groundwater was approximately 178 ft above msl, and the elevation of deep zone groundwater was 175.75 ft above msl.

Based on previous investigations, the shallow groundwater COCs at LHAAP-35A (58) are tetrachloroethene (PCE); trichloroethene (TCE); 1,1,2-trichloroethane (TCA); 1,1-dichloroethene (1,1-DCE); 1,2-dichloroethane (1,2-DCA); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); vinyl chloride (VC); methylene chloride (MC); and benzene. In addition, low concentrations of 1,1-DCA were detected in the shallow zone groundwater, but were below the groundwater medium-specific concentrations (MSCs) so 1,1-DCA is not considered a groundwater COC at this site. No COCs were detected in samples from the intermediate and deep groundwater zones.

Although arsenic has not been designated as a COC, it is included in the shallow zone groundwater monitoring program in accordance with the RAWP (AECOM, August 2013) and the Revised Technical Memorandum, Steps to Remedy-in-Place for LHAAP-03/LHAAP-58 (AECOM, November 2012).

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2 SITE ACTIVITIES AT LHAAP-35A (58)

2.1 Annual LUC Compliance Inspection, Maintenance, and Repairs

2.1.1 Annual LUC Compliance Inspection

The objectives of the LUCs at LHAAP-35A (58) are to prevent human exposure to groundwater contamination presenting an unacceptable risk to human health, and to ensure that there is no withdrawal or use of groundwater beneath the site for any purpose other than environmental monitoring and testing until the cleanup levels are attained (AECOM, August 2013). A restriction prohibiting residential use of groundwater will remain in effect until COC concentrations in groundwater and soil are reduced to levels that allow unrestricted use and unlimited exposure (UU/UE). Notices of the groundwater use restrictions accompany all property transfer documents and were recorded at the Harrison County Courthouse in March 2015 in accordance with the Texas Administrative Code (TAC) Title 30, §335.566. Additional details regarding the implementation of the LUC are presented in the RACR (AECOM, October 2015).

AECOM performed the annual LUC compliance inspection for LHAAP-35A (58) on August 1, 2016. The Annual Land Use Control Compliance Certification Documentation form for the third year RA(O) period is presented in **Appendix A**. No compliance issues or concerns were noted by AECOM during the annual inspection in 2016.

2.1.2 Well Field Operation & Maintenance

Inspections of the conditions/integrity of monitoring wells are conducted during each sampling event and the information is recorded on the field sampling forms. Maintenance or repairs are performed as needed, based on observed conditions. For the 3rd annual reporting period, the only maintenance issue observed during the April and October 2016 sampling events was that monitoring well 35AWW04 needs to be repainted. It is recommended that 35AWW04 be repainted during the next reporting period. Mowing the area to control brush and weeds is conducted on a routine basis and as needed to allow access to the wells, typically before sampling events. During the 3rd annual reporting period, mowing was conducted twice, in April 2016 and in October 2016. **Appendix B** provides photos of the current monitoring well conditions and **Appendix C** provides information about the individual well surface conditions observed during the two sampling events during this reporting period. No maintenance or repairs were conducted on the LHAAP-35A (58) monitoring well network during this reporting period.

2.2 Eastern Groundwater Plume EISB Implementation

2.3 Groundwater Monitoring for MNA

During the 3rd year RA(O), 28 monitoring wells were gauged for depth to water in April and October 2016. The RAWP (AECOM, August 2013) proposed inclusion of 20 monitoring wells in the MNA program (18 shallow groundwater zone wells [35AWW06, 35AWW08, 35AWW10, 35AWW11, 35AWW12, 35AWW13, 35AWW14, 35AWW15, 35AWW16, 35AWW17, 35AWW18, 35AWW19, 35AWW20, 35AWW21, 35AWW22, LHSMW04, LHSMW06, and LHSMW07] and 2 intermediate groundwater zone wells [35AWW01 and 35AWW05]). Monitoring wells 03WW01, 1004TW001, 1004TW006, 35AWW02, 35AWW03, 35AWW04, 35AWW07R, 35AWW09, LHSMW03, and LHSMW05 were not included in the monitoring program per the RAWP (AECOM, August 2013). However, monitoring wells 03WW01 and 35AWW09 are located within the EISB treatment area of the eastern groundwater plume and were added to the monitoring program during the 1st year monitoring period. Therefore these 22 monitoring wells were sampled in April 2016 and 21 of the monitoring wells were sampled in October 2016. LHSMW04 was dry in October 2016 and not sampled. LHSMW04 was also dry the previous year in October 2015, and as a result was sampled in March 2016. All LHAAP-35A (58) monitoring wells are depicted in **Figure 2**. **Table 1** presents the monitoring wells that were gauged during the 3rd year RA(O) period. Each of the monitoring wells were secure and sampled with no technical issues encountered.

Before collecting groundwater samples, the wells were gauged using a water level probe and the depth to water was recorded to the nearest 0.01 ft from the top of casing. Groundwater samples were collected using the low-flow sampling technique described in the Groundwater Sampling Procedures in the Installation-Wide Work Plan (AECOM, July 2014). After water quality parameters stabilized and were within acceptable ranges, samples were collected at the same low flow rate.

During the 3 years of RA(O) sampling, only monitoring well LHSMW04, located to the east of the eastern groundwater plume, has been periodically dry. However, the absence of data from this well has had no effect on evaluating EISB or MNA. Monitoring well LHSMW04 is located between 35AWW09 and 35AWW12 and the results for these two wells provide ample data to evaluate this area.

Groundwater sampling forms are presented in **Appendix C**. Chain of custody forms, laboratory reports, and data validation reports are presented in **Appendix D**.

2.3.1 Groundwater Elevation and Flow Direction

2.3.1.1 Shallow Groundwater Zone

The groundwater flow direction in the shallow water bearing unit during the 3rd year RA(O) monitoring period at LHAAP-35A (58) is interpreted to the southeast in the western portion of the site and to the east-southeast in the eastern portion of the site (see **Figures 4 and 5**). This corresponds well with the flow directions presented in the Remedial Design (RD) document (Shaw, September 2011), which was interpreted to the southeast in the westernmost area, and to the east for the remainder of the site. Groundwater elevation data are presented in **Table 1**.

Groundwater levels for the 3rd year RA(O) were measured in April 2016 and October 2016. The shallow zone groundwater elevations increased across the site in the majority of monitoring wells between April 2016 and October 2016. One notable exception during that time frame, was the groundwater elevation in monitoring well 35AWW10, which decreased by 1.57 feet.

2.3.1.2 Intermediate Groundwater Zone

Wells 35AWW01 and 35AWW05 (**Figure 2**) are completed in the intermediate groundwater zone. Groundwater elevations in each well decreased slightly (approximately 1.03 feet or less) between April 2016 and October 2016. Because there are only two wells screened in the intermediate groundwater zone, a potentiometric surface map cannot be constructed to determine the groundwater flow direction. The groundwater elevations are presented in **Table 1**.

2.3.1.3 Deep Groundwater Zone

Well 35AWW02 (**Figure 2**) is the only well screened in the deep groundwater zone. This well is not included in the sampling program, in accordance with the RAWP (AECOM, August 2013). The groundwater elevation at 35AWW02 in the deep zone decreased between April 2016 and October 2016 but has remained relatively static (within 0.44 feet) since October 2013. The groundwater elevation is presented in **Table 1**.

2.3.2 Vertical Gradient

There are two pairs of shallow and intermediate zone co-located wells, which include monitoring wells 35AWW08 (shallow) and 35AWW01 (intermediate); and LHSMW07 (shallow) and 35AWW05 (intermediate). During the 3rd year RA(O) monitoring period, the elevation difference between wells 35AWW08 and 35AWW01 was approximately 9 ft and between wells LHSMW07 and 35AWW05 was over 20 ft. These elevation differences are consistent with those observed in the 1st and 2nd year RA(O) monitoring period. This difference in elevation between the shallow groundwater zone and the intermediate groundwater zone indicates that there is hydraulic separation between these two water bearing zones. Because the potentiometric

level of the shallow zone groundwater is higher than the potentiometric level of the intermediate zone groundwater, a potential downward vertical gradient exists at this site.

A groundwater elevation difference of 3.67 ft was observed between co-located intermediate well 35AWW01 and deep well 35AWW02 in the October 2016 gauging event. This elevation difference indicates that there is hydraulic separation between these two water-bearing zones. Because the potentiometric level of the intermediate zone groundwater is higher than the potentiometric level of the deep zone groundwater, a potential downward vertical gradient exists at this site.

2.4 Groundwater Analytical Results

2.4.1 Shallow Zone

The COCs for shallow zone groundwater are 1,1,2-TCA; 1,1-DCA; 1,1-DCE; 1,2-DCA; benzene; cis-1,2-DCE; TCE; PCE; and VC (AECOM, May 2016). Analytical results for all semi-annual samples are presented on **Table 2**, and **Figures 6 and 7** display the COC analytical data for April 2016 and October 2016 respectively.

Twenty two wells were sampled for COCs during the 3rd year RA(O), with the exception of well LHSMW04, which was dry during the October 2016 sampling event. Select wells were also sampled for MNA parameters per the RAWP in October 2016.

During the April 2016 event, wells 03WW01, 35AWW06, 35AWW08, 35AWW09, 35AWW11, 35AWW14, 35AWW16, 35AWW18, 35AWW19, 35AWW20, LHSMW04, LHSMW06, and LHSMW07 had one or more COCs reported at concentrations above the laboratory detection limits. Only wells 03WW01, 35AWW06, 35AWW08, 35AWW09, 35AWW11, 35AWW19, 35AWW20, LHSMW04, LHSMW06, and LHSMW07 had concentrations exceeding the MCLs.

During the October 2016 event, wells 03WW01, 35AWW06, 35AWW08, 35AWW09, 35AWW11, 35AWW12, 35AWW13, 35AWW14, 35AWW15, 35AWW18, 35AWW19, 35AWW20, LHSMW06, and LHSMW07 had one or more COCs reported at concentrations above laboratory detection limits. Only wells 35AWW06, 35AWW08, 35AWW09, 35AWW11, 35AWW14, 35AWW19, 35AWW20, LHSMW06, and LHSMW07 had concentrations exceeding COC MCLs.

Groundwater monitoring well sampling forms were completed for each well sampled and are included in **Appendix C**. The laboratory analytical results are included in **Appendix D**.

2.4.2 Intermediate Zone

Wells 35AWW01 and 35AWW05 (**Figure 2**) are completed in the intermediate groundwater zone. Both wells were sampled during the 3rd year RA(O) monitoring period. COC analytical results for these two wells were below laboratory detection limits in both the April and October

2016 events. The laboratory analytical results are shown in **Table 2** and laboratory analytical reports are included in **Appendix D**.

2.4.3 Deep Zone

Well 35AWW02 is completed in the deep groundwater zone. This well is not included in the sampling program in accordance with the RAWP and was not sampled during the 2nd or 3rd year RA(O). Deep well 35AWW02 was sampled only during the October 2013 sampling event and the COC concentrations were below the laboratory detection limits. The laboratory analytical results for 35AWW02 are included on **Table 3** (Historic Monitoring Well COC Concentrations).

2.4.4 Arsenic Monitoring

Although arsenic has not been designated as a COC, groundwater was analyzed for arsenic from the 1st Year RA(O) monitoring period through July 2015 of the 2nd Year RA(O) monitoring period, as described in the Revised Technical Memorandum, Steps to Remedy-in-Place for LHAAP-03/LHAAP-58 (Appendix A of the RAWP). The four quarters of arsenic monitoring were completed to be compliant with the RAWP (AECOM, August 2013). However, per the Year 2 RA(O) Report (AECOM, May 2016), monitoring arsenic was recommended for the wells within the eastern plume 03WW01, 35AWW08, and 35AWW09. Continuation of the arsenic sampling program during the period of implementation and monitoring of EISB effectiveness with the western plume was also recommended based upon the recommendation to implement EISB for the western plume.

However, arsenic sampling at LHAAP-58 was inadvertently left out of the Year 3 RA(O) monitoring period and no arsenic monitoring was conducted during the 3rd Year reporting period.

2.5 Surface Water Sampling

The RAWP (AECOM, August 2013) specifies that surface water monitoring for VOCs (1,1,2-TCA; 1,1-DCA; 1,1-DCE; 1,2-dichloroethane; benzene; cis-1,2-DCE; TCE; PCE; and VC) will be performed at surface water sample location 35ASW03, which is in a ditch that runs parallel to 4th Street, on the western boundary of the site and adjacent to the western groundwater plume. **Figure 2** depicts the surface water sampling location. Surface water sampling data are included in **Table 2**. Analytical results from 35ASW03 during the 1st and 2nd Year RA(O)s were below MCLs for all COCs that were detected in groundwater at the site.

A semi-annual surface water sample from 35ASW03 was collected in April 2016 during the 3rd year RA(O) monitoring period. A surface water sample was not collected in October 2016 because the ditch was dry. No COCs were detected above the laboratory detection limits from surface water sample 35ASW03 during the April 2016 sampling event.

It should be noted that this surface water sample should not have been collected in April 2016. As recommended in the Year 2 RA(O) Report (AECOM, May 2016), surface water sampling will occur only if the groundwater elevation is at or above the bottom of the ditch. The surveyed bottom of the ditch at the lowest point is 213.58 ft above msl, while the gauged water level in nearest upgradient monitoring well 35AWW18 in April 2016 was 195.35 ft above msl. Therefore, the groundwater surface in April 2016 was below the base of the ditch and groundwater was not discharging to surface water in the ditch. For future sampling events, surface water samples will only be collected for analysis if the groundwater elevation is at or above the bottom of the ditch.

2.6 Well Abandonment

In accordance with the RAWP (AECOM, August 2013), wells that are recommended for abandonment are identified in this 3rd year RA(O) report. Based on 3 years of monitoring, the temporary well 1004TW006, which was identified for potential abandonment in the RAWP, is now recommended for abandonment. Well 1004TW006 is not included in the MNA wells and was meant to be a temporary well. This well is co-located with MNA well 35AWW20, which provides the information needed in this area of the site. Temporary well 1004TW001 was previously recommended for abandonment but will remain for potential future use in distinguishing between the western and eastern plume lobes given the location of this well.

Based on 3 years of monitoring, monitoring wells 35AWW02 and 35AWW03, which were identified for potential abandonment in the RAWP, are recommended to remain in place but can be removed from the monitoring program. The rationale supporting removal from the monitoring programs is listed below:

- 35AWW02: This is a deep monitoring well and was determined to be clean. It is isolated from the shallow impacted zone by an intermediate clean zone. Therefore, this well has served its purpose demonstrating that the deep zone is not impacted.
- 35AWW03: Adjacent and cross-gradient of clean well 35AWW13, which is included in the monitoring network. Well 35AWW13 provides delineation of the eastern plume to the north. Well 35AWW03 is also a very shallow well (total depth is 21 ft below top of casing versus greater than 30 ft below top of casing for other shallow zone wells) and has been dry throughout the monitoring period (February 2014 through October 2016).

Monitoring wells 35AWW01 and 35AWW04, which were identified for potential abandonment in the RAWP, are recommended to remain at the site (AECOM, May 2016). Well 35AWW01 is part of the MNA network and 35AWW04 is downgradient from the 1,1-DCE plume. Well 35AWW04 will be removed from the monitoring program but not abandoned at this time.

Other wells that were not recommended for abandonment in the RAWP were recommended for abandonment in the 2nd Year RA(O) report (AECOM, May 2016). However, it is currently recommended that they remain in place, and be removed from the monitoring program. These wells with rationale for their removal from the monitoring program are:

- 35AWW07R: Cross-gradient and far from the plume. A clean well (35AWW12) is located between plume and this well. Well 35AWW07R is not in the MNA network.
- LHSMW03: Downgradient of a clean well (35AWW21) and not in the MNA network.

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3 PERFORMANCE MONITORING OF EISB

The EISB target area is located within the vicinity of wells 03WW01 and 35AWW08 within the eastern groundwater plume. Well 35AWW10 is considered an upgradient, clean well and well 35AWW09 is located downgradient of the EISB area, but within the groundwater plume. Groundwater monitoring was performed in August 2013 prior to EISB implementation (baseline event), in October 2013 after the carbon substrate injections, and in January 2014, May 2014, October 2014, January 2015, April 2015, July 2015, October 2015, April 2016, and October 2016 after bioaugmentation culture injections. The EISB performance and key parameters are discussed below and much of the information is provided in **Tables 2 and 4**.

3.1 Analysis of VOCs

Major reductions are observed in PCE in the two wells, 03WW01 and 35AWW08, located within the influence of the EISB treatment area. TCE, a degradation product of PCE, initially decreased between August 2013 and October 2013 but subsequently increased (due to reduction of PCE into TCE) indicating the occurrence of early stages of dechlorination. After the initial increase, TCE concentrations subsequently decreased, due to degradation of TCE to daughter products, and plateaued to nearly the August 2013 concentrations. The concentrations of cis-1,2-DCE, a degradation product of TCE, increased during the 2nd Year monitoring period in both wells, suggesting that dechlorination of TCE was occurring (AECOM, May 2016). During this 3rd year monitoring period, TCE has continued to decrease while cis-1,2-DCE has also generally increased compared to concentrations observed during the 2nd Year monitoring period.

In October 2016, PCE decreased to historically low concentrations at both wells. TCE also decreased to non-detect in monitoring well 03WW01 and to 235 micrograms per liter (µg/L) in monitoring well 35AWW08. A year earlier, during the October 2015 sampling event, TCE was detected at 51.8 J (data qualifier denoting an estimated concentration) µg/L in monitoring well 03WW01 and at 581 µg/L at monitoring well 35AWW08. The daughter product cis-1,2-DCE which increased during the 2nd Year monitoring event has also subsequently decreased at both wells. October 2016 concentrations of cis-1,2-DCE are below action levels for both monitoring wells 03WW01 and 35AWW08, located within the influence of the EISB treatment area. Degradation product VC was detected for the first time in April 2016, at 14.2 J µg/L, in monitoring well 35AWW08 during the 3rd year monitoring period. During the most recent sampling event in October 2016, VC was detected at 7.46 J µg/L in monitoring well 35AWW08. This indicates that reductive dechlorination has progressed beyond cis-1,2-DCE during the 3rd year of monitoring. No VC has been observed at monitoring well 03WW01 through October 2016. Furthermore, after 3 years of monitoring, no rebound has been observed at either monitoring well 03WW01 or 35AWW08. As discussed below, the data within the EISB area continues to support reductive conditions.

3.2 Analysis of Field Parameters

The field parameters (potential of hydrogen [pH], dissolved oxygen [DO], oxidation-reduction potential [ORP], temperature, and specific conductivity) were measured in the LHAAP-35A (58) wells during the monitoring events. However, because wells 03WW01 and 35AWW08 were sampled using a bailer, the ORP and DO concentrations were not recorded on the field forms, as these concentrations are not representative and so are not included in **Table 4**. The pH in these two wells initially decreased, potentially related to substrate fermentation and organic acid production. However, since October 2014, and continuing through this 3rd year monitoring period, the pH in both wells has increased, indicating a self-buffering capacity of the aquifer.

3.3 TOC Levels

Total organic carbon (TOC) is an indicator of the presence of carbon substrate. After injection of the carbon substrate, there was an initial spike of the TOC levels in both wells (03WW01 and 35AWW08), indicating effective substrate distribution from the injection points to the impacted zone. TOC levels have since decreased. Over the course of the 3rd year monitoring period, the TOC levels have continued to decrease, which is expected as the carbon substrate is consumed and due to migration away from the injection area. The most recent residual TOC levels (October 2016) of 292 mg/L in 03WW01 and 918 mg/L in 35AWW08 indicate that TOC remains at sufficiently high concentrations to support reductive dechlorination, albeit at much reduced amounts compared to the period immediately after injection in October 2013. The October 2015 TOC levels were higher than background TOC concentrations in nearby wells such as 35AWW09 and 35AWW10 with October 2016 TOC concentrations of 15.6 mg/L and 7.43 mg/L, respectively.

3.4 Analysis of Anions

Decreased sulfate concentrations in the two EISB wells relative to background levels in nearby wells such as 35AWW09 and 35AWW10, indicate the development of reducing conditions conducive to reductive dechlorination. The sulfate concentrations in monitoring well 03WW01 decreased from a high of 487 mg/L in October 2013 to less than (<) 5 mg/L in October 2016 and in 35AWW08 from 703 mg/L in October 2013 to < 10 mg/L in October 2016. Although sulfate reduction occurs through competing reactions to reductive dechlorination, the decrease in sulfate concentration is indicative of reducing aquifer conditions.

3.5 Dissolved Gases

The methane concentration during the 3rd year monitoring period in 03WW01 decreased, from a peak of 16,100 µg/L in July 2015 to 5,950 µg/L in October 2016 (**Table 4**). However, the methane concentration at 03WW01 remains well above the baseline methane concentration observed in August 2013 of 3.22 µg/L. The methane concentration in 35AWW08 continues to increase during the 3rd year monitoring period from < 2 µg/L in October 2013 to a peak of 7,350

µg/L in October 2016. Increasing methane concentrations due to methanogenesis indicates development of strong reducing conditions. Concurrently, carbon dioxide levels have continued to increase in both 03WW01 and 35AWW08, indicating metabolism of the carbon substrate. Ethane and ethene levels have remained below reporting limits (< 20 µg/L), in both 03WW01 and 35AWW08, indicating the absence of complete dechlorination.

3.6 Dechlorinating Bacteria

The dechlorinating bacteria count spiked after the bioaugmentation event (November 2013) in wells 03WW01 and 35AWW08, indicating effective distribution of the introduced culture. The introduced bacterial cultures then decreased in October 2014, in particular the concentrations of dehalococcoides (DHC) species, the bacteria responsible for degrading cis-1,2-DCE to VC, which decreased to 10.9 cells/milliliter (mL) in 03WW01 and to 70.4 cells/mL in 35AWW08. However, during the 3rd year RA(O) sampling event, DHC species have spiked to the highest levels yet observed, to 9,460,000 cells/mL in 03WW01 and to 25,600,000 cells/mL in 35AWW08. These elevated dechlorinating bacteria counts in 2016 indicate the rapid proliferation of bacteria is occurring, and are adequate for the continued degradation of PCE/TCE to VC.

In summary, the EISB treatment has been effective in reducing the VOC concentrations and the conditions are still conducive for continued reductions.

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4 NATURAL ATTENUATION EVALUATION

This section presents the results of the natural attenuation evaluation in accordance with the three lines of evidence discussed in the Final Remedial Design (Shaw, September 2011) for LHAAP-35A (58) groundwater COCs. The discussion below pertains only to the shallow aquifer where COCs are detected above cleanup levels.

4.1 First Line of Evidence: Change in COC Concentrations over Time and with Distance

Natural attenuation is the combination of multiple mechanisms, including biodegradation, volatilization, dilution, advection, and absorption that reduce contaminant concentrations. The decrease of COC concentrations over time and distance in the absence of any other treatment is evidence of natural attenuation (AECOM, May 2016). The change in groundwater COC concentrations over time and with distance was evaluated at LHAAP-35A (58). VOC concentrations for the 3rd year RA(O) monitoring period are identified on **Figure 6** (April 2016) and **Figure 7** (October 2016).

Eighteen monitoring wells (in addition to the four wells included in the EISB treatment performance monitoring program [03WW01, 35AWW08, 35AWW09, and 35AWW10]) are included in the MNA monitoring program for VOCs (35AWW01, 35AWW05, 35AWW06, 35AWW11, 35AWW12, 35AWW13, 35AWW14, 35AWW15, 35AWW16, 35AWW17, 35AWW18, 35AWW19, 35AWW20, 35AWW21, 35AWW22, LHSMW04, LHSMW06, and LHSMW07). Wells 35AWW01 and 35AWW05 are screened in the intermediate groundwater zone; all other wells are screened in the shallow groundwater zone.

The only wells where COCs were detected above their respective MCLs are 03WW01, 35AWW06, 35AWW08, 35AWW09, 35AWW11, 35AWW14, 35AWW19, 35AWW20, LHSMW04, LHSMW06, and LHSMW07. No COCs were detected above the MCLs in any of the other monitored wells during the 3rd year RA(O) monitoring events (**Table 2**).

The Draft Final RACR for LHAAP-35A (58) (AECOM, October 2015) states that historical groundwater data indicates that monitoring wells 35AWW20 and LHSMW07 in the western plume, and wells 35AWW08 and 35AWW09 in the eastern plume, will be the primary focus of COC trend analysis as they contain the highest relative COC concentrations. Additionally, well 03WW01, located in the eastern plume, and well LHSMW06 located in the western plume, had elevated concentrations of COCs during this monitoring period and is therefore discussed herein.

Mann-Kendall analysis for the data collected from 2008 through the end of the 3rd year RA(O) period (October 2016) was completed for various COCs for monitoring wells 03WW01, 35AWW08, 35AWW09, 35AWW20, LHSMW06, and LHSMW07. The results are presented in

Appendix E in graphical format with statistical results presented on the right hand side. The U.S. Environmental Protection Agency's (USEPA's) ProUCL version 5.1 software was used for this analysis. Data used to generate the Mann-Kendall analysis is presented in Tables 2 and 3. The dates are displayed in numerical format (elapsed days) rather than in a date format as required by the program. The concentration of COCs are presented on the data points on the graph in µg/L. The level of significance was 5 percent (%). A summary table of the Mann-Kendall results is presented below at the end of Section 4.1.2 (page 4-6).

4.1.1 Western Plume

Well 35AWW20

The COCs 1,1-DCE; cis-1,2-DCE; TCE; and VC were all detected in this well at concentrations above their respective MCLs during both monitoring events (**Table 2**). Concentrations of cis-1,2-DCE; 1,1-DCE; and TCE have fluctuated between October 2013 and October 2016 but have remained relatively stable. The fluctuations in cis-1,2-DCE; 1,1-DCE; and TCE concentrations appear to be related to groundwater level changes. Concentrations of TCE have increased by approximately 16% between October 2013 and October 2016 while the concentrations of 1,1-DCE and cis-1,2-DCE have increased by less than 5% during this same period. Degradation product VC appears to have a more distinct upward trend throughout the 3-year monitoring period with an overall increase of 58% between October 2013 and October 2016, and a maximum concentration of 216 µg/L observed in April 2016.

In addition to the above constituents, well 35AWW20 contained 1,1,2-TCA and 1,2-DCA (daughter product of degradation of 1,1,2-TCA) above the MCLs throughout the three year monitoring period. The COC, 1,1,2-TCA fluctuated between a minimum of 48.3 µg/L in February 2014 and a maximum of 82.7 µg/L in October 2016. Additionally, the 1,1,2-TCA daughter product, 1,2-DCA fluctuated between a minimum of 13.2 µg/L in February 2014 and a maximum of 20.3 µg/L in October 2013. The concentrations of both COCs detected in Year 3, remained stable within the ranges reported above with an overall increase between April 2016 and October 2016 in 1,1,2-TCA concentration of 23% and an overall decrease in 1,2-DCA concentration of 3%.

The Mann-Kendall trend analysis in 35AWW20 was conducted for TCE; cis-1,2-DCE; 1,1-DCE; and VC for analytical results from 2008 through the end of the 3-year RA(O) period (October 2016). The results indicate no significant trend in concentrations for TCE; 1,1-DCE; and cis-1,2-DCE over time with the general trend lines pointing slightly upward. Conversely, concentrations of VC indicate significant evidence of an increasing trend over time at 35AWW20. These results indicate there is no appreciable attenuation occurring in the vicinity of 35AWW20 with the exception of the observed statistical increase in VC concentrations.

Well LHSMW06

The COCs TCE; 1,1-DCE; and VC were detected in this well at concentrations above their respective MCLs during both monitoring events (**Table 2**). All three COCs have increased to historically high concentrations in October 2016. TCE was detected at 9.06 µg/L, 1,1-DCE at 19.2 µg/L, and VC at 2.94 µg/L in well LHSMW06. The increase in concentration of COCs in LHSMW06 indicates likely migration of COCs from the upgradient area of 35AWW20 to the area of LHSMW06.

The Mann-Kendall trend analysis in LHSMW06 was conducted for TCE; 1,1-DCE; and VC for analytical results from 2008 through the end of the 3-year RA(O) period (October 2016. The results indicate statistically significant increasing trends in concentrations for TCE; 1,1-DCE; and VC over time. The Mann-Kendall analysis further indicates that while degradation is occurring, with the increase in daughter products, migration of COCs from upgradient sources is likely.

Well LHSMW07

The COCs 1,1-DCE; TCE; and VC were detected in this well at concentrations above their respective MCLs during the entire 3-year monitoring period. Concentrations of TCE have experienced an overall increase between October 2013 and October 2016, with TCE increasing from 23.9 µg/L to 71.6 µg/L in October 2016. Concentrations of 1,1-DCE and VC also experienced an overall increase between October 2013 and October 2016 with peak concentrations occurring in July 2015. Specifically, 1,1-DCE increased from 396 µg/L in October 2013 to 701 µg/L in October 2016, and VC increased from 15.9 µg/L to 21.8 µg/L in October 2016. The overall increases in concentration for 1,1-DCE and VC were 77% and 33%, respectively. The Mann-Kendall trend analysis in LHSMW07 was conducted for TCE; 1,1-DCE; and VC for analytical results from 2008 through the end of the 3-year RA(O) period (October 2016). The results indicate a statistically significant evidence of an increasing trend in concentrations for TCE, 1,1-DCE, and VC over time. The increase in concentration of COCs in LHSMW07 indicates likely migration of COCs from the upgradient area of 35AWW20 to the area of LHSMW07.

The COC, 1,1,2-TCA was detected above the MCL of 5 µg/L for the first time in April 2014 at 5.68 µg/L and was also above the MCL in October 2016 at a concentration of 7.72 µg/L. The 1,1,2-TCA overall increase was 36% during the 3-year reporting period. The 1,1,2-TCA daughter product, 1,2-DCA while detected below the MCL, had concentrations between 6.1 µg/L in October 2013 and 2.56 J µg/L in October 2016 with an overall decrease of 58% during the 3-year monitoring period.

Historical data from a sample collected in November 2008 indicated 1,1-DCE; TCE; and VC concentrations of 576 µg/L, 25 µg/L, and 14.4 µg/L, respectively (Shaw, September 2011). The 1,1-DCE highs were reported at 1,341 µg/L in January 1996 and 950 µg/L in May 1998. **Table 3** presents the historical analytical results.

4.1.2 Eastern Plume

Well 03WW01

This well is located within the active EISB area. PCE and TCE previously detected in this well at concentrations above their respective MCLs were not detected during the 3rd year RA(O) monitoring period. PCE concentrations during the 2nd Year RA(O) reporting period decreased rapidly after the introduction of the carbon substrate and bacterial augmentation. PCE concentrations, continued decreasing during the 2016 (3rd year) reporting period to 6.49 J µg/L in April 2016, and below the method detection limit in October 2016. The decrease in PCE concentration is nearly 100% since October 2013. TCE concentrations increased after substrate injection and more rapidly after bioaugmentation, reaching a peak of 223 µg/L in October 2014 but has since decreased to < 5 µg/L in October 2016. The initial increase in TCE concentrations is a reflection of PCE degradation.

Degradation of TCE resulted in the accumulation of cis-1,2-DCE to a high of 117 µg/L in April 2016. The increase in cis-1,2-DCE indicates that cis-1,2-DCE has been biodegrading as well, as a result of introduction of KB-1® bacteria. Accumulation of VC was also not observed, likely because VC degradation was taking place, noting that the reporting limit for VC (12.5 µg/L) in April 2016 may have masked the presence of VC in this well.

The Mann-Kendall trend analysis in 03WW01 was conducted for PCE; TCE; and cis-1,2-DCE for analytical results from 2008 through the end of the 3-year RA(O) period (October 2016). The Mann-Kendall results indicate a statistically significant evidence of a decreasing trend in concentrations for PCE but no significant change in TCE. However, the Mann-Kendall results indicate a statistically significant increase in cis-1,2-DCE concentrations, indicating the degradation of TCE is occurring.

The concentrations of PCE and TCE in a groundwater sample collected in November 2008 were 2,570 µg/L and 196 µg/L, respectively (Shaw, September 2011). These high historical levels of PCE and TCE compared to concentrations in October 2013, before EISB was implemented, indicate that some form of natural attenuation was already taking place, with dilution likely to be the dominant mechanism.

Seasonal fluctuations are difficult to discern for this well due to the rapid change in concentrations associated with EISB.

Well 35AWW08

This well is located within the active EISB area. PCE and TCE were detected in this well at concentrations above their respective MCLs during the 3rd year RA(O) monitoring period. PCE concentrations during the 3-year RA(O) reporting period have continued to decrease rapidly after the introduction of the carbon substrate and bacterial augmentation, reaching a minimum concentration of 36.9 µg/L in October 2016. Therefore a 98% decrease in PCE concentration

has occurred since October 2013. TCE concentrations increased after substrate injection and more rapidly after bioaugmentation, reaching a peak of 953 µg/L in May 2014 followed by a decrease to 235 µg/L in October 2016. The increase in TCE concentrations is a reflection of PCE degradation.

Degradation of TCE has resulted in an overall increase in cis-1,2-DCE concentrations, especially during the 2nd year monitoring period, reaching a high of 79.6 µg/L in October 2015. Although, cis-1,2-DCE has decreased slightly to 41.7 µg/L in October 2016, the data indicates that active degradation of TCE has continued through the end of the 3rd year monitoring period. An increase in VC indicates that cis-1,2-DCE has been biodegrading as well, as a result of introduction of KB-1® bacteria. Accumulation of VC was observed during the 3rd year reporting period as the cis-1,2-DCE biodegraded. VC was detected at 14.2 J µg/L in April 2016 and at 7.46 J µg/L in October 2016.

The Mann-Kendall trend analysis in 35AWW08 was conducted for PCE; TCE; and cis-1,2-DCE for analytical results from 2008 through the end of the 3-year RA(O) period (October 2016) (**Appendix E**). The results provide statistically significant evidence of a decreasing trend in concentrations for PCE, but no significant change in TCE. The general trend in TCE is downward. The cis-1,2-DCE results indicate an insufficient statistical change, however the general trend is upward as expected with TCE degradation.

Detected concentrations of PCE and TCE in a sample collected in November 2008 are 9,590 µg/L and 675 µg/L, respectively (Shaw, September 2011). These high historical levels of PCE compared to concentrations in October 2013, before EISB was implemented, indicate that some form of natural attenuation was already taking place, with dilution likely to be the dominant mechanism. Seasonal fluctuations are difficult to discern for this well due to the rapid change in concentrations associated with EISB.

Well 35AWW09

This well is located downgradient of the active EISB area. PCE and TCE were detected in this well at concentrations above their respective MCLs throughout the 3-year monitoring period. PCE concentrations have increased from 57.6 J µg/L in October 2013 to 173 µg/L in October 2016, but have decreased slightly since October 2015 (283 µg/L). Similarly, TCE concentrations exhibited a nine-fold increase over the first 2 year monitoring periods from 8.97 J µg/L in October 2013 to 81.3 µg/L in October 2015, but decreased during the 3rd year monitoring period back to 48.2 µg/L. A slight increase in cis-1,2-DCE was observed in this well from non-detect in October 2013 to 0.437 J µg/L in October 2016.

The Mann-Kendall trend analysis in 35AWW09 was conducted for PCE; TCE; and cis-1,2-DCE for analytical results from 2008 through the end of the 3-year RA(O) period (October 2016) (**Appendix E**). The results provide statistically significant evidence of an increasing trend in PCE

and TCE concentrations, but no statistically significant change in cis-1,2-DCE concentrations. However, the overall trend in cis-1,2-DCE concentrations was slightly upward.

Well 35AWW09 was installed in August 2013 and sampled the same month. PCE and TCE were detected at concentrations of 21.9 µg/L and 11.9 µg/L, respectively. No other historical data are available for this well. **Table 3** includes the historical COC concentrations.

The cause of the increase in COCs in well 35AWW09 is the migration of COCs in groundwater from the upgradient highly contaminated area (e.g., 35AWW08 and 03WW01). The initial increase in concentrations in 35AWW09 is likely associated with continued plume migration downgradient. The influence of biodegradation associated with EISB appears to remain within the area targeted for EISB (area of monitoring wells 35AWW08 and 03WW01) with little to no influence observed in 35AWW09.

Figure 8 shows COC concentration profiles in wells 03WW01, 35AWW08, 35AWW09, 35AWW20, and LHSMW07 and the table below summarizes the Mann-Kendall trend results for these same wells. Total VOCs were determined by adding the concentrations of the VOCs shown on **Figure 8** in milliequivalents. Other VOCs not shown on **Figure 8** were not included in the calculations.

Mann-Kendall Trend Summary

Monitoring Well	PCE	TCE	cis-1,2-DCE	1,1-DCE	VC
03WW01	**Significant Decrease***	No significant trend*	**Significant Increase***	--	--
35AWW08	**Significant Decrease**	No significant trend	No significant trend*	--	--
35AWW09	**Significant Increase**	**Significant Increase**	No significant trend*	--	--
35AWW20	--	No significant trend	No significant trend	No significant trend	**Significant Increase**
LHSMW06	--	**Significant Increase**	--	**Significant Increase**	**Significant Increase**
LHSMW07	--	**Significant Increase**	--	No significant trend	**Significant Increase**

Note:
* Most recent concentrations already achieve MCLs

4.1.3 Plume Stability

Contaminant plume maps completed for the April 2016 and October 2016 sampling events are presented as **Figures 6 and 7**, respectively.

4.1.3.1 Western Plume

Based on the southeasterly direction of groundwater flow, the following wells can be considered to be along the groundwater flow path: 35AWW15, 35AWW20, LHSMW07, and 35AWW19. The COC concentrations in upgradient well 35AWW15 have remained below detection limits throughout the reporting period. The in-plume well (35AWW20) exhibits the highest levels of COCs, which have increased then decreased over the 3-year RA(O) monitoring period, with the exception of VC, which exhibited an overall increasing trend. The concentrations of COCs in the in-plume, downgradient well LHSMW07 have slightly increased since October 2013. The increase in concentrations of COCs in LHSMW07 likely indicates migration of COCs from the upgradient area of 35AWW20 to the area of LHSMW07.

The 1,1-DCE concentrations in monitoring wells 35AWW14 and 35AWW19, both of which are located in a downgradient direction of the western plume, have increased from below the MCL in October 2013 to above the MCL in October 2016, indicating plume expansion in a downgradient direction. The 1,1-DCE concentration has increased nearly 10-fold at 35AWW14 from 1.63 J µg/L in October 2013 to 10.4 µg/L in October 2016. Over the same time period, TCE concentrations at 35AWW14 have increased from 0.663 J µg/L in October 2013 to 10.2 µg/L in October 2016. The 1,1-DCE concentration doubled at 35AWW19 from 6.45 µg/L in October 2013 to 12.9 µg/L in October 2016. The 1,2-DCA concentration in 35AWW19 also slightly increased, although remaining below the MCL, from 1.83 µg/L in October 2013 to 2.74 µg/L in October 2016. The TCE concentration in 35AWW19 also increased from a low of 0.379 J µg/L in October 2013 to a high of 1.13 µg/L in April 2015 and ended the 3 year sampling period at 0.754 J µg/L in October 2016. Therefore, based on the inferred southeastern groundwater flow path, COC levels have increased with distance from the source area, implying plume migration is taking place and based on the last nine sampling events, the lateral extent of the western plume is no longer defined in the area of 35AWW14 and 35AWW19.

Further evidence of plume expansion is the statistically significant increase in concentrations of 1,1-DCE; TCE; and VC in LHSMW06 (**Appendix E**), located east and cross-gradient of 35AWW20, to above their MCLs in October 2016. Similarly, concentrations of 1,1-DCE in 35AWW11, located on the eastern edge of the western plume, appear to be slightly increasing from a low of 7.7 µg/L in October 2013 to 16 µg/L in October 2016.

Concentrations of some COCs in individual wells over time, such as 1,1-DCE in 35AWW06, located directly to the south and somewhat cross-gradient of LHSMW07, appeared to remain relatively stable during the monitoring period. Concentrations of COCs in perimeter wells,

including boundary area wells 35AWW15, 35AWW16, 35AWW17, or 35AWW18, exhibited no increases in COC concentrations or detections of new COCs.

A review of the data for individual wells over the course of the monitoring period for the western plume suggests that there may be a correlation between groundwater elevations and COC concentrations. **Figure 8** provides concentration profiles with groundwater levels for monitoring wells 35AWW20 and LHSMW07.

4.1.3.2 Eastern Plume

Based on the southeasterly direction of groundwater flow over the 3-year RA(O) monitoring period, the following wells are considered to be along the groundwater flow path: 35AWW10, 35AWW08, 03WW01, 35AWW09, and 35AWW21. The COC concentrations in the upgradient well 35AWW10 remained below detection limits. The in-plume wells (35AWW08 and 35AWW09) exhibit the highest concentrations of COCs in the eastern plume. It should be noted that 03WW01 which is hydraulically downgradient of 35AWW08 and upgradient of 35AWW09 had no detections of COCs above the method detection limits in October 2016. This area of the eastern plume near 03WW01 was targeted for EISB. PCE concentrations detected during the 3-year RA(O) reporting period decreased significantly at 03WW01 and 35AWW08 after the introduction of the carbon substrate and bacterial augmentation, reaching a minimum concentration of < 5 µg/L and 36.9 µg/L, respectively, in October 2016. TCE concentrations increased after substrate injection and more rapidly after bioaugmentation, reaching peak concentrations of 953 µg/L in May 2014 at 35AWW08, and 223 µg/L in October 2014 at 03WW01. Since 2014, TCE has decreased to 235 µg/L (35AWW08) and < 5 µg/L (03WW01), respectively, in October 2016. Concentrations of cis-1,2-DCE have also increased in 35AWW08, from October 2013 through October 2015 before tapering off during the current reporting period, as a result of biodegradation of TCE to cis-1,2-DCE, the main TCE degradation daughter product.

Although PCE and TCE were detected at lower concentrations in April and October 2016 than in October 2015, there is a statistically significant increasing trend in concentrations of PCE and TCE in 35AWW09. Monitoring well 35AWW09 is located approximately 75 ft downgradient from 03WW01. The increase in concentrations in 35AWW09 is likely associated with downstream plume migration from highly impacted area well 35AWW08 and formerly impacted well 03WW01.

LHSMW04, which had been dry since 2008 was sampled in March and April 2016. PCE was detected at 419 µg/L and TCE was detected at 106 µg/L in March 2016. However, the concentrations of COCs in the downgradient wells 35AWW12 and 35AWW21 remained below the detection limits. Monitoring well LHSMW04 is located between 35AWW09 and 35AWW12 and presents the lateral extent of the eastern plume. No increased concentrations or detections of new COCs at boundary area wells 35AWW10, 35AWW13, 35AWW22, 35AWW12, and 35AWW21 occurred, therefore, the extent of the eastern plume is stable.

A review of the data in 35AWW09 over the course of the monitoring period does not indicate any correlation between groundwater elevations and COC concentrations. COC concentration changes in 03WW01 and 35AWW08 could not be correlated with groundwater elevation because of EISB implementation in this area of the plume. **Figure 8** provides plots of groundwater COC concentrations and groundwater elevation changes over time in wells 03WW01, 35AWW08, and 35AWW09.

4.2 Second Line of Evidence: Geochemical Indicators

Table 2 includes the geochemical indicator parameters that are useful for MNA evaluation. Some geochemical parameters are measured in the field and are recorded for all sampling events for all wells. The field parameters for LHAAP-35A (58) wells include: DO, ORP, pH, conductivity, turbidity, and temperature. DO and ORP measurements from bailed wells are not considered representative and not included in **Table 2**. The other geochemical indicators analyzed in the laboratory include: alkalinity, chloride, nitrate, nitrite, iron, sulfate, sulfide, methane, ethane, ethene, TOC, phosphorous, manganese, and dechlorinating bacteria. The following discussion examines the geochemical indicators recorded during the 3-year RA(O) period.

- Alkalinity – There is a positive correlation between zones of microbial activity and increased alkalinity (USEPA, September1998). During the 3rd year reporting period, alkalinity levels in the shallow zone groundwater at the site ranged between 55.4 mg/L (35AWW10) and 9,160 J mg/L (35AWW08) in October 2016. 35AWW08 and 03WW01 (5,500 J mg/L) within the EISB area had the highest alkalinity readings onsite in October 2016. Outside the EISB area, alkalinity levels were generally lower, ranging between 55.4 mg/L (35AWW10) and 704 mg/L (35AWW20) in October 2016. The higher alkalinity in 03WW01 and 35AWW08 is associated with biodegradation of organic substrate added to the groundwater and generation of carbon dioxide.
- Chloride – During biodegradation of chlorinated hydrocarbons in groundwater, chloride is released to groundwater. This results in higher chloride concentrations in the contaminant plume as compared to background levels in upgradient wells or in unimpacted downgradient wells (USEPA, September 1998). Chloride levels in the shallow zone ranged between 6.37 mg/L in background well 35AWW10 and 2,380 mg/L in impacted well 35AWW11. Relatively high levels of chloride in impacted wells LHSMW07 (2,280 mg/L) and 35AWW20 (1,470 mg/L) near the center of the western plume supports the occurrence of biodegradation in this area. Additionally, chloride levels within the eastern plume EISB treatment area wells 03WW01 (762 mg/L), 35AWW08 (2,000 mg/L), and 35AWW09 (1,420 mg/L) provide evidence of biodegradation in the eastern plume. These levels can be compared to background chloride concentrations in upgradient wells such as 35AWW10 with a chloride concentration below 20 mg/L.
- Dissolved Oxygen – DO is the most thermodynamically favored electron acceptor used by microbes for biodegradation of organic carbon, whether natural or anthropogenic (USEPA,

September 1998). Anaerobic bacteria generally cannot function at DO concentrations greater than about 0.5 mg/L and hence, reductive dechlorination will not occur. During the course of the monitoring period, the wells in the eastern plume (03WW01 and 35AWW08) were bailed, making the DO measurements in these wells unreliable, therefore, the DO levels in these wells were not recorded. The DO levels observed in eastern plume well 35AWW09 were 1.94 mg/L (April 2016) and 2.18 mg/L (October 2016); in western plume well 35AWW20 were 0.88 mg/L (April 2016) and 1.35 mg/L (October 2016); and in western plume well LHSMW07 were 0.47 mg/L (April 2016) and 1.34 mg/L (October 2016). These 3rd year reporting period DO levels are not low enough to adequately support anaerobic conditions.

- Oxidation-Reduction Potential – The ORP levels indicate how oxidative or reductive the groundwater is in the aquifer matrix and provide real-time data to determine if conditions are conducive for anaerobic biodegradation. ORP values less than 50 millivolts (mV) indicate that the aquifer is reaching anaerobic conditions that are favorable for the biological reductive dechlorination of chlorinated ethenes and ethanes. During the monitoring period, wells in the eastern plume (03WW01 and 35AWW08) were bailed, making the ORP measurements in these wells unreliable, therefore, the ORP levels in these wells were not recorded. The ORP measurements at LHAAP-35A (58) during the 3rd year monitoring period were as follows: 279 mV (October 2016) and 499 mV (April 2016) in 35AWW09 (eastern plume downgradient of EISB area); 67 mV (April 2016) and 91 mV (October 2016) in 35AWW20 (western plume highest impacted well); and 113 mV (October 2016) and 130 mV (April 2016) in LHSMW07 (western plume second highest impacted well). These results indicate that conditions within the western plume and in the eastern plume outside of the EISB treatment area (35AWW09), are generally aerobic and not supportive of anaerobic degradation.
- Nitrate and Nitrite – After DO has been depleted in the microbiological treatment zone, nitrate may be used as an electron acceptor for anaerobic biodegradation of organic carbon by denitrification. In order for reductive dechlorination to occur, nitrate concentrations in the contaminated portion of the aquifer must be less than 1.0 mg/L (USEPA, September 1998). **Table 2** indicates that nitrate and nitrite concentrations were below the laboratory reporting limits in the October 2016 LHAAP 35A (58) groundwater. Based on these observations, nitrate reduction in the shallow aquifer is not a likely mode of microbial respiration at the site, and the lack of nitrate is favorable for achieving the reducing conditions ideal for anaerobic reductive dechlorination.
- Iron – In some cases, iron (III) (ferric iron) is used as an electron acceptor during anaerobic biodegradation of organic carbon. During this process, iron (III) is reduced to iron (II) (ferrous iron), which may be soluble in water. Ferrous iron concentrations can be used as an indicator of anaerobic degradation of organic compounds. Ferrous iron concentrations in LHAAP-35A (58) wells during the October 2016 sampling event were as follows: 8.02 mg/L in 03WW01; 17.6 mg/L in 35AWW08; 0.263 mg/L in 35AWW20; and 0.26 mg/L in LHSMW07. The relatively high concentrations of ferrous iron in monitoring wells 03WW01 and 35AWW08 indicate active reductive conditions in the eastern plume around these wells

as a result of EISB. However, ferrous iron concentrations in the remaining wells indicate limited reductive conditions in the western plume, and in the portion of the eastern plume outside the influence of EISB.

- Sulfate and Sulfide – After DO and nitrate have been depleted in the microbiological treatment zone, sulfate may be used as an electron acceptor for anaerobic biodegradation. This process is termed "sulfate reduction" and results in the production of sulfide. Concentrations of sulfate greater than 20 mg/L may cause competitive exclusion of dechlorination. However, in many plumes with high concentrations of sulfate, reductive dechlorination still occurs (USEPA, September 1998). **Table 2** indicates that the sulfate concentrations decreased in 03WW01 from a high of 487 mg/L in October 2013 to < 5 mg/L in October 2016 as a result of organic carbon introduction to the groundwater. Similarly, sulfate decreased in 35AWW08 from 703 mg/L in October 2013 to < 10 mg/L in October 2016 as a result of EISB. The sulfate concentration in 35AWW09, outside the influence of EISB, was 951 mg/L in October 2016. In the western plume, the sulfate concentration in 35AWW20 was 1,830 mg/L and in LSHMW07 was 2,650 mg/L. Generally, sulfate levels were well above 20 mg/L in the majority of wells at LHAAP-35A (58) except in the wells that were influenced by EISB. In October 2016, sulfide was detected in two monitoring wells at 0.87 J mg/L in 35AWW20 (western plume) and at 3.68 mg/L in 35AWW09 (eastern plume), likely in response to sulfate reduction.
- Dissolved gasses – Methanogenesis occurs in highly reducing conditions and generally occurs after oxygen, nitrate, and sulfate have been depleted. Ethane and ethene are the end products of reductive dechlorination of chlorinated VOCs and their levels increase if complete reductive dechlorination takes place. Methane levels above 500 µg/L are considered to indicate methanogenic conditions (USEPA, September 1998). Methane concentrations in the eastern plume increased from 4.35 µg/L in 03WW01 in October 2013 to 5,950 µg/L in October 2016 and in 35AWW08 from 5.38 µg/L in October 2013 to 7,350 µg/L in October 2016 (**Table 4**). These wells are influenced by EISB and the production of methane is a strong indicator of anaerobic conditions. Methane concentrations in the remaining wells were below 250 µg/L, indicating limited anaerobic conditions in the aquifer. Ethene was only detected at one well in October 2016 at 2.64 J µg/L in 35AWW20 indicating that limited reductive dechlorination is occurring in the western plume. Ethane was non-detect in all the samples.
- Total Organic Carbon – Regardless of the electron acceptor being used, organic carbon is a required source of reduced carbon and energy to sustain microbial activity. TOC is utilized as a carbon and energy source to support the reductive dechlorination of the chlorinated COCs. TOC concentrations greater than 20 mg/L are considered adequate to support microbial activity (USEPA, 1998). TOC concentrations in eastern plume area wells, 03WW01 and 35AWW08, influenced by injected substrate slightly exceeded this threshold, with October 2016 concentrations of 292 mg/L and 918 mg/L respectively. These concentrations indicate that sufficient TOC remains in the aquifer to support reductive dechlorination in the eastern plume. However, TOC in the western plume area wells, 35AWW20 and

LHSMW07, while above the 20 mg/L threshold, was detected at lower concentrations of 31.8 mg/L and 41.6 mg/L, respectively (i.e., background levels). The remaining wells generally had TOC concentrations below 20 mg/L.

- Phosphorus – Phosphorus in groundwater is a nutrient available to microbes for their metabolic processes during reductive dechlorination. Phosphorus is generally present at very low concentrations in the aquifer. However, phosphorus was introduced with the injected substrate in the area of 03WW01 and 35AWW08. In 03WW01, phosphorous was reported at 243 mg/L in October 2013 but decreased to 2.06 J mg/L in October 2016, indicating consumption of phosphorous by bacteria. Similarly, phosphorous was detected at 361 mg/L in 35AWW08 in October 2013, but decreased to 5.68 mg/L in October 2016. These levels continue to support microbial activities, but could become rate limiting quickly. Detected phosphorus levels in other sampled wells were generally low or were less than the laboratory reporting limit, indicating that groundwater does not have naturally available phosphorus for biological degradation.
- Manganese – Manganese is a naturally occurring potential electron acceptor under anaerobic conditions. During anaerobic biological activity, manganese is solubilized from the aquifer matrix material. Dissolved manganese concentrations were relatively low ranging from 0.0748 mg/L in 35AWW10 in October 2016 to 9.38 mg/L in 35AWW08 in October 2016. Wells 03WW01 (8.47 mg/L in October 2016) and 35AWW08 (9.38 mg/L in October 2016), which are inside the EISB treatment area, were the only wells that had manganese concentrations greater than 5.0 mg/L, suggesting no significant biological activity outside of the EISB treatment area.
- Dechlorinating bacteria – Dechlorinating bacteria, dehalococcoides ethenogenes, dehalobacter, and associated functional genes were analyzed in groundwater samples from wells 03WW01, 35AWW08, 35AWW09, and 35AWW10, within and outside the eastern plume. Generally, the microbial population counts and the functional gene counts were below the laboratory reporting limits in areas not influenced by bioaugmentation (35AWW09 and 35AWW10), indicating a limited natural population of the bacteria and the absence of gene expression necessary for anaerobic biological degradation of the COCs. Within the bioaugmentation area, the microbial population counts were high, indicating the rapid proliferation of the microbial population during the 3rd year reporting period.

The qualitative assessment of geochemical indicators in the shallow groundwater zone at LHAAP-35A (58) indicates current geochemical conditions are not supportive of MNA.

4.3 Third Line of Evidence: Predictive Modeling and Microbial Analysis

If the first two lines of evidence for MNA are deemed inadequate or inconclusive, and/or if the need for a contingency remedy is evaluated, data from field or microcosm studies will be necessary to establish the third line of evidence for MNA.

Dechlorinating bacteria, dehalococcoides ethenogenes, and associated functional genes were analyzed in wells 03WW01, 35AWW08, 35AWW09, and 35AWW10, both within and outside the eastern plume. Generally, outside the bioaugmentation area (35AWW09 and 35AWW10), the microbial population count and the functional gene counts were very low (less than 100 cells/mL) and in most cases below the laboratory reporting limits, indicating a limited population of the bacteria and an absence of gene expression necessary for anaerobic biological degradation of the COCs. Areas that were bioaugmented reflected high concentrations of microbial population.

Of the analyzed parameters and wells using Mann-Kendall statistical analysis, only two data sets showed a significant decrease in concentration over time (PCE in 03WW01 and 35AWW08). ProUCL software was used to determine the best fit regression curve for the dataset from which the first order rate constant was determined (**Appendix F**). PCE at 03WW01, has achieved the MCL of 5 µg/L as of October 2016. For 35AWW08, the first order rate constant was estimated at 1.016 yr^{-1} and the time to achieve the MCL of 5 µg/L from the October 2016 concentration of 36.9 µg/L is estimated at 1.77 years. Degradation of COCs in other wells is not occurring to allow a determination of time to achieve the MCL (i.e., predictive modeling by assuming some degree of degradation and degradation half-lives is not meaningful for this plume). These determinations assume the rate of concentration decrease will continue at the same as calculated from recent data.

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5 CONCLUSIONS AND RECOMMENDATIONS

COC concentration data and geochemical indicator measurements were collected over the course of the monitoring period at LHAAP-35A (58) to evaluate the effectiveness of EISB (eastern plume area) and MNA (western and eastern plumes) as the LHAAP-35A (58) groundwater remedy. A tiered approach based on assessment of three lines of evidence was used to evaluate the occurrence of natural attenuation in site groundwater. The first line of evidence evaluated reductions in COC concentrations over time and with increasing distance from source areas; the second line of evidence evaluated geochemical indicators; and the third line of evidence evaluated microbial conditions in the aquifer and the projected time necessary to achieve the MCLs for wells that exhibited significant decrease in trends in COC concentrations, based on the Mann-Kendall test for trends. The results of the tiered evaluation and the conclusions are summarized below.

Data for 3rd year RA(O) were collected in March 2016 (LHSMW04 only), April 2016, and October 2016. The groundwater flow direction at the site is interpreted to the southeast in the western portion of the site and to the east-southeast in the eastern portion of the site (see **Figures 4 and 5**). This corresponds well with the flow directions presented in the Remedial Design (RD) document (Shaw, September 2011), which was interpreted to the southeast in the westernmost area, and to the east for the remainder of the site.

The EISB treatment in the eastern plume area appears to be effectively reducing the VOC concentrations and the current groundwater conditions are conducive to continued reductions of VOCs. The primary initial influence of EISB was a reduction of PCE in 03WW01 and 35AWW08. TCE concentrations were observed to increase at each well after substrate injection, as PCE was degraded to TCE, followed by a decrease in concentration as the rate of TCE formation became lower than the rate of TCE biodegradation. Generally, cis-1,2-DCE was observed to increase in these two wells due to formation of cis-1,2-DCE from biodegradation of TCE. All COCs had reduced to non-detected results at well 03WW01 by the end of the reporting period (October 2016). Although a significant reduction in PCE was observed in well 35AWW08, PCE and TCE concentrations at the end of the reporting period (October 2016) remained above the MCL. VC was also detected in October 2016 at 35AWW08 as well, indicating the degradation of cis-1,2-DCE. Additional monitoring will be required to evaluate whether complete reductive dechlorination will occur.

Concentrations of PCE and TCE in 35AWW09, located within the eastern plume but outside the EISB area, have increased since October 2013 (and decreased since October 2015), likely due to downgradient migration of COCs from the highly impacted area around 35AWW08. The concentrations of COCs in downgradient well 35AWW21, which is located outside the eastern plume, have remained below the detection limits. Therefore, based on the inferred east-southeastern groundwater flow path, COC levels are not increasing with distance from the source area. Concentrations of COCs away from the most impacted wells, 35AWW08,

03WW01, and 35AWW09, have exhibited no increase in COC concentrations or new detections of COCs at boundary area wells 35AWW10, 35AWW13, 35AWW22, 35AWW12, and 35AWW21. Therefore, it appears that the lateral extent of the eastern plume is stable.

In the western plume, the COC concentrations in upgradient well 35AWW15 have remained below detection limits during this monitoring period. The in-plume well (35AWW20) exhibits the highest levels of COCs, which first increased then decreased over the 3-year RA(O) monitoring period, except for VC, which exhibited an overall increasing trend. The concentrations of COCs in in-plume, downgradient well LHSMW07 have increased significantly. The increase in concentration of all the COCs in LHSMW07 indicates likely migration of COCs from the upgradient area of 35AWW20 to the area of LHSMW07.

Concentrations of COCs in perimeter wells, 35AWW15, 35AWW16, 35AWW17, and 35AWW18, which are located well away from the most impacted wells 35AWW20 and LHSMW07, have not increased and no new COCs were detected during the monitoring period. However, concentrations of 1,1-DCE in monitoring wells 35AWW14 and 35AWW19, downgradient boundary wells, increased from below the MCL in October 2013 to above the MCL in October 2016, indicating plume expansion in the downgradient direction. Therefore, based on the interpreted southeastern groundwater flow direction, COC levels have generally increased with distance from the source area. Based on the 3rd year monitoring results, the lateral extent of the western plume is no longer defined in the area of monitoring wells 35AWW14 and 35AWW19.

The qualitative assessment of geochemical indicators and the absence of dechlorinating bacteria in the shallow groundwater zone (outside of EISB zone) at LHAAP-35A (58) indicates current naturally occurring geochemical conditions are not optimal for MNA. Although, degradation products (1,1-DCE in 35AWW09; 1,1-DCE, cis-1,2-DCE, and VC in 35AWW20; and 1,1-DCE and VC in LHSMW07) have been detected in the plume monitoring wells, conditions currently existing within the impacted area do not sustain complete reductive dechlorination.

Based on the evidence of plume migration, increasing trends and geochemical indicators indicating reductive dechlorination is unlikely to be occurring in the western plume, it is recommended that the contingency remedy be implemented at this time to enhance MNA in the western plume.

Arsenic sampling at LHAAP-58 was inadvertently left out of the Year 3 RA(O) monitoring period. However, historically the highest arsenic concentrations were detected in samples from 03WW01 at 89.1 µg/L in May 2014, and from 35AWW08 at 160 µg/L in January 2014. These wells are within the EISB area in the eastern groundwater plume. The presence of arsenic in groundwater above the MCL was reported in the past in samples from onsite wells and background wells, up to a maximum concentration of 62.1 µg/L in a filtered sample collected on December 16, 2004, from perimeter well 110. Therefore, the presence of arsenic in groundwater cannot be attributed solely to reductive conditions caused by EISB, although it may have contributed to an increase in arsenic concentrations.

Based on historic arsenic results, it is recommended to continue monitoring arsenic in wells 03WW01, 35AWW08, and 35AWW09 within the eastern plume. Additionally, because EISB implementation on the western plume is recommended, continuation of the arsenic sampling program during the period of implementation and monitoring of EISB effectiveness within the western plume is also recommended. The wells recommended for arsenic sampling will be included in the Revised Final Remedial Action Work Plan, Contingency Remedy for the Western Plume LHAAP-35A (58) (Bhate, December 2017). Monitoring for arsenic in the eastern plume is included in the 4th year RA(O) monitoring plan.

Groundwater monitoring continues to be performed at LHAAP-35A (58) on a semi-annual basis in compliance with the RAWP (AECOM, August 2013). No change in land or groundwater use has occurred at the site, and current land use complies with the ROD.

One surface water sample was collected at surface water sample location 35ASW03 in April 2016 during the 3rd year RA(O) monitoring period. Surface water samples were not collected in October 2016 because the ditch was dry. No COCs were detected above the laboratory detection limits during the 3rd year monitoring period at 35ASW03. Continuing surface water sampling will be evaluated during the next five year review.

A LUC compliance inspection was conducted on August 1, 2016. No compliance issues or concerns were noted during the annual inspection (**Appendix A**). Operation and maintenance of the well field continued with inspections conducted during the April and October 2016 monitoring events. Well conditions, as of October 2016, are documented in the photographic log presented in **Appendix B**. The operation and maintenance inspection information is documented in the well field sampling forms (**Appendix C**). Monitoring well 35AWW04 was identified as needing new paint, but otherwise, no damage to bollards, pads, or protective well casings was observed and minimal encroachment of weeds or brush on the well pads was observed. It is recommended that repainting of well 35AWW04 be conducted during the next reporting period in 2017. Mowing the well areas is conducted regularly, as part of routine maintenance at the site, particularly before sampling events.

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FIGURES

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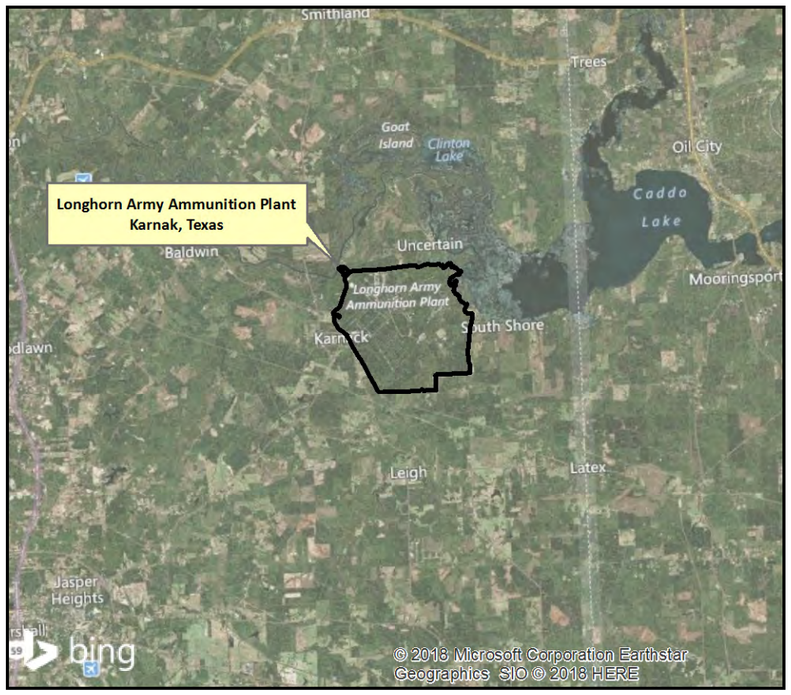

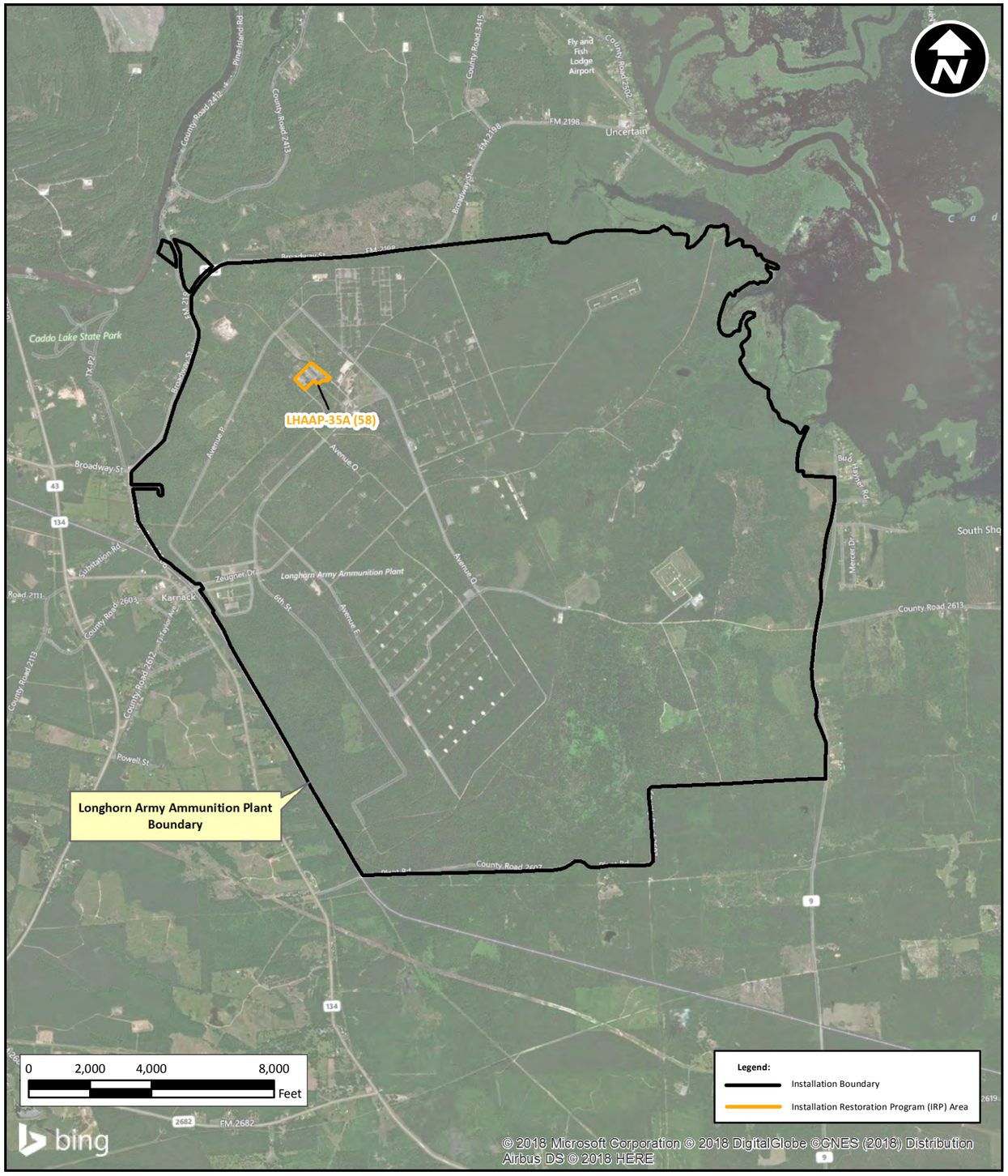

Longhorn Army Ammunition Plant
Location and Site Vicinity Map

Figure 1

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 3/2/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.012.0001.03

bhate ENVIRONMENT & INFRASTRUCTURE

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LHAAP-58 Monitoring Well Location Map

Figure 2

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 3/2/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.012.0001.03

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Groundwater Use Restrictions

LHAAP-61
LHAAP-02
LHAAP-35A (58)
LHAAP-03
LHAAP-60D
LHAAP-68
LHAAP-69
LHAAP-56
LHAAP-59
LHAAP-65

35AWW03
35AWW13
35AWW22
35AWW07R
35AWW15
35AWW10
35AWW01
35AWW02
03WW01
35AWW09
LHSMW04
35AWW12
LHSMW05
35AWW08
LHSMW06
1004TW001
35AWW11
35AWW21
LHSMW03
35AWW20
1004TW006
35AWW16
35AWW14
35AWW05
LHSMW07
35AWW06
35ASW03
35AWW18
35AWW17
35AWW19
35AWW04

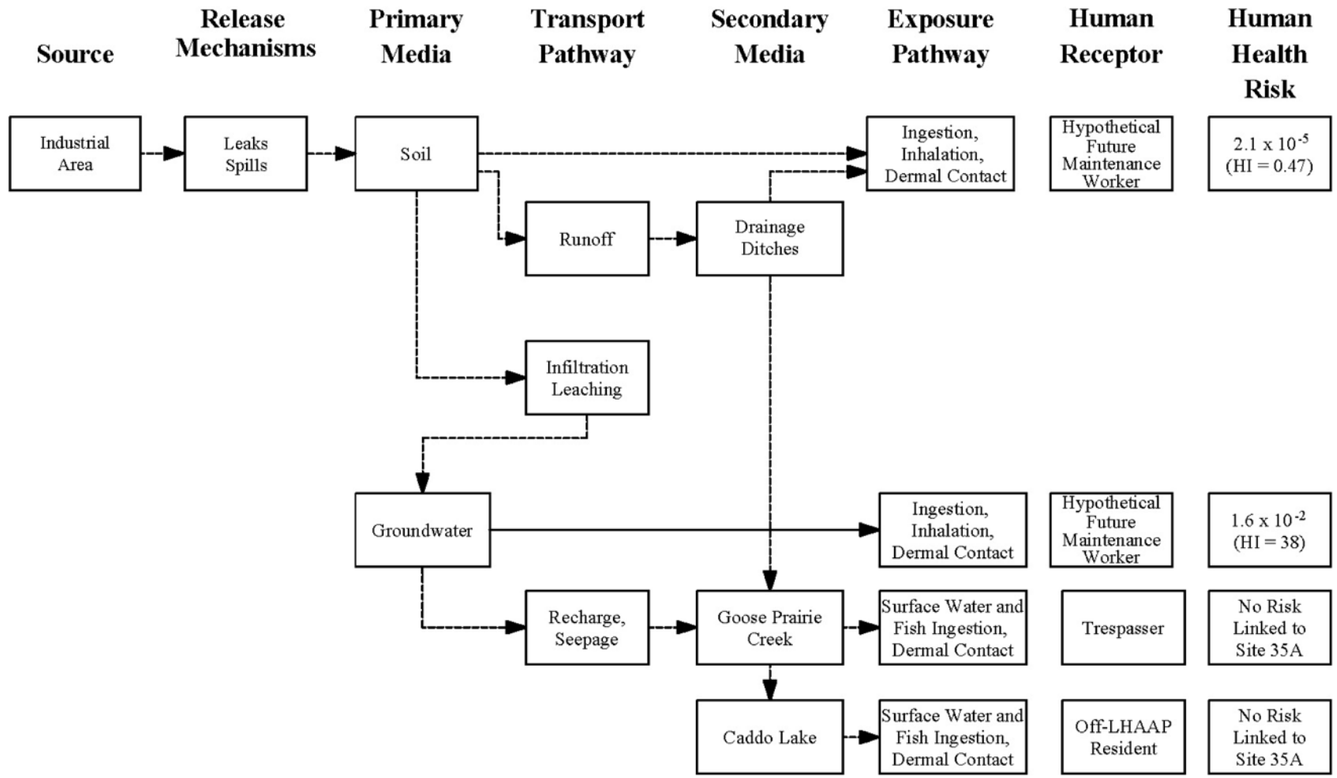
32ND ST.
HARRELL ST.
TACKET DR.
AVE "F"
10TH ST.
9TH ST.
8TH ST.
AVE "G"
11TH ST.
6TH ST.
4TH ST.

0 75 150 300 Feet

Legend:
- Shallow Monitoring Well Location
- Shallow Temporary Monitoring Well Location
- Intermediate Monitoring Well Location
- Deep Monitoring Well Location
- Surface Water Sample Location
- Installation Restoration Program (IRP) Area
- Stream
- 401 Building Number

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

00864880



Pathway considered for remediation

Pathway *not* considered for remediation

Source: Shaw, May 2010

Conceptual Site Model

Figure 3

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 3/2/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.012.0001.03

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LHAAP-58 April 2016 Shallow Potentiometric Map

Figure 4

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 3/2/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.012.0001.03

bhate ENVIRONMENT & INFRASTRUCTURE

LHAAP-35A (58)

32ND ST.
HARRELL ST
TACKET DR
AVE "F"
AVE "G"
9TH ST.
10TH ST.
4TH ST.
6TH ST.
11TH ST.

35AWW03 (Dry)
35AWW13 (195.02)
35AWW22 (187.14)
35AWW07R (187.77)
35AWW15 (203.46)
35AWW10 (203.35)
LHSMW04 (187.30)
35AWW12 (187.45)
LHSMW05 (Dry)
35AWW09 (186.45)
35AWW08 (187.75)
03WW01 (186.93)
LHSMW06 (204.07)
1004TW001 (NM)
35AWW21 (187.61)
35AWW20 (203.36)
1004TW006 (NM)
35AWW11 (189.12)
LHSMW03 (188.51)
35AWW16 (202.45)
35AWW14 (188.74)
LHSMW07 (202.30)
35AWW06 (200.48)
35AWW18 (195.35)
35AWW17 (195.84)
35AWW19 (190.84)

204.00
203.00
202.00
201.00
200.00
199.00
198.00
197.00
196.00
195.00
194.00
193.00
192.00
191.00
190.00
189.00
188.00
187.00
186.00

0 75 150 300 Feet

Legend:

- Shallow Monitoring Well Location
- Shallow Temporary Monitoring Well Location
- (189.12) Potentiometric Surface Elevation in Feet Above Mean Sea Level
- (NM) Not Measured
- Potentiometric Surface Contour
- Direction of Groundwater Flow
- Installation Restoration Program (IRP) Area
- *401* Building Number

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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LHAAP-58 October 2016 Shallow Potentiometric Map

Figure 5

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 3/2/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.012.0001.03

bhate ENVIRONMENT & INFRASTRUCTURE

LHAAP-35A (58)

32ND ST.
HARRELL ST
TACKET DR
AVE "F"
10TH ST.
9TH ST.
8TH ST.
AVE "G"
6TH ST.
4TH ST.
11TH ST.

35AWW03 (Dry)
35AWW13 (194.71)
35AWW22 (187.23)
35AWW07R (187.29)
35AWW15 (203.63)
35AWW10 (201.78)
LHSMW04 (Dry)
35AWW12 (187.12)
LHSMW05 (Dry)
35AWW09 (186.47)
35AWW08 (187.95)
03WW01 (187.20)
LHSMW06 (204.27)
1004TW001 (NM)
35AWW21 (186.95)
35AWW11 (189.67)
1004TW006 (NM)
35AWW20 (203.67)
LHSMW03 (187.75)
35AWW14 (189.10)
35AWW16 (202.98)
LHSMW07 (202.69)
35AWW06 (200.90)
35AWW18 (195.82)
35AWW17 (196.14)
35AWW19 (191.58)

Contours: 204.00, 203.00, 202.00, 201.00, 200.00, 199.00, 198.00, 197.00, 196.00, 195.00, 194.00, 193.00, 192.00, 191.00, 190.00, 189.00, 188.00, 187.00

Legend:
- Shallow Monitoring Well Location
- Shallow Temporary Monitoring Well Location
- (189.10) Potentiometric Surface Elevation in Feet Above Mean Sea Level
- (NM) Not Measured
- Potentiometric Surface Contour
- Direction of Groundwater Flow
- Installation Restoration Program (IRP) Area
- 401 Building Number

0 75 150 300 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Legend
J = Estimated value
U = Result is less than the laboratory detection limit
< = less than
COC = Contaminant of Concern
MCL = Maximum Contaminant Level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
VC = Vinyl Chloride
NS = Not Sampled
Bold Red values exceed the United States Environmental Protection Agency MCL
All results and MCLs are reported in micrograms per liter (µg/L)

35AWW10	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW13	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

03WW01	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<25 U
cis-1,2-DCE	70	**117**
PCE	5	**6.49 J**
trans-1,2-DCE	100	<12.5 U
TCE	5	<12.5 U
VC	2	<12.5 U

35AWW22	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW09	4/12/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	0.515 J
PCE	5	**172**
trans-1,2-DCE	100	<0.5 U
TCE	5	**55.7**
VC	2	<0.5 U

LHSMW06	4/13/2016	
COC	MCL	Result
1,1-DCE	7	**13.7**
cis-1,2-DCE	70	11.9
PCE	5	0.563 J
trans-1,2-DCE	100	<0.5 U
TCE	5	**6.5**
VC	2	**2.38**

35AWW15	4/14/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

LHSMW04	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<2.5 U
cis-1,2-DCE	70	0.851 J
PCE	5	**397**
trans-1,2-DCE	100	<1.25 U
TCE	5	**86.1**
VC	2	<1.25 U

35AWW20	4/13/2016	
COC	MCL	Result
1,1-DCE	7	**5,460**
cis-1,2-DCE	70	**126**
PCE	5	<5 U
trans-1,2-DCE	100	5.16 J
TCE	5	**707**
VC	2	**216**

35AWW12	4/12/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW16	4/12/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW21	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

LHSMW07	4/14/2016	
COC	MCL	Result
1,1-DCE	7	**1,250**
cis-1,2-DCE	70	19.6
PCE	5	0.397 J
trans-1,2-DCE	100	0.681 J
TCE	5	**67.5**
VC	2	**10.8**

35AWW11	4/12/2016	
COC	MCL	Result
1,1-DCE	7	**21.3**
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	0.532 J

35AWW08	4/13/2016	
COC	MCL	Result
1,1-DCE	7	<25 U
cis-1,2-DCE	70	60.9
PCE	5	**80.1**
trans-1,2-DCE	100	<12.5 U
TCE	5	**234**
VC	2	**14.2 J**

35AWW06	4/11/2016	
COC	MCL	Result
1,1-DCE	7	**13**
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW17	4/11/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW18	4/11/2016	
COC	MCL	Result
1,1-DCE	7	2.13
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW19	4/13/2016	
COC	MCL	Result
1,1-DCE	7	**13.5**
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	0.899 J
VC	2	<0.5 U

35AWW14	4/13/2016	
COC	MCL	Result
1,1-DCE	7	3.25
cis-1,2-DCE	70	1.78
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	1.79
VC	2	<0.5 U

32ND ST.
TACKET DR
AVE "F"
10TH ST.
9TH ST.
8TH ST.
AVE "G"
4TH ST.
LHAAP-35A (58)
35AWW03 (NS)
LHSMW05 (NS)
35AWW07R (NS)
LHSMW03 (NS)
35AWW04 (NS)
11TH ST.
6TH ST.
GH-1
401
AVE "I"

0 100 200 400 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend:
- Shallow Monitoring Well Location
- 1,1-DCE Concentration ≥ 7 µg/L
- cis-1,2-DCE Concentration ≥ 70 µg/L
- PCE Concentration ≥ 5 µg/L
- TCE Concentration ≥ 5 µg/L
- VC Concentration ≥ 2 µg/L
- Installation Restoration Program (IRP) Area
- Stream
- 401 Building Number

COC Concentrations in Shallow Groundwater (April 2016)

Figure 6

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM
DATE: 3/2/2018
SCALE: As Shown
PROJECT NO: NWO1312.0150.012.0001.03

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Legend
J = Estimated value
U = Result is less than the laboratory detection limit
< = less than
COC = Contaminant of Concern
MCL = Maximum Contaminant Level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
VC = Vinyl Chloride
NS = Not Sampled
Bold Red values exceed the United States Environmental Protection Agency MCL
All results and MCLs are reported in micrograms per liter (µg/L)

35AWW10	10/3/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW13	10/6/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

03WW01	10/4/2016	
COC	MCL	Result
1,1-DCE	7	<10 U
cis-1,2-DCE	70	<5 U
PCE	5	<5 U
trans-1,2-DCE	100	<5 U
TCE	5	<5 U
VC	2	<5 U

35AWW22	10/6/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW09	10/3/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	0.437 J
PCE	5	173
trans-1,2-DCE	100	<0.5 U
TCE	5	48.2
VC	2	<0.5 U

LHSMW06	10/6/2016	
COC	MCL	Result
1,1-DCE	7	19.2
cis-1,2-DCE	70	19
PCE	5	0.9 J
trans-1,2-DCE	100	0.391 J
TCE	5	9.06
VC	2	2.94

35AWW15	10/5/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

GH-1

35AWW12	10/5/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW20	10/4/2016	
COC	MCL	Result
1,1-DCE	7	3,440
cis-1,2-DCE	70	115
PCE	5	<10 U
trans-1,2-DCE	100	<10 U
TCE	5	594
VC	2	166

35AWW21	10/4/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW16	10/4/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

LHSMW07	10/4/2016	
COC	MCL	Result
1,1-DCE	7	701
cis-1,2-DCE	70	22.1
PCE	5	<2.5 U
trans-1,2-DCE	100	<2.5 U
TCE	5	71.6
VC	2	21.8

35AWW11	10/3/2016	
COC	MCL	Result
1,1-DCE	7	16
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	0.328 J

35AWW08	10/4/2016	
COC	MCL	Result
1,1-DCE	7	<10 U
cis-1,2-DCE	70	41.7
PCE	5	36.9
trans-1,2-DCE	100	<5 U
TCE	5	235
VC	2	7.46 J

35AWW06	10/3/2016	
COC	MCL	Result
1,1-DCE	7	7.48
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW17	10/3/2016	
COC	MCL	Result
1,1-DCE	7	<1 U
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW18	10/5/2016	
COC	MCL	Result
1,1-DCE	7	0.97 J
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	<0.5 U
VC	2	<0.5 U

35AWW19	10/6/2016	
COC	MCL	Result
1,1-DCE	7	12.9
cis-1,2-DCE	70	<0.5 U
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	0.754 J
VC	2	<0.5 U

35AWW14	10/6/2016	
COC	MCL	Result
1,1-DCE	7	10.4
cis-1,2-DCE	70	5.09
PCE	5	<0.5 U
trans-1,2-DCE	100	<0.5 U
TCE	5	10.2
VC	2	0.303 J

35AWW03 (NS)
35AWW04 (NS)
35AWW07R (NS)
LHSMW03 (NS)
LHSMW04 (Dry)
LHSMW05 (NS)
LHAAP-35A (58)
93RD ST.
TACKER DR
AVE "F"
8TH ST.
10TH ST.
9TH ST.
AVE "G"
4TH ST.
11TH ST.
6TH ST.
401
AVE "T"

0 100 200 400 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend:
Shallow Monitoring Well Location
1,1-DCE Concentration ≥ 7 µg/L
cis-1,2-DCE Concentration ≥ 70 µg/L
PCE Concentration ≥ 5 µg/L
TCE Concentration ≥ 5 µg/L
VC Concentration ≥ 2 µg/L
Installation Restoration Program (IRP) Area
Stream
401 Building Number

COC Concentrations in Shallow Groundwater (October 2016)

Figure 7

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM
DATE: 3/2/2018
SCALE: As Shown
PROJECT NO: NWO1312.0150.012.0001.03

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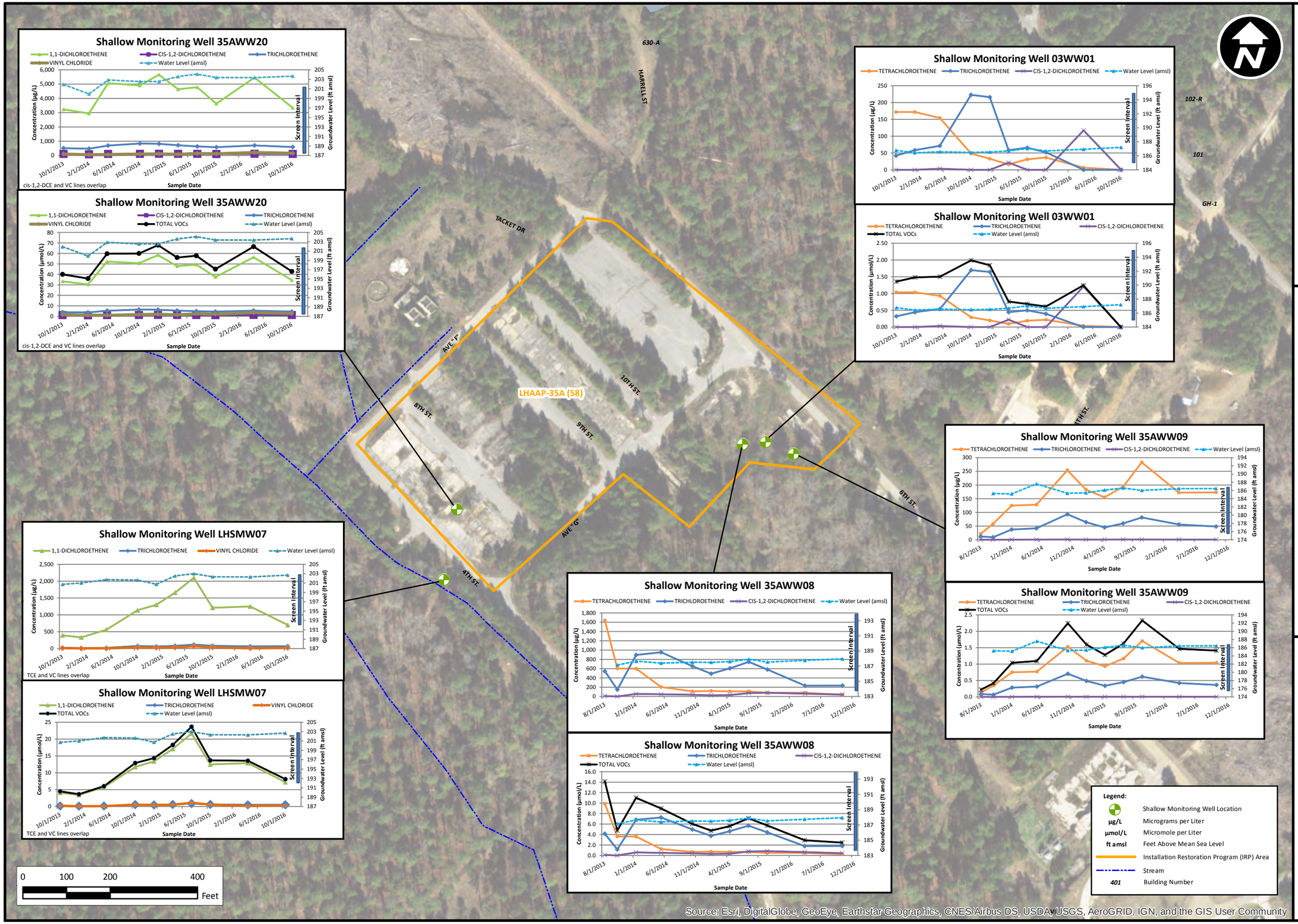
LHAAP-58 COC Concentration Trends

Figure 8



Shallow Monitoring Well 35AWW20

Shallow Monitoring Well 35AWW20

Shallow Monitoring Well 03WW01

Shallow Monitoring Well 03WW01

Shallow Monitoring Well 35AWW09

Shallow Monitoring Well 35AWW09

Shallow Monitoring Well LHSMW07

Shallow Monitoring Well LHSMW07

Shallow Monitoring Well 35AWW08

Shallow Monitoring Well 35AWW08

0 100 200 400 Feet

Legend:

- Shallow Monitoring Well Location
- µg/L — Micrograms per Liter
- µmol/L — Micromole per Liter
- ft amsl — Feet Above Mean Sea Level
- Installation Restoration Program (IRP) Area
- Stream
- *401* — Building Number

3rd Annual Remedial Action Operation Report (March 2016 – October 2016)
LHAAP-35A (58), Shops Area
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 3/2/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.012.0001.03

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TABLES

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Table 1
Groundwater Elevation Data
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Well Identification	Aquifer	Sampling Date	Screen Intervals (ft from Top of Casing)	Top of Casing Elevation (ft)	Depth to Water (ft from Top of Casing)	Groundwater Elevation (ft above msl)
03WW01	Shallow	10/9/2013	21.53 - 31.53	216.29	29.51	186.78
		1/29/2014	21.53 - 31.53	216.29	29.86	186.43
		5/20/2014	21.53 - 31.53	216.29	29.72	186.57
		10/27/2014	21.53 - 31.53	216.29	29.81	186.48
		1/20/2015	21.53 - 31.53	216.29	29.75	186.54
		4/14/2015	21.53 - 31.53	216.29	29.60	186.69
		7/7/2015	21.53 - 31.53	216.29	29.25	187.04
		10/7/2015	21.53 - 31.53	216.29	29.60	186.69
		4/12/2016	21.53 - 31.53	216.29	29.36	186.93
		10/3/2016	21.53 - 31.53	216.29	29.09	187.20
1004TW001	Shallow	5/28/2014	NA	NM	18.05	NC
		10/30/2014	NA	NM	18.40	NC
		7/8/2015	NA	NM	17.00	NC
		4/14/2016	NA	NM	17.75	NC
		10/4/2016	NA	NM	17.46	NC
1004TW006	Shallow	1/31/2014	NA	NM	19.17	NC
35AWW01	Intermediate	10/11/2013	62.69 - 72.69	218.03	40.58	177.45
		1/31/2014	62.69 - 72.69	218.03	40.21	177.82
		5/29/2014	62.69 - 72.69	218.03	39.31	178.72
		10/31/2014	62.69 - 72.69	218.03	40.17	177.86
		1/27/2015	62.69 - 72.69	218.03	39.40	178.63
		4/10/2015	62.69 - 72.69	218.03	40.06	177.97
		7/10/2015	62.69 - 72.69	218.03	39.10	178.93
		10/6/2015	62.69 - 72.69	218.03	39.79	178.24
		4/12/2016	62.69 - 72.69	218.03	38.86	179.17
		10/5/2016	62.69 - 72.69	218.03	39.01	179.02
35AWW02	Deep	10/22/2013	128.59 - 138.59	218.05	42.30	175.75
		4/13/2016	128.59 - 138.59	218.05	42.26	175.79
		10/4/2016	128.59 - 138.59	218.05	42.70	175.35
35AWW03	Shallow	2/1/2014	11.75 - 21.75	219.66	DRY	NC
		5/29/2014	11.75 - 21.75	219.66	DRY	NC
		10/30/2014	11.75 - 21.75	219.66	DRY	NC
		7/9/2015	11.75 - 21.75	219.66	DRY	NC
		4/13/2016	11.75 - 21.75	219.66	DRY	NC
		10/4/2016	11.75 - 21.75	219.66	DRY	NC
35AWW05	Intermediate	10/16/2013	62.4 - 72.4	221.41	43.70	177.71
		2/1/2014	62.4 - 72.4	221.41	37.70	183.71
		5/22/2014	62.4 - 72.4	221.41	43.12	178.29
		10/21/2014	62.4 - 72.4	221.41	43.60	177.81
		1/23/2015	62.4 - 72.4	221.41	42.90	178.51
		4/8/2015	62.4 - 72.4	221.41	42.55	178.86
		7/10/2015	62.4 - 72.4	221.41	42.67	178.74
		10/5/2015	62.4 - 72.4	221.41	43.31	178.10
		4/14/2016	62.4 - 72.4	221.41	41.40	180.01
		10/5/2016	62.4 - 72.4	221.41	42.43	178.98

Table 1
Groundwater Elevation Data
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Well Identification	Aquifer	Sampling Date	Screen Intervals (ft from Top of Casing)	Top of Casing Elevation (ft)	Depth to Water (ft from Top of Casing)	Groundwater Elevation (ft above msl)
35AWW06	Shallow	10/15/2013	19.05 - 29.05	220.43	21.50	198.93
		1/30/2014	19.05 - 29.05	220.43	21.14	199.29
		5/21/2014	19.05 - 29.05	220.43	20.65	199.78
		10/29/2014	19.05 - 29.05	220.43	20.55	199.88
		1/28/2015	19.05 - 29.05	220.43	20.58	199.85
		4/15/2015	19.05 - 29.05	220.43	18.95	201.48
		7/7/2015	19.05 - 29.05	220.43	19.47	200.96
		10/7/2015	19.05 - 29.05	220.43	19.97	200.46
		4/11/2016	19.05 - 29.05	220.43	19.95	200.48
		10/3/2016	19.05 - 29.05	220.43	19.53	200.90
35AWW07R	Shallow	10/16/2013	21.55 - 31.25	212.11	27.90	184.21
		2/3/2014	21.55 - 31.25	212.11	28.90	183.21
		5/29/2014	21.55 - 31.25	212.11	25.83	186.28
		10/30/2014	21.55 - 31.26	212.11	26.55	185.56
		7/10/2015	21.55 - 31.26	212.11	24.08	188.03
		4/13/2016	21.55 - 31.26	212.11	24.34	187.77
		10/4/2016	21.55 - 31.26	212.11	24.82	187.29
35AWW08	Shallow	10/9/2013	21.83 - 31.83	216.95	29.80	187.15
		1/29/2014	21.83 - 31.83	216.95	29.30	187.65
		5/20/2014	21.83 - 31.83	216.95	29.55	187.40
		10/27/2014	21.83 - 31.83	216.95	29.43	187.52
		1/20/2015	21.83 - 31.83	216.95	29.45	187.50
		4/14/2015	21.83 - 31.83	216.95	29.35	187.60
		7/7/2015	21.83 - 31.83	216.95	29.05	187.90
		10/7/2015	21.83 - 31.83	216.95	29.41	187.54
		4/12/2016	21.83 - 31.83	216.95	29.20	187.75
		10/3/2016	21.83 - 31.83	216.95	29.00	187.95
35AWW09	Shallow	10/10/2013	26.69 - 41.29	217.47	32.21	185.26
		1/29/2014	26.69 - 41.29	217.47	32.32	185.15
		5/20/2014	26.69 - 41.29	217.47	29.87	187.60
		10/27/2014	26.69 - 41.29	217.47	32.15	185.32
		1/21/2015	26.69 - 41.29	217.47	32.04	185.43
		4/14/2015	26.69 - 41.29	217.47	31.38	186.09
		7/7/2015	26.69 - 41.29	217.47	30.87	186.60
		10/7/2015	26.69 - 41.29	217.47	31.46	186.01
		4/12/2016	26.69 - 41.29	217.47	31.02	186.45
		10/3/2016	26.69 - 41.29	217.47	31.00	186.47
35AWW10	Shallow	10/10/2013	18.16 - 32.76	220.76	20.15	200.61
		1/29/2014	18.16 - 32.76	220.76	18.85	201.91
		5/20/2014	18.16 - 32.76	220.76	17.10	203.66
		10/28/2014	18.16 - 32.76	220.76	19.55	201.21
		1/27/2015	18.16 - 32.76	220.76	17.78	202.98
		4/14/2015	18.16 - 32.76	220.76	16.45	204.31
		7/7/2015	18.16 - 32.76	220.76	17.17	203.59
		10/7/2015	18.16 - 32.77	220.76	19.45	201.31
		4/13/2016	18.16 - 32.76	220.76	17.41	203.35
		10/3/2016	18.16 - 32.77	220.76	18.98	201.78

Table 1
Groundwater Elevation Data
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Well Identification	Aquifer	Sampling Date	Screen Intervals (ft from Top of Casing)	Top of Casing Elevation (ft)	Depth to Water (ft from Top of Casing)	Groundwater Elevation (ft above msl)
35AWW11	Shallow	10/15/2013	22.24 - 36.84	220.15	31.36	188.79
		2/3/2014	22.24 - 36.84	220.15	31.80	188.35
		5/21/2014	22.24 - 36.84	220.15	31.55	188.60
		10/29/2014	22.24 - 36.84	220.15	31.73	188.42
		1/27/2015	22.24 - 36.84	220.15	31.60	188.55
		4/14/2015	22.24 - 36.84	220.15	31.25	188.90
		7/8/2015	22.24 - 36.84	220.15	30.72	189.43
		10/7/2015	22.24 - 36.84	220.15	31.20	188.95
		4/12/2016	22.24 - 36.84	220.15	31.03	189.12
		10/3/2016	22.24 - 36.84	220.15	30.48	189.67
35AWW12	Shallow	10/18/2013	22.17 - 36.77	215.99	30.05	185.94
		1/31/2014	22.17 - 36.77	215.99	28.10	187.89
		5/29/2014	22.17 - 36.77	215.99	29.00	186.99
		10/30/2014	22.17 - 36.77	215.99	30.11	185.88
		1/28/2015	22.17 - 36.77	215.99	29.45	186.54
		4/7/2015	22.17 - 36.77	215.99	28.70	187.29
		7/9/2015	22.17 - 36.77	215.99	28.22	187.77
		10/5/2015	22.17 - 36.77	215.99	29.35	186.64
		4/12/2016	22.17 - 36.77	215.99	28.54	187.45
		10/5/2016	22.17 - 36.77	215.99	28.87	187.12
35AWW13	Shallow	10/11/2013	24.72 - 39.32	219.12	25.07	194.05
		2/3/2014	24.72 - 39.32	219.12	24.91	194.21
		5/22/2014	24.72 - 39.32	219.12	23.80	195.32
		10/21/2014	24.72 - 39.32	219.12	24.85	194.27
		1/23/2015	24.72 - 39.32	219.12	24.70	194.42
		4/8/2015	24.72 - 39.32	219.12	23.72	195.40
		7/9/2015	24.72 - 39.32	219.12	23.39	195.73
		10/6/2015	24.72 - 39.32	219.12	24.61	194.51
		4/13/2016	24.72 - 39.32	219.12	24.10	195.02
		10/6/2016	24.72 - 39.32	219.12	24.41	194.71
35AWW14	Shallow	10/18/2013	17.06 - 31.76	218.41	30.80	187.61
		1/31/2014	17.06 - 31.76	218.41	30.95	187.46
		5/28/2014	17.06 - 31.76	218.41	30.57	187.84
		10/29/2014	17.06 - 31.76	218.41	31.00	187.41
		1/20/2015	17.06 - 31.76	218.41	30.85	187.56
		4/7/2015	17.06 - 31.76	218.41	30.48	187.93
		7/8/2015	17.06 - 31.76	218.41	29.75	188.66
		10/1/2015	17.06 - 31.76	218.41	30.19	188.22
		4/12/2016	17.06 - 31.76	218.41	29.67	188.74
		10/5/2016	17.06 - 31.76	218.41	29.31	189.10
35AWW15	Shallow	10/16/2013	25.67 - 40.37	222.97	20.65	202.32
		2/1/2014	25.67 - 40.37	222.97	20.40	202.57
		5/28/2014	25.67 - 40.37	222.97	19.64	203.33
		10/21/2014	25.67 - 40.37	222.97	20.18	202.79
		1/23/2015	25.67 - 40.37	222.97	20.15	202.82
		4/10/2015	25.67 - 40.37	222.97	19.31	203.66
		7/10/2015	25.67 - 40.37	222.97	18.95	204.02
		10/6/2015	25.67 - 40.37	222.97	19.56	203.41
		4/14/2016	25.67 - 40.37	222.97	19.51	203.46
		10/5/2016	25.67 - 40.37	222.97	19.34	203.63

Table 1
Groundwater Elevation Data
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Well Identification	Aquifer	Sampling Date	Screen Intervals (ft from Top of Casing)	Top of Casing Elevation (ft)	Depth to Water (ft from Top of Casing)	Groundwater Elevation (ft above msl)
35AWW16	Shallow	10/22/2013	21.75 - 36.45	220.88	19.58	201.30
		1/31/2014	21.75 - 36.45	220.88	19.28	201.60
		5/28/2014	21.75 - 36.45	220.88	18.60	202.28
		10/30/2014	21.75 - 36.45	220.88	19.96	200.92
		1/27/2015	21.75 - 36.45	220.88	18.90	201.98
		4/7/2015	21.75 - 36.45	220.88	18.22	202.66
		7/9/2015	21.75 - 36.45	220.88	17.79	203.09
		10/6/2015	21.75 - 36.45	220.88	18.20	202.68
		4/12/2016	21.75 - 36.45	220.88	18.43	202.45
		10/4/2016	21.75 - 36.45	220.88	17.90	202.98
35AWW17	Shallow	10/18/2013	26.97 - 41.67	221.44	28.00	193.44
		2/1/2014	26.97 - 41.67	221.44	36.90	184.54
		5/29/2014	26.97 - 41.67	221.44	26.60	194.84
		10/31/2014	26.97 - 41.67	221.44	26.80	194.64
		1/28/2015	26.97 - 41.67	221.44	26.00	195.44
		4/10/2015	26.97 - 41.67	221.44	25.65	195.79
		7/10/2015	26.97 - 41.67	221.44	25.42	196.02
		10/5/2015	26.97 - 41.67	221.44	25.93	195.51
		4/11/2016	26.97 - 41.67	221.44	25.60	195.84
		10/3/2016	26.97 - 41.67	221.44	25.30	196.14
35AWW18	Shallow	10/18/2013	26.85 - 41.55	221.75	28.35	193.40
		2/1/2014	26.85 - 41.55	221.75	27.90	193.85
		5/29/2014	26.85 - 41.55	221.75	27.65	194.10
		10/31/2014	26.85 - 41.55	221.75	27.50	194.25
		1/28/2015	26.85 - 41.55	221.75	27.11	194.64
		4/10/2015	26.85 - 41.55	221.75	25.90	195.85
		7/10/2015	26.85 - 41.55	221.75	26.42	195.33
		10/5/2015	26.85 - 41.55	221.75	26.67	195.08
		4/11/2016	26.85 - 41.55	221.75	26.40	195.35
		10/5/2016	26.85 - 41.55	221.75	25.93	195.82
35AWW19	Shallow	10/22/2013	16.99 - 31.09	219.71	30.65	189.06
		1/31/2014	16.99 - 31.09	219.71	30.68	189.03
		5/28/2014	16.99 - 31.09	219.71	30.30	189.41
		10/29/2014	16.99 - 31.09	219.71	30.45	189.26
		1/20/2015	16.99 - 31.09	219.71	30.15	189.56
		4/7/2015	16.99 - 31.09	219.71	29.84	189.87
		7/8/2015	16.99 - 31.09	219.71	29.16	190.55
		10/1/2015	16.99 - 31.09	219.71	29.46	190.25
		4/12/2016	16.99 - 31.09	219.71	28.87	190.84
		10/5/2016	16.99 - 31.09	219.71	28.13	191.58
35AWW20	Shallow	10/15/2013	20.94 - 35.64	223.05	21.12	201.93
		2/3/2014	20.94 - 35.64	223.05	23.12	199.93
		5/21/2014	20.94 - 35.64	223.05	20.18	202.87
		10/29/2014	20.94 - 35.64	223.05	20.50	202.55
		1/27/2015	20.94 - 35.64	223.05	20.50	202.55
		4/15/2015	20.94 - 35.64	223.05	19.45	203.60
		7/8/2015	20.94 - 35.64	223.05	18.95	204.10
		10/8/2015	20.94 - 35.64	223.05	19.67	203.38
		4/13/2016	20.94 - 35.64	223.05	19.69	203.36
		10/4/2016	20.94 - 35.64	223.05	19.38	203.67

Table 1
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Well Identification	Aquifer	Sampling Date	Screen Intervals (ft from Top of Casing)	Top of Casing Elevation (ft)	Depth to Water (ft from Top of Casing)	Groundwater Elevation (ft above msl)
35AWW21	Shallow	10/16/2013	27.56 - 42.26	219.05	34.36	184.69
		2/4/2014	27.56 - 42.26	219.05	33.55	185.50
		5/22/2014	27.56 - 42.26	219.05	32.40	186.65
		10/21/2014	27.56 - 42.26	219.05	33.90	185.15
		1/23/2015	27.56 - 42.26	219.05	33.06	185.99
		4/8/2015	27.56 - 42.26	219.05	31.73	187.32
		7/9/2015	27.56 - 42.26	219.05	31.11	187.94
		10/6/2015	27.56 - 42.26	219.05	32.74	186.31
		4/13/2016	27.56 - 42.26	219.05	31.44	187.61
		10/4/2016	27.56 - 42.26	219.05	32.10	186.95
35AWW22	Shallow	10/22/2013	22.27 - 36.77	219.14	32.13	187.01
		1/31/2014	22.27 - 36.77	219.14	32.08	187.06
		5/28/2014	22.27 - 36.77	219.14	32.00	187.14
		10/29/2014	22.27 - 36.77	219.14	32.45	186.69
		1/20/2015	22.27 - 36.77	219.14	33.32	185.82
		4/8/2015	22.27 - 36.77	219.14	32.09	187.05
		7/9/2015	22.27 - 36.77	219.14	31.72	187.42
		10/5/2015	22.27 - 36.77	219.14	32.30	186.84
		4/12/2016	22.27 - 36.77	219.14	32.00	187.14
		10/5/2016	22.27 - 36.77	219.14	31.91	187.23
LHSMW03	Shallow	10/9/2013	22.54 - 35.54	217.26	DRY	NC
		2/3/2014	22.54 - 35.54	217.26	31.00	186.26
		5/28/2014	22.54 - 35.54	217.26	29.40	187.86
		10/29/2014	22.54 - 35.54	217.26	31.20	186.06
		7/8/2015	22.54 - 35.54	217.26	28.21	189.05
		4/13/2016	22.54 - 35.54	217.26	28.75	188.51
		10/4/2016	22.54 - 35.54	217.26	29.51	187.75
LHSMW04	Shallow	10/9/2013	21.11 - 31.11	216.95	DRY	NC
		1/31/2014	21.11 - 31.11	216.95	DRY	NC
		5/20/2014	21.11 - 31.11	216.95	DRY	NC
		10/30/2014	21.11 - 31.11	216.95	DRY	NC
		1/20/2015	21.11 - 31.11	216.95	DRY	NC
		4/7/2015	21.11 - 31.11	216.95	DRY	NC
		7/8/2015	21.11 - 31.11	216.95	DRY	NC
		10/1/2015	21.11 - 31.11	216.95	DRY	NC
		3/28/2016	21.11 - 31.11	216.95	29.72	187.23
		4/12/2016	21.11 - 31.11	216.95	29.65	187.30
		10/4/2016	21.11 - 31.11	216.95	DRY	NC
LHSMW05	Shallow	10/9/2013	14.08 - 24.08	217.59	DRY	NC
		1/31/2014	14.08 - 24.08	217.59	DRY	NC
		5/20/2014	14.08 - 24.08	217.59	DRY	NC
		10/30/2014	14.08 - 24.08	217.59	DRY	NC
		1/20/2015	14.08 - 24.08	217.59	DRY	NC
		4/7/2015	14.08 - 24.08	217.59	DRY	NC
		7/10/2015	14.08 - 24.08	217.59	DRY	NC
		10/1/2015	14.08 - 24.08	217.59	DRY	NC
		4/12/2016	14.08 - 24.08	217.59	DRY	NC
		10/4/2016	14.08 - 24.08	217.59	DRY	NC

Table 1
Groundwater Elevation Data
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Well Identification	Aquifer	Sampling Date	Screen Intervals (ft from Top of Casing)	Top of Casing Elevation (ft)	Depth to Water (ft from Top of Casing)	Groundwater Elevation (ft above msl)
LHSMW06	Shallow	10/16/2013	13.32 - 23.32	223.18	20.97	202.21
		1/30/2014	13.32 - 23.32	223.18	20.50	202.68
		5/28/2014	13.32 - 23.32	223.18	19.30	203.88
		10/29/2014	13.32 - 23.32	223.18	19.81	203.37
		1/20/2015	13.32 - 23.32	223.18	19.92	203.26
		4/7/2015	13.32 - 23.32	223.18	18.92	204.26
		7/8/2015	13.32 - 23.32	223.18	18.21	204.97
		10/1/2015	13.32 - 23.32	223.18	18.98	204.20
		4/12/2016	13.32 - 23.32	223.18	19.11	204.07
		10/5/2016	13.32 - 23.32	223.18	18.91	204.27
LHSMW07	Shallow	10/15/2013	19.73 - 29.73	221.27	20.55	200.72
		1/30/2014	19.73 - 29.73	221.27	20.25	201.02
		5/22/2014	19.73 - 29.73	221.27	19.55	201.72
		10/29/2014	19.73 - 29.73	221.27	19.63	201.64
		1/28/2015	19.73 - 29.73	221.27	20.53	200.74
		4/15/2015	19.73 - 29.73	221.27	18.75	202.52
		7/7/2015	19.73 - 29.73	221.27	18.27	203.00
		10/8/2015	19.73 - 29.73	221.27	18.94	202.33
		4/14/2016	19.73 - 29.73	221.27	18.97	202.30
		10/4/2016	19.73 - 29.73	221.27	18.58	202.69

Notes:
ft - feet
msl = mean sea level
NC - not calculated
NM - not measured
NA - not available

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
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Sample Identification: Sample Date:	Units	MCL/ MSC	03WW01-041316 4/13/2016	03WW01-100416 10/4/2016	03WW01F-100416 10/4/2016	03WW01FF-100416 10/4/2016	35ASW03-041316 4/13/2016	35AWW01-041216 4/12/2016	35AWW01FD-041216 4/12/2016	35AWW01-100516 10/5/2016	35AWW05-041416 4/14/2016	35AWW05-100516 10/5/2016	35AWW06-041116 4/11/2016	35AWW06-100316 10/3/2016	35AWW06FF-100316 10/3/2016
Location Description:			Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - E, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - SW, outside site boundary. Surface water. Dry in October 2016	Site 58 - E, inside site boundary. Intermediate zone, sampled semi-annually.	Site 58 - E, inside site boundary. Intermediate zone, sampled semi-annually. Field duplicate	Site 58 - E, inside site boundary. Intermediate zone, sampled semi-annually.	Site 58 - SW, outside the site boundary. Intermediate zone, sampled semi-annually.	Site 58 - SW, outside the site boundary. Intermediate zone, sampled semi-annually.	Site 58 - SW, outside the site boundary. Sampled semi-annually.	Site 58 - SW, outside the site boundary. Sampled semi-annually.	Site 58 - SW, outside the site boundary. Field filtered w/ 0.45 micron filter.
Volatile Organic Compounds (8260B)															
1,1,1,2-TETRACHLOROETHANE	µg/L	110	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,1,1-TRICHLOROETHANE	µg/L	200	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,1,2,2-TETRACHLOROETHANE	µg/L	14	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	NA
1,1,2-TRICHLOROETHANE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,1-DICHLOROETHANE	µg/L	10,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	2.28	1.77	NA
1,1-DICHLOROETHENE	µg/L	7	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	13	7.48	NA
1,1-DICHLOROPROPENE	µg/L	2.9	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,2,3-TRICHLOROBENZENE	µg/L	310	<7.5 U	<3 U	NA	NA	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	NA
1,2,3-TRICHLOROPROPANE	µg/L	0.041	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
1,2,4-TRICHLOROBENZENE	µg/L	70	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	0.233 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	NA
1,2,4-TRIMETHYLBENZENE	µg/L	5,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	µg/L	0.2	<50 U	<20 U	NA	NA	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 UJ	<2 U	NA
1,2-DIBROMOETHANE	µg/L	0.050	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,2-DICHLOROBENZENE	µg/L	600	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
1,2-DICHLOROETHANE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,2-DICHLOROPROPANE	µg/L	5	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	NA
1,3,5-TRIMETHYLBENZENE	µg/L	5,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,3-DICHLOROBENZENE	µg/L	3,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
1,3-DICHLOROPROPANE	µg/L	29	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	NA
1,4-DICHLOROBENZENE	µg/L	75	<6.26 U	1.52 J	NA	NA	<0.25 U	<0.25 U	<0.25 U	0.142 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
2,2-DICHLOROPROPANE	µg/L	42	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
2-BUTANONE	µg/L	61,000	3,610	<50 U	NA	NA	<5 U	<5 U	<5 U	<5 UJ	<5 U	<5 UJ	<5 U	<5 U	NA
2-CHLOROTOLUENE	µg/L	2,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
2-HEXANONE	µg/L	6,100	<125 U	<50 U	NA	NA	<5 U	<5 U	<5 U	<5 UJ	<5 U	<5 UJ	<5 U	<5 U	NA
4-CHLOROTOLUENE	µg/L	2,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
4-METHYL-2-PENTANONE	µg/L	8,200	<125 U	<50 U	NA	NA	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	NA
ACETONE	µg/L	92,000	4,180	73.4 U	NA	NA	<5 U	<5 U	<5 U	<5 UJ	<5 U	<5 UJ	<5 U	3.19 J	NA
BENZENE	µg/L	5	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
BROMOBENZENE	µg/L	2,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
BROMOCHLOROMETHANE	µg/L	4,100	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	NA
BROMODICHLOROMETHANE	µg/L	4.6	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
BROMOFORM	µg/L	36	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
BROMOMETHANE	µg/L	140	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 UJ	NA
CARBON DISULFIDE	µg/L	10,000	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
CARBON TETRACHLORIDE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
CHLOROBENZENE	µg/L	100	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
CHLOROETHANE	µg/L	41,000	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
CHLOROFORM	µg/L	1,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
CHLOROMETHANE	µg/L	220	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
CIS-1,2-DICHLOROETHENE	µg/L	70	117	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
CIS-1,3-DICHLOROPROPENE	µg/L	5.3	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
DIBROMOCHLOROMETHANE	µg/L	34	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
DIBROMOMETHANE	µg/L	380	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
DICHLORODIFLUOROMETHANE	µg/L	20,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
ETHYLBENZENE	µg/L	700	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
HEXACHLOROBUTADIENE	µg/L	20	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
ISOPROPYLBENZENE	µg/L	10,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
M,P-XYLENE	µg/L	10,000	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
METHYLENE CHLORIDE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
NAPHTHALENE	µg/L	2,000	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	NA
N-BUTYLBENZENE	µg/L	4,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
N-PROPYLBENZENE	µg/L	4,100	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
O-XYLENE	µg/L	10,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
P-ISOPROPYLTOLUENE	µg/L	10,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
SEC-BUTYLBENZENE	µg/L	4,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
STYRENE	µg/L	100	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	NA
TERT-BUTYLBENZENE	µg/L	4,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
TETRACHLOROETHENE	µg/L	5	6.49 J	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
TOLUENE	µg/L	1,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
TRANS-1,2-DICHLOROETHENE	µg/L	100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
TRANS-1,3-DICHLOROPROPENE	µg/L	29	<25 U	<10 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA
TRICHLOROETHENE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
TRICHLOROFLUOROMETHANE	µg/L	31,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA
VINYL CHLORIDE	µg/L	2	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	03WW01-041316 4/13/2016	03WW01-100416 10/4/2016	03WW01F-100416 10/4/2016	03WW01FF-100416 10/4/2016	35ASW03-041316 4/13/2016	35AWW01-041216 4/12/2016	35AWW01FD-041216 4/12/2016	35AWW01-100516 10/5/2016	35AWW05-041416 4/14/2016	35AWW05-100516 10/5/2016	35AWW06-041116 4/11/2016	35AWW06-100316 10/3/2016	35AWW06FF-100316 10/3/2016
Location Description:			Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - E, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - SW, outside site boundary. Surface water. Dry in October 2016	Site 58 - E, inside site boundary. Intermediate zone, sampled semi-annually.	Site 58 - E, inside site boundary. Intermediate zone, sampled semi-annually. Field duplicate	Site 58 - E, inside site boundary. Intermediate zone, sampled semi-annually.	Site 58 - SW, outside the site boundary. Intermediate zone, sampled semi-annually.	Site 58 - SW, outside the site boundary. Intermediate zone, sampled semi-annually.	Site 58 - SW, outside the site boundary. Sampled semi-annually.	Site 58 - SW, outside the site boundary. Sampled semi-annually.	Site 58 - SW, outside the site boundary. Field filtered w/ 0.45 micron filter.
Water Quality Parameters															
Temperature	°C	NV	17.75	18.64	NA	NA	NA	20.47	NA	20.25	19.20	22.93	18.70	22.43	NA
pH	pH Units	NV	7.19	6.81	NA	NA	NA	5.40	NA	5.41	5.66	5.56	6.10	5.92	NA
Conductivity	µS/cm	NV	7.99	6.38	NA	NA	NA	0.812	NA	0.782	2.77	2.80	5.82	6.01	NA
Dissolved Oxygen	mg/L	NV	NR	NR	NA	NA	NA	0.38	NA	1.65	0.42	1.30	1.56	1.88	NA
Turbidity	NTU	NV	127	70	NA	NA	NA	396	NA	37.0	71.5	77.6	2.0	0.00	NA
Oxidation Reduction Potential	mV	NV	-127	NR	NA	NA	NA	129	NA	134	82	116	159	177	NA
Alkalinity (310.2)															
ALKALINITY, TOTAL	mg/L	NV	NA	5,500 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	621	NA
Phosphorus (365.4)															
PHOSPHORUS	mg/L	NV	NA	2.06 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.208 J	NA
Total Organic Carbon (415.1)															
TOTAL ORGANIC CARBON (TOC)	mg/L	NV	NA	292	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.8	NA
Metals (6010C)															
IRON	mg/L	NV	NA	NA	46.5	NA	NA	NA	NA	NA	NA	NA	NA	0.182	NA
Metals (6020A)															
MANGANESE	mg/L	14	NA	NA	8.31	8.47	NA	NA	NA	NA	NA	NA	NA	0.346	0.341
Metabolic Acids (830-MBA)															
Acetic Acid	mg/L	NV	NA	33.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyric Acid	mg/L	NV	NA	<1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lactic Acid	mg/L	NV	NA	<1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propionic Acid	mg/L	51	NA	<10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyruvic Acid	mg/L	NV	NA	<0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions (9056)															
CHLORIDE	mg/L	NV	NA	762	NA	NA	NA	NA	NA	NA	NA	NA	NA	948	NA
NITRATE	mg/L	10	NA	<1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4 U	NA
NITRITE	mg/L	1	NA	<1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4 U	NA
SULFATE	mg/L	NV	NA	<5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,450	NA
Dechlorinating Bacteria															
BAV1 Vinyl Chloride Reductase	cells/mL	NV	NA	<3.30 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalobacter spp.	cells/mL	NV	NA	53,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalococcoides	cells/mL	NV	NA	9,460,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tceA Reductase	cells/mL	NV	NA	<3.30 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride Reductase	cells/mL	NV	NA	589,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Gases (RSK-175)															
CARBON DIOXIDE	µg/L	NV	NA	657,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	997,000	NA
ETHANE	µg/L	NV	NA	<20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2 U	NA
ETHENE	µg/L	NV	NA	<20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2 U	NA
METHANE	µg/L	NV	NA	5,950	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2 U	NA
Ferrous Iron (SM3500FE)															
FERROUS IRON	mg/L	NV	NA	8.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0238 J	NA
Sulfide (SM4500-S-(-2)-F-2000)															
SULFIDE	mg/L	NV	NA	<1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1 U	NA

Notes:
Blue Highlighting Indicates concentrations above the MCL/MSC
Note: Some samples may have been diluted due to the concentration(s)
of one or more analytes exceeding the upper limit of the calibration curve.
J - Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
MCL/MSC - Maximum Contaminant Level/Medium-Specific Concentration
mg/L - milligrams per liter
U - Undetected: The analyte was analyzed for, but not detected.
UJ - The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
µg/L - micrograms per liter
°C = degrees celsius
NA = Not analyzed
NV = no value
cells/mL = cells per milliliter
µS/cm = microsiemens per centimeter
mV = miliivolts
NTU = Nephelometric turbidity units
NR = not recorded

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW08-041316 4/13/2016	35AWW08-100416 10/4/2016	35AWW08F-100416 10/4/2016	35AWW08FF-100416 10/4/2016	35AWW09-041216 4/12/2016	35AWW09-100316 10/3/2016	35AWW09F-100316 10/3/2016	35AWW09FF-100316 10/3/2016	35AWW10-041316 4/13/2016	35AWW10-100316 10/3/2016	35AWW10F-100316 10/3/2016	35AWW10FF-100316 10/3/2016
Location Description:			Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - E, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - E, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - ESE, inside site boundary. Sampled semi-annually.	Site 58 - ESE, inside site boundary. Sampled semi-annually.	Site 58 - ESE, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - ESE, inside site boundary. Field filtered w/ 0.45 micron filter.
Volatile Organic Compounds (8260B)														
1,1,1,2-TETRACHLOROETHANE	µg/L	110	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,1,1-TRICHLOROETHANE	µg/L	200	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,1,2,2-TETRACHLOROETHANE	µg/L	14	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	NA	NA
1,1,2-TRICHLOROETHANE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,1-DICHLOROETHANE	µg/L	10,000	<6.26 U	<2.5 U	NA	NA	0.626 J	0.506 J	NA	NA	<0.25 U	<0.25 U	NA	NA
1,1-DICHLOROETHENE	µg/L	7	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
1,1-DICHLOROPROPENE	µg/L	2.9	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,2,3-TRICHLOROBENZENE	µg/L	310	<7.5 U	<3 U	NA	NA	<0.3 U	<0.3 U	NA	NA	<0.3 U	<0.3 U	NA	NA
1,2,3-TRICHLOROPROPANE	µg/L	0.041	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
1,2,4-TRICHLOROBENZENE	µg/L	70	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	NA	NA
1,2,4-TRIMETHYLBENZENE	µg/L	5,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	µg/L	0.2	<50 U	<20 U	NA	NA	<2 U	<2 U	NA	NA	<2 U	<2 U	NA	NA
1,2-DIBROMOETHANE	µg/L	0.050	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,2-DICHLOROBENZENE	µg/L	600	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
1,2-DICHLOROETHANE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,2-DICHLOROPROPANE	µg/L	5	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	NA	NA
1,3,5-TRIMETHYLBENZENE	µg/L	5,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,3-DICHLOROBENZENE	µg/L	3,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
1,3-DICHLOROPROPANE	µg/L	29	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	NA	NA
1,4-DICHLOROBENZENE	µg/L	75	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
2,2-DICHLOROPROPANE	µg/L	42	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
2-BUTANONE	µg/L	61,000	<125 U	40.7 J	NA	NA	<5 U	<5 U	NA	NA	<5 U	<5 U	NA	NA
2-CHLOROTOLUENE	µg/L	2,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
2-HEXANONE	µg/L	6,100	<125 U	<50 UJ	NA	NA	<5 U	<5 U	NA	NA	<5 U	<5 U	NA	NA
4-CHLOROTOLUENE	µg/L	2,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
4-METHYL-2-PENTANONE	µg/L	8,200	<125 U	<50 U	NA	NA	<5 U	<5 U	NA	NA	<5 U	<5 U	NA	NA
ACETONE	µg/L	92,000	122 J	95.5 J	NA	NA	<5 U	3.78 J	NA	NA	<5 U	<5 U	NA	NA
BENZENE	µg/L	5	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
BROMOBENZENE	µg/L	2,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
BROMOCHLOROMETHANE	µg/L	4,100	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	NA	NA
BROMODICHLOROMETHANE	µg/L	4.6	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
BROMOFORM	µg/L	36	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
BROMOMETHANE	µg/L	140	<25 U	<10 U	NA	NA	<1 U	<1 UJ	NA	NA	<1 U	<1 UJ	NA	NA
CARBON DISULFIDE	µg/L	10,000	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
CARBON TETRACHLORIDE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
CHLOROBENZENE	µg/L	100	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
CHLOROETHANE	µg/L	41,000	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
CHLOROFORM	µg/L	1,000	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
CHLOROMETHANE	µg/L	220	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
CIS-1,2-DICHLOROETHENE	µg/L	70	60.9	41.7	NA	NA	0.515 J	0.437 J	NA	NA	<0.5 U	<0.5 U	NA	NA
CIS-1,3-DICHLOROPROPENE	µg/L	5.3	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
DIBROMOCHLOROMETHANE	µg/L	34	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
DIBROMOMETHANE	µg/L	380	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
DICHLORODIFLUOROMETHANE	µg/L	20,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
ETHYLBENZENE	µg/L	700	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
HEXACHLOROBUTADIENE	µg/L	20	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
ISOPROPYLBENZENE	µg/L	10,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
M,P-XYLENE	µg/L	10,000	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
METHYLENE CHLORIDE	µg/L	5	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
NAPHTHALENE	µg/L	2,000	<10 U	<4 U	NA	NA	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	NA	NA
N-BUTYLBENZENE	µg/L	4,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
N-PROPYLBENZENE	µg/L	4,100	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
O-XYLENE	µg/L	10,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
P-ISOPROPYLTOLUENE	µg/L	10,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
SEC-BUTYLBENZENE	µg/L	4,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
STYRENE	µg/L	100	<6.26 U	<2.5 U	NA	NA	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	NA	NA
TERT-BUTYLBENZENE	µg/L	4,100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
TETRACHLOROETHENE	µg/L	5	80.1	36.9	NA	NA	172	173	NA	NA	<0.5 U	<0.5 U	NA	NA
TOLUENE	µg/L	1,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
TRANS-1,2-DICHLOROETHENE	µg/L	100	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
TRANS-1,3-DICHLOROPROPENE	µg/L	29	<25 U	<10 U	NA	NA	<1 U	<1 U	NA	NA	<1 U	<1 U	NA	NA
TRICHLOROETHENE	µg/L	5	234	235	NA	NA	55.7	48.2	NA	NA	<0.5 U	<0.5 U	NA	NA
TRICHLOROFLUOROMETHANE	µg/L	31,000	<12.5 U	<5 U	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA
VINYL CHLORIDE	µg/L	2	14.2 J	7.46 J	NA	NA	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	NA	NA

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW08-041316 4/13/2016	35AWW08-100416 10/4/2016	35AWW08F-100416 10/4/2016	35AWW08FF-100416 10/4/2016	35AWW09-041216 4/12/2016	35AWW09-100316 10/3/2016	35AWW09F-100316 10/3/2016	35AWW09FF-100316 10/3/2016	35AWW10-041316 4/13/2016	35AWW10-100316 10/3/2016	35AWW10F-100316 10/3/2016	35AWW10FF-100316 10/3/2016
Location Description:			Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - E, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Sampled semi-annually.	Site 58 - E, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - E, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - ESE, inside site boundary. Sampled semi-annually.	Site 58 - ESE, inside site boundary. Sampled semi-annually.	Site 58 - ESE, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - ESE, inside site boundary. Field filtered w/ 0.45 micron filter.
Water Quality Parameters														
Temperature	°C	NV	17.69	19.46	NA	NA	17.98	18.64	NA	NA	21.77	23.25	NA	NA
pH	pH Units	NV	6.86	6.92	NA	NA	5.41	5.47	NA	NA	5.16	4.88	NA	NA
Conductivity	µS/cm	NV	13.9	11.8	NA	NA	6.83	6.31	NA	NA	0.271	0.244	NA	NA
Dissolved Oxygen	mg/L	NV	NR	NR	NA	NA	1.94	2.18	NA	NA	1.46	1.66	NA	NA
Turbidity	NTU	NV	74.6	50.4	NA	NA	56.6	67.8	NA	NA	6.7	22.5	NA	NA
Oxidation Reduction Potential	mV	NV	-162	NR	NA	NA	499	279	NA	NA	270	279	NA	NA
Alkalinity (310.2)														
ALKALINITY, TOTAL	mg/L	NV	NA	9,160 J	NA	NA	NA	241	NA	NA	NA	55.4	NA	NA
Phosphorus (365.4)														
PHOSPHORUS	mg/L	NV	NA	5.68	NA	NA	NA	<0.2 U	NA	NA	NA	<0.2 U	NA	NA
Total Organic Carbon (415.1)														
TOTAL ORGANIC CARBON (TOC)	mg/L	NV	NA	918	NA	NA	NA	15.6	NA	NA	NA	7.43	NA	NA
Metals (6010C)														
IRON	mg/L	NV	NA	NA	33.3	NA	NA	NA	0.913	NA	NA	NA	<0.1 U	NA
Metals (6020A)														
MANGANESE	mg/L	14	NA	NA	7.97	9.38	NA	NA	0.151	0.15	NA	0.0748	0.077	NA
Metabolic Acids (830-MBA)														
Acetic Acid	mg/L	NV	NA	156	NA	NA	NA	<1 U	NA	NA	NA	NA	NA	<1 U
Butyric Acid	mg/L	NV	NA	<1 U	NA	NA	NA	<1 U	NA	NA	NA	NA	NA	<1 U
Lactic Acid	mg/L	NV	NA	<1 U	NA	NA	NA	<1 U	NA	NA	NA	NA	NA	<1 U
Propionic Acid	mg/L	51	NA	17.6 J	NA	NA	NA	<10 U	NA	NA	NA	NA	NA	<10 U
Pyruvic Acid	mg/L	NV	NA	<0.1 U	NA	NA	NA	<0.1 U	NA	NA	NA	NA	NA	<0.1 U
Anions (9056)														
CHLORIDE	mg/L	NV	NA	2,000	NA	NA	NA	1,420	NA	NA	NA	6.37	NA	NA
NITRATE	mg/L	10	NA	<2 U	NA	NA	NA	<2 U	NA	NA	NA	<0.2 U	NA	NA
NITRITE	mg/L	1	NA	<2 U	NA	NA	NA	<2 U	NA	NA	NA	<0.2 U	NA	NA
SULFATE	mg/L	NV	NA	<10 U	NA	NA	NA	951	NA	NA	NA	47	NA	NA
Dechlorinating Bacteria														
BAV1 Vinyl Chloride Reductase	cells/mL	NV	NA	<4.50 U	NA	NA	NA	<1.50 U	NA	NA	NA	<0.5 U	NA	NA
Dehalobacter spp.	cells/mL	NV	NA	625,000	NA	NA	NA	<15.20 U	NA	NA	NA	<4.60 U	NA	NA
Dehalococcoides	cells/mL	NV	NA	25,600,000	NA	NA	NA	<1.50 U	NA	NA	NA	<0.5 U	NA	NA
tceA Reductase	cells/mL	NV	NA	<4.50 U	NA	NA	NA	<1.50 U	NA	NA	NA	<0.5 U	NA	NA
Vinyl Chloride Reductase	cells/mL	NV	NA	1,760,000	NA	NA	NA	<1.50 U	NA	NA	NA	<0.5 U	NA	NA
Dissolved Gases (RSK-175)														
CARBON DIOXIDE	µg/L	NV	NA	424,000	NA	NA	NA	706,000	NA	NA	NA	525,000	NA	NA
ETHANE	µg/L	NV	NA	<20 U	NA	NA	NA	<2 U	NA	NA	NA	<2 U	NA	NA
ETHENE	µg/L	NV	NA	<20 U	NA	NA	NA	<2 U	NA	NA	NA	<2 U	NA	NA
METHANE	µg/L	NV	NA	7,350	NA	NA	NA	7.57	NA	NA	NA	<2 U	NA	NA
Ferrous Iron (SM3500FE)														
FERROUS IRON	mg/L	NV	NA	17.6	NA	NA	NA	<0.04 U	NA	NA	NA	<0.04 U	NA	NA
Sulfide (SM4500-S-(-2)-F-2000)														
SULFIDE	mg/L	NV	NA	<1 U	NA	NA	NA	3.68	NA	NA	NA	<1 U	NA	NA

Notes:
Blue Highlighting Indicates concentrations above the MCL/MSC
Note: Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.
J - Estimated: The analyte was positively identified, the quantitation is an es
MCL/MSC - Maximum Contaminant Level/Medium-Specific Concentration
mg/L - milligrams per liter
U - Undetected: The analyte was analyzed for, but not detected.
UJ - The analyte was not detected; however, the result is estimated due to
µg/L - micrograms per liter
°C = degrees celsius
NA = Not analyzed
NV = no value
cells/mL = cells per milliliter
µS/cm = microsiemens per centimeter
mV = miliivolts
NTU = Nephelometric turbidity units
NR = not recorded

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW11-041216 4/12/2016	35AWW11-100316 10/3/2016	35AWW11F-100316 10/3/2016	35AWW11FF-100316 10/3/2016	35AWW12-041216 4/12/2016	35AWW12-100516 10/5/2016	35AWW12FD-100516 10/5/2016	35AWW13-041316 4/13/2016	35AWW13-100616 10/6/2016	35AWW14-041316 4/13/2016	35AWW14-100616 10/6/2016	35AWW15-041416 4/14/2016	35AWW15-100516 10/5/2016
Location Description:			Site 58 - SE, inside site boundary. Sampled semi-annually.	Site 58 - SE, inside site boundary. Sampled semi-annually.	Site 58 - SE, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - SE, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually. Field duplicate.	Site 58 - NE, inside site boundary. Sampled semi-annually.	Site 58 - NE, inside site boundary. Sampled semi-annually.	Site 58 - SE, outside site boundary. Sampled semi-annually.	Site 58 - SE, outside site boundary. Sampled semi-annually.	Site 58 - W, inside site boundary. Sampled semi-annually.	Site 58 - W, inside site boundary. Sampled semi-annually.
Volatile Organic Compounds (8260B)															
1,1,1,2-TETRACHLOROETHANE	µg/L	110	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,1-TRICHLOROETHANE	µg/L	200	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	µg/L	14	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,1,2-TRICHLOROETHANE	µg/L	5	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	µg/L	10,000	0.643 J	0.458 J	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	6.57	10.4	<0.25 U	<0.25 U
1,1-DICHLOROETHENE	µg/L	7	21.3	16	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	3.25	10.4	<1 U	<1 U
1,1-DICHLOROPROPENE	µg/L	2.9	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2,3-TRICHLOROBENZENE	µg/L	310	<0.3 U	<0.3 U	NA	NA	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U
1,2,3-TRICHLOROPROPANE	µg/L	0.041	<1 U	<1 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,2,4-TRICHLOROBENZENE	µg/L	70	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,2,4-TRIMETHYLBENZENE	µg/L	5,100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	µg/L	0.2	<2 U	<2 U	NA	NA	<2 UJ	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-DIBROMOETHANE	µg/L	0.050	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	µg/L	600	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
1,2-DICHLOROETHANE	µg/L	5	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROPROPANE	µg/L	5	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,3,5-TRIMETHYLBENZENE	µg/L	5,100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	µg/L	3,100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROPROPANE	µg/L	29	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
1,4-DICHLOROBENZENE	µg/L	75	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
2,2-DICHLOROPROPANE	µg/L	42	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
2-BUTANONE	µg/L	61,000	<5 U	<5 U	NA	NA	<5 U	<5 UJ	<5 UJ	<5 U	<5 UJ	<5 U	<5 U	<5 U	<5 UJ
2-CHLOROTOLUENE	µg/L	2,000	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
2-HEXANONE	µg/L	6,100	<5 U	<5 U	NA	NA	<5 U	<5 UJ	<5 UJ	<5 U	<5 UJ	<5 U	<5 UJ	<5 U	<5 UJ
4-CHLOROTOLUENE	µg/L	2,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
4-METHYL-2-PENTANONE	µg/L	8,200	<5 U	<5 U	NA	NA	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
ACETONE	µg/L	92,000	<5 U	<5 U	NA	NA	<5 U	3.59 J	<5 UJ	<5 U	4.45 J	<5 U	4.01 J	<5 U	4.49 J
BENZENE	µg/L	5	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	0.303 J	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
BROMOBENZENE	µg/L	2,000	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
BROMOCHLOROMETHANE	µg/L	4,100	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
BROMODICHLOROMETHANE	µg/L	4.6	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOFORM	µg/L	36	<1 U	<1 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
BROMOMETHANE	µg/L	140	<1 U	<1 UJ	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CARBON DISULFIDE	µg/L	10,000	<1 U	<1 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CARBON TETRACHLORIDE	µg/L	5	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROBENZENE	µg/L	100	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
CHLOROETHANE	µg/L	41,000	<1 U	<1 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CHLOROFORM	µg/L	1,000	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
CHLOROMETHANE	µg/L	220	<1 U	<1 U	NA	NA	<1 U	<1 U	0.543 J	<1 U	0.667 J	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.78	5.09	<0.5 U	<0.5 U
CIS-1,3-DICHLOROPROPENE	µg/L	5.3	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DIBROMOCHLOROMETHANE	µg/L	34	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DIBROMOMETHANE	µg/L	380	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	µg/L	20,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ETHYLBENZENE	µg/L	700	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
HEXACHLOROBUTADIENE	µg/L	20	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	µg/L	10,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
M,P-XYLENE	µg/L	10,000	<1 U	<1 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
METHYLENE CHLORIDE	µg/L	5	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
NAPHTHALENE	µg/L	2,000	<0.4 U	<0.4 U	NA	NA	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
N-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
N-PROPYLBENZENE	µg/L	4,100	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
O-XYLENE	µg/L	10,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
P-ISOPROPYLTOLUENE	µg/L	10,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
SEC-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
STYRENE	µg/L	100	<0.25 U	<0.25 U	NA	NA	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U
TERT-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TOLUENE	µg/L	1,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	µg/L	29	<1 U	<1 U	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.79	10.2	<0.5 U	<0.5 U
TRICHLOROFLUOROMETHANE	µg/L	31,000	<0.5 U	<0.5 U	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	0.532 J	0.328 J	NA	NA	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.303 J	<0.5 U	<0.5 U

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW11-041216 4/12/2016	35AWW11-100316 10/3/2016	35AWW11F-100316 10/3/2016	35AWW11FF-100316 10/3/2016	35AWW12-041216 4/12/2016	35AWW12-100516 10/5/2016	35AWW12FD-100516 10/5/2016	35AWW13-041316 4/13/2016	35AWW13-100616 10/6/2016	35AWW14-041316 4/13/2016	35AWW14-100616 10/6/2016	35AWW15-041416 4/14/2016	35AWW15-100516 10/5/2016
Location Description:			Site 58 - SE, inside site boundary. Sampled semi-annually.	Site 58 - SE, inside site boundary. Sampled semi-annually.	Site 58 - SE, inside site boundary. Field filtered w/ 10 micron filter.	Site 58 - SE, inside site boundary. Field filtered w/ 0.45 micron filter.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually. Field duplicate.	Site 58 - NE, inside site boundary. Sampled semi-annually.	Site 58 - NE, inside site boundary. Sampled semi-annually.	Site 58 - SE, outside site boundary. Sampled semi-annually.	Site 58 - SE, outside site boundary. Sampled semi-annually.	Site 58 - W, inside site boundary. Sampled semi-annually.	Site 58 - W, inside site boundary. Sampled semi-annually.
Water Quality Parameters															
Temperature	°C	NV	18.61	21.10	NA	NA	17.42	22.07	NA	22.12	23.35	16.93	21.24	20.82	23.32
pH	pH Units	NV	6.10	5.48	NA	NA	5.23	5.33	NA	5.49	5.66	6.58	6.65	6.25	5.62
Conductivity	µS/cm	NV	10.2	8.81	NA	NA	2.38	2.77	NA	1.9	1.89	6.84	7.16	13.5	11.9
Dissolved Oxygen	mg/L	NV	1.13	1.60	NA	NA	0.52	1.43	NA	0.32	1.58	NR	NR	0.37	1.07
Turbidity	NTU	NV	47.5	107	NA	NA	3.0	0.00	NA	96.5	92.1	94.4	0.00	57	842
Oxidation Reduction Potential	mV	NV	189	255	NA	NA	273	224	NA	188	137	159	NR	38	66
Alkalinity (310.2)															
ALKALINITY, TOTAL	mg/L	NV	NA	421	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus (365.4)															
PHOSPHORUS	mg/L	NV	NA	0.303 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (415.1)															
TOTAL ORGANIC CARBON (TOC)	mg/L	NV	NA	25.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (6010C)															
IRON	mg/L	NV	NA	NA	0.188	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (6020A)															
MANGANESE	mg/L	14	NA	NA	0.525	0.487	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metabolic Acids (830-MBA)															
Acetic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyric Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lactic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propionic Acid	mg/L	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyruvic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions (9056)															
CHLORIDE	mg/L	NV	NA	2,380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE	mg/L	10	NA	<4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE	mg/L	1	NA	<4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	mg/L	NV	NA	1,160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dechlorinating Bacteria															
BAV1 Vinyl Chloride Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalobacter spp.	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalococcoides	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tceA Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Gases (RSK-175)															
CARBON DIOXIDE	µg/L	NV	NA	855,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE	µg/L	NV	NA	<2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	µg/L	NV	NA	<2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	µg/L	NV	NA	<2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron (SM3500FE)															
FERROUS IRON	mg/L	NV	NA	<0.04 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide (SM4500-S-(-2)-F-2000)															
SULFIDE	mg/L	NV	NA	<1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Blue Highlighting Indicates concentrations above the MCL/MSC
Note: Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.
J - Estimated: The analyte was positively identified, the quantitation is an es
MCL/MSC - Maximum Contaminant Level/Medium-Specific Concentration
mg/L - milligrams per liter
U - Undetected: The analyte was analyzed for, but not detected.
UJ - The analyte was not detected; however, the result is estimated due to
µg/L - micrograms per liter
°C = degrees celsius
NA = Not analyzed
NV = no value
cells/mL = cells per milliliter
µS/cm = microsiemens per centimeter
mV = miliivolts
NTU = Nephelometric turbidity units
NR = not recorded

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW16-041216 4/12/2016	35AWW16-100416 10/4/2016	35AWW16FD-100416 10/4/2016	35AWW17-041116 4/11/2016	35AWW17-100316 10/3/2016	35AWW18-041116 4/11/2016	35AWW18FD-041116 4/11/2016	35AWW18-100516 10/5/2016	35AWW19-041216 4/13/2016	35AWW19-100616 10/6/2016	35AWW20-041316 4/13/2016	35AWW20-100416 10/4/2016	35AWW20FF-100416 10/4/2016
Location Description:			Site 58 - SW, outside site boundary, near Building 744-A. Sampled semi-annually.	Site 58 - SW, outside site boundary, near Building 744-A. Sampled semi-annually.	Site 58 - SW, outside site boundary, near Building 744-A. Field duplicate.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually. Field duplicate.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SSE, outside site boundary. Sampled semi-annually.	Site 58 - SSE, outside site boundary. Sampled semi-annually.	Site 58 - SW, inside site boundary, between Building 716 and 113. Sampled semi-annually.	Site 58 - SW, inside site boundary, between Building 716 and 113. Sampled semi-annually.	Site 58 - SW, inside site boundary, between Building 716 and 113. Field filtered w/ 0.45 micron filter.
Volatile Organic Compounds (8260B)															
1,1,1,2-TETRACHLOROETHANE	µg/L	110	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,1,1-TRICHLOROETHANE	µg/L	200	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,1,2,2-TETRACHLOROETHANE	µg/L	14	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<4 U	<8 U	NA
1,1,2-TRICHLOROETHANE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	67	82.7	NA
1,1-DICHLOROETHANE	µg/L	10,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	1.05	1.1	0.563 J	2.59	2.42	522	459	NA
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 U	2.13	2.09	0.97 J	13.5	12.9	5,460	3,440	NA
1,1-DICHLOROPROPENE	µg/L	2.9	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,2,3-TRICHLOROBENZENE	µg/L	310	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<3 U	<6 U	NA
1,2,3-TRICHLOROPROPANE	µg/L	0.041	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 U	NA
1,2,4-TRICHLOROBENZENE	µg/L	70	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<4 U	<8 U	NA
1,2,4-TRIMETHYLBENZENE	µg/L	5,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	µg/L	0.2	<2 U	<2 U	<2 U	<2 UJ	<2 U	<2 UJ	<2 UJ	<2 U	<2 U	<2 U	<20 U	<40 U	NA
1,2-DIBROMOETHANE	µg/L	0.050	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,2-DICHLOROBENZENE	µg/L	600	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	7.29 J	9.77 J	NA
1,2-DICHLOROETHANE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2.96	2.74	17.7	17.2 J	NA
1,2-DICHLOROPROPANE	µg/L	5	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<4 U	<8 U	NA
1,3,5-TRIMETHYLBENZENE	µg/L	5,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,3-DICHLOROBENZENE	µg/L	3,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
1,3-DICHLOROPROPANE	µg/L	29	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<4 U	<8 U	NA
1,4-DICHLOROBENZENE	µg/L	75	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
2,2-DICHLOROPROPANE	µg/L	42	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
2-BUTANONE	µg/L	61,000	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 UJ	<5 U	<5 U	<50 U	<100 U	NA
2-CHLOROTOLUENE	µg/L	2,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
2-HEXANONE	µg/L	6,100	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 UJ	<5 U	<5 U	<50 U	<100 U	NA
4-CHLOROTOLUENE	µg/L	2,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
4-METHYL-2-PENTANONE	µg/L	8,200	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<50 U	<100 U	NA
ACETONE	µg/L	92,000	3.51 J	2.82 U	<5 U	<5 U	<5 U	<5 U	<5 U	3.72 J	<5 U	4.19 J	<50 U	<100 U	NA
BENZENE	µg/L	5	0.307 J	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	7.09 J	6.39 J	NA
BROMOBENZENE	µg/L	2,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
BROMOCHLOROMETHANE	µg/L	4,100	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<4 U	<8 U	NA
BROMODICHLOROMETHANE	µg/L	4.6	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
BROMOFORM	µg/L	36	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 U	NA
BROMOMETHANE	µg/L	140	<1 U	<1 UJ	<1 UJ	<1 U	<1 UJ	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 UJ	NA
CARBON DISULFIDE	µg/L	10,000	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 U	NA
CARBON TETRACHLORIDE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
CHLOROBENZENE	µg/L	100	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
CHLOROETHANE	µg/L	41,000	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 U	NA
CHLOROFORM	µg/L	1,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
CHLOROMETHANE	µg/L	220	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	0.673 J	<1 U	<1 UJ	<10 U	<20 UJ	NA
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	126	115	NA
CIS-1,3-DICHLOROPROPENE	µg/L	5.3	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
DIBROMOCHLOROMETHANE	µg/L	34	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
DIBROMOMETHANE	µg/L	380	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
DICHLORODIFLUOROMETHANE	µg/L	20,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
ETHYLBENZENE	µg/L	700	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
HEXACHLOROBUTADIENE	µg/L	20	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
ISOPROPYLBENZENE	µg/L	10,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
M,P-XYLENE	µg/L	10,000	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 U	NA
METHYLENE CHLORIDE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
NAPHTHALENE	µg/L	2,000	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<4 U	<8 U	NA
N-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
N-PROPYLBENZENE	µg/L	4,100	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
O-XYLENE	µg/L	10,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
P-ISOPROPYLTOLUENE	µg/L	10,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
SEC-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
STYRENE	µg/L	100	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<2.5 U	<5 U	NA
TERT-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
TOLUENE	µg/L	1,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 U	NA
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	5.16 J	<10 U	NA
TRANS-1,3-DICHLOROPROPENE	µg/L	29	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<20 U	NA
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.899 J	0.754 J	707	594	NA
TRICHLOROFLUOROMETHANE	µg/L	31,000	<0.5 U	<0.5 UJ	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<10 UJ	NA
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	216	166	NA

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW16-041216 4/12/2016	35AWW16-100416 10/4/2016	35AWW16FD-100416 10/4/2016	35AWW17-041116 4/11/2016	35AWW17-100316 10/3/2016	35AWW18-041116 4/11/2016	35AWW18FD-041116 4/11/2016	35AWW18-100516 10/5/2016	35AWW19-041216 4/13/2016	35AWW19-100616 10/6/2016	35AWW20-041316 4/13/2016	35AWW20-100416 10/4/2016	35AWW20FF-100416 10/4/2016
Location Description:			Site 58 - SW, outside site boundary, near Building 744-A. Sampled semi-annually.	Site 58 - SW, outside site boundary, near Building 744-A. Sampled semi-annually.	Site 58 - SW, outside site boundary, near Building 744-A. Field duplicate.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually. Field duplicate.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SSE, outside site boundary. Sampled semi-annually.	Site 58 - SSE, outside site boundary. Sampled semi-annually.	Site 58 - SW, inside site boundary, between Building 716 and 113. Sampled semi-annually.	Site 58 - SW, inside site boundary, between Building 716 and 113. Sampled semi-annually.	Site 58 - SW, inside site boundary, between Building 716 and 113. Field filtered w/ 0.45 micron filter.
Water Quality Parameters															
Temperature	°C	NV	20.67	23.07	NA	18.98	23.69	19.23	NA	21.83	18.32	21.66	22.46	22.22	NA
pH	pH Units	NV	5.75	5.91	NA	5.83	5.89	6.16	NA	5.85	5.35	6.60	6.30	6.09	NA
Conductivity	µS/cm	NV	12.0	10.5	NA	10.2	10.5	10.0	NA	10.7	6.23	6.27	8.16	7.77	NA
Dissolved Oxygen	mg/L	NV	0.56	1.37	NA	0.36	1.17	0.56	NA	1.33	NR	NR	0.88	1.35	NA
Turbidity	NTU	NV	273	57.6	NA	7.3	6.1	48.5	NA	27.5	13.2	9.0	0.0	0.00	NA
Oxidation Reduction Potential	mV	NV	134	111	NA	137	145	68	NA	112	258	NR	67	91	NA
Alkalinity (310.2)															
ALKALINITY, TOTAL	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	704	NA
Phosphorus (365.4)															
PHOSPHORUS	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2 U	NA
Total Organic Carbon (415.1)															
TOTAL ORGANIC CARBON (TOC)	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.8	NA
Metals (6010C)															
IRON	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.458	NA
Metals (6020A)															
MANGANESE	mg/L	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.95	1.91
Metabolic Acids (830-MBA)															
Acetic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyric Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lactic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propionic Acid	mg/L	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyruvic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions (9056)															
CHLORIDE	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,470	NA
NITRATE	mg/L	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4 U	NA
NITRITE	mg/L	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4 U	NA
SULFATE	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,830	NA
Dechlorinating Bacteria															
BAV1 Vinyl Chloride Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalobacter spp.	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalococcoides	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tceA Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Gases (RSK-175)															
CARBON DIOXIDE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	735,000	NA
ETHANE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2 U	NA
ETHENE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.64 J	NA
METHANE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	216	NA
Ferrous Iron (SM3500FE)															
FERROUS IRON	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.263	NA
Sulfide (SM4500-S-(-2)-F-2000)															
SULFIDE	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.87 J	NA

Notes:
Blue Highlighting Indicates concentrations above the MCL/MSC
Note: Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.
J - Estimated: The analyte was positively identified, the quantitation is an es
MCL/MSC - Maximum Contaminant Level/Medium-Specific Concentration
mg/L - milligrams per liter
U - Undetected: The analyte was analyzed for, but not detected.
UJ - The analyte was not detected; however, the result is estimated due to
µg/L - micrograms per liter
°C = degrees celsius
NA = Not analyzed
NV = no value
cells/mL = cells per milliliter
µS/cm = microsiemens per centimeter
mV = miliivolts
NTU = Nephelometric turbidity units
NR = not recorded

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW21-041316 4/13/2016	35AWW21FD-041316 4/13/2016	35AWW21-100416 10/4/2016	35AWW21FD-100416 10/4/2016	35AWW22-041316 4/13/2016	35AWW22-100616 10/6/2016	LHSMW04- 032916 3/29/2016	LHSMW04- 041316 4/13/2016	LHSMW06- 041316 4/13/2016	LHSMW06- 100616 10/6/2016	LHSMW07- 041416 4/14/2016	LHSMW07- 100416 10/4/2016	LHSMW07FF-100416 10/4/2016
Location Description:			Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually.	Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually. Field duplicate.	Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually.	Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually Field duplicate.	Site 58 - ENE, outside site boundary. Sampled semi-annually.	Site 58 - ENE, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - SW, inside site boundary, beside Building 715. Sampled semi-annually.	Site 58 - SW, inside site boundary, beside Building 715. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Field filtered w/ 0.45 micron filter.
Volatile Organic Compounds (8260B)															
1,1,1,2-TETRACHLOROETHANE	µg/L	110	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,1,1-TRICHLOROETHANE	µg/L	200	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,1,2,2-TETRACHLOROETHANE	µg/L	14	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<1 U	<0.4 U	<0.4 U	<0.4 U	<2 U	NA
1,1,2-TRICHLOROETHANE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	4.96	7.72	NA
1,1-DICHLOROETHANE	µg/L	10,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	0.691 J	0.543 J	4.87	6.75	106	96.2	NA
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	13.7	19.2	1,250	701	NA
1,1-DICHLOROPROPENE	µg/L	2.9	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,2,3-TRICHLOROBENZENE	µg/L	310	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.3 U	<0.75 U	<0.3 U	<0.3 U	<0.3 U	<1.5 U	NA
1,2,3-TRICHLOROPROPANE	µg/L	0.041	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
1,2,4-TRICHLOROBENZENE	µg/L	70	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<1 U	<0.4 U	<0.4 U	<0.4 U	<2 U	NA
1,2,4-TRIMETHYLBENZENE	µg/L	5,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	µg/L	0.2	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<5 U	<2 U	<2 U	<2 U	<10 U	NA
1,2-DIBROMOETHANE	µg/L	0.050	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,2-DICHLOROBENZENE	µg/L	600	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	0.142 J	<1.25 U	NA
1,2-DICHLOROETHANE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	2.23	2.56 J	NA
1,2-DICHLOROPROPANE	µg/L	5	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<1 U	<0.4 U	<0.4 U	<0.4 U	<2 U	NA
1,3,5-TRIMETHYLBENZENE	µg/L	5,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,3-DICHLOROBENZENE	µg/L	3,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
1,3-DICHLOROPROPANE	µg/L	29	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<1 U	<0.4 U	<0.4 U	<0.4 U	<2 U	NA
1,4-DICHLOROBENZENE	µg/L	75	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	<0.25 U	0.657 J	NA
2,2-DICHLOROPROPANE	µg/L	42	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
2-BUTANONE	µg/L	61,000	<5 U	<5 U	<5 U	<5 U	<5 U	<5 UJ	<5 U	<12.5 U	<5 U	<5 U	<5 U	<25 U	NA
2-CHLOROTOLUENE	µg/L	2,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	<0.25 U	<1.25 U	NA
2-HEXANONE	µg/L	6,100	<5 U	<5 U	<5 U	<5 U	<5 U	<5 UJ	<5 U	<12.5 U	<5 U	<5 U	<5 U	<25 U	NA
4-CHLOROTOLUENE	µg/L	2,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
4-METHYL-2-PENTANONE	µg/L	8,200	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<12.5 U	<5 U	<5 U	<5 U	<25 U	NA
ACETONE	µg/L	92,000	<5 U	<5 U	<5 U	<5 U	<5 U	<5 UJ	<5 U	<12.5 U	<5 U	<5 U	<5 U	<25 U	NA
BENZENE	µg/L	5	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	1.09	1.17 J	NA
BROMOBENZENE	µg/L	2,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	<0.25 U	<1.25 U	NA
BROMOCHLOROMETHANE	µg/L	4,100	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<1 U	<0.4 U	<0.4 U	<0.4 U	<2 U	NA
BROMODICHLOROMETHANE	µg/L	4.6	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
BROMOFORM	µg/L	36	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
BROMOMETHANE	µg/L	140	<1 U	<1 U	<1 UJ	<1 UJ	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
CARBON DISULFIDE	µg/L	10,000	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	0.713 J	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
CARBON TETRACHLORIDE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
CHLOROBENZENE	µg/L	100	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	0.404 J	0.729 J	NA
CHLOROETHANE	µg/L	41,000	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
CHLOROFORM	µg/L	1,000	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	<0.25 U	<1.25 U	NA
CHLOROMETHANE	µg/L	220	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 UJ	<1 UJ	<5 U	NA
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.666 J	0.851 J	11.9	19	19.6	22.1	NA
CIS-1,3-DICHLOROPROPENE	µg/L	5.3	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
DIBROMOCHLOROMETHANE	µg/L	34	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
DIBROMOMETHANE	µg/L	380	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
DICHLORODIFLUOROMETHANE	µg/L	20,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
ETHYLBENZENE	µg/L	700	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
HEXACHLOROBUTADIENE	µg/L	20	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
ISOPROPYLBENZENE	µg/L	10,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
M,P-XYLENE	µg/L	10,000	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
METHYLENE CHLORIDE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
NAPHTHALENE	µg/L	2,000	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<1 U	<0.4 U	<0.4 U	<0.4 U	<2 U	NA
N-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
N-PROPYLBENZENE	µg/L	4,100	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	<0.25 U	<1.25 U	NA
O-XYLENE	µg/L	10,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
P-ISOPROPYLTOLUENE	µg/L	10,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
SEC-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
STYRENE	µg/L	100	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.626 U	<0.25 U	<0.25 U	<0.25 U	<1.25 U	NA
TERT-BUTYLBENZENE	µg/L	4,100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	419	397	0.563 J	0.9 J	0.397 J	<2.5 U	NA
TOLUENE	µg/L	1,000	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	0.391 J	0.681 J	<2.5 U	NA
TRANS-1,3-DICHLOROPROPENE	µg/L	29	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<2.5 U	<1 U	<1 U	<1 U	<5 U	NA
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	106	86.1	6.5	9.06	67.5	71.6	NA
TRICHLOROFLUOROMETHANE	µg/L	31,000	<0.5 U	<0.5 U	<0.5 UJ	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<1.25 U	<0.5 U	<0.5 U	<0.5 U	<2.5 U	NA
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1.25 U	2.38	2.94	10.8	21.8	NA

Table 2
Groundwater and Surface Water Validated Analytical Data (March - October 2016)
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL/ MSC	35AWW21-041316 4/13/2016	35AWW21FD-041316 4/13/2016	35AWW21-100416 10/4/2016	35AWW21FD-100416 10/4/2016	35AWW22-041316 4/13/2016	35AWW22-100616 10/6/2016	LHSMW04- 032916 3/29/2016	LHSMW04- 041316 4/13/2016	LHSMW06- 041316 4/13/2016	LHSMW06- 100616 10/6/2016	LHSMW07- 041416 4/14/2016	LHSMW07- 100416 10/4/2016	LHSMW07FF-100416 10/4/2016
Location Description:			Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually.	Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually. Field duplicate.	Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually.	Site 58 - ESE, outside site boundary, beside Building 725. Sampled semi-annually Field duplicate.	Site 58 - ENE, outside site boundary. Sampled semi-annually.	Site 58 - ENE, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - E, outside site boundary. Sampled semi-annually.	Site 58 - SW, inside site boundary, beside Building 715. Sampled semi-annually.	Site 58 - SW, inside site boundary, beside Building 715. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Sampled semi-annually.	Site 58 - SW, outside site boundary. Field filtered w/ 0.45 micron filter.
Water Quality Parameters															
Temperature	°C	NV	19.46	NA	22.10	NA	17.76	21.42	16.87	17.68	17.34	22.07	18.33	20.89	NA
pH	pH Units	NV	4.78	NA	4.84	NA	6.59	6.06	4.67	7.21	6.15	7.03	6.15	5.99	NA
Conductivity	µS/cm	NV	1.82	NA	2.00	NA	9.19	9.23	7.3	7.24	3.22	3.33	11	10.6	NA
Dissolved Oxygen	mg/L	NV	0.55	NA	1.61	NA	NR	NR	NR	NR	NR	NR	0.47	1.34	NA
Turbidity	NTU	NV	18.7	NA	22.7	NA	8.2	16.9	26.9	40.3	0.0	0.00	0.0	0.0	NA
Oxidation Reduction Potential	mV	NV	304	NA	289	NA	10	NR	153	28	166	NR	130	113	NA
Alkalinity (310.2)															
ALKALINITY, TOTAL	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	658	NA
Phosphorus (365.4)															
PHOSPHORUS	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2 U	NA
Total Organic Carbon (415.1)															
TOTAL ORGANIC CARBON (TOC)	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41.6	NA
Metals (6010C)															
IRON	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.34	NA
Metals (6020A)															
MANGANESE	mg/L	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.137	0.144
Metabolic Acids (830-MBA)															
Acetic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyric Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lactic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propionic Acid	mg/L	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyruvic Acid	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions (9056)															
CHLORIDE	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,280	NA
NITRATE	mg/L	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4 U	NA
NITRITE	mg/L	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4 U	NA
SULFATE	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,650	NA
Dechlorinating Bacteria															
BAV1 Vinyl Chloride Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalobacter spp.	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dehalococcoides	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tceA Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride Reductase	cells/mL	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Gases (RSK-175)															
CARBON DIOXIDE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	921,000	NA
ETHANE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2 U	NA
ETHENE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2 U	NA
METHANE	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	115	NA
Ferrous Iron (SM3500FE)															
FERROUS IRON	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.26	NA
Sulfide (SM4500-S-(-2)-F-2000)															
SULFIDE	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1 U	NA

Notes:
Blue Highlighting Indicates concentrations above the MCL/MSC
Note: Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.
J - Estimated: The analyte was positively identified, the quantitation is an es
MCL/MSC - Maximum Contaminant Level/Medium-Specific Concentration
mg/L - milligrams per liter
U - Undetected: The analyte was analyzed for, but not detected.
UJ - The analyte was not detected; however, the result is estimated due to
µg/L - micrograms per liter
°C = degrees celsius
NA = Not analyzed
NV = no value
cells/mL = cells per milliliter
µS/cm = microsiemens per centimeter
mV = miliivolts
NTU = Nephelometric turbidity units
NR = not recorded

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	03WW01-112408 11/24/2008	03WW01-110509 5/9/2011	03WW01-082013 8/20/2013	03WW01-101013 10/10/2013	03WW01-12914 1/29/2014	03WW01-052114 5/21/2014	03WW01-102814 10/28/2014	03WW01-012115 1/21/2015	03WW01-041515 4/15/2015	03WW01-070815 7/8/2015	03WW01-100815 10/8/2015	03WW01-041316 4/13/2016	03WW01-100416 10/4/2016	35ASW03-101713 10/17/2013	35ASW03-020314 2/3/2014	35ASW03-052814 5/28/2014	35ASW03-012315 1/23/2015	35ASW03-041015 4/10/2015	35ASW03-041316 4/13/2016	35AWW01-981108 11/8/1998
1,1-DICHLOROETHENE	µg/L	7	<20 U	<2.5 U	<2 U	<5 U	<10 U	<10 U	<100 U	<100 U	<50 U	<100 U	<100 U	<25 U	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<20 U	1.1 J	0.978 J	<2.5 U	<5 U	3.3 J	<50 U	<50 U	21.4 J	<50 U	<50 U	117	<5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
TETRACHLOROETHENE	µg/L	5	2,570	418	368	172 J	172	154	48.6 J	32.8 J	15.9 J	31.4 J	36.4 J	6.49 J	<5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<20 U	<2.5 U	<1 U	<2.5 U	<5 U	<5 U	<50 U	<50 U	<25 U	<50 U	<50 U	<12.5 U	<5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
TRICHLOROETHENE	µg/L	5	196	69.1	94.8	42.1 J	58.4	71.2	223	216	131	65.6 J	51.8 J	<12.5 U	<5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.259 J	<0.5 U	<1 U
VINYL CHLORIDE	µg/L	2	<20 U	<2.5 U	<1 U	<2.5 U	<5 U	<5 U	<50 U	<50 U	<25 U	<50 U	<50 U	<12.5 U	<5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

J - Estimated value; analyte concentration was less than the limit of quantification

MCL - Maximum Contaminant Level

NA - not analyzed

U - Analyte was not detected.

UJ - The analysis was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. 'UJ' not detects are not definite; the analyte may be present.

µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	35AWW01-981108FD 11/8/1998	35AWW01-040909 9/9/2004	35AWW01-020608 2/6/2008	35AWW01-111908 11/19/2008	35AWW01-101113 10/11/2013	35AWW01-013114 1/31/2014	35AWW01FD-013114 1/31/2014	35AWW01-052914 5/29/2014	35AWW01-103114 10/31/2014	35AWW01-012715 1/27/2015	35AWW01-041015 4/10/2015	35AWW01FD-041015 4/10/2015	35AWW01-071015 7/10/2015	35AWW01FD-071015 7/10/2015	35AWW01-100615 10/6/2015	35AWW01FD-100615 10/6/2015	35AWW01-041216 4/12/2016	35AWW01FD-041216 4/12/2016	35AWW01-100516 10/5/2016	35AWW02-981108 11/8/1998
1,1-DICHLOROETHENE	µg/L	7	<1 U	<5 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<1 U	<5 U	<1 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
TETRACHLOROETHENE	µg/L	5	<1 U	<5 U	<1 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<1 U	<5 U	<1 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
TRICHLOROETHENE	µg/L	5	<1 U	<5 U	<1 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U
VINYL CHLORIDE	µg/L	2	<1 U	<5 U	<1 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

J - Estimated value; analyte concentration was less than the limit of quantification

MCL - Maximum Contaminant Level

NA - not analyzed

U - Analyte was not detected.

UJ - The analysis was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. 'UJ' not detects are not definite; the analyte may be present.

µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	35AWW02-040910 9/10/2004	35AWW02-112608 11/26/2008	35AWW02-112608-FD 11/26/2008	35AWW02-102213 10/22/2013	35AWW05-040908 9/8/2004	35AWW05-112108 11/21/2008	35AWW05-101613 10/16/2013	35AWW05-020114 2/1/2014	35AWW05-052214 5/22/2014	35AWW05FD-052214 5/22/2014	35AWW05-102114 10/21/2014	35AWW05-012315 1/23/2015	35AWW05FD-012315 1/23/2015	35AWW05-040815 4/8/2015	35AWW05-071015 7/10/2015	35AWW05-100515 10/2/2015	35AWW05-041416 4/14/2016	35AWW05-100516 10/5/2016	35AWW06-120308 12/3/2008	35AWW06-110509 5/9/2011
1,1-DICHLOROETHENE	µg/L	7	<5 U	<1 U	<1 U	<1 U	<5 U	0.551 J	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	57.6	21.3
CIS-1,2-DICHLOROETHENE	µg/L	70	<5 U	<1 U	<1 U	<0.5 U	<5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.37 J	<1 U
TETRACHLOROETHENE	µg/L	5	<5 U	<1 U	<1 U	<0.5 U	<5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	7.19	<1 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<5 U	<1 U	<1 U	<0.5 U	<5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U
TRICHLOROETHENE	µg/L	5	<5 U	<1 U	<1 U	<0.5 U	<5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.811 J	<1 U
VINYL CHLORIDE	µg/L	2	<5 U	<1 U	<1 U	<0.5 U	<5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

J - Estimated value; analyte concentration was less than the limit of quantification

MCL - Maximum Contaminant Level

NA - not analyzed

U - Analyte was not detected.

UJ - The analysis was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. 'UJ' not detects are not definite; the analyte may be present.

µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	35AWW06-101513 10/15/2013	35AWW06-013014 1/30/2014	35AWW06-052114 5/21/2014	35AWW06-102914 10/29/2014	35AWW06-012815 1/28/2015	35AWW06-041515 4/15/2015	35AWW06-070715 7/7/2015	35AWW06-100715 10/7/2015	35AWW06-041116 4/11/2016	35AWW06-100316 10/3/2016	35AWW07R-101613 10/16/2013	35AWW08-112408 11/24/2008	35AWW08-110509 5/9/2011	35AWW08-082013 8/20/2013	35AWW08-101013 10/10/2013	35AWW08-012914 1/29/2014	35AWW08-052014 5/20/2014	35AWW08-102714 10/27/2014	35AWW08-012115 1/21/2015	35AWW08-041515 4/15/2015
1,1-DICHLOROETHENE	µg/L	7	15.8	14.2	12	16	13.5	4.17	18.6	12.8	13	7.48	<1 U	<100 U	<25 U	<10 U	<10 U	<10 U	<10 U	<50 U	<50 U	<50 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.709 J	<100 U	13.4 J	9.35 J	<5 U	55.9	47.2	38.6 J	27.2 J	30.7 J
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.586 J	9,590	6,480	1,640	603 J	599	204	112	119	110
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<100 U	<25 U	<5 U	<5 U	<5 U	2.82 J	<25 U	<25 U	<25 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.03	675	1,150	544	149 J	895	953	653	491	607
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<100 U	<25 U	<5 U	<5 U	<5 U	<5 U	<25 U	<25 U	<25 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

J - Estimated value; analyte concentration was less than the limit of quantification

MCL - Maximum Contaminant Level

NA - not analyzed

U - Analyte was not detected.

UJ - The analysis was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. 'UJ' not detects are not definite; the analyte may be present.

µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	35AWW08-070815 7/8/2015	35AWW08-100815 10/8/2015	35AWW08-041316 4/13/2016	35AWW08-100416 10/4/2016	35AWW09-082913 8/29/2013	35AWW09-101013 10/10/2013	35AWW09-012914 1/29/2014	35AWW09-052014 5/20/2014	35AWW09-102714 10/27/2014	35AWW09-012115 1/21/2015	35AWW09-041415 4/14/2015	35AWW09-070715 7/7/2015	35AWW09-100715 10/7/2015	35AWW09-041216 4/12/2016	35AWW09-100316 10/3/2016	35AWW10-082913 8/29/2013	35AWW10-101013 10/10/2013	35AWW10-012914 1/29/2014	35AWW10-052014 5/20/2014	35AWW10-102814 10/28/2014
1,1-DICHLOROETHENE	µg/L	7	<100 U	<25 U	<25 U	<10 U	<1 U	<1 UJ	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	73.5 J	79.6	60.9	41.7	<0.5 U	<0.5 UJ	0.317 J	0.502 J	0.703 J	0.486 J	0.483 J	0.622 J	0.717 J	0.515 J	0.437 J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	110	79	80.1	36.9	21.9	57.6 J	125	128	254	183	155	194	283	172	173	<0.5 U	<0.5 U	<0.5 U	0.401 J	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<50 U	<12.5 U	<12.5 U	<5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	746	581	234	235	11.9	8.97 J	37.3	41.7	93	64.3	45	59.5	81.3	55.7	48.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	<50 U	<12.5 U	14.2 J	7.46 J	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

J - Estimated value; analyte concentration was less than the limit of quantification

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µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	35AWW10-012715 1/27/2015	35AWW10-041415 4/14/2015	35AWW10-070715 7/7/2015	35AWW10-100715 10/7/2015	35AWW10-041316 4/13/2016	35AWW10-100316 10/3/2016	35AWW11-101513 10/15/2013	35AWW11-020314 2/3/2014	35AWW11-052114 5/21/2014	35AWW11-102914 10/29/2014	35AWW11-012715 1/27/2015	35AWW11-041415 4/14/2015	35AWW11-070815 7/8/2015	35AWW11-100715 10/7/2015	35AWW11-041216 4/12/2016	35AWW11-100316 10/3/2016	35AWW12-101813 10/18/2013	35AWW12FD-101813 10/18/2013	35AWW12-013114 1/31/2014	35AWW12FD-013114 1/31/2014
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	7.7	10.1	11.6	21.9	12.5	13.5	16.8	14.7	21.3	16	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.292 J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.442 J	<0.5 U	<0.5 U	0.369 J	<0.5 U	0.273 J	<0.5 U	<0.5 U	0.532 J	0.328 J	<0.5 U	<0.5 U	<0.5 U	<0.5 U

Notes:

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µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	35AWW12-052914 5/29/2014	35AWW12-103014 10/30/2014	35AWW12-012815 1/28/2015	35AWW12-040715 4/7/2015	35AWW12FD-040715 4/7/2015	35AWW12-070915 7/9/2015	35AWW12-100515 10/5/2015	35AWW12FD-100515 10/5/2015	35AWW12-041216 4/12/2016	35AWW12-100516 10/5/2016	35AWW12FD-100516 10/5/2016	35AWW13-101113 10/11/2013	35AWW13FD-101113 10/11/2013	35AWW13-020314 2/3/2014	35AWW13-052214 5/22/2014	35AWW13-102114 10/21/2014	35AWW13FD-102114 10/21/2014	35AWW13-012315 1/23/2015	35AWW13-040815 4/8/2015	35AWW13-070915 7/9/2015
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	0.343 J	0.326 J	0.279 J	0.251 J	<0.5 U	0.511 J	0.426 J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

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Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	35AWW13-100615 10/6/2015	35AWW13-041316 4/13/2016	35AWW13-100616 10/6/2016	35AWW14-101813 10/18/2013	35AWW14-013114 1/31/2014	35AWW14-052814 5/28/2014	35AWW14FD-052814 5/28/2014	35AWW14-103014 10/30/2014	35AWW14-012115 1/21/2015	35AWW14-040715 4/7/2015	35AWW14-070915 7/9/2015	35AWW14-100215 10/2/2015	35AWW14-041316 4/13/2016	35AWW14-100616 10/6/2016	35AWW15-101613 10/16/2013	35AWW15FD-101613 10/16/2013	35AWW15-020114 2/1/2014	35AWW15-052814 5/28/2014	35AWW15-102114 10/21/2014	35AWW15-012315 1/23/2015
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	1.63 J	1.63 J	1.22 J	1.07 J	1.57 J	1.8 J	1.78 J	1.7 J	2.47	3.25	10.4	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	2.04	1.75	1.46	1.47	1.94	1.91	2.08	1.7	1.96	1.78	5.09	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	0.663 J	0.669 J	0.612 J	0.565 J	0.806 J	0.707 J	0.786 J	0.632 J	1.06	1.79	10.2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	0.272 J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.303 J	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

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LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	35AWW15-041015 4/10/2015	35AWW15-071015 7/10/2015	35AWW15-100615 10/6/2015	35AWW15-041416 4/14/2016	35AWW15-100516 10/5/2016	35AWW16-102213 10/22/2013	35AWW16-013114 1/31/2014	35AWW16-052814 5/28/2014	35AWW16-103014 10/30/2014	35AWW16-012715 1/27/2015	35AWW16FD-012715 1/27/2015	35AWW16-040715 4/7/2015	35AWW16-070915 7/9/2015	35AWW16FD-070915 7/9/2015	35AWW16-100615 10/6/2015	35AWW16-041216 4/12/2016	35AWW16-100416 10/4/2016	35AWW16FD-100416 10/4/2016	35AWW17-101813 10/18/2013	35AWW17-020114 2/1/2014
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

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Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	35AWW17-052914 5/29/2014	35AWW17-103114 10/31/2014	35AWW17-012815 1/28/2015	35AWW17-041015 4/10/2015	35AWW17-071015 7/10/2015	35AWW17-100515 10/2/2015	35AWW17-041116 4/11/2016	35AWW17-100316 10/3/2016	35AWW18-101813 10/18/2013	35AWW18-020114 2/1/2014	35AWW18-052914 5/29/2014	35AWW18-103114 10/31/2014	35AWW18-012815 1/28/2015	35AWW18-041015 4/10/2015	35AWW18-071015 7/10/2015	35AWW18-100515 10/2/2015	35AWW18-041116 4/11/2016	35AWW18FD-041116 4/11/2016	35AWW18-100516 10/5/2016	35AWW19-102213 10/22/2013
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 UJ	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	0.792 J	0.726 J	0.78 J	<1 UJ	<1 U	2.13	2.09	0.97 J	6.45
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.379 J
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 UJ	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

Notes:

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Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	35AWW19-013114 1/31/2014	35AWW19-052814 5/28/2014	35AWW19-103014 10/30/2014	35AWW19-012115 1/21/2015	35AWW19-040715 4/7/2015	35AWW19-070915 7/9/2015	35AWW19FD-070915 7/9/2015	35AWW19-100215 10/2/2015	35AWW19-041216 4/13/2016	35AWW19-100616 10/6/2016	35AWW20-101513 10/15/2013	35AWW20-020314 2/3/2014	35AWW20-052114 5/21/2014	35AWW20-102914 10/29/2014	35AWW20-012715 1/27/2015	35AWW20-041515 4/15/2015	35AWW20-070815 7/8/2015	35AWW20-100815 10/8/2015	35AWW20-041316 4/13/2016	35AWW20-100416 10/4/2016
1,1-DICHLOROETHENE	µg/L	7	9.31	9.98	10.9	17.4	17.5	13.4	11.7	14.7	13.5	12.9	3,230	2,950	5,060	4,910	5,660	4,640	4,780	3,630	5,460	3,440
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	110	87.7	110	119	123	120	118	105	126	115
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.65	1.53	<10 U	<10 U	<10 U	<12.5 U	<12.5 U	<12.5 U	<12.5 U	<10 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	3.77	3.52	<10 U	<10 U	<10 U	<12.5 U	<12.5 U	<12.5 U	5.16 J	<10 U
TRICHLOROETHENE	µg/L	5	0.619 J	0.596 J	0.81 J	0.941 J	1.13	0.807 J	0.751 J	0.939 J	0.899 J	0.754 J	513	479	695	843	820	718	636	582	707	594
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	105	62.4	65.7	102	122	90.6	151	126	216	166

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

J - Estimated value; analyte concentration was less than the limit of quantification

MCL - Maximum Contaminant Level

NA - not analyzed

U - Analyte was not detected.

UJ - The analysis was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. 'UJ' not detects are not definite; the analyte may be present.

µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	35AWW21-101613 10/16/2013	35AWW21-020414 2/4/2014	35AWW21-052214 5/22/2014	35AWW21-102114 10/21/2014	35AWW21-012315 1/23/2015	35AWW21-040815 4/8/2015	35AWW21-070915 7/9/2015	35AWW21-100615 10/6/2015	35AWW21-041316 4/13/2016	35AWW21FD-041316 4/13/2016	35AWW21-100416 10/4/2016	35AWW21FD-100416 10/4/2016	35AWW22-102213 10/22/2013	35AWW22-013114 1/31/2014	35AWW22-052914 5/29/2014	35AWW22-103014 10/30/2014	35AWW22FD-103014 10/30/2014	35AWW22-012115 1/21/2015	35AWW22FD-012115 1/21/2015	35AWW22-040715 4/7/2015
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U

Notes:

Blue Highlighting Indicates Analyte Detected Above MCL

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µg/L - micrograms per liter

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LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	35AWW22-070915 7/9/2015	35AWW22-100515 10/5/2015	35AWW22-041316 4/13/2016	35AWW22-100616 10/6/2016	LHSMW04-941201 12/1/1994	LHSMW04-960812 8/12/1996	LHSMW04-980513 5/13/1998	LHSMW04-040909 9/9/2004	LHSMW04-FEB2007 2/20/2007	LHSMW04-013008 1/30/2008	LHSMW04-112508 11/25/2008	LHSMW04-032916 3/29/2016	LHSMW04-041316 4/13/2016	LHSMW05-941201 12/1/1994	LHSMW05-960131 1/31/1996	LHSMW05-960812 8/12/1996	LHSMW05-980513 5/13/1998	LHSMW05-040909 9/9/2004	LHSMW06-941201 12/1/1994	LHSMW06-960813 8/13/1996
1,1-DICHLOROETHENE	µg/L	7	<1 U	<1 U	<1 U	<1 U	<5 U	<0.2 U	<1 U	<5 U	<2 U	<1 U	<1 U	<1 U	<2.5 U	<5 U	<1 U	<0.2 U	<40 U	<5 U	<5 U	2
CIS-1,2-DICHLOROETHENE	µg/L	70	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA	<0.2 U	<1 U	<5 U	<2 U	<1 U	0.292 J	0.666 J	0.851 J	NA	<1 U	0.21	<40 U	<5 U	NA	0.98
TETRACHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<0.25 U	<1 U	<5 U	6.4	8.74	25.7	419	397	870	4,884	2,700	4,900	5,100 J	<5 U	0.27
TRANS-1,2-DICHLOROETHENE	µg/L	100	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA	<0.29 U	<1 U	<5 U	<2 U	<1 U	<1 U	<0.5 U	<1.25 U	NA	<1 U	<0.29 U	<40 U	<5 U	NA	<0.29 U
TRICHLOROETHENE	µg/L	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<0.25 U	<1 U	<5 U	4.6	5.74	11.3	106	86.1	49	99	39.7	160	230 J	<5 U	0.43
VINYL CHLORIDE	µg/L	2	<0.5 U	<0.5 U	<0.5 U	<0.5 U	NA	<0.24 U	<1 U	<5 U	<2 U	<1 U	<1 U	<0.5 U	<1.25 U	NA	<1 U	<0.24 U	<40 U	<5 U	NA	0.62

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µg/L - micrograms per liter

Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: / Sample Date:	Units	MCL	LHSMW06-980513 5/13/1998	LHSMW06-040908 9/8/2004	LHSMW06-FEB2007 2/21/2007	LHSMW06-111908 11/19/2008	LHSMW06-101713 10/17/2013	LHSMW06-013114 1/31/2014	LHSMW06-052814 5/28/2014	LHSMW06-103014 10/30/2014	LHSMW06-012115 1/21/2015	LHSMW06-040715 4/7/2015	LHSMW06-070915 7/9/2015	LHSMW06-100215 10/2/2015	LHSMW06-041316 4/13/2016	LHSMW06-100616 10/6/2016	LHSMW07-941201 12/1/1994	LHSMW07-941201FD 12/1/1994	LHSMW07-960131 1/31/1996	LHSMW07-960812 8/12/1996	LHSMW07-980513 5/13/1998	LHSMW07-040908 9/8/2004
1,1-DICHLOROETHENE	µg/L	7	1.3	<5 U	<2 U	<1 U	1.23 J	0.884 J	1.68 J	4.03	3.28	5.95	8.2	12.1	13.7	19.2	750	660	1,341	311	950	590 J
CIS-1,2-DICHLOROETHENE	µg/L	70	1.4	<5 U	5.1	2.26	4.01	1.85	2.59	5.2	3.25	5.52	7.24	10.4	11.9	19	NA	NA	NA	2.5	11	6
TETRACHLOROETHENE	µg/L	5	0.69	2 J	<2 U	<1 U	0.663 J	<0.5 U	0.255 J	0.381 J	0.255 J	0.454 J	0.443 J	0.518 J	0.563 J	0.9 J	<5 U	<5 U	7	2.7	<1 U	<5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<1 U	<5 U	<2 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.391 J	NA	NA	NA	<0.29 U	0.73	<5 U
TRICHLOROETHENE	µg/L	5	0.53	<5 U	0.77 J	0.486 J	1.87	0.751 J	1.41	2.77	1.75	3.02	3.23	5.66	6.5	9.06	16	19	24	5.9	25	24
VINYL CHLORIDE	µg/L	2	<1 U	<5 U	<2 U	<1 U	0.627 J	0.5 J	0.597 J	1.15	0.924 J	0.967 J	1.36	2.1	2.4	2.94	NA	NA	10	1.1	7.2	9

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Table 3
Historic Monitoring Well COC Concentrations
LHAAP-58, Longhorn Army Ammunition Plan, Karnack, Texas
3rd Year RA(O) Report

Sample Identification: Sample Date:	Units	MCL	LHSMW07-FEB2007 2/21/2007	LHSMW07-111908 11/21/2008	LHSMW07-110509 5/9/2011	LHSMW07-101513 10/15/2013	LHSMW07-013014 1/30/2014	LHSMW07-052214 5/22/2014	LHSMW07-102914 10/29/2014	LHSMW07-012815 1/28/2015	LHSMW07-041515 4/15/2015	LHSMW07-070715 7/7/2015	LHSMW07-100815 10/8/2015	LHSMW07-041416 4/14/2016	LHSMW07-100416 10/4/2016
1,1-DICHLOROETHENE	µg/L	7	394	576	669	396	334	558 J	1,140	1,300	1,660	2,100	1,210	1,250	701
CIS-1,2-DICHLOROETHENE	µg/L	70	3.6	7.96	10.1	6.1	4.66	7.17	21	19.3	31.4	32.4	22.5	19.6	22.1
TETRACHLOROETHENE	µg/L	5	<2 U	<1 U	0.253 J	<0.5 U	<1 U	<0.5 U	<1 U	<2.5 U	<5 U	<2.5 U	<2.5 U	0.397 J	<2.5 U
TRANS-1,2-DICHLOROETHENE	µg/L	100	<2 U	0.421 J	0.384 J	0.282 J	<1 U	0.296 J	1.06 J	<2.5 U	<5 U	1.29 J	<2.5 U	0.681 J	<2.5 U
TRICHLOROETHENE	µg/L	5	15.8	25	41.3	23.9	17.6	23.1	78.1	64.3	82.1	118	84.9	67.5	71.6
VINYL CHLORIDE	µg/L	2	3	14.4	9.47	15.9	5.43	7.98	35.4	28.8	34.1	69.4 J	37.1	10.8	21.8

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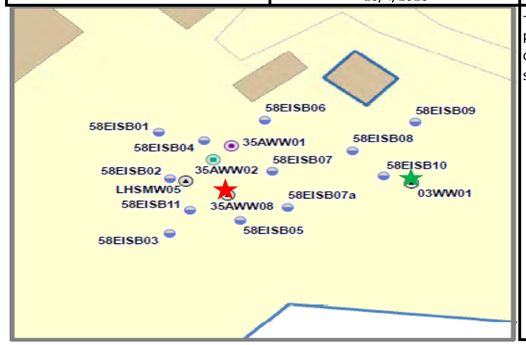
µg/L - micrograms per liter

Table 4
Enhanced In-situ Bioremediation Performance Data Summary
LHAAP-58, Longhorn Army Ammunition Plant, Karnack, Texas
3rd Year RA(O) Report

Monitoring Location	Sample Date	Field Parameters					Electron Donor	cVOCs				Dissolved Gases				Wet Chemistry						Dechlorinating Bacteria	
		pH	DO	ORP	Spec Cond	Turb	TOC	PCE	TCE	cDCE	VC	Ethane	Methane	Ethene	CO_2	Fe^{2+}	NO_3	NO_2	SO_4	Cl^-	Alk	DHC	DHBt
		SU	mg/L	mV	µs/cm	NTU	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cells/mL	cells/mL
35AWW08	8/20/2013	6.05	NR	NR	8.23	26.9	16.5	1,640	544	9.35 J	<5	<2	10.1	<2	143,000	0.04	<4	<4	1,480	2,510	174	<0.9	<5.3
	10/10/2013	6.7	NR	NR	47.7	4.1	66,400	603 J	149 J	<5	<5	<2	5.38	<2	NA	52.4	12.3J	<20	703	905	35,600	3.6	1,300
	1/29/2014	6.68	NR	NR	23.4	79.8	43,500	599	895	55.9	<5	<2	345	<2	428,000	144	<10	<10	285	2,190	27,700	<0.8	12,900
	5/20/2014	5.57	NR	NR	18.2	90.4	16,900	204	953	47.2	<5	<2	NA	<2	NA	<800	<10	<10	262	1,590	18,300	4,880	574,000
	10/27/2014	6.86	NR	NR	19.5	213	13,900	112	653	38.6 J	<25	<2	4,420	<2	505,000	478	<20	<20	<100	2,020	11,800 J	70.4	3,050,000 J
	1/21/2015	6.82	NR	NR	18.1	225	6,030	119	491	27.2 J	<25	<40	2,540	<40	152,000 J	10.9 J	<3	<3	<15	1,900	20,400	NA	NA
	4/15/2015	8.06	NR	NR	16.4	448	8,330	110	607	30.7 J	<25	<20	3,380	<20	249,000	<80	<2	<2	<10	2,250	18,800 J	NA	NA
	7/8/2015	8.07	NR	NR	13.9	325	2,540	110	746	73.5 J	<50	<20	5,600	<20	370,000	123	<2	<2	<10	2,250	10,100 J	NA	NA
	10/8/2015	7.22	NR	NR	11.3	300	2,240	79	581	79.6	<12.5	<20	5,510	<20	374,000	21.1	<5	<5	<25	2,130 J	20,600	448	72,900
	10/4/2016	6.92	NR	NR	11.8	50.4	918	36.9	235	41.7	7.46 J	<20	7,350	<20	424,000	17.6	<2	<2	<10	2,000	9,160 J	25,600,000	625,000
03WW01	8/20/2013	6.18	NR	NR	3.64	33	10.5	368	94.8	0.978 J	<1	<2	3.22	<2	143,000	0.04	<1	<1	534	892	142	1.2	0.4J
	10/10/2013	6.55	NR	NR	39.2	10	49,200	172	42.1	<2.5	<2.5	<2	4.35	<2	NA	35.4	<20	<20	487	398	39,700	<2.1	15.7J
	1/29/2014	6.58	NR	NR	20.2	256	30,200	172	58.4	<5	<5	<2	5.09	<2	337,000	110	<10	<10	457	906	27,500	<0.9	639,000
	5/21/2014	5.52	NR	NR	16	152	29,100	154	71.2	3.3 J	<5	<2	479	<2	564,000	0.0217	<10	<10	376	780	25,700	2,870	2,700,000
	10/28/2014	5.87	NR	NR	14.2	171	8,440	48.6 J	223	<50	<50	<2	910	<2	564,000 J	107	<1	<1	11	940	12,300 J	10.9	192,000
	1/21/2015	6.51	NR	NR	13.6	93.3	7,720	32.8 J	216	<50	<50	<10	393	<10	333,000	40.6	<2	<2	10.2	881	19,000 J	NA	NA
	4/15/2015	7.11	NR	NR	12.8	387	7,800	15.9 J	131	21.4 J	<25	<20	3,170	<20	396,000	27.8J	<1	<1	18	976	24,100	NA	NA
	7/8/2015	7.62	NR	NR	11.8	847	3,640	31.4 J	65.6 J	<50	<50	<20	16,100	<20	408,000	96.1	<1	<1	3.62J	1,020	12,400 J	NA	NA
	10/8/2015	6.65	NR	NR	11.4	525	1,700	36.4 J	51.8 J	<50	<50	<20	5,880	<20	500,000	0.835	<5	<5	<25	1,200	20,300	78	8,800
	10/4/2016	6.81	NR	NR	6.38	70	292	<5	<5	<5	<5	<20	5,950	<20	657,000	8.02	<1	<1	<5	762	5,500 J	9,460,000	53,300



-Slight decrease in pH noted during May 2014 sampling event, potentially related to excessive substrate fermentation and organic acid production, need to monitor closely. System has self buffered over time.

-Initial spike in TOC indicates effective substrate distribution.
-Residual electron donor present to support desired biogeochemical reactions.
-Declining TOC concentrations over time indicative of substrate consumption and/or washout.

-Decreasing concentrations of PCE, paired with subsequent increases then decreases in TCE and cDCE, and increases in VC suggest early stages of dechlorination are occurring at 35AWW08.
-Additional time/monitoring necessary to observe complete dechlorination at 35AWW08.

-Increasing methane concentrations (caused by methongenesis) indicates the development of strongly reducing conditions.
-Increased carbon dioxide indicates metabolism of the injected substrate is occurring.
-No ethene production yet (indicating complete dechlorination is occurring) but it is early in the process.

-Decreasing sulfate concentration indicates the onset/development of reducing conditions conducive to reductive dechlorination.

-Initial spike in dechlorinating bacteria counts suggest effective distribution of the bioaugmentation culture
-Sustained elevated counts indicate survival and possible proliferation of the bioaugmentation culture.
-Elevated dechlorinating bacteria counts in 2016 indicate rapid proliferation is ongoing.

Notes:

1. Electron donor injections completed in Sept. 2013
2. Bioaugmentation performed in Nov. 2013

pH = potential of hydrogen
SU = standard units
DO = dissolved oxygen
mg/L = milligrams per liter
ORP = oxidation-reduction potential
mV = millivolts
Spec Cond = specific conductivity
µs/cm = microsiemens per centimeter
Turb = turbidity
NTU = nephelometric turbidity units
TOC = total organic carbon
cVOC = chlorinated volatile organic compounds
PCE = tetrachloroethene
TCE = trichloroethene
cDCE = cis-1,2-dichloroethene
VC = vinyl chloride
µg/L = micrograms per liter
CO_2 = carbon dioxide
Fe^{2+} = ferrous iron
NO_3 = nitrate
NO_2 = nitrite
SO_4 = sulfate
Cl^- = chloride
Alk = alkalinity
DHC = dehalococcoides
DHBt = dehalobacter spp.
cells/mL = cells per milliliter
NA = not analyzed
NR = not recorded

APPENDIX A
ANNUAL LAND USE CONTROL COMPLIANCE CERTIFICATION DOCUMENTATION

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Annual Land Use Control Compliance Certification Documentation

In accordance with the Remedial Design dated September 2011, for LHAAP-58 a certification of site was conducted by AECOM Technical Services, Inc. on 8/1/16.

A summary of land use control mechanism is as follows:

- Groundwater restriction – restriction of the use of groundwater to environmental monitoring and testing until cleanup levels are met.

A summary of compliance with land use and restriction covenants is as follows:

- No use of groundwater, installation of new groundwater wells, or tampering with existing wells at LHAAP-58.

I, the undersigned, do document that the certification was performed as indicated above, and that the above information is true and correct to the best of my knowledge, information, and belief

Date: 8/1/16

Name/Title: Scott Beasinger / Senior Technician

Signature: Scott Beasinger

APPENDIX B
PHOTOGRAPHIC LOG

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Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 1: 03WW01 in good condition.



Photo 2: Temporary well 1004TW001

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 3: Dry surface water sampling location 35ASW03.



Photo 4: 35AWW01 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 5: 35AWW02 in good condition.



Photo 6: 35AWW03 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 7: 35AWW04 needs repainting.



Photo 8: 35AWW05 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 9: 35AWW06 in good condition.



Photo 10: 35AWW07R in good condition.



Photo 11: 35AWW08 in good condition.



Photo 12: 35AWW09 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 13: 35AWW10 in good condition.



Photo 14: 35AWW11 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 15: 35AWW12 in good condition.



Photo 16: 35AWW13 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 17: 35AWW14 in good condition.



Photo 18: 35AWW15 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 19: 35AWW16 in good condition.



Photo 20: 35AWW17 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 21: 35AWW18 in good condition.



Photo 22: 35AWW19 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 23: 35AWW20 in good condition.



Photo 24: 35AWW21 in good condition.

Longhorn Army Ammunition Plant Site LHAAP-58 Photograph Log October 2016



Photo 25: 35AWW22 in good condition.



Photo 26: LHSMW03 in good condition.



Photo 27: LHSMW04 in good condition.



Photo 28: LHSMW05 in good condition.



Photo 29: LHSMW06 in good condition.



Photo 30: LHSMW07 in good condition.

APPENDIX C
MONITORING WELL SAMPLE COLLECTION FORMS

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: LHSMW04	Date: 3/28/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 29.72	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 31.11	Screen Intverval (ft) from TOC: 21.11 - 31.11	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
3/28/16	0915	29.72	NA							Bailing well
3/28/16	0919	31.08	NA							Bailed 1 gallon RANDRY
3/29/16	0840	29.66	NA	16.87	4.67	7.30	NA	26.9	153	

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
LHSMW04-032916	0840	3 - 40 ml glass	HCL	N	Bailer	VOC

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

CO= LEL= OXY= H2S=

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW01	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 38.86	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 72.50	Screen Intverval (ft) from TOC: 62.69-72.69	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 67.69	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	0940	38.87	100	17.81	5.92	0.910	3.25	254	228	
	0945	38.95	100	19.51	6.13	0.911	1.56	610	76	
	0950	38.99	100	19.80	5.79	0.857	1.07	582	53	
	0955	39.03	100	20.01	5.59	0.829	0.74	493	109	
	1000	39.05	100	20.22	5.50	0.824	0.50	465	116	
	1005	39.05	100	20.46	5.44	0.814	0.40	400	130	
	1010	39.05	100	20.47	5.40	0.813	0.39	398	130	
	1015	39.05	100	20.49	5.40	0.812	0.38	397	130	
	1020	39.05	100	20.47	5.40	0.812	0.38	396	129	

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: 35AWW01-041216 TIME: 1020

DUPLICATE (D): YES/NO Yes

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
6-40 ml glass	HCl	N	Pump	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW02	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 42.26	Weather Conditions: CLOUDY
	Total Well Depth (ft) from TOC: 139.67	Screen Intverval (ft) from TOC: 128.59 - 138.59	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER LEVEL ONLY

NO SAMPLES REQUIRED

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW03	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: DRY	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 21.75	Screen Intverval (ft) from TOC: 11.75 - 21.75	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER Level Only
No Samples Required

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW04		Date: 4/14/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21099	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: DRY		Weather Conditions: Cloudy/Drizzle	
	Total Well Depth (ft) from TOC: 25.49	Screen Intverval (ft) from TOC: 15.50 - 25.50		Condition of Well/Remarks: Needs paint	
		Pump Placement (ft) from TOC: NA			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER Level ONLY

No Samples Required

DRY Well

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO						
MATRIX SPIKE (MS): YES/NO						
MATRIX DUPLICATE (MD): YES/NO						
CO= LEL= OXY= H2S=						

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW05	Date: 4/14/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4	Static Water Level Reading (ft) from TOC: [redacted]41.40	Weather Conditions: Cloudy/Rain
	Total Well Depth (ft) from TOC: 72.15	Screen Intverval (ft) from TOC: 62.40-72.40	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 67.40	

CASING INFO											
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/14/16	0900	41.43	100	17.93	6.70	2.84	1.50	74.4	-14	
	0905	41.47	100	18.72	6.05	2.76	0.79	70.3	36	
	0910	41.50	100	18.96	5.87	2.75	0.55	77.7	55	
	0915	41.52	100	18.87	5.74	2.75	0.51	72.3	66	
	0920	41.54	100	19.09	5.68	2.76	0.44	72.9	77	
	0925	41.55	100	19.15	5.67	2.76	0.42	72.0	79	
	0930	41.55	100	19.18	5.66	2.77	0.41	72.8	80	
	0935	41.55	100	19.20	5.66	2.77	0.42	71.5	82	

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: 35AWW05-041416 TIME: 0935

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AwW06	Date: 4/11/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 19.95	Weather Conditions: Cloudy / Drizzle
	Total Well Depth (ft) from TOC: 30.33	Screen Intverval (ft) from TOC: 19.05 - 29.05	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 24.05	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/11/16	0955	19.45	100	18.93	6.63	5.98	2.92	2.8	95	
	1000	20.02	100	18.75	6.48	5.89	2.51	0.1	113	
	1005	20.09	100	18.65	6.31	5.84	2.01	0.0	134	
	1010	20.13	100	18.60	6.13	5.83	1.60	0.0	157	
	1015	20.16	100	18.63	6.12	5.84	1.59	0.7	158	
	1020	20.17	100	18.67	6.11	5.83	1.57	1.6	158	
	1025	20.18	100	18.70	6.10	5.82	1.56	2.0	159	

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: 35AwW06-04/11/16 TIME: 1025

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW07R	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 24.34	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 32.48	Screen Intverval (ft) from TOC: 21.55-31.25	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: NA	

CASING INFO											
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER LEVEL ONLY

NO SAMPLES REQUIRED

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW08	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 29.20	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 33.35	Screen Intverval (ft) from TOC: 21.83 - 31.83	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1330	29.20	NA							Bailing well
4/12/16	1340	33.28	NA							Bailed 1.25 gallon RAN DRY
4/13/16	0820	29.59	NA	17.69	6.86	13.9	NA	74.6	-162	

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: 35AWW08-041316 TIME: 0820

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCL	N	Bailer	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW09	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 31.00	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 42.18	Screen Intverval (ft) from TOC: 26.69 - 41.29	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 34.00	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	0835	31.00	100	17.38	5.76	6.19	1.96	81.5	295	
	0840	31.07	100	17.86	5.59	6.43	1.08	135	388	
	0845	31.12	100	17.87	5.54	6.56	0.89	137	435	
	0850	31.17	100	17.72	5.51	6.63	1.07	117	459	
	0855	31.21	100	17.81	5.47	6.71	2.45	77.3	481	
	0900	31.24	100	17.94	5.41	6.81	2.00	58.7	496	
	0905	31.26	100	18.00	5.41	6.82	1.98	58.0	497	
	0910	31.27	100	17.97	5.42	6.82	1.96	57.1	498	
	0915	31.27	100	17.98	5.41	6.83	1.94	56.6	499	

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: 35AWW09-041216 TIME: 0915

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCl	N	Pump	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35A WW10	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 17.41	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 33.73	Screen Interval (ft) from TOC: 18.16 - 32.76	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 25.46	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/13/16	1310	17.39	100	22.95	5.59	0.316	2.54	45.5	220	
	1315	17.47	100	22.62	5.47	0.296	2.37	34.5	227	
	1320	17.53	100	22.24	5.25	0.276	2.15	22.2	245	
	1325	17.57	100	22.08	5.17	0.272	1.83	12.4	265	
	1330	17.58	100	21.86	5.19	0.272	1.51	9.8	267	
	1335	17.59	100	21.73	5.17	0.272	1.49	9.3	269	
	1340	17.59	100	21.74	5.16	0.271	1.47	8.5	269	
	1345	17.59	100	21.77	5.16	0.271	1.46	6.7	270	

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: 35AWW10-041316 TIME: 1345

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
9 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW11	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 31.03	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 38.10	Screen Intverval (ft) from TOC: 22.24 - 36.84	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 34.50	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1050	31.00	100	18.99	6.06	9.94	1.96	243	148	
	1055	31.09	100	18.65	6.09	10.1	1.68	215	164	
	1100	31.15	100	18.60	6.09	10.2	1.59	168	172	
	1105	31.20	100	18.63	6.10	10.2	1.37	93.2	177	
	1110	31.24	100	18.59	6.10	10.2	1.19	46.5	190	
	1115	31.27	100	18.59	6.10	10.2	1.17	47.9	189	
	1120	31.29	100	18.62	6.10	10.2	1.15	47.0	188	
	1125	31.29	100	18.61	6.10	10.2	1.13	47.5	189	

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: 35AWW11-041216 TIME: 1125

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3- 40 ml glass	HCL	N	Pump	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW12	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 28.54	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 37.61	Screen Intverval (ft) from TOC: 22.17-36.77	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 32.50	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	0740	28.52	100	18.38	4.22	1.62	2.97	30.3	267	
	0745	28.59	100	16.91	5.18	2.14	1.37	46.5	269	
	0750	28.65	100	17.16	5.14	2.23	0.99	34.7	268	
	0755	28.70	100	17.22	5.13	2.30	0.79	20.1	268	
	0800	28.73	100	17.45	5.23	2.38	0.51	10.0	274	
	0805	28.75	100	17.48	5.23	2.39	0.50	8.8	274	
	0810	28.76	100	17.45	5.22	2.38	0.50	6.5	272	
	0815	28.77	100	17.42	5.23	2.38	0.52	3.0	273	

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: 35AWW12-041216 TIME: 0815

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW13	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 24.10	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 40.28	Screen Interval (ft) from TOC: 24.72-39.32	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 32.02	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/13/16	1040	24.07	100	20.76	5.55	1.36	1.74	154	242	
	1045	24.15	100	21.67	5.41	1.50	0.76	186	224	
	1050	24.21	100	21.85	5.42	1.59	0.60	135	212	
	1055	24.25	100	22.00	5.45	1.73	0.45	141	199	
	1100	24.29	100	21.95	5.50	1.88	0.30	98.3	191	
	1105	24.31	100	22.05	5.48	1.89	0.30	97.5	190	
	1110	24.33	100	22.04	5.49	1.90	0.32	97.1	189	
	1115	24.34	100	22.12	5.49	1.90	0.32	96.5	188	

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: 35AWW13-041316 TIME: 1115

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW14	Date: 4/12/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 29.67	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 32.46	Screen Intverval (ft) from TOC: 17.06 - 31.76	Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1315	29.67	NA							Bailing well
4/12/16	1323	32.37	NA							Bailed 1 gallon RAN DRY
4/13/16		29.70	NA	16.93	6.58	6.84	NA	94.4	159	

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: 35AWW14-041316 TIME: 0805

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCl	N	Bailer	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35ANW15	Date: 4/14/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 19.51	Weather Conditions: Cloudy / Rain
	Total Well Depth (ft) from TOC: 41.48	Screen Intervel (ft) from TOC: 25.67 - 40.37	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 33.00	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/14/16	0755	19.50	100	19.85	6.13	13.2	1.08	367	77	
	0800	19.58	100	20.21	6.20	13.5	0.69	338	54	
	0805	19.65	100	20.50	6.22	13.6	0.50	218	47	
	0810	19.70	100	20.80	6.24	13.5	0.40	97.3	40	
	0815	19.72	100	20.78	6.25	13.5	0.35	59.5	37	
	0820	19.73	100	20.78	6.25	13.5	0.36	58.9	37	
	0825	19.73	100	20.81	6.25	13.5	0.37	58.1	37	
	0830	19.73	100	20.82	6.25	13.5	0.37	57.0	38	

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: 35ANW15-04/416 TIME: 0830

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35A MW16	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 18.43	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 37.51	Screen Intverval (ft) from TOC: 21.75 - 36.45	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 29.10	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1435	18.40	100	24.36	6.34	10.1	2.50	332	172	
	1440	18.47	100	21.53	5.84	12.0	0.97	499	150	
	1445	18.55	100	21.34	5.79	12.1	0.74	569	150	
	1450	18.60	100	21.40	5.77	12.0	0.49	433	145	
	1455	18.63	100	21.64	5.76	12.0	0.51	329	141	
	1500	18.64	100	20.77	5.77	12.0	0.53	277	138	
	1505	18.65	100	20.69	5.76	12.0	0.55	275	136	
	1510	18.65	100	20.72	5.75	12.0	0.55	274	135	
	1515	18.65	100	20.67	5.75	12.0	0.56	273	134	

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: 35AMW16-041216 TIME: 1515

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO yes

MATRIX DUPLICATE (MD): YES/NO yes

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
9 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW17	Date: 4/11/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 25.60	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 42.48	Screen Intverval (ft) from TOC: 21.97 - 41.67	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 34.32	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/11/16	0805	25.58	100	19.09	5.90	10.3	1.30	20.0	139	
	0810	25.65	100	18.94	5.81	10.2	0.70	16.6	133	
	0815	25.71	100	18.94	5.80	10.2	0.42	14.2	133	
	0820	25.75	100	18.93	5.80	10.2	0.38	9.8	135	
	0825	25.77	100	18.92	5.82	10.2	0.37	9.0	136	
	0830	25.79	100	18.95	5.83	10.1	0.37	8.2	137	
	0835	25.80	100	18.98	5.83	10.2	0.36	7.3	137	

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: 35AWW17-041116 TIME: 0835

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW18	Date: 4/11/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 26.40	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 42.18	Screen Intverval (ft) from TOC: 26.85 - 41.55	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 34.20	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/11/16	0900	26.37	100	19.71	6.55	10.5	2.01	69.1	92	
	0905	26.45	100	19.30	6.37	10.4	0.88	63.5	67	
	0910	26.51	100	19.25	6.29	10.3	0.67	63.3	68	
	0915	26.55	100	19.27	6.20	10.1	0.60	50.2	67	
	0920	26.58	100	19.21	6.17	10.0	0.58	49.5	67	
	0925	26.60	100	19.22	6.17	10.0	0.57	49.0	68	
	0930	26.60	100	19.23	6.16	10.0	0.56	48.5	68	

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: 35AWW18-04/11/16 TIME: 0930

DUPLICATE (D): YES/NO #-Yes

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
6 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW19	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 28.87	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 32.46	Screen Intverval (ft) from TOC: 13.90 - 28.40	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1252	28.87	NA							Bailing well
4/12/16	1258	32.40	NA							Bailed 1.5 gallons RANDY
4/13/16	0735	28.75	NA	18.32	5.35	6.23	NA	13.2	258	

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: 35AWW19-041316 TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3-40 ml glass	HCl	N	~~Pump~~ Bailer	VOC
DUPLICATE (D): YES/NO ND					
MATRIX SPIKE (MS): YES/NO ND					
MATRIX DUPLICATE (MD): YES/NO ND					
CO= LEL= OXY= H2S=					

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW20	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 19.69	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 36.12	Screen Intverval (ft) from TOC: 20.94 - 35.64	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 28.29	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/13/16	1420	19.67	100	22.56	6.33	8.47	0.87	7.6	54	
	1425	19.75	100	22.42	6.32	8.29	0.92	0.9	59	
	1430	19.80	100	22.54	6.31	8.17	0.95	0.0	63	
	1435	19.83	100	22.66	6.30	8.14	0.95	0.0	66	
	1440	19.85	100	22.61	6.30	8.16	0.89	0.0	68	
	1445	19.86	100	22.53	6.29	8.17	0.87	0.0	68	
	1450	19.86	100	22.48	6.29	8.17	0.87	0.0	68	
	1455	19.87	100	22.46	6.30	8.16	0.88	0.0	67	

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: 35AWW20-041316 TIME: 1455

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW21	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 31.44	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 42.84	Screen Intverval (ft) from TOC: 25.56 - 42.26	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 34.91	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/13/16	0935	31.41	100	18.33	6.76	1.96	2.11	137	108	
	0940	31.49	100	19.23	5.34	1.88	1.20	93.9	173	
	0945	31.55	100	19.75	5.07	1.85	0.88	61.3	205	
	0950	31.60	100	19.53	4.93	1.84	0.73	50.1	234	
	0955	31.63	100	19.40	4.81	1.84	0.68	27.4	263	
	1000	31.66	100	19.47	4.78	1.83	0.58	20.2	301	
	1005	31.69	100	19.47	4.77	1.83	0.56	19.5	302	
	1010	31.71	100	19.48	4.76	1.82	0.55	19.0	303	
	1015	31.72	100	19.46	4.78	1.82	0.55	18.7	304	

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: 35AWW21-041816 TIME:

DUPLICATE (D): YES/NO yes

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
6 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	35AWW22	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 32.00	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 37.78	Screen Intverval (ft) from TOC: 22.27-36.77	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1410	32.00	NA							Bailing well
4/12/16	1420	37.70	NA							Bailed 2.50 gallons RAW DAY
4/13/16	0905	31.93	NA	17.76	6.59	9.19	NA	8.2	10	

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: 35AWW22-041316 TIME:

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCl	N	Bailer	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	03WW01	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 29.36	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 33.43	Screen Intverval (ft) from TOC: 21.53 - 31.53	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1345	29.36	NA							Bailing well
4/12/16	1350	33.35	NA							Bailed 1.75 gallon RAN DRY
4/13/16	0835	29.79	NA	17.75	7.19	7.99	NA	127	-127	

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: 03WW01 - 041316 TIME: 0835

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCL	N	Bailer	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	1004TW001	Date: 4/14/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ ID#:	
WELL INFO	Casing I.D. (in): 1"	Static Water Level Reading (ft) from TOC: 17.75	Weather Conditions: Cloudy / Drizzle
	Total Well Depth (ft) from TOC: 24.78	Screen Interval (ft) from TOC: UNKNOWN	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: NA	

CASING INFO											
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER LEVEL ONLY
NO SAMPLES REQUIRED

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LHS MW03	Date: 4/13/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4 11	Static Water Level Reading (ft) from TOC: 28.75	Weather Conditions: Cloudy
	Total Well Depth (ft) from TOC: 35.54	Screen Intverval (ft) from TOC: 25.54 - 35.54	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: NA	

CASING INFO											
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER Level ONLY

NO SAMPLES REQUIRED

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LHSmw04	Date: 4/12/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 29.65	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: ~~33~~ 31.14	Screen Intverval (ft) from TOC: 21.11-31.11	Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1357	29.65	NA							Bailing well
4/12/16	1403	31.08	NA							Bailed 1.50 gallon RAN DRY
4/13/16	0850	29.61	NA	17.68	7.21	7.24	NA	403	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: LHSmw04-04/13/16 TIME: 0850

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

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Bailer	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LHS MW05	Date: 4/12/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:		
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: DRY	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 24.39	Screen Intverval (ft) from TOC: 14.08 - 24.08	Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

DRY WELL

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LHSmw06	Date: 4/12/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 19.11	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 23.53	Screen Intverval (ft) from TOC: 13.32 - 23.32	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/12/16	1303	19.11	NA							Bailing well
4/12/16	1310	23.45	NA							Bailed 2.50 gallons RANDRY
4/13/16	0755	19.00	NA	17.34	6.15	3.22	NA	0.0	166	

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: LHSmw06-041316 TIME:

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Bailer	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LHSMW07	Date: 4/14/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 18.97	Weather Conditions: Cloudy / Drizzle
	Total Well Depth (ft) from TOC: 30.50	Screen Intverval (ft) from TOC: 19.73 - 29.73	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 24.73	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/14/16	1000	18.99	100	17.92	6.21	10.4	1.46	13.1	61	
	1005	19.05	100	18.15	6.31	10.8	0.83	6.5	91	
	1010	19.10	100	18.15	6.26	10.9	0.49	1.3	125	
	1015	19.13	100	18.27	6.17	10.9	0.48	0.9	126	
	1020	19.15	100	18.29	6.16	10.9	0.47	0.0	127	
	1025	19.17	100	18.31	6.15	11.0	0.47	0.0	129	
	1030	19.18	100	18.33	6.15	11.0	0.47	0.0	130	

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: LHSMW07-04/14/16 TIME: 1030

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: 35AWW01	Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 4"		Static Water Level Reading (ft) from TOC: 39.01	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 72.46		Screen Interval (ft) from TOC: 62.50-72.50	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: 67.50		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	0730	39.02	100	20.75	6.31	0.804	3.33	32.4	119	
	0735	39.06	100	20.41	5.79	0.788	2.79	29.3	107	
	0740	39.10	100	20.30	5.62	0.784	2.27	31.6	119	
	0745	39.14	100	20.24	5.47	0.785	2.01	36.4	125	
	0750	39.16	100	20.21	5.40	0.785	1.67	37.7	135	
	0755	39.18	100	20.23	5.42	0.783	1.65	37.8	133	
	0800	39.19	100	20.23	5.40	0.782	1.63	37.3	135	
	0805	39.19	100	20.25	5.41	0.782	1.65	37.0	134	

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: 35AWW01-100516 TIME: 0805

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO Yes

MATRIX DUPLICATE (MD): YES/NO Yes

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
9 - 40 ml glass	HCl	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW02		Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 42.70		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 139.69	Screen Interval (ft) from TOC: 129.67 - 139.67		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER Level Only

No Samples Required

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO						
MATRIX SPIKE (MS): YES/NO						
MATRIX DUPLICATE (MD): YES/NO						
CO= LEL= OXY= H2S=						

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35A WW03		Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 4 4	Static Water Level Reading (ft) from TOC: DRY		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 21.75	Screen Interval (ft) from TOC: 11.75 - 21.75		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

DRY WELL

WATER Level only

NO SAMPLES REQUIRED

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO						
MATRIX SPIKE (MS): YES/NO						
MATRIX DUPLICATE (MD): YES/NO						
CO= LEL= OXY= H2S=						

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: 35AWW04		Date: 10/4/16
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA		Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101		Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 4"		Static Water Level Reading (ft) from TOC: DRY		Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 25.50		Screen Intverval (ft) from TOC: 15.50 - 25.50		Condition of Well/Remarks: Weeds paint
			Pump Placement (ft) from TOC:		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

DRY Well

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: 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)

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW05	Date: 10/5/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21168	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 42.43	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 72.12	Screen Interval (ft) from TOC: 62.15 - 72.15	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 67.15	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	0925	42.45	100	23.38	6.60	2.90	2.41	134	39	
	0930	42.50	100	23.04	5.96	2.83	1.49	85.3	76	
	0935	42.55	100	23.07	5.78	2.81	1.35	77.4	94	
	0940	42.58	100	23.07	5.72	2.80	1.30	77.0	102	
	0945	42.60	100	23.10	5.60	2.80	1.27	78.1	115	
	0950	42.61	100	23.00	5.57	2.81	1.27	78.9	115	
	0955	42.61	100	22.95	5.57	2.81	1.28	78.0	115	
	1000	42.61	100	22.93	5.56	2.80	1.30	77.6	116	

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: 35AWW05-100516 TIME: 1000

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO YES

MATRIX DUPLICATE (MD): YES/NO YES

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
9 - 40 ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW06		Date: 10/3/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 19.53		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 30.32	Screen Intverval (ft) from TOC: 20.50 - 30.50		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 25.50			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	1300	19.55	100	25.23	6.65	5.81	2.93	0.0	181	
	1305	19.62	100	23.92	6.56	5.79	2.21	0.0	182	
	1310	19.67	100	23.47	6.20	6.00	2.05	0.0	183	
	1315	19.71	100	22.55	5.95	6.00	1.95	0.0	183	
	1320	19.73	100	22.58	5.95	5.99	1.93	0.0	180	
	1325	19.75	100	22.50	5.94	6.00	1.90	0.0	178	
	1330	19.77	100	22.43	5.92	6.01	1.88	0.0	177	

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: 35AWW06-100316 TIME: 1330

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCl	N	PUMP	VOC
3-20 ml glass	NA	N		Gases / CO2
1-250 ml Amber	NA	N		Ferrous Iron
1-500 ml plastic	ZnAcNaOH	N		Sulfide
1-500 ml plastic	HNO3	Y		Dissolved metals
1-500 ml plastic	HNO3	N		TOTAL metals
1-250 ml plastic	H2SO4	N		TOC / TOTAL phosphorous
1-250 ml plastic	NA	N		Anions
1-250 ml plastic	NA	N		ALKALINITY

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW07R		Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 24.82		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 32.48	Screen Intverval (ft) from TOC: 22.78 - 32.48		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC:			

CASING INFO												
Casing I.D. (in):	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):	**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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER LEVEL ONLY

NO SAMPLES REQUIRED

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO						
MATRIX SPIKE (MS): YES/NO						
MATRIX DUPLICATE (MD): YES/NO						
CO= LEL= OXY= H2S=						

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW08		Date: 10/3/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: ~~Bladder Pump~~ Bailer	ID#:		
WELL INFO	Casing I.D. (in): 2 11	Static Water Level Reading (ft) from TOC: 29.00		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 33.35	Screen Interval (ft) from TOC: 23.35 - 33.35		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	1225	29.00	NA							Bailing well
10/3/16	1230	33.25	NA							Bailed 1 gallon RAN DRY
10/4/16	0740	29.00	NA	19.46	6.92	11.8	NA	50.4	NA	

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: 35AWW08-1004/16 TIME: 0740

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	BAILER	VOC
3-20 ml glass	NA	N		GASES / CO2
2-1 Liter plastic	NA	N		DHC / Dehalabacter
2-250 ml Amber	NA / H3PO4	N		Ferrous / VFA
1-500 ml plastic	HNO3	Y		Dissolved metals
1-500 ml plastic	HNO3			TOTAL metals
1-500 ml plastic	ZnAcenAOH	N		Sulfide
1-250 ml plastic	H2SO4	N		TOC / TOTAL Phosphorocs
1-250 ml plastic	NA	N		ANIONS
1-250 ml plastic	NA	N		ALK

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW09	Date: 10/3/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 31.00	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 42.18	Screen Intverval (ft) from TOC: 27.58 - 42.18	Condition of Well/Remarks: Good	
		Pump Placement (ft) from TOC: 34.88		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	0755	30.97	100	18.67	5.69	5.53	3.05	37.3	255	
	0800	31.04	100	18.70	5.71	5.84	2.62	201	259	
	0805	31.10	100	18.70	5.53	6.17	2.31	[redacted]	265	
	0810	31.14	100	18.72	5.50	6.28	2.25	[redacted]	274	
	0815	31.17	100	18.68	5.48	6.30	2.23	69.3	278	
	0820	31.20	100	18.64	5.47	6.31	2.20	68.2	279	
	0825	31.22	100	18.64	5.47	6.31	2.18	67.8		

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: 35AWW09-$00316 TIME: 0825

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40ml glass	NA	N	Pump	Gases/CO2
3-40 ml glass	HCL	N		NOC
2-1 Liter Plastic	NA	N		DHC/Dehalabacter
2-250 ml Amber	NA/H3PO4	N		Ferrous/VFA
1-500 ml plastic	ZnAc+NaOH	N		Sulfide
1-500 ml plastic	HNO3	[redacted] Y		Dissolved metals
1-500 ml plastic	HNO3	Y		Total metals
1-250 ml plastic	H2SO4	N		TOC, Total phosphorous
1-250 ml plastic	NA	N		Anions
1-250 ml plastic	NA	N		Alkalinity

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW10	Date: 10/3/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21168	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 18.98	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 33.70	Screen Interval (ft) from TOC: 19.73 - 33.73	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 26.43	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	0910	18.95	100	20.72	5.45	0.419	3.03	74.4	243	
	0915	19.02	100	22.08	5.17	0.273	2.90	78.2	260	
	0920	19.08	100	22.65	5.03	0.257	1.93	56.3	274	
	0925	19.14	100	23.00	4.90	0.246	1.72	24.0	275	
	0930	19.17	100	23.20	4.89	0.245	1.70	23.4	276	
	0935	19.19	100	23.22	4.88	0.244	1.68	23.0	277	
	0940	19.20	100	23.25	4.88	0.244	1.66	22.5	279	

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: 35AWW10-100316 TIME: 0940

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40ml glass	HCl	N	Pump	VOC
3-20ml glass	NA	N		Gases/CO2
2-1 Liter Plastic	NA	N		DHC/Dehalabacter
2-250 ml Amber	NA/NP304	N		Ferrous/UREA
1-500 ml plastic	ZnAcNaOH	N		Sulfide
1-500 ml plastic	HNO3	Y		Dissolved metals
1-500 ml plastic	HNO3	Y		Total metals
1-250 ml plastic	H2SO4	N		TOC/Total Phosphorous
1-250 ml plastic	NA	N		Anions
1-250ml plastic	NA	N		Alkalinity

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: 35AWW11	Date: 10/3/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 2"		Static Water Level Reading (ft) from TOC: 30.48	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 38.10		Screen Interval (ft) from TOC: 23.50 - 38.10	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: 33.00		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	1020	30.45	100	22.80	5.75	8.76	3.00	132	257	
	1025	30.52	100	22.02	5.48	8.78	1.98	126	258	
	1030	30.59	100	21.75	5.45	8.78	1.69	[redacted]	258	
	1035	30.63	100	21.20	5.46	8.79	1.62	107	258	
	1040	30.65	100	21.15	5.47	8.80	1.60	108	256	
	1045	30.67	100	21.12	5.48	8.81	1.59	108	255	
	1050	30.69	100	21.10	5.48	8.81	1.60	107	255	

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: 35AWW11-100316 TIME: 1050

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC
3-20 ml glass	NA	N		GASES / CO2
1-250 ml Amber	NA	N		Ferrous IRON
1-500 ml plastic	ZnAcNaOH	N		Sulfide
1-500 ml plastic	HNO3	Y		Dissolved metals
1-500 ml plastic	HNO3	Y		TOTAL metals
1-250 ml plastic	H2SO4	N		TOC / TOTAL phosphorous
1-250 ml plastic	NA	N		ANIONS
1-250 ml plastic	NA	N		ALKALINITY

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35A WW 12		Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 28.87		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: ~~37.85~~ 37.61	Screen Interval (ft) from TOC: 25.08 - ~~37.85~~ 37.61		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 30.31			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	1255	28.84	100	23.95	6.02	2.87	2.49	9.5	165	
	1300	28.90	100	23.06	5.59	2.79	2.27	0.0	178	
	1305	28.97	100	22.19	5.38	2.78	1.88	0.0	200	
	1310	29.02	100	22.20	5.35	2.78	1.55	0.0	213	
	1315	29.05	100	22.22	5.34	2.78	1.45	0.0	219	
	1320	29.07	100	22.12	5.34	2.78	1.43	0.0	221	
	1325	29.09	100	22.09	5.34	2.78	1.41	0.0	222	
	1330	29.11	100	22.07	5.33	2.77	1.43	0.0	224	

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: 35AWW12-100516 TIME: 1330

DUPLICATE (D): YES/NO Yes

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
6- 40ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW13		Date: 10/6/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst · ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 24.41		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 40.32	Screen Intverval (ft) from TOC: 25.68 - 40.28		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 32.98			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/6/16	0755	24.38	100	23.44	6.01	1.39	2.91	148	208	
	0800	24.46	100	23.41	5.79	1.41	2.42	136	190	
	0805	24.52	100	23.33	5.72	1.53	1.88	114	176	
	0810	24.57	100	23.25	5.68	1.64	1.67	106	156	
	0815	24.60	100	23.24	5.69	1.87	1.62	93.5	140	
	0820	24.62	100	23.28	5.68	1.88	1.60	93.0	139	
	0825	24.64	100	23.31	5.67	1.89	1.59	92.5	138	
	0830	24.65	100	23.35	5.66	1.89	1.58	92.1	137	

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: 35AWW13-100616 TIME: 0830

DUPLICATE (D): YES/NO ~~NO~~ yes metals only

MATRIX SPIKE (MS): YES/NO ~~NO~~ yes metals only

MATRIX DUPLICATE (MD): YES/NO yes metals only

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCL	N	Pump	VOC
4 - 500 ml plastic	HNO3	Y	Pump	TOTAL metals

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35A WW14		Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: ~~Bladder Pump~~ Bailer	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 29.31		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 32.46	Screen Interval (ft) from TOC: 17.46-32.46		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	1400	29.31	NA							Bailing well
10/5/16	1406	32.35	NA							Bailed 1 gallon RAN DRY
10/6/16	0915	29.35	NA	21.24	6.65	7.16	NA	0.0	NA	

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: 35AWW14-100616 TIME: 0915

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Bailer	VOC

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW15	Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 19.34	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 41.48	Screen Interval (ft) from TOC: 26.78 - 41.48	Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 34.10		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	0830	19.31	100	22.74	5.76	12.2	2.67	880	60	
	0835	19.38	100	23.09	5.69	12.5	1.70	855	58	
	0840	19.45	100	23.12	5.65	12.1	1.25	850	58	
	0845	19.50	100	23.13	5.64	11.8	1.10	846	61	
	0850	19.53	100	23.26	5.64	11.8	1.08	844	62	
	0855	19.55	100	23.31	5.63	11.9	1.06	843	65	
	0900	19.56	100	23.32	5.62	11.9	1.07	842	66	

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: 35AWW15-100516 TIME: 0900

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCL	N	Pump	VOC

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW16		Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst · ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 17.90		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 37.50	Screen Interval (ft) from TOC: 22.81 - 37.51		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 30.16			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/4/16	1240	17.87	100	26.40	6.39	10.2	2.68	45.0	140	
	1245	17.95	100	24.69	5.91	10.5	2.03	110	121	
	1250	18.01	100	23.37	5.89	10.5	1.65	144	118	
	1255	18.05	100	23.40	5.88	10.5	1.39	88.3	114	
	1300	18.08	100	23.20	5.87	10.5	1.36	59.2	112	
	1305	18.10	100	23.15	5.89	10.5	1.35	58.5	111	
	1310	18.12	100	23.10	5.91	10.5	1.35	58.0	110	
	1315	18.12	100	23.07	5.91	10.5	1.37	57.6	111	

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: 35AWW16-100416 TIME: 1315

DUPLICATE (D): YES/NO Yes

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
6 - 40ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW17	Date: 10/3/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst · ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 25.30	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 42.48	Screen Intverval (ft) from TOC: 22.78 - 42.48	Condition of Well/Remarks: Good	
		Pump Placement (ft) from TOC: 32.63		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	1405	25.27	100	23.68	6.26	10.6	2.38	6.7	150	
	1410	25.35	100	23.64	5.97	10.6	1.77	5.9	150	
	1415	25.41	100	23.85	5.90	10.3	1.39	7.0	149	
	1420	25.45	100	23.75	5.90	10.3	1.20	5.8	148	
	1425	25.47	100	23.72	5.90	10.4	1.19	6.7	147	
	1430	25.49	100	23.70	5.89	10.5	1.18	6.5	146	
↓	1435	25.51	100	23.69	5.89	10.5	1.17	6.1	145	

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: 35AWW17-100316 TIME: 1435

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW18		Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 25.93		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 42.18	Screen Interval (ft) from TOC: 27.48 - 42.18		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 34.83			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	1025	34.80	100	23.88	6.27	10.6	2.57	45.1	111	
	1030	34.87	100	22.33	6.11	10.7	1.81	43.8	103	
	1035	34.93	100	21.95	5.95	10.8	1.57	32.2	95	
	1040	34.98	100	21.82	5.90	10.7	1.45	25.3	103	
	1045	35.01	100	21.90	5.85	10.8	1.30	26.4	110	
	1050	35.03	100	21.93	5.85	10.8	1.30	26.9	110	
	1055	35.05	100	21.81	5.85	10.8	1.32	27.3	111	
	1100	35.06	100	21.83	5.85	10.7	1.33	27.5	112	

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: 35AWW18-100516 TIME: 1100

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Pump	VOC

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AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: 35ANWW19	Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 2"		Static Water Level Reading (ft) from TOC: 28.13	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 32.46		Screen Interval (ft) from TOC: 17.96 - 32.46	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	1425	28.13	NA							Bailing well
10/5/16	1435	32.33	NA							Baled 2 gallons RAN DRY
10/6/16	0935	28.13	NA	21.66	6.60	6.27	NA	9.0	NA	

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: 35ANWW19-100616 TIME: 0935

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40ml glass	HCL	N	BAILER	VOC

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MONITORING WELL SAMPLE COLLECTION FORM

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LOCATION	Site: 58		LocID: 35AWW20		Date: 10/4/16
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA		Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101		Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 2"		Static Water Level Reading (ft) from TOC: 19.38		Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 36.11		Screen Intverval (ft) from TOC: 21.42 - 36.12		Condition of Well/Remarks: GOOD
			Pump Placement (ft) from TOC: 28.77		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/4/12	0905	19.35	100	21.17	6.60	8.13	2.96	20.0	48	
	0910	19.42	100	21.67	6.28	8.02	2.01	17.8	67	
	0915	19.48	100	21.95	6.15	7.82	1.75	6.3	83	
	0920	19.54	100	22.11	6.11	7.75	1.38	1.7	89	
	0925	19.57	100	22.18	6.08	7.76	1.35	0.0	91	
	0930	19.59	100	22.20	6.09	7.77	1.33	0.0	91	
	0935	19.60	100	22.22	6.09	7.77	1.35	0.0	91	

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: 35AWW20-100416 TIME: 0935

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3 - 40 ml glass	HCL	N	Pump	VOC
3 - 20 ml glass	NA	N		GASES / CO2
1 - 250 ml Amber	NA	N		Ferrous IRON
1 - 500 ml plastic	2 mL NaOH	N		Sulfide
1 - 500 ml plastic	HNO3	Y		Dissolved metals
1 - 500 ml plastic	HNO3	N		TOTAL metals
1 - 250 ml plastic	H2SO4	N		TOC / TOTAL phosphorous
1 - 250 ml plastic	NA	N		Anions,
1 - 250 ml plastic	NA	N		ALKALINITY

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35A WW21		Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 32.10		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 42.84	Screen Interval (ft) from TOC: 21.8 - 42.84		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 35.49			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/4/16	1340	32.07	100	23.96	5.73	2.31	2.51	82.9	169	
	1345	32.15	100	22.89	5.17	2.09	1.87	82.5	212	
	1350	32.21	100	22.49	4.90	2.02	1.65	47.4	243	
	1355	32.25	100	22.20	4.83	2.00	1.64	24.3	285	
	1400	32.28	100	22.22	4.82	2.00	1.63	23.9	286	
	1405	32.30	100	22.17	4.83	2.00	1.62	23.1	288	
	1410	32.32	100	22.10	4.84	2.00	1.61	22.7	289	

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: 35AWW21-100416 TIME: 1410

DUPLICATE (D): YES/NO Yes

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
6 - 40 ml glass	HCL	N	Pump	VOC

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 35AWW22		Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: ~~Bladder Pump~~ Bailer	ID#:		
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 31.91		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 37.78	Screen Interval (ft) from TOC: 23.28 - 37.78		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: NA			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	1342	31.91	NA							BAILING well
10/5/16	1355	37.60	NA							Bailed 2.5 gallons RAN DRY
10/6/16	0855	31.91	NA	21.42	6.06	9.23	NA	16.9	NA	

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: 35AWW22-100616 TIME: 0855

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Bailer	VOC

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: 03WW01	Date: 10/3/16
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21168	Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 29.09	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 33.43	Screen Intverval (ft) from TOC: 23.43 - 33.43	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: NA	

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/3/16	1236	29.09	NA							Bailing well
10/3/16	1241	33.35	NA							Bailed 1 gallon RANDM
10/4/16	0820	29.33	NA	18.64	6.81	6.38	NA	70.0	NA	

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: 03WW01-100416 TIME: 0820

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Bailer	VOC
3-20 ml glass	NA	N		GASES / CO2
2-1 Liter Plastic	NA	N		PHC / Dehalabacter
2-250 ml Amber	NA/H3PO4	N		Ferrous / VFA
1-500 ml plastic	HNO3	Y		Dissolved metals
1-500 ml plastic	HNO3			TOTAL metals
1-500 ml plastic	ZnAce NaOH	N		Sulfide
1-250 ml plastic	H2SO4	N		TOC / TOTAL phosphorous
1-250 ml plastic	NA	N		Anions
1-250 ml plastic	NA	N		Alkalinity

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: ~~[redacted]~~ T1004TW001	Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 1"		Static Water Level Reading (ft) from TOC: 17.46	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 24.96		Screen Interval (ft) from TOC: 14.95 - 24.95	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER Level only

NO SAMPLE REQUIRED

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO						
MATRIX SPIKE (MS): YES/NO						
MATRIX DUPLICATE (MD): YES/NO						
CO= LEL= OXY= H2S=						

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: LHSmw03	Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 4"		Static Water Level Reading (ft) from TOC: 29.51	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 35.56		Screen Intverval (ft) from TOC: 25.54-35.54	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

WATER LEVEL ONLY

NO SAMPLES REQUIRED

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: TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO					
MATRIX SPIKE (MS): YES/NO					
MATRIX DUPLICATE (MD): YES/NO					
CO= LEL= OXY= H2S=					

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: LHSMW04	Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 4"		Static Water Level Reading (ft) from TOC: DRY	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 31.12		Screen Intverval (ft) from TOC: 21.14-31.14	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC:		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

DRY WELL

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: 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)

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: LHSMW05	Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: Bladder Pump ID#:		
WELL INFO	Casing I.D. (in): 4 11		Static Water Level Reading (ft) from TOC: DRY	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 24.39		Screen Interval (ft) from TOC: 14.39 - 24.39	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)

DRY WELL

WATER LEVEL ONLY

NO SAMPLES REQUIRED

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:	TIME:	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
DUPLICATE (D): YES/NO						
MATRIX SPIKE (MS): YES/NO						
MATRIX DUPLICATE (MD): YES/NO						
CO= LEL= OXY= H2S=						

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58		LocID: LHSmw06	Date: 10/5/16	
	Project: Longhorn Army Ammunition Plant		Project No. 60256135.0002HA	Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52		Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168		Sampling Equipment: ~~Bladder Pump~~ Bailer ID#:		
WELL INFO	Casing I.D. (in): 4		Static Water Level Reading (ft) from TOC: 18.91	Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 23.43		Screen Interval (ft) from TOC: 13.53 - 23.53	Condition of Well/Remarks: GOOD	
			Pump Placement (ft) from TOC: NA		

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/5/16	1411	18.91	NA							Bailing well
10/5/16	1420	23.32	NA							Bail well 2.5 gallon RANDOM
10/6/16	0925	18.91	NA	22.07	7.03	3.33	NA	0.0	NA	

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: LHSmw06-100616 TIME: 0925

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40 ml glass	HCL	N	Bailer	VOC

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MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 58	LocID: LHSmw07		Date: 10/4/16	
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA		Recorded By: Scott Beesinger	Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe:	Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD	
	Unit # 21168	Sampling Equipment: Bladder Pump	ID#:		
WELL INFO	Casing I.D. (in): 4"	Static Water Level Reading (ft) from TOC: 18.58		Weather Conditions: CLEAR	
	Total Well Depth (ft) from TOC: 30.49	Screen Intverval (ft) from TOC: 19.73-29.73		Condition of Well/Remarks: GOOD	
		Pump Placement (ft) from TOC: 24.73			

CASING INFO												
Casing I.D. (in):	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):	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)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/4/16	1010	18.60	100	21.07	6.39	10.5	2.72	5.6	104	
	1015	18.65	100	20.90	6.19	10.6	1.92	0.0	92	
	1020	18.70	100	20.84	6.09	10.6	1.63	0.0	99	
	1025	18.73	100	20.79	6.01	10.6	1.29	0.0	110	
	1030	18.75	100	20.85	6.00	10.6	1.33	0.0	110	
	1035	18.77	100	20.86	5.99	10.6	1.32	0.0	112	
	1040	18.78	100	20.89	5.99	10.6	1.34	0.0	113	

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: LHSmw07-100416 TIME: 1040

DUPLICATE (D): YES/NO NO

MATRIX SPIKE (MS): YES/NO NO

MATRIX DUPLICATE (MD): YES/NO NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
3-40ml glass	HCL	N	Pump	VOC
3-20ml glass	NA	N		Gases/CO2
1-250 ml Amber	NA	N		Ferrous IRON
1-500 ml plastic	HNO3	Y		Dissolved metals
1-500 ml plastic	HNO3	N		TOTAL metals
1-500 ml plastic	2ml NaOH	N		Sulfide
1-250 ml plastic	H2SO4	N		TOC/TOTAL phosphorous
1-250 ml plastic	NA	N		ANions,
1-250 ml plastic	NA	N		ALKalinity

APPENDIX D
LABORATORY ANALYTICAL RESULTS
(PROVIDED ON CD)

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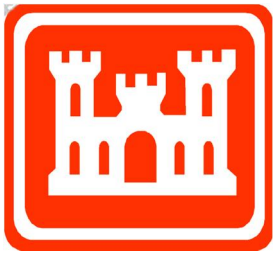
QUALITY CONTROL SUMMARY REPORT
LHAAP-58
FOR
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:





U.S. Army Corps of Engineers

Prepared By:

AECOM

AECOM Technical Services

September 2017

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1 INTRODUCTION

AECOM reviewed five data packages from Microbac Laboratory Services (Microbac), Marietta, OH. Groundwater samples were collected March 29 - April 14, 2016 and October 18-21, 2016 at the LHAAP-58 site at the 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, January 2017), and EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, (EPA, January 2017).

1.1 Intended Use of Data

The objective of this sampling event was to collect data for the Remedial Action Completion Report.

Analyses requested included:

- SW8260B – Volatiles
- SW6010C – Fe (total and dissolved)
- SW6020A –Mn (dissolved)
- SW9056 – Common Anions (chloride, sulfate, nitrate, nitrite)
- RSK 175 – Dissolved gases (methane, ethane, ethene)
- E310.2 - Alkalinity
- E365.4 – Total Phosphorus
- E415.1 – Total Organic Carbon
- SM4500-S – Sulfide
- 830-MBA – Metabolic acids
- SM3500FE-B – Ferrous Iron

Table 1 lists the sample identifications and their associated laboratory identifications. **Table 2** 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 excepted as noted below.

1.3 Calibrations

Initial calibration acceptance criteria are a relative standard deviation (RSD) less than or equal to 15 percent (%) or a correlation coefficient (r^2) $\geq$ 0.99. All calibration curves met criteria.

1.3.1 Continuing Calibration Verifications (CCV)

1.3.1.1 SW8260B

If the continuing calibration verification (CCV) compound exceeds 20% difference, 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 (80% to 120%) and is less than ± 20% difference, then the compound is qualified J or UJ.

CCV WG563534-02 - chloromethane is recovered at 121.4%, above the upper control limit of 120%. This compound is not detected in the associated sample so no qualification is necessary.

CCV WG565327-02 - 1,2-dibromo-3-chloropropane is recovered at 77.4%, below the lower control limit of 80%. This compound is not detected in the associated sample s and is qualified UJ.

CCV WG565516-02 - bromomethane is recovered at 125.4%, above the upper control limit of 120%. This compound is dot detected in the associated samples so no qualification is necessary.

CCV WG565879-02 - bromomethane (138.5%), carbon tetrachloride (133.8%), 1,2-dichloroethane (125.2%), 2,2-dichloropropane (125.2%), hexachlorobutadiene (128.7%), 1,1,1-trichloroethane (126.2%), trichlorofluoromethane (127.6%) were recovered above the upper control limit of 120% . These compounds are not detected in the associated sample s so no qualification is necessary. In addition, chloromethane is recovered at 70.3%, below the lower control limit of 80%. Chloromethane is not detected in the associated sample s and is qualified UJ.

CCV WG587314-02 - trichlorofluoromethane is recovered at 120.8%, above the upper control limit of 120%. This compound is dot detected in the associated samples so no qualification is necessary. In addition, bromomethane is recovered at 78.6%, below the lower control limit of 80%. Bromomethane is not detected in the associated sample s and are qualified UJ..

CCV WG587866-02 - acetone (69%), 2-butanone (77.6%), and 2-hexanone (77%) are recovered below the lower control limit of 80%. Detected results for these compounds in associated samples are qualified J qualified and non-detects are qualified UJ.

CCV WG587981-02 - chloromethane is recovered at 70.2%. Chloromethane is not detected in the associated sample s and is qualified UJ.

Table 2 shows qualified analytical data.

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

1.4.1 SW8260B

The following analytes were detected in blanks associated with the project samples:

Blank	Analyte	Result	Units
Method Blank - WG565386-01 (4/18/16)	Chloroform	0.0.189	µg/L
Method Blank - WG587598-01 (10/13/16)	Bromobenzene	0.144	µg/L
	n-Butylbezene	0.489	µg/L
	sec-Butylbenzene	0.259	mg/L
	Carbon disulfide	0.632	µg/L
	2-Chlorotoluene	0.214	mg/L
	4-Chlorotoluene	0.297	µg/L
	1,2-Dichlorobenzene	0.210	µg/L
	1,3-Dichlorobenzene	0.250	µg/L
	1,4-Dichlorobenzene	0.387	µg/L
	Hexachlorobutadiene	0.604	µg/L
	p-Isopropyltoluene	0.325	µg/L
	Naphthalene	0.214	µg/L
	n-Propylbenzene	0.280	µg/L
	Styrene	0.143	µg/L
	Tetrachloroethene	0.342	µg/L
	1,2,3-Trichlorobenzene	0.416	µg/L
	1,2,4-Trichlorobenzene	0.636	µg/L
Method Blank - WG587867-01 (10/17/16)	1,4-Dichlorobenzene	0..137	µg/L
	1,2,3-Trichlorobenzene	0.165	µg/L
	1,2,4-Trichlorobenzene	0.251	µg/L
Trip Blank (11/4/16)	Acetone	9.24	µg/L

Table 2 shows qualified analytical data.

1.5 Surrogates

Surrogates were evaluated using limits defined by method in project-specific QAPP in Worksheet 28. All surrogates are within criteria.

1.6 Laboratory Control Sample (LCS)

LCS/LCSD recoveries were evaluated using limits defined by method in project-specific QAPP in Worksheet 15.

1.6.1 SW8260B

LCS WG563535-02 recoveries for chloromethane (128%) and 1,2-dichloropropane (127%) are above the control limits of 125%. These compounds are not detected in the associated sample, so is no qualification is necessary.

LCS WG563757-02 recovery for dichlorodifluoromethane is 25%, below the control limits of 30-155%. The associated sample, LHSMW04-032916 is reported as a dilution for tetrachloroethene. No qualification is necessary for dichlorodifluoromethane.

LCS/LCSD WG55328-02/-03 recovery for chloromethane (127%) is above the upper control limit of 125%. This compound is not detected in the associated samples, so no qualification is necessary

Table 2 shows qualified analytical data.

1.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD recoveries were evaluated using limits defined by method in project-specific QAPP in Worksheet 15.

1.8 All MS/MSD results are within criteria. Field Duplicate Precision

Precision is the measure of variability of individual sample measurements. Evaluation of field duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. Field duplicate RPD limits were set at ±25% for groundwater matrices.

Table 2 shows qualified analytical data.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project (see Table 3). The data quality objectives have been met for the project.

Table 1: Field Sample Identification and Laboratory Identification

Client Sample ID	Laboratory Sample ID	SW8260B	SW6010C	SW6020A	RSK 175	SW9056	E310.2	E365.4	SM4500-S	E415.1	830-MBA	SM3500 Fe-B
March/ April 2016												
LHSMW04-032916	L16031613-01	X										
Trip Blank	L16031613-02	X										
35AWW17-041116	L16040858-01	X										
35AWW18-041116	L16040858-02	X										
35AWW18FD-041116	L16040858-03	X										
35AWW06-041116	L16040858-04	X										
35AWW12-041216	L16040858-05	X										
35AWW09-041216	L16040858-06	X										
35AWW01-041216	L16040858-07	X										
35AWW01FD-041216	L16040858-08	X										
35AWW11-041216	L16040858-09	X										
35AWW16-041216	L16040858-10	X										
35AWW19-041216	L16040858-13	X										
LHSMW06-041316	L16040858-14	X										
35AWW14-041316	L16040858-15	X										
35AWW08-041316	L16040858-16	X										
03WW01-041316	L16040858-17	X										
LHSMW04-041316	L16040858-18	X										
35AWW22-041316	L16040858-19	X										
35AWW21-041316	L16040858-20	X										
35AWW21FD-041316	L16040858-21	X										
35AWW13-041316	L16040858-22	X										
35ASW03-041316	L16040858-23	X										
35AWW10-041316	L16040858-24	X										
35AWW20-041316	L16040858-27	X										
35AWW15-041416	L16040858-28	X										
35AWW05-041416	L16040858-29	X										
LHSMW07-041416	L16040858-30	X										
Trip Blank	L16040858-31	X										
October 2016												
35AWW09-100316	L16100123-01	X			X	X	X	X	X	X		X
35AWW09F-100316	L16100123-02		X	X								
35AWW10-100316	L16100123-03	X			X	X	X	X	X	X		X
35AWW10F-100316	L16100123-04		X	X								
35AWW11-100316	L16100123-05	X			X	X	X	X	X	X		X
35AWW11F-100316	L16100123-06		X	X								
35AWW06-100316	L16100123-07	X	X		X	X	X	X	X	X		X
35AWW17-100316	L16100123-08	X										
Trip Blank	L16100123-09	X										

Client Sample ID	Laboratory Sample ID	SW8260B	SW6010C	SW6020A	RSK 175	SW9056	E310.2	E365.4	SM4500-S	E415.1	830-MBA	SM3500 Fe-B
35AWW09FF-100316	L16100123-10			X								
35AWW09-100316	L16100123-11										X	
35AWW10-100316	L16100123-12			X								
35AWW10FF-100316	L16100123-13										X	
35AWW11FF-100316	L16100123-14			X								
35AWW06FF-100316	L16100123-15			X								
35AWW08-100416	L16100194-01	X			X	X	X	X	X	X		X
35AWW08F-100416	L16100194-02		X	X								
03WW01-100416	L16100194-03	X			X	X	X	X	X	X		X
03WW01F-100416	L16100194-04		X	X								
35AWW20-100416	L16100194-05	X	X	X	X	X	X	X	X	X		X
LHSMW07-100416	L16100194-06	X	X	X	X	X	X	X	X	X		X
35AWW16-100416	L16100194-07	X										
35AWW16FD-100416	L16100194-08	X										
35AWW21-100416	L16100194-09	X										
35AWW21FD-100416	L16100194-10	X										
Trip Blank	L16100194-11	X										
35AWW08-100416	L16100194-12										X	
35AWW08FF-100416	L16100194-13			X								
03WW01-100416	L16100194-14										X	
03WW01FF-100416	L16100194-15			X								
35AWW20FF-100416	L16100194-16			X								
LHSMW07FF-100416	L16100194-17			X								
35AWW01-100516	L16100409-01	X										
35AWW15-100516	L16100409-04	X										
35AWW05-100516	L16100409-05	X										
35AWW18-100516	L16100409-08	X										
35AWW12-100516	L16100409-09	X										
35AWW12FD-100516	L16100409-10	X										
35AWW13-100616	L16100409-11	X										
35AWW22-100616	L16100409-12	X										
35AWW14-100616	L16100409-13	X										
LHSMW06-100616	L16100409-14	X										
35AWW19-100616	L16100409-15	X										
Trip Blank	L16100409-16	X										

E – U.S. Environmental Protection Agency method.
Laboratory – Micorbac Laboratories in Marietta, Ohio (groundwater).
SM – Standard Methods for the Examination of Water and Wastewater.
SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
X – Sample analyzed for indicated parameter.

Table 2: Qualified Analytical Data

Client Sample ID	Lab Sample ID	Analyte Name	Result	Units	DV Qualifier	Reason
35AWW17-041116	L16040858-01	1,2-Dibromo-3-chloropropane	<2.00	µg/L	UJ	CCV below control limits
35AWW18-041116	L16040858-02	1,2-Dibromo-3-chloropropane	<2.00	µg/L	UJ	CCV below control limits
35AWW18FD-041116	L16040858-03	1,2-Dibromo-3-chloropropane	<2.00	µg/L	UJ	CCV below control limits
35AWW06-041116	L16040858-04	1,2-Dibromo-3-chloropropane	<2.00	µg/L	UJ	CCV below control limits
35AWW12-041216	L16040858-05	1,2-Dibromo-3-chloropropane	<2.00	µg/L	UJ	CCV below control limits
35AWW20-041316	L16040858-27	Chloromethane	<20.0	µg/L	UJ	CCV below control limits
LHSMW07-041416	L16040858-30	Chloromethane	<100.0	µg/L	UJ	CCV below control limits
35AWW09-100316	L16100123-01	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW10-100316	L16100123-03	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW11-100316	L16100123-05	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW06-100316	L16100123-07	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW17-100316	L16100123-08	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW08-100416	L16100194-01	Acetone	95.5	µg/L	J	CCV below control limits
		2-Butanone	40.7	µg/L	J	CCV below control limits
		2-Hexanone	<50.0	µg/L	UJ	CCV below control limits
03WW01-100416	L16100194-03	1,4-Dichlorobenzene	1.52	µg/L	J	Method blank contamination
		Acetone	73.4	µg/L	U	Trip blank contamination
35AWW20-100416	L16100194-05	Bromomethane	<20.0	µg/L	UJ	CCV below control limits
LHSMW07-10416	L16100194-06	Chlorobenzene	0.729	µg/L	J	Method blank contamination
		1,4-Dichlorobenzene	0.657	µg/L	J	Method blank contamination
35AWW16-100416	L16100194-07	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW16FD-100416	L16100194-08	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
		Acetone	2.82	µg/L	U	Trip blank contamination
35AWW21-100416	L16100194-09	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW21FD-100416	L16100494-10	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
35AWW01-100516	L16100409-01	Acetone	<5.00	µg/L	UJ	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		1,4-Dichlorobenzene	0.142	µg/L	U	Method blank contamination
35AWW01-100516	L16100409-01	2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
		1,2,4-Trichlorobenzene	0.233	µg/L	U	Method blank contamination

Client Sample ID	Lab Sample ID	Analyte Name	Result	Units	DV Qualifier	Reason
35AWW15-100516	L16100409-04	Acetone	4.49	µg/L	J	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW05-100516	L16100409-05	Acetone	<5.00	µg/L	UJ	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW18-100516	L16100409-08	Acetone	3.72	µg/L	J	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW12-100516	L16100409-09	Acetone	3.59	µg/L	J	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW12FD-100516	L16100409-10	Acetone	<5.00	µg/L	UJ	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW13-100616	L16100409-11	Acetone	4.45	µg/L	J	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW22-100616	L16100409-12	Acetone	<5.00	µg/L	UJ	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
35AWW14-100616	L16100409-13	Acetone	4.01	µg/L	J	CCV below control limits
		2-Butanone	<5.00	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
LHSMW06-100616	L16100409-14	Chloromethane	<1.00	µg/L	UJ	CCV below control limits
35AWW19-100616	L16100409-15	Chloromethane	<1.00	µg/L	UJ	CCV below control limits

Table 3: Completeness by Method

Method	No. of Rejected Results	% Completeness
SW8260B	0	100
SW6010C	0	100
SW6020A	0	100
RSK 175	0	100
SW9056	0	100
E310.2	0	100
E365.4	0	100
SM4500-S	0	100
E415.1	0	100
830-MBA	0	100
SM3500Fe-B	0	100

E – U.S. Environmental Protection Agency method.
SM – Standard Methods for the Examination of Water and Wastewater.
SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods

Microbac

Laboratory Report Number: L16031613

Kayla Teague
AECOM Technical Services, Inc.
16000 Dallas Parkway
Dallas, TX 75248

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:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@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 April 12 2016

David L. Vandenberg

David Vandenberg – Managing Director

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00113361	I	4.0		J2317165803	X

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	All samples were checked for pH and met the standard. Exceptions are noted above under discrepancy. (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
LHSMW04-032916	L16031613-01	03/29/2016 08:40	03/30/2016 10:09
TRIP BLANK	L16031613-02	03/29/2016 00:01	03/30/2016 10:09

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac REPORT L16031613
PREPARED FOR AECOM Technical Services, Inc.
WORK ID:

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1.0 Summary Data

1.1 Narratives

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Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16031613
Project Name:		**Method:**	8260
Prep Batch Number(s):	563535, 563757	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-08 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
Franci Bolden		Analyst I	2016-04-08 17:43:49

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Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16031613
Project Name:		**Method:**	8260
Prep Batch Number(s):	563535, 563757	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-08 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				

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Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16031613
Project Name:		**Method:**	8260
Prep Batch Number(s):	563535, 563757	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-08 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			1
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				

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Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16031613
Project Name:		**Method:**	8260
Prep Batch Number(s):	563535, 563757	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-08 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			2
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					

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Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16031613
Project Name:		**Method:**	8260
Prep Batch Number(s):	563535, 563757	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-08 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 the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16031613
Project Name:		**Method:**	8260
Prep Batch Number(s):	563535, 563757	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-08 00:00:00		

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)Chloromethane and 1,2Dichloropropane exceeded the UCL in the LCS analyzed 4/5/16 on HPMS8. Dichlorodifluoromethane was below the LCL in the LCS analyzed 4/6/16 on HPMS8.

2)Chloromethane exceeded the UCL in the CCV analyzed 4/5/16 on HPMS8.

1.2 Certificate of Analysis

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Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16031613-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW04-032916	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/17/2016 19:18
Workgroup #:	WG563535	**Analyst:**	TMB	**Run Date:**	04/05/2016 20:34
Collect Date:	03/29/2016 08:40	**Dilution:**	1	**File ID:**	8M411239
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	0.713	J	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	Q	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	0.691	J	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	0.666	J	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

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Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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
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	106		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	98.7	85	115	
1,2-Dichloroethane-d4	95.3	70	120	
Toluene-d8	93.8	85	120	
4-Bromofluorobenzene	95.3	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
J	Estimated value ; the analyte concentration was greater than the highest standard
Q	One or more quality control criteria failed. See narrative.

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Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16031613-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW04-032916	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/17/2016 19:18
Workgroup #:	WG563757	**Analyst:**	TMB	**Run Date:**	04/06/2016 17:29
Collect Date:	03/29/2016 08:40	**Dilution:**	10	**File ID:**	8M411257
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Tetrachloroethene	127-18-4	419		10.0	5.00	2.50

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.4	85	115	
1,2-Dichloroethane-d4	97.4	70	120	
Toluene-d8	95.8	85	120	
4-Bromofluorobenzene	93.5	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.

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16031613-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/17/2016 19:18
Workgroup #:	WG563535	**Analyst:**	TMB	**Run Date:**	04/05/2016 16:38
Collect Date:	03/29/2016 00:01	**Dilution:**	1	**File ID:**	8M411231
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	Q	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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	99.7	85	115	
1,2-Dichloroethane-d4	98.6	70	120	
Toluene-d8	93.0	85	120	
4-Bromofluorobenzene	95.1	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16031613-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW04-032916	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/17/2016 19:18
Workgroup #:	WG563535	**Analyst:**	TMB	**Run Date:**	04/05/2016 20:34
Collect Date:	03/29/2016 08:40	**Dilution:**	1	**File ID:**	8M411239
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	0.713	J	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	Q	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	0.691	J	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	0.666	J	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	487	J	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	106		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	98.7	85	115	
1,2-Dichloroethane-d4	95.3	70	120	
Toluene-d8	93.8	85	120	
4-Bromofluorobenzene	95.3	75	120	

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16031613-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW04-032916	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/17/2016 19:18
Workgroup #:	WG563757	**Analyst:**	TMB	**Run Date:**	04/06/2016 17:29
Collect Date:	03/29/2016 08:40	**Dilution:**	10	**File ID:**	8M411257
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	50.0	U	100	50.0	25.0
Benzene	71-43-2	2.50	U	10.0	2.50	1.25
Bromobenzene	108-86-1	2.50	U	10.0	2.50	1.25
Bromochloromethane	74-97-5	4.00	U	10.0	4.00	2.00
Bromodichloromethane	75-27-4	5.00	U	10.0	5.00	2.50
Bromoform	75-25-2	10.0	U	20.0	10.0	5.00
Bromomethane	74-83-9	10.0	U	20.0	10.0	5.00
2-Butanone	78-93-3	50.0	U	100	50.0	25.0
n-Butylbenzene	104-51-8	5.00	U	10.0	5.00	2.50
sec-Butylbenzene	135-98-8	5.00	U	10.0	5.00	2.50
tert-Butylbenzene	98-06-6	5.00	U	10.0	5.00	2.50
Carbon disulfide	75-15-0	10.0	U	20.0	10.0	5.00
Carbon tetrachloride	56-23-5	5.00	U	10.0	5.00	2.50
Chlorobenzene	108-90-7	2.50	U	10.0	2.50	1.25
Chlorodibromomethane	124-48-1	5.00	U	10.0	5.00	2.50
Chloroethane	75-00-3	10.0	U	20.0	10.0	5.00
Chloroform	67-66-3	2.50	U	10.0	2.50	1.25
Chloromethane	74-87-3	10.0	U	20.0	10.0	5.00
2-Chlorotoluene	95-49-8	2.50	U	10.0	2.50	1.25
4-Chlorotoluene	106-43-4	5.00	U	10.0	5.00	2.50
1,2-Dibromo-3-chloropropane	96-12-8	20.0	U	50.0	20.0	10.0
1,2-Dibromoethane	106-93-4	5.00	U	10.0	5.00	2.50
Dibromomethane	74-95-3	5.00	U	10.0	5.00	2.50
1,2-Dichlorobenzene	95-50-1	2.50	U	10.0	2.50	1.25
1,3-Dichlorobenzene	541-73-1	5.00	U	10.0	5.00	2.50
1,4-Dichlorobenzene	106-46-7	2.50	U	10.0	2.50	1.25
Dichlorodifluoromethane	75-71-8	5.00	U	10.0	5.00	2.50
1,1-Dichloroethane	75-34-3	2.50	U	10.0	2.50	1.25
1,2-Dichloroethane	107-06-2	5.00	U	10.0	5.00	2.50
1,1-Dichloroethene	75-35-4	10.0	U	20.0	10.0	5.00
cis-1,2-Dichloroethene	156-59-2	5.00	U	10.0	5.00	2.50

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	5.00	U	10.0	5.00	2.50
1,2-Dichloropropane	78-87-5	4.00	U	10.0	4.00	2.00
1,3-Dichloropropane	142-28-9	4.00	U	10.0	4.00	2.00
2,2-Dichloropropane	594-20-7	5.00	U	10.0	5.00	2.50
cis-1,3-Dichloropropene	10061-01-5	5.00	U	10.0	5.00	2.50
trans-1,3-Dichloropropene	10061-02-6	10.0	U	20.0	10.0	5.00
1,1-Dichloropropene	563-58-6	5.00	U	10.0	5.00	2.50
Ethylbenzene	100-41-4	5.00	U	10.0	5.00	2.50
2-Hexanone	591-78-6	50.0	U	100	50.0	25.0
Hexachlorobutadiene	87-68-3	5.00	U	10.0	5.00	2.50
Isopropylbenzene	98-82-8	5.00	U	10.0	5.00	2.50
p-Isopropyltoluene	99-87-6	5.00	U	10.0	5.00	2.50
4-Methyl-2-pentanone	108-10-1	50.0	U	100	50.0	25.0
Methylene chloride	75-09-2	5.00	U	10.0	5.00	2.50
Naphthalene	91-20-3	3.93	J	10.0	4.00	2.00
n-Propylbenzene	103-65-1	2.50	U	10.0	2.50	1.25
Styrene	100-42-5	2.50	U	10.0	2.50	1.25
1,1,1,2-Tetrachloroethane	630-20-6	5.00	U	10.0	5.00	2.50
1,1,2,2-Tetrachloroethane	79-34-5	4.00	U	10.0	4.00	2.00
Tetrachloroethene	127-18-4	419		10.0	5.00	2.50
Toluene	108-88-3	5.00	U	10.0	5.00	2.50
1,2,3-Trichlorobenzene	87-61-6	2.33	J	10.0	3.00	1.50
1,2,4-Trichlorobenzene	120-82-1	4.00	U	10.0	4.00	2.00
1,1,1-Trichloroethane	71-55-6	5.00	U	10.0	5.00	2.50
1,1,2-Trichloroethane	79-00-5	5.00	U	10.0	5.00	2.50
Trichloroethene	79-01-6	91.3		10.0	5.00	2.50
Trichlorofluoromethane	75-69-4	5.00	U	10.0	5.00	2.50
1,2,3-Trichloropropane	96-18-4	10.0	U	20.0	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6	5.00	U	10.0	5.00	2.50
1,3,5-Trimethylbenzene	108-67-8	5.00	U	10.0	5.00	2.50
Vinyl chloride	75-01-4	5.00	U	10.0	5.00	2.50
o-Xylene	95-47-6	5.00	U	10.0	5.00	2.50
m-,p-Xylene	179601-23-1	10.0	U	20.0	10.0	5.00

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.4	85	115	
1,2-Dichloroethane-d4	97.4	70	120	
Toluene-d8	95.8	85	120	
4-Bromofluorobenzene	93.5	75	120	

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16031613-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/17/2016 19:18
Workgroup #:	WG563535	**Analyst:**	TMB	**Run Date:**	04/05/2016 16:38
Collect Date:	03/29/2016 00:01	**Dilution:**	1	**File ID:**	8M411231
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	Q	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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	99.7	85	115	
1,2-Dichloroethane-d4	98.6	70	120	
Toluene-d8	93.0	85	120	
4-Bromofluorobenzene	95.1	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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

Microbac

Lab Report #: L16031613
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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: 100515
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 22
Method: 624 SOP: MSV10 Rev: 13
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53462

Internal Standard: STD72767 Surrogate Standard: STD72767
CCV: STD72810 LCS: STD72811 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG540826

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M407827	WG540826-01 50ng BFB STD 8260	NA	1	1	STD72715	10/05/15 11:26
8M407828	WG540826-02 5ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 11:49
8M407829	WG540826-03 20ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 12:17
8M407830	WG540826-04 50ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 12:51
8M407831	WG540826-05 100ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 13:20
8M407832	WG540826-06 200ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 13:49
8M407833	WG540826-07 300ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 14:17
8M407834	WG540826-08 400ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 14:47
8M407835	WG540826-09 500ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 15:15
8M407836	RINSE	NA	1	1		10/05/15 15:50
8M407837	RINSE	NA	1	1		10/05/15 16:19
8M407838	WG540826-10 100ug/L ALT SRC STD A9/F	NA	1	1	STD72811	10/05/15 16:48

Approved: October 09, 2015



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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 021716
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53639

Internal Standard: STD74636 Surrogate Standard: STD74636
CCV: STD74773 LCS: STD74755 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG556046

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M410188	WG556046-01 50ng BFB STD 8260	NA	1	1	STD74606	02/17/16 12:04
8M410189	WG556046-02 0.3ug/L STD 8260	NA	1	1	STD74697	02/17/16 12:31
8M410190	WG556046-03 0.4ug/L STD 8260	NA	1	1	STD74773	02/17/16 13:01
8M410191	WG556046-01 50ng BFB STD 8260	NA	1	1	STD74606	02/17/16 14:11
8M410192	WG556046-01 50ng BFB STD 8260	NA	1	1	STD74606	02/17/16 14:25
8M410193	WG556046-02 0.3ug/L STD 8260	NA	1	1	STD74773	02/17/16 14:49
8M410194	WG556046-03 0.4ug/L STD 8260	NA	1	1	STD74773	02/17/16 15:18
8M410195	WG556046-04 1ug/L STD 8260	NA	1	1	STD74773	02/17/16 15:47
8M410196	WG556046-05 2ug/L STD 8260	NA	1	1	STD74773	02/17/16 16:23
8M410197	WG556046-06 5ug/L STD 8260	NA	1	1	STD74773	02/17/16 16:52
8M410198	WG556046-07 20ug/L STD 8260	NA	1	1	STD74773	02/17/16 17:21
8M410199	WG556046-08 50ug/L STD 8260	NA	1	1	STD74773	02/17/16 17:50
8M410200	WG556046-09 100ug/L STD 8260	NA	1	1	STD74773	02/17/16 18:19
8M410201	WG556046-10 200ug/L STD 8260	NA	1	1	STD74773	02/17/16 18:49
8M410202	WG556046-11 300ug/L STD 8260	NA	1	1	STD74773	02/17/16 19:18
8M410203	RINSE	NA	1	1		02/17/16 19:46
8M410204	RINSE	NA	1	1		02/17/16 20:15
8M410205	WG556046-12 50ug/L ALT SRC STD 8260	NA	1	1	STD74755	02/17/16 20:44
8M410206	RINSE	NA	1	1		02/17/16 21:14
8M410207	RINSE	NA	1	1		02/17/16 21:42

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Internal standard failure	
File ID: 8M410189				
Internals too high, DNR.				
3	X		Internal standard failure	
File ID: 8M410190				
Internals too high, DNR. Lowered the voltage by 20.				
4	X			
File ID: 8M410191				
Tune failed, DNR.				

Approved: February 18, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 040516
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18

Maintenance Log ID: 53693

Internal Standard: STD75032 Surrogate Standard: STD75032
CCV: STD75490 LCS: STD75403 MS/MSD: STD75403

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG563535

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411217	WG563534-01 50ng BFB STD 8260	NA	1	1	STD75485	04/05/16 09:48
8M411218	WG563534-02 50ug/L CCV STD 8260	NA	1	1	STD75490	04/05/16 10:11
8M411219	WG000000-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/05/16 10:40
8M411220	WG563535-01 VBLK0405 BLANK STD 826	NA	1	1		04/05/16 11:09
8M411221	L16031504-11 B 826-SPE	<2	1	1		04/05/16 11:38
8M411222	WG563535-02 20ug/L LCS STD 8260	NA	1	1	STD75403	04/05/16 12:08
8M411223	L16031583-01 B 5X REF 826-SPE	<2	1	5		04/05/16 12:37
8M411224	L16031583-02 B 5X MS 826-SPE	5	1	5	STD75403	04/05/16 13:06
8M411225	L16031583-03 B 5X MSD 826-SPE	3	1	5	STD75403	04/05/16 13:35
8M411226	L16031583-06 B 100X 826-SPE D1	6	1	100		04/05/16 14:04
8M411227	L16031504-06 B 826-SPE	<2	1	1		04/05/16 14:34
8M411228	L16031504-03 B 826-SPE	<2	1	1		04/05/16 15:03
8M411229	L16031504-05 A 10X 826-SPE D1	<2	1	10		04/05/16 15:39
8M411230	L16031715-04 A TB 826-SPE	<2	1	1		04/05/16 16:08
8M411231	L16031613-02 A TB 826-LOW	<2	1	1		04/05/16 16:38
8M411232	L16031614-03 A TB 826-LOW	<2	1	1		04/05/16 17:07
8M411233	L16031616-03 A TB 826-LOW	<2	1	1		04/05/16 17:36
8M411234	L16031715-01 A EB 826-SPE	<2	1	1		04/05/16 18:06
8M411235	L16031614-01 A 826-LOW	<2	1	1		04/05/16 18:36
8M411236	L16031614-02 A 826-LOW	<2	1	1		04/05/16 19:06
8M411237	L16031616-01 A 826-LOW	<2	1	1		04/05/16 19:36
8M411238	L16031616-02 A 826-LOW	<2	1	1		04/05/16 20:05
8M411239	L16031613-01 A 826-LOW	<2	1	1		04/05/16 20:34
8M411240	L16031715-02 A 10X 826-SPE	6	1	10		04/05/16 21:03
8M411241	L16031715-03 A 10X 826-SPE	6	1	10		04/05/16 21:32
8M411242	CCV	NA	1	1		04/05/16 22:01
8M411243	RINSE	NA	1	1		04/05/16 22:30
8M411244	RINSE	NA	1	1		04/05/16 22:59
8M411245	RINSE	NA	1	1		04/05/16 23:27

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3				

Approved: April 07, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 040516
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18

Maintenance Log ID: 53693

Internal Standard: STD75032 Surrogate Standard: STD75032
CCV: STD75490 LCS: STD75403 MS/MSD: STD75403

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG563535

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 8M411219				
Not needed, DNR.				
20	X	20	Over Calibration Range	11-DCE
File ID: 8M411236				
21	X	1	Carry-over contamination	
File ID: 8M411237				
23	X	10	Over Calibration Range	PCE
File ID: 8M411239				
24	X	250	Over Calibration Range	VC, CIS12-DCE, 12-DCP
File ID: 8M411240				
25	X	500	Over Calibration Range	12-DCP
File ID: 8M411241				

Approved: April 07, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 040616
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035S SOP: PAT01 Rev: 18
Maintenance Log ID: 53696

Internal Standard: STD75032 Surrogate Standard: STD75032
CCV: STD75490; STD75328 LCS: STD75503 MS/MSD: STD75503

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG563757

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411246	WG563756-01 50ng BFB STD 8260	NA	1	1	STD75485	04/06/16 12:26
8M411247	WG563756-01 50ng BFB STD 8260	NA	1	1	STD75485	04/06/16 12:41
8M411248	WG563756-02 50ug/L CCV STD 8260	NA	1	1	STD75490	04/06/16 13:04
8M411249	WG000000-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/06/16 13:35
8M411250	WG563757-01 VBLK0406 BLANK STD 826	NA	1	1		04/06/16 14:05
8M411251	L16040001-01 LOD 826-SPE	NA	1	1	STD75504	04/06/16 14:35
8M411252	L16040003-01 LOQ 826-SPE	NA	1	1	STD75504	04/06/16 15:04
8M411253	L16040003-09 826-SPE	NA	1	1	STD75504	04/06/16 15:33
8M411254	WG563757-02 20ug/L LCS STD 8260	NA	1	1	STD75503	04/06/16 16:02
8M411255	L16040278-02 A MS 826-SPE	6	1	1	STD75503	04/06/16 16:31
8M411256	L16040278-03 A MSD 826-SPE	6	1	1	STD75503	04/06/16 17:00
8M411257	L16031613-01 B 10X 826-LOW D1	<2	1	10		04/06/16 17:29
8M411258	L16031614-02 B 20X 826-LOW D1	<2	1	20		04/06/16 17:58
8M411259	L16031715-02 B 250X 826-SPE D1	6	1	250		04/06/16 18:28
8M411260	L16031715-03 B 500X 826-SPE D1	6	1	500		04/06/16 18:57
8M411261	L16031616-01 B 826-LOW	<2	1	1		04/06/16 19:26
8M411262	L16040278-01 A REF 826-SPE	6	1	1		04/06/16 19:56
8M411263	L16040278-04 A TB 826-SPE	5	1	1		04/06/16 20:25
8M411264	L16040280-01 A TB 826-LOW	<2	1	1		04/06/16 20:55
8M411265	L16040280-05 A FB 826-LOW	<2	1	1		04/06/16 21:24
8M411266	L16040280-08 A ER 826-LOW	<2	1	1		04/06/16 21:54
8M411267	L16040280-02 A 826-LOW	<2	1	1		04/06/16 22:23
8M411268	L16040280-07 A 826-LOW	<2	1	1		04/06/16 22:52
8M411269	L16040280-03 A 826-LOW	<2	1	1		04/06/16 23:21
8M411270	L16040280-04 A 826-LOW	<2	1	1		04/06/16 23:51
8M411271	L16040280-06 A 826-LOW	<2	1	1		04/07/16 00:20
8M411272	RINSE	NA	1	1		04/07/16 00:50
8M411273	WG563757-06 VBLK0406 BLANK STD 624	NA	2	1		04/07/16 01:19
8M411274	L16040198-03 A 624-SPE	5	2	1		04/07/16 01:49
8M411275	L16040158-02 A 624-SPE1	6	2	1		04/07/16 02:18
8M411276	CCV	NA	1	1		04/07/16 02:48
8M411277	RINSE	NA	1	1		04/07/16 03:17
8M411278	RINSE	NA	1	1		04/07/16 03:46

Approved: April 08, 2016

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 040616
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035S SOP: PAT01 Rev: 18
Maintenance Log ID: 53696

Internal Standard: STD75032 Surrogate Standard: STD75032
CCV: STD75490; STD75328 LCS: STD75503 MS/MSD: STD75503

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG563757

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1	X			
File ID: 8M411246				
			Tune failed, DNR.	
6	X			
File ID: 8M411251				
			Rerun for DCDF.	
7	X			
File ID: 8M411252				
			Rerun for DCDF.	
8	X			
File ID: 8M411253				
			Rerun for DCDF.	

Approved: April 08, 2016

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Microbac Laboratories Inc.

Data Checklist

Date: 05-OCT-2015
Analyst: TMB
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 70874
Analytical Workgroups: WG540826

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
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	TMB
Secondary Reviewer	FJB
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:
06-OCT-2015

Tiffany Bailey

Secondary Reviewer:
09-OCT-2015

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-09-2015 12:12:03

Microbac Laboratories Inc.

Data Checklist

Date: 17-FEB-2016
Analyst: TMB
Analyst: NA
Method: 8260B/OVAP/624
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 73351
Analytical Workgroups: WG556046

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	FJB
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:
18-FEB-2016
Tiffany Bailey

Secondary Reviewer:
18-FEB-2016

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-18-2016 14:47:54

Microbac Laboratories Inc.

Data Checklist

Date: 05-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 74281
Analytical Workgroups: WG563535

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	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	SAV
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:
06-APR-2016
Tiffany Bailey

Secondary Reviewer:
07-APR-2016
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: APR-07-2016 10:56:45

Microbac Laboratories Inc.

Data Checklist

Date: 06-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS/
Curve Workgroup: NA
Runlog ID: 74309
Analytical Workgroups: WG563757

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	TMB
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	FJB
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:
07-APR-2016
Tiffany Bailey

Secondary Reviewer:
08-APR-2016

CHECKLIST1 - Modified 03/05/2008
Generated: APR-08-2016 13:26:02

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG563535

Login Number: L16031613

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
LHSMW04-032916	01	03/29/16					04/05/2016	7.5	14		04/05/16	7.5	14	
TRIP BLANK	02	03/29/16					04/05/2016	7.7	14		04/05/16	7.7	14	

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4704437
Report generated 04/08/2016 13:13

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG563757

Login Number: L16031613

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
LHSMW04-032916	01	03/29/16					04/06/2016	8.4	14		04/06/16	8.4	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4704437
Report generated 04/08/2016 13:13

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16031613
Instrument Id: HPMS8
Workgroup (AAB#): WG563535

Method: 8260
CAL ID: HPMS8-17-FEB-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16031613-01	1.00	01	95.3	98.7	95.3	93.8
L16031613-02	1.00	01	98.6	99.7	95.1	93.0
WG563535-01	1.00	01	92.9	95.9	95.9	93.0
WG563535-02	1.00	01	93.4	97.9	89.3	92.8

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: 4704442
Report generated: 04/08/2016 13:14

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16031613
Instrument Id: HPMS8
Workgroup (AAB#): WG563757

Method: 8260
CAL ID: HPMS8-17-FEB-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16031613-01	10.0	DL01	97.4	97.4	93.5	95.8
WG563757-01	1.00	01	97.4	96.4	96.2	95.1
WG563757-02	1.00	01	98.3	96.1	90.4	94.8
WG563757-06	1.00	01	96.5	98.8	97.6	96.6

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: 4704442
Report generated: 04/08/2016 13:14

METHOD BLANK SUMMARY

Login Number: L16031613
Work Group: WG563535
Blank File ID: 8M411220
Blank Sample ID: WG563535-01
Prep Date: 04/05/16 11:09
Instrument ID: HPMS8
Analyzed Date: 04/05/16 11:09
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG563535-02	8M411222	04/05/16 12:08	01
TRIP BLANK	L16031613-02	8M411231	04/05/16 16:38	01
LHSMW04-032916	L16031613-01	8M411239	04/05/16 20:34	01

Report Name: BLANK_SUMMARY
PDF File ID: 4707790
Report generated 04/08/2016 13:13

METHOD BLANK SUMMARY

Login Number:	L16031613	**Work Group:**	WG563757
Blank File ID:	8M411250	**Blank Sample ID:**	WG563757-01
Prep Date:	04/06/16 14:05	**Instrument ID:**	HPMS8
Analyzed Date:	04/06/16 14:05	**Method:**	8260B
Analyst:	TMB		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG563757-02	8M411254	04/06/16 16:02	01
LHSMW04-032916	L16031613-01	8M411257	04/06/16 17:29	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 4707790
Report generated 04/08/2016 13:13

Login Number: L16031613 Prep Date: 04/05/16 11:09 Sample ID: WG563535-01
Instrument ID: HPMS8 Run Date: 04/05/16 11:09 Prep Method: 5030B/5030C/503
File ID: 8M411220 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563535 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-17-FEB-16

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: 4707791
08-APR-2016 13:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16031613 Prep Date: 04/05/16 11:09 Sample ID: WG563535-01
Instrument ID: HPMS8 Run Date: 04/05/16 11:09 Prep Method: 5030B/5030C/503
File ID: 8M411220 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563535 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-17-FEB-16

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	95.9	85 - 115	PASS
1,2-Dichloroethane-d4	92.9	70 - 120	PASS
Toluene-d8	93.0	85 - 120	PASS
4-Bromofluorobenzene	95.9	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: 4707791
08-APR-2016 13:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16031613 Prep Date: 04/06/16 14:05 Sample ID: WG563757-01
Instrument ID: HPMS8 Run Date: 04/06/16 14:05 Prep Method: 5030B/5030C/503
File ID: 8M411250 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563757 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-17-FEB-16

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: 4707791
08-APR-2016 13:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16031613 Prep Date: 04/06/16 14:05 Sample ID: WG563757-01
Instrument ID: HPMS8 Run Date: 04/06/16 14:05 Prep Method: 5030B/5030C/503
File ID: 8M411250 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563757 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-17-FEB-16

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	96.4	85 - 115	PASS
1,2-Dichloroethane-d4	97.4	70 - 120	PASS
Toluene-d8	95.1	85 - 120	PASS
4-Bromofluorobenzene	96.2	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: 4707791
08-APR-2016 13:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16031613 Run Date: 04/05/2016 Sample ID: WG563535-02
Instrument ID: HPMS8 Run Time: 12:08 Prep Method: 5030B/5030C/503
File ID: 8M411222 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563535 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75403 Cal ID: HPMS8-17-FEB-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	25.7	129	40 - 140	
Benzene	20.0	23.8	119	80 - 120	
Bromobenzene	20.0	18.2	91.0	75 - 125	
Bromochloromethane	20.0	22.5	112	65 - 130	
Bromodichloromethane	20.0	22.9	114	75 - 120	
Bromoform	20.0	19.1	95.7	70 - 130	
Bromomethane	20.0	12.7	63.3	30 - 145	
2-Butanone	20.0	25.1	126	30 - 150	
n-Butylbenzene	20.0	19.8	99.0	70 - 135	
sec-Butylbenzene	20.0	20.4	102	70 - 125	
tert-Butylbenzene	20.0	18.7	93.7	70 - 130	
Carbon disulfide	20.0	20.2	101	35 - 160	
Carbon tetrachloride	20.0	21.8	109	65 - 140	
Chlorobenzene	20.0	21.4	107	80 - 120	
Chlorodibromomethane	20.0	20.9	105	60 - 135	
Chloroethane	20.0	25.6	128	60 - 135	
Chloroform	20.0	23.0	115	65 - 135	
Chloromethane	20.0	25.6	128	40 - 125	*
2-Chlorotoluene	20.0	19.1	95.6	75 - 125	
4-Chlorotoluene	20.0	20.4	102	75 - 130	
1,2-Dibromo-3-chloropropane	20.0	18.6	92.8	50 - 130	
1,2-Dibromoethane	20.0	20.7	104	80 - 120	
Dibromomethane	20.0	21.9	109	75 - 125	
1,2-Dichlorobenzene	20.0	19.9	99.5	70 - 120	
1,3-Dichlorobenzene	20.0	19.6	98.1	75 - 125	
1,4-Dichlorobenzene	20.0	19.6	98.2	75 - 125	
Dichlorodifluoromethane	20.0	26.1	130	30 - 155	
1,1-Dichloroethane	20.0	22.5	112	70 - 135	
1,2-Dichloroethane	20.0	23.5	117	70 - 130	
1,1-Dichloroethene	20.0	22.3	111	70 - 130	
cis-1,2-Dichloroethene	20.0	23.6	118	70 - 125	
trans-1,2-Dichloroethene	20.0	23.2	116	60 - 140	
1,2-Dichloropropane	20.0	25.4	127	75 - 125	*
1,3-Dichloropropane	20.0	22.4	112	75 - 125	
2,2-Dichloropropane	20.0	23.4	117	70 - 135	
cis-1,3-Dichloropropene	20.0	25.9	129	70 - 130	
trans-1,3-Dichloropropene	20.0	20.9	104	55 - 140	
1,1-Dichloropropene	20.0	21.4	107	75 - 130	
Ethylbenzene	20.0	20.1	101	75 - 125	
2-Hexanone	20.0	21.5	107	55 - 130	
Hexachlorobutadiene	20.0	18.4	92.2	50 - 140	

LCS - Modified 03/06/2008
PDF File ID: 4704438
Report generated: 04/08/2016 13:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16031613 Run Date: 04/05/2016 Sample ID: WG563535-02
Instrument ID: HPMS8 Run Time: 12:08 Prep Method: 5030B/5030C/503
File ID: 8M411222 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563535 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75403 Cal ID: HPMS8-17-FEB-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Isopropylbenzene	20.0	22.2	111	75 - 125	
p-Isopropyltoluene	20.0	19.7	98.4	75 - 130	
4-Methyl-2-pentanone	20.0	22.4	112	60 - 135	
Methylene chloride	20.0	22.4	112	55 - 140	
Naphthalene	20.0	16.7	83.4	55 - 140	
n-Propylbenzene	20.0	20.5	103	70 - 130	
Styrene	20.0	22.4	112	65 - 135	
1,1,1,2-Tetrachloroethane	20.0	20.4	102	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	19.8	98.8	65 - 130	
Tetrachloroethene	20.0	19.3	96.5	45 - 150	
Toluene	20.0	21.6	108	75 - 120	
1,2,3-Trichlorobenzene	20.0	17.9	89.3	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.0	89.8	65 - 135	
1,1,1-Trichloroethane	20.0	22.2	111	65 - 130	
1,1,2-Trichloroethane	20.0	21.4	107	75 - 125	
Trichloroethene	20.0	22.3	111	70 - 125	
Trichlorofluoromethane	20.0	21.9	109	60 - 145	
1,2,3-Trichloropropane	20.0	18.7	93.7	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.0	100	75 - 130	
1,3,5-Trimethylbenzene	20.0	20.1	100	75 - 130	
Vinyl chloride	20.0	24.4	122	50 - 145	
o-Xylene	20.0	20.8	104	80 - 120	
m-,p-Xylene	40.0	42.7	107	75 - 130	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	97.9	85 - 115	PASS
1,2-Dichloroethane-d4	93.4	70 - 120	PASS
Toluene-d8	92.8	85 - 120	PASS
4-Bromofluorobenzene	89.3	75 - 120	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 4704438
Report generated: 04/08/2016 13:13

Login Number: L16031613 Run Date: 04/06/2016 Sample ID: WG563757-02
Instrument ID: HPMS8 Run Time: 16:02 Prep Method: 5030B/5030C/503
File ID: 8M411254 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563757 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75503 Cal ID: HPMS8-17-FEB-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	25.1	126	40 - 140	
Benzene	20.0	22.2	111	80 - 120	
Bromobenzene	20.0	19.2	95.9	75 - 125	
Bromochloromethane	20.0	21.5	107	65 - 130	
Bromodichloromethane	20.0	22.5	112	75 - 120	
Bromoform	20.0	20.9	105	70 - 130	
Bromomethane	20.0	10.8	53.8	30 - 145	
2-Butanone	20.0	26.4	132	30 - 150	
n-Butylbenzene	20.0	20.4	102	70 - 135	
sec-Butylbenzene	20.0	21.1	106	70 - 125	
tert-Butylbenzene	20.0	19.7	98.3	70 - 130	
Carbon disulfide	20.0	20.1	101	35 - 160	
Carbon tetrachloride	20.0	20.4	102	65 - 140	
Chlorobenzene	20.0	21.3	106	80 - 120	
Chlorodibromomethane	20.0	21.4	107	60 - 135	
Chloroethane	20.0	18.2	90.9	60 - 135	
Chloroform	20.0	21.5	107	65 - 135	
Chloromethane	20.0	12.0	60.0	40 - 125	
2-Chlorotoluene	20.0	19.1	95.4	75 - 125	
4-Chlorotoluene	20.0	21.4	107	75 - 130	
1,2-Dibromo-3-chloropropane	20.0	20.9	104	50 - 130	
1,2-Dibromoethane	20.0	22.3	111	80 - 120	
Dibromomethane	20.0	22.7	113	75 - 125	
1,2-Dichlorobenzene	20.0	21.4	107	70 - 120	
1,3-Dichlorobenzene	20.0	20.4	102	75 - 125	
1,4-Dichlorobenzene	20.0	20.7	103	75 - 125	
Dichlorodifluoromethane	20.0	5.00	25.0	30 - 155	*
1,1-Dichloroethane	20.0	20.8	104	70 - 135	
1,2-Dichloroethane	20.0	22.9	114	70 - 130	
1,1-Dichloroethene	20.0	18.8	94.2	70 - 130	
cis-1,2-Dichloroethene	20.0	21.8	109	70 - 125	
trans-1,2-Dichloroethene	20.0	21.0	105	60 - 140	
1,2-Dichloropropane	20.0	23.7	118	75 - 125	
1,3-Dichloropropane	20.0	23.4	117	75 - 125	
2,2-Dichloropropane	20.0	20.3	102	70 - 135	
cis-1,3-Dichloropropene	20.0	24.4	122	70 - 130	
trans-1,3-Dichloropropene	20.0	21.7	109	55 - 140	
1,1-Dichloropropene	20.0	19.5	97.6	75 - 130	
Ethylbenzene	20.0	19.8	99.1	75 - 125	
2-Hexanone	20.0	23.3	117	55 - 130	
Hexachlorobutadiene	20.0	18.9	94.5	50 - 140	

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16031613 Run Date: 04/06/2016 Sample ID: WG563757-02
Instrument ID: HPMS8 Run Time: 16:02 Prep Method: 5030B/5030C/503
File ID: 8M411254 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG563757 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75503 Cal ID: HPMS8-17-FEB-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Isopropylbenzene	20.0	22.3	111	75 - 125	
p-Isopropyltoluene	20.0	20.3	101	75 - 130	
4-Methyl-2-pentanone	20.0	24.6	123	60 - 135	
Methylene chloride	20.0	20.8	104	55 - 140	
Naphthalene	20.0	19.2	96.1	55 - 140	
n-Propylbenzene	20.0	21.0	105	70 - 130	
Styrene	20.0	22.4	112	65 - 135	
1,1,1,2-Tetrachloroethane	20.0	20.4	102	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	21.9	109	65 - 130	
Tetrachloroethene	20.0	18.8	93.8	45 - 150	
Toluene	20.0	21.5	108	75 - 120	
1,2,3-Trichlorobenzene	20.0	19.8	99.2	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.3	96.5	65 - 135	
1,1,1-Trichloroethane	20.0	20.5	103	65 - 130	
1,1,2-Trichloroethane	20.0	22.1	110	75 - 125	
Trichloroethene	20.0	21.4	107	70 - 125	
Trichlorofluoromethane	20.0	17.2	85.9	60 - 145	
1,2,3-Trichloropropane	20.0	21.3	107	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.7	103	75 - 130	
1,3,5-Trimethylbenzene	20.0	20.6	103	75 - 130	
Vinyl chloride	20.0	14.2	70.8	50 - 145	
o-Xylene	20.0	20.6	103	80 - 120	
m-,p-Xylene	40.0	43.3	108	75 - 130	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	96.1	85 - 115	PASS
1,2-Dichloroethane-d4	98.3	70 - 120	PASS
Toluene-d8	94.8	85 - 120	PASS
4-Bromofluorobenzene	90.4	75 - 120	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 4704438
Report generated: 04/08/2016 13:13

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16031613 Tune ID: WG540826-01
Instrument: HPMS8 Run Date: 10/05/2015
Analyst: TMB Run Time: 11:26
Workgroup: WG540826 File ID: 8M407827
Cal ID: HPMS8-05-OCT-15

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.7	8565	PASS
75.0	95.0	30.0	60.0	52.2	18121	PASS
95.0	95.0	100	100	100	34714	PASS
96.0	95.0	5.00	9.00	6.52	2262	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	74.2	25773	PASS
175	174	5.00	9.00	7.16	1845	PASS
176	174	95.0	101	98.5	25378	PASS
177	176	5.00	9.00	6.88	1746	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG540826-02	STD	01	10/05/2015 11:49	
WG540826-03	STD	01	10/05/2015 12:17	
WG540826-04	STD	01	10/05/2015 12:51	
WG540826-05	STD-CCV	01	10/05/2015 13:20	
WG540826-06	STD	01	10/05/2015 13:49	
WG540826-07	STD	01	10/05/2015 14:17	
WG540826-08	STD	01	10/05/2015 14:47	
WG540826-09	STD	01	10/05/2015 15:15	
WG540826-10	SSCV	01	10/05/2015 16:48	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4704440
Report generated 04/08/2016 13:14

BFB

Login Number: L16031613
Instrument: HPMS8
Analyst: TMB
Workgroup: WG556046

Tune ID: WG556046-01
Run Date: 02/17/2016
Run Time: 14:25
File ID: 8M410192
Cal ID: HPMS8 -

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	10897	PASS
75.0	95.0	30.0	60.0	52.3	21632	PASS
95.0	95.0	100	100	100	41381	PASS
96.0	95.0	5.00	9.00	6.35	2628	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	69.5	28751	PASS
175	174	5.00	9.00	7.35	2112	PASS
176	174	95.0	101	95.5	27459	PASS
177	176	5.00	9.00	6.72	1846	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG556046-02	STD	01	02/17/2016 14:49	
WG556046-03	STD	01	02/17/2016 15:18	
WG556046-04	STD	01	02/17/2016 15:47	
WG556046-05	STD	01	02/17/2016 16:23	
WG556046-06	STD	01	02/17/2016 16:52	
WG556046-07	STD	01	02/17/2016 17:21	
WG556046-08	STD-CCV	01	02/17/2016 17:50	
WG556046-09	STD	01	02/17/2016 18:19	
WG556046-10	STD	01	02/17/2016 18:49	
WG556046-11	STD	01	02/17/2016 19:18	
WG556046-12	SSCV	01	02/17/2016 20:44	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4704440
Report generated 04/08/2016 13:14

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16031613
Instrument: HPMS8
Analyst: TMB
Workgroup: WG563534

Tune ID: WG563534-01
Run Date: 04/05/2016
Run Time: 09:48
File ID: 8M411217
Cal ID: HPMS8-17-FEB-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	29.1	13211	PASS
75.0	95.0	30.0	60.0	53.8	24445	PASS
95.0	95.0	100	100	100	45421	PASS
96.0	95.0	5.00	9.00	6.13	2785	PASS
173	174	0	2.00	0.305	101	PASS
174	95.0	50.0	100	73.0	33149	PASS
175	174	5.00	9.00	8.21	2721	PASS
176	174	95.0	101	98.4	32632	PASS
177	176	5.00	9.00	5.93	1934	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG563534-02	CCV	01	04/05/2016 10:11	
WG563535-01	BLANK	01	04/05/2016 11:09	
WG563535-02	LCS	01	04/05/2016 12:08	
L16031613-02	TRIP BLANK	01	04/05/2016 16:38	
L16031613-01	LHSMW04-032916	01	04/05/2016 20:34	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4704440
Report generated 04/08/2016 13:14

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16031613
Instrument: HPMS8
Analyst: TMB
Workgroup: WG563756

Tune ID: WG563756-01
Run Date: 04/06/2016
Run Time: 12:41
File ID: 8M411247
Cal ID: HPMS8-17-FEB-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	27.1	12100	PASS
75.0	95.0	30.0	60.0	54.1	24136	PASS
95.0	95.0	100	100	100	44610	PASS
96.0	95.0	5.00	9.00	6.40	2855	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	67.8	30224	PASS
175	174	5.00	9.00	7.71	2331	PASS
176	174	95.0	101	97.9	29596	PASS
177	176	5.00	9.00	7.76	2298	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG563756-02	CCV	01	04/06/2016 13:04	
WG563757-01	BLANK	01	04/06/2016 14:05	
WG563757-02	LCS	01	04/06/2016 16:02	
L16031613-01	LHSMW04-032916	DL01	04/06/2016 17:29	
WG563757-06	BLANK2	01	04/07/2016 01:19	*

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4704440
Report generated 04/08/2016 13:14

Calibration Table Report
Method: A9FOOWTR.M
Title: A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Calibration: Tue Oct 06 11:55:21 2015
Curve: WG540826
Calibration Files

	Compound	5 8M407828.D	20 8M407829.D	50 8M407830.D	100 8M407831.D	200 8M407832.D	300 8M407833.D	400 8M407834.D	500 8M407835.D	Avg	%RSD
I	Fluorobenzene	ISTD									
T	Acetonitrile	0.020	0.019	0.020	0.019	0.019	0.019	0.019	0.019	0.019	3.019
T	3-Chloro-1-propene	0.474	0.484	0.476	0.471	0.484	0.465	0.458	0.432	0.468	3.632
T	2-Chloro-1,3-butadiene	0.448	0.481	0.482	0.486	0.514	0.495	0.486	0.460	0.481	4.206
T	Ethyl Acetate	0.104	0.129	0.132	0.131	0.132	0.128	0.128	0.133	0.127	7.528
T	Methacrylonitrile	0.046	0.055	0.058	0.057	0.057	0.056	0.057	0.060	0.056	7.551
T	Isobutyl Alcohol			0.005	0.005	0.005	0.005	0.005	0.006	0.005	4.964
T	1-Butanol			0.002	0.002	0.003	0.003	0.003	0.003	0.003	10.874
T	Methyl methacrylate	0.120	0.147	0.158	0.162	0.162	0.158	0.160	0.165	0.154	9.638
T	2-Nitropropane			0.021	0.022	0.025	0.026	0.029	0.031	0.026	14.916
I	Chlorobenzene-d5	ISTD									
I	1,4-Dichlorobenzene-d4	ISTD									
T	Cyclohexanone			0.057	0.052	0.054	0.051	0.052	0.054	0.053	3.733

Tue Oct 06 11:57:17 2015

Calibration Table Report
Method: 8260WTR.M
Title: Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Calibration: Thu Feb 18 08:44:45 2016
Curve: WG556046
Calibration Files

	Compound	0.3 8M410193.D	0.4 8M410194.D	1 8M410195.D	2 8M410196.D	5 8M410197.D	20 8M410198.D	50 8M410199.D	100 8M410200.D	200 8M410201.D	300 8M410202.D	Avg	%RSD	Linear	Quad
I	Fluorobenzene	ISTD													
T	Dichlorodifluoromethane		0.351	0.368	0.381	0.370	0.437	0.432	0.397	0.419	0.392	0.394	7.613		
P	Chloromethane			0.707	0.649	0.626	0.626	0.615	0.566	0.551	0.480	0.603	11.422		
C	Vinyl Chloride		0.412	0.459	0.470	0.454	0.465	0.439	0.384	0.371	0.321	0.419	12.261		
T	1,3-Butadiene				0.468	0.454	0.468	0.355	0.226	0.195	0.166	0.333	40.602		1.004
T	Bromomethane			0.176	0.192	0.188	0.189	0.201	0.199	0.226	0.223	0.199	8.574		
T	Chloroethane		0.157	0.179	0.185	0.187	0.194	0.195	0.190	0.209	0.209	0.190	8.249		
T	Trichlorofluoromethane		0.356	0.451	0.464	0.443	0.470	0.461	0.446	0.483	0.472	0.450	8.291		
T	Diethyl ether			0.159	0.167	0.162	0.156	0.160	0.173		0.175	0.165	4.394		
T	Isoprene		0.239	0.290	0.300	0.308	0.313	0.308	0.316	0.331	0.337	0.305	9.366		
T	Acrolein			0.021	0.026	0.025	0.025	0.025	0.027		0.030	0.026	10.130		
T	1,1,2-Trichloro-1,2,2-Trifluoroethane			0.229	0.245	0.247	0.247	0.245	0.236	0.261	0.254	0.245	4.026		
T	Acetone					0.043	0.042	0.042	0.040	0.041	0.037	0.041	5.295		
C	1,1-Dichloroethene		0.349	0.473	0.461	0.452	0.465	0.464	0.453	0.484	0.465	0.452	8.789		
T	Tert-Butyl Alcohol				0.011	0.010	0.011	0.010	0.011		0.009	0.010	8.176		
T	Dimethyl Sulfide		0.155	0.187	0.196	0.198	0.203	0.198	0.210	0.216	0.217	0.198	9.528		
T	Iodomethane			0.037	0.051	0.089	0.127	0.153	0.162	0.165	0.156	0.118	44.182		0.999
T	Methyl acetate					0.118	0.110	0.110	0.121	0.113	0.114	0.114	4.080		
T	Methylene Chloride			0.221	0.259	0.242	0.248	0.250	0.247	0.259	0.253	0.247	4.891		
T	Carbon Disulfide			0.778	0.815	0.773	0.806	0.774	0.770	0.766	0.728	0.776	3.390		
T	Acrylonitrile			0.046	0.055	0.053	0.053	0.060	0.065		0.071	0.058	14.747		
T	Methyl Tert Butyl Ether			0.480	0.497	0.506	0.495	0.504	0.523	0.516	0.496	0.502	2.688		
T	trans-1,2-Dichloroethene		0.341	0.421	0.427	0.423	0.430	0.436	0.430	0.457	0.436	0.422	7.643		
T	n-Hexane					0.364	0.355	0.338	0.348	0.376	0.378	0.360	4.412		
T	Diisopropyl ether			0.927	0.975	0.936	0.927	0.940	0.963		0.899	0.938	2.651		
T	Vinyl Acetate				0.430	0.422	0.430	0.428	0.448	0.431	0.429	0.431	1.806		
P	1,1-Dichloroethane		0.447	0.520	0.526	0.536	0.540	0.546	0.536	0.561	0.530	0.527	6.147		
T	Ethyl-Tert-Butyl ether			0.711	0.774	0.740	0.747	0.760	0.793		0.741	0.752	3.518		
T	2-Butanone					0.060	0.063	0.063	0.070	0.065	0.065	0.064	5.543		
T	Propionitrile			0.014	0.017	0.019	0.019	0.019	0.021		0.021	0.018	11.798		
T	2,2-Dichloropropane		0.382	0.424	0.435	0.440	0.400	0.404	0.409	0.428	0.408	0.414	4.495		
T	cis-1,2-Dichloroethene		0.237	0.254	0.275	0.279	0.278	0.280	0.275	0.290	0.280	0.272	5.979		
C	Chloroform	0.478	0.380	0.479	0.469	0.487	0.484	0.486	0.475	0.487	0.450	0.467	6.993		
T	1-Bromopropane			0.025	0.030	0.038	0.040	0.039	0.039	0.040	0.041	0.036	15.643	1.000	
T	Bromochloromethane		0.091	0.143	0.126	0.147	0.141	0.144	0.144	0.147	0.141	0.136	13.184		
T	Tetrahydrofuran			0.050	0.044	0.040	0.040	0.041	0.044		0.043	0.043	8.308		
S	Dibromofluoromethane			0.256	0.246	0.251	0.265	0.257	0.260	0.261	0.257	0.257	2.232		
T	1,1,1-Trichloroethane		0.381	0.405	0.430	0.434	0.435	0.437	0.431	0.455	0.431	0.427	4.995		
T	Cyclohexane			0.463	0.487	0.477	0.505	0.483	0.493	0.530	0.534	0.496	5.074		
T	1,1-Dichloropropene			0.374	0.376	0.367	0.367	0.371	0.362	0.385	0.368	0.371	1.869		
T	Tert-Amyl-Methyl ether			0.506	0.545	0.522	0.516	0.529	0.559		0.525	0.529	3.406		
T	Carbon Tetrachloride		0.326	0.366	0.396	0.388	0.399	0.408	0.397	0.417	0.397	0.3882	7.02026		
S	1,2-Dichloroethane-d4			0.28	0.262	0.274	0.28	0.279	0.282	0.276	0.266	0.2748	2.6686		
T	Heptane											0	0		
T	1,2-Dichloroethane		0.292	0.366	0.357	0.366	0.362	0.371	0.371	0.369	0.342	0.3551	7.17543		
T	Benzene		0.865	1.032	1.016	1.033	1.022	1.017	0.968	0.933	0.816	0.967	8.25646		
T	Trichloroethene		0.209	0.271	0.272	0.266	0.266	0.266	0.259	0.272	0.264	0.2604	7.60614		
T	Methylcyclohexane					0.359	0.384	0.367	0.367	0.387	0.386	0.375	3.19985		
C	1,2-Dichloropropane		0.185	0.262	0.269	0.284	0.281	0.288	0.284	0.299	0.294	0.2719	12.7406		
T	Bromodichloromethane		0.251	0.354	0.342	0.356	0.357	0.364	0.364	0.368	0.348	0.3451	10.5088		
T	1,4-Dioxane					0.001	0.001	0.001	0.001		0.001	0.0011	14.1931		
T	Dibromomethane		0.087	0.111	0.123	0.131	0.129	0.132	0.133	0.134	0.13	0.1234	12.391		
T	2-Chloroethyl Vinyl Ether				0.105	0.114	0.116	0.122	0.128	0.124	0.119	0.1183	6.24286		
T	4-Methyl-2-Pentanone					0.052	0.053	0.055	0.058	0.056	0.057	0.0551	4.31412		
T	cis-1,3-Dichloropropene		0.265	0.386	0.361	0.391	0.39	0.4	0.4	0.405	0.383	0.3756	11.5897		

T	Dimethyl Disulfide					0.162	0.192	0.199	0.211	0.213	0.211	0.198	9.81879	
I	Chlorobenzene-d5	ISTD												
S	Toluene-d8			1.316	1.165	1.244	1.298	1.265	1.231	1.204	1.152	1.2344	4.76846	
C	Toluene		1.245	1.503	1.474	1.507	1.504	1.488	1.408	1.308	1.101	1.3931	10.3952	
T	Ethyl Methacrylate			0.219	0.254	0.256	0.284	0.278	0.3	0.283	0.278	0.2691	9.32864	
T	Paraldehyde											0	0	
T	trans-1,3-Dichloropropene			0.438	0.435	0.461	0.47	0.489	0.501	0.482	0.45	0.4656	5.15607	
T	1,1,2-Trichloroethane		0.164	0.201	0.219	0.233	0.233	0.239	0.24	0.236	0.228	0.2215	11.1669	
T	2-Hexanone					0.059	0.067	0.069	0.076	0.071	0.072	0.0689	8.19995	
T	1,3-Dichloropropane		0.33	0.388	0.418	0.417	0.418	0.432	0.432	0.421	0.398	0.406	7.86782	
T	Tetrachloroethene		0.186	0.28	0.28	0.295	0.294	0.289	0.287	0.305	0.304	0.2798	13.0158	
T	Dibromochloromethane		0.228	0.29	0.279	0.3	0.317	0.335	0.336	0.331	0.317	0.3037	11.4256	
T	1,2-Dibromoethane		0.169	0.214	0.224	0.23	0.232	0.244	0.242	0.236	0.228	0.2242	10.0577	
T	1-Chlorohexane		0.404	0.45	0.475	0.504	0.496	0.48	0.484	0.482	0.476	0.4724	6.29469	
P	Chlorobenzene		0.849	0.989	0.959	1.025	0.982	1	0.977	0.957	0.841	0.9533	6.79068	
T	1,1,1,2-Tetrachloroethane		0.252	0.319	0.327	0.341	0.35	0.369	0.375	0.383	0.363	0.342	11.7428	
C	Ethylbenzene		0.453	0.515	0.552	0.55	0.551	0.558	0.562	0.599	0.569	0.5454	7.48715	
T	m-,p-Xylene		0.519	0.653	0.635	0.675	0.664	0.67	0.651	0.622	0.521	0.6234	9.75924	
T	o-Xylene			0.64	0.613	0.652	0.646	0.665	0.651	0.673	0.633	0.6466	2.9007	
T	Styrene		0.68	0.966	0.995	1.038	1.063	1.11	1.077	1.036	0.907	0.9859	13.1823	
P	Bromoform			0.144	0.156	0.165	0.174	0.194	0.195	0.189	0.184	0.175	10.6143	
T	Isopropylbenzene		1.377	1.617	1.614	1.683	1.69	1.695	1.59	1.428	1.183	1.5419	11.4107	
I	1,4-Dichlorobenzene-d4	ISTD												
P	1,1,2,2-Tetrachloroethane		0.358	0.494	0.519	0.525	0.508	0.542	0.539	0.513	0.499	0.4996	11.1252	
S	p-Bromofluorobenzene				0.839	1.01	1.018	0.977	0.968	1	0.985	0.9712	6.26503	
T	1,2,3-Trichloropropane			0.103	0.155	0.143	0.137	0.147	0.149	0.143	0.141	0.1398	11.3016	
T	trans-1,4-Dichloro-2-Butene			0.153	0.154	0.193	0.191	0.196	0.203	0.201	0.198	0.186	10.9928	
T	n-Propylbenzene		3.098	3.974	3.866	4.12	4.014	3.872	3.532	3.078		3.6942	11.14	
T	Bromobenzene	0.651	0.808	0.721	0.726	0.726	0.749	0.761	0.728	0.751	0.731	0.7353	5.36612	
T	1,3,5-Trimethylbenzene		2.266	2.707	2.643	2.797	2.797	2.779	2.633	2.497	2.088	2.5785	9.73874	
T	2-Chlorotoluene		2.378	2.661	2.489	2.516	2.443	2.493	2.286	2.444	2.006	2.4131	7.60285	
T	4-Chlorotoluene		1.872	2.489	2.416	2.66	2.584	2.559	2.431	1.921		2.3667	12.7271	
T	a-Methylstyrene					1.352	1.373	1.348	1.352	1.379	1.296	1.3502	2.17308	
T	tert-Butylbenzene			0.503	0.537	0.568	0.557	0.561	0.546	0.588	0.585	0.5556	4.94159	
T	1,2,4-Trimethylbenzene		2.284	2.83	2.74	2.918	2.92	2.903	2.731	2.528	2.094	2.661	11.2193	
T	sec-Butylbenzene			3.439	3.337	3.489	3.518	3.432	3.179	2.885	2.361	3.205	12.4661	
T	p-Isopropyltoluene			2.766	2.695	2.849	2.859	2.839	2.673	2.485	2.075	2.6551	9.99136	
T	1,3-Dichlorobenzene		1.162	1.531	1.517	1.551	1.524	1.559	1.49	1.479	1.343	1.4618	8.86916	
T	1,4-Dichlorobenzene	1.52	1.175	1.573	1.455	1.526	1.51	1.538	1.472	1.443		1.4681	7.99055	
T	n-Butylbenzene			2.784	2.906	2.915	2.893	2.823	2.636	2.411	2	2.671	11.9953	
T	1,2-Dichlorobenzene	1.201	1.043	1.287	1.323	1.333	1.342	1.379	1.315	1.294	1.193	1.2711	7.81151	
T	1,2-Dibromo-3-Chloropropane				0.06	0.093	0.091	0.099	0.102	0.097	0.092	0.0908	15.6405	0.998
T	1,2,4-Trichlorobenzene		0.767	0.935	0.912	0.967	0.946	1.001	0.962	0.948	0.891	0.9255	7.26883	
T	Hexachlorobutadiene		0.256	0.373	0.367	0.39	0.393	0.4	0.389	0.42	0.419	0.3785	13.0258	
T	Naphthalene		1.314	1.576	1.522	1.596	1.577	1.684	1.608	1.456	1.296	1.5143	8.83211	
T	1,2,3-Trichlorobenzene	0.787	0.686	0.717	0.757	0.801	0.781	0.835	0.808	0.788	0.741	0.77	5.84885	

Thu Feb 18 09:10:34 2016

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16031613 Run Date: 02/17/2016 Sample ID: WG556046-12
Instrument ID: HPMS8 Run Time: 20:44 Method: 8260B
File ID: 8M410205 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG556046 Cal ID: HPMS8 - 17-FEB-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	50.0	49.9	ug/L	0.466	0.200	20	
1,1-Dichloroethene	CCC	50.0	49.2	ug/L	0.444	1.60	20	
1,2-Dichloropropane	CCC	50.0	54.1	ug/L	0.294	8.20	20	
Ethylbenzene	CCC	50.0	52.2	ug/L	0.569	4.40	20	
Toluene	CCC	50.0	53.5	ug/L	1.49	7.00	20	
Vinyl Chloride	CCC	50.0	42.6	ug/L	0.358	14.8	20	
Bromoform	SPCC	50.0	47.2	ug/L	0.165	5.50	20	
Chlorobenzene	SPCC	50.0	53.3	ug/L	1.02	6.70	20	
Chloromethane	SPCC	50.0	46.7	ug/L	0.563	6.50	20	
1,1-Dichloroethane	SPCC	50.0	49.3	ug/L	0.519	1.40	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	48.9	ug/L	0.488	2.30	20	
Acetone		50.0	50.4	ug/L	0.0413	0.900	20	
Benzene		50.0	51.8	ug/L	1.00	3.60	20	
Bromobenzene		50.0	49.7	ug/L	0.731	0.500	20	
Bromochloromethane		50.0	50.2	ug/L	0.137	0.400	20	
Bromodichloromethane		50.0	50.7	ug/L	0.350	1.30	20	
Bromomethane		50.0	49.6	ug/L	0.198	0.900	20	
2-Butanone		50.0	47.5	ug/L	0.0611	5.00	20	
n-Butylbenzene		50.0	52.3	ug/L	2.80	4.70	20	
sec-Butylbenzene		50.0	54.9	ug/L	3.52	9.70	20	
tert-Butylbenzene		50.0	53.2	ug/L	0.591	6.40	20	
Carbon Disulfide		50.0	48.0	ug/L	0.745	4.00	20	
Carbon Tetrachloride		50.0	49.6	ug/L	0.385	0.900	20	
Dibromochloromethane		50.0	51.8	ug/L	0.315	3.60	20	
Chloroethane		50.0	55.0	ug/L	0.209	10.1	20	
2-Chlorotoluene		50.0	52.9	ug/L	2.55	5.80	20	
4-Chlorotoluene		50.0	55.4	ug/L	2.62	10.7	20	
1,2-Dibromo-3-Chloropropane		50.0	48.3	ug/L	0.0920	3.40	20	
1,2-Dibromoethane		50.0	51.5	ug/L	0.231	3.00	20	
Dibromomethane		50.0	47.8	ug/L	0.118	4.40	20	
1,2-Dichlorobenzene		50.0	53.6	ug/L	1.36	7.30	20	
1,3-Dichlorobenzene		50.0	52.9	ug/L	1.55	5.90	20	
1,4-Dichlorobenzene		50.0	52.8	ug/L	1.55	5.60	20	
Dichlorodifluoromethane		50.0	52.5	ug/L	0.414	5.10	20	
1,2-Dichloroethane		50.0	50.1	ug/L	0.356	0.200	20	
cis-1,2-Dichloroethene		50.0	51.6	ug/L	0.281	3.20	20	
trans-1,2-Dichloroethene		50.0	52.8	ug/L	0.446	5.70	20	
1,3-Dichloropropane		50.0	54.7	ug/L	0.444	9.40	20	
2,2-Dichloropropane		50.0	50.4	ug/L	0.418	0.800	20	
cis-1,3-Dichloropropene		50.0	56.1	ug/L	0.421	12.2	20	
trans-1,3-Dichloropropene		50.0	51.1	ug/L	0.476	2.20	20	
1,1-Dichloropropene		50.0	48.2	ug/L	0.358	3.50	20	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4704439
Report generated 04/08/2016 13:13

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16031613 Run Date: 02/17/2016 Sample ID: WG556046-12
Instrument ID: HPMS8 Run Time: 20:44 Method: 8260B
File ID: 8M410205 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG556046 Cal ID: HPMS8 - 17-FEB-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2-Hexanone		50.0	51.7	ug/L	0.0713	3.50	20	
Hexachlorobutadiene		50.0	57.0	ug/L	0.431	13.9	20	
Isopropylbenzene		50.0	55.8	ug/L	1.72	11.7	20	
p-Isopropyltoluene		50.0	54.2	ug/L	2.88	8.40	20	
4-Methyl-2-Pentanone		50.0	49.1	ug/L	0.0541	1.80	20	
Methylene Chloride		50.0	49.7	ug/L	0.246	0.700	20	
Naphthalene		50.0	45.1	ug/L	1.37	9.70	20	
n-Propylbenzene		50.0	54.5	ug/L	4.03	9.00	20	
Styrene		50.0	56.1	ug/L	1.11	12.2	20	
1,1,1,2-Tetrachloroethane		50.0	52.2	ug/L	0.357	4.30	20	
Tetrachloroethene		50.0	52.0	ug/L	0.291	4.00	20	
1,2,3-Trichlorobenzene		50.0	50.1	ug/L	0.771	0.100	20	
1,2,4-Trichlorobenzene		50.0	50.3	ug/L	0.930	0.500	20	
1,1,1-Trichloroethane		50.0	50.2	ug/L	0.428	0.300	20	
1,1,2-Trichloroethane		50.0	51.9	ug/L	0.230	3.80	20	
Trichloroethene		50.0	51.3	ug/L	0.267	2.60	20	
Trichlorofluoromethane		50.0	49.1	ug/L	0.441	1.80	20	
1,2,3-Trichloropropane		50.0	49.6	ug/L	0.139	0.700	20	
1,2,4-Trimethylbenzene		50.0	54.7	ug/L	2.91	9.30	20	
1,3,5-Trimethylbenzene		50.0	56.6	ug/L	2.92	13.1	20	
o-Xylene		50.0	53.3	ug/L	0.689	6.50	20	
m-,p-Xylene		100	110	ug/L	0.683	9.60	20	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4704439
Report generated 04/08/2016 13:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16031613 Run Date: 04/05/2016 Sample ID: WG563534-02
Instrument ID: HPMS8 Run Time: 10:11 Method: 8260B
File ID: 8M411218 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG563535 Cal ID: HPMS8 - 17-FEB-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	55.8	ug/L	0.522	11.6	20	
1,1-Dichloroethene	CCC	50.0	57.4	ug/L	0.519	14.9	20	
1,2-Dichloropropane	CCC	50.0	59.2	ug/L	0.322	18.3	20	
Ethylbenzene	CCC	50.0	50.1	ug/L	0.547	0.247	20	
Toluene	CCC	50.0	51.8	ug/L	1.44	3.66	20	
Vinyl Chloride	CCC	50.0	56.8	ug/L	0.476	13.5	20	
Bromoform	SPCC	50.0	50.0	ug/L	0.175	0.0542	20	
Chlorobenzene	SPCC	50.0	50.0	ug/L	0.954	0.0358	20	
Chloromethane	SPCC	50.0	60.7	ug/L	0.732	21.4	20	*
1,1-Dichloroethane	SPCC	50.0	57.9	ug/L	0.610	15.7	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	46.2	ug/L	0.461	7.67	20	
Xylenes		150	152	ug/L	0.638	1.60	20	
Acetone		50.0	51.9	ug/L	0.0424	3.80	20	
Benzene		50.0	57.4	ug/L	1.11	14.9	20	
Bromobenzene		50.0	44.4	ug/L	0.653	11.2	20	
Bromochloromethane		50.0	54.6	ug/L	0.149	9.24	20	
Bromodichloromethane		50.0	55.6	ug/L	0.384	11.2	20	
Bromomethane		50.0	42.8	ug/L	0.171	14.4	20	
2-Butanone		50.0	57.4	ug/L	0.0738	14.8	20	
n-Butylbenzene		50.0	49.6	ug/L	2.65	0.773	20	
sec-Butylbenzene		50.0	48.1	ug/L	3.08	3.89	20	
tert-Butylbenzene		50.0	45.2	ug/L	0.502	9.63	20	
Carbon Disulfide		50.0	56.3	ug/L	0.875	12.7	20	
Carbon Tetrachloride		50.0	54.9	ug/L	0.426	9.79	20	
Dibromochloromethane		50.0	49.6	ug/L	0.301	0.814	20	
Chloroethane		50.0	56.8	ug/L	0.215	13.6	20	
2-Chlorotoluene		50.0	45.5	ug/L	2.20	9.02	20	
4-Chlorotoluene		50.0	47.3	ug/L	2.24	5.30	20	
1,2-Dibromo-3-Chloropropane		50.0	43.0	ug/L	0.0818	13.9	20	
1,2-Dibromoethane		50.0	48.9	ug/L	0.219	2.14	20	
Dibromomethane		50.0	55.9	ug/L	0.138	11.7	20	
1,2-Dichlorobenzene		50.0	47.0	ug/L	1.20	5.98	20	
1,3-Dichlorobenzene		50.0	47.2	ug/L	1.38	5.61	20	
1,4-Dichlorobenzene		50.0	46.0	ug/L	1.35	8.09	20	
Dichlorodifluoromethane		50.0	58.7	ug/L	0.463	17.4	20	
1,2-Dichloroethane		50.0	53.8	ug/L	0.382	7.67	20	
cis-1,2-Dichloroethene		50.0	56.0	ug/L	0.305	12.0	20	
trans-1,2-Dichloroethene		50.0	57.0	ug/L	0.482	14.0	20	
1,3-Dichloropropane		50.0	49.7	ug/L	0.404	0.505	20	
2,2-Dichloropropane		50.0	58.2	ug/L	0.482	16.4	20	
cis-1,3-Dichloropropene		50.0	58.3	ug/L	0.438	16.6	20	
trans-1,3-Dichloropropene		50.0	50.7	ug/L	0.472	1.46	20	

CCV - Modified 03/05/2008
PDF File ID: 4704441
Report generated 04/08/2016 13:14

Login Number: L16031613 Run Date: 04/05/2016 Sample ID: WG563534-02
Instrument ID: HPMS8 Run Time: 10:11 Method: 8260B
File ID: 8M411218 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG563535 Cal ID: HPMS8 - 17-FEB-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	54.3	ug/L	0.403	8.54	20	
2-Hexanone		50.0	52.3	ug/L	0.0720	4.53	20	
Hexachlorobutadiene		50.0	46.9	ug/L	0.355	6.18	20	
Isopropylbenzene		50.0	52.8	ug/L	1.63	5.69	20	
p-Isopropyltoluene		50.0	48.3	ug/L	2.56	3.40	20	
4-Methyl-2-Pentanone		50.0	55.0	ug/L	0.0606	9.97	20	
Methylene Chloride		50.0	54.7	ug/L	0.271	9.43	20	
Naphthalene		50.0	44.5	ug/L	1.35	10.9	20	
n-Propylbenzene		50.0	47.7	ug/L	3.52	4.69	20	
Styrene		50.0	53.9	ug/L	1.06	7.70	20	
1,1,1,2-Tetrachloroethane		50.0	50.5	ug/L	0.345	1.01	20	
Tetrachloroethene		50.0	49.1	ug/L	0.275	1.80	20	
1,2,3-Trichlorobenzene		50.0	44.8	ug/L	0.690	10.4	20	
1,2,4-Trichlorobenzene		50.0	44.8	ug/L	0.829	10.4	20	
1,1,1-Trichloroethane		50.0	54.3	ug/L	0.463	8.55	20	
1,1,2-Trichloroethane		50.0	50.8	ug/L	0.225	1.62	20	
Trichloroethene		50.0	53.6	ug/L	0.279	7.15	20	
Trichlorofluoromethane		50.0	54.2	ug/L	0.487	8.36	20	
1,2,3-Trichloropropane		50.0	43.3	ug/L	0.121	13.4	20	
1,2,4-Trimethylbenzene		50.0	48.6	ug/L	2.59	2.70	20	
1,3,5-Trimethylbenzene		50.0	47.0	ug/L	2.42	6.02	20	
o-Xylene		50.0	48.7	ug/L	0.630	2.52	20	
m-,p-Xylene		100	104	ug/L	0.646	3.67	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4704441
Report generated 04/08/2016 13:14

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16031613 Run Date: 04/06/2016 Sample ID: WG563756-02
Instrument ID: HPMS8 Run Time: 13:04 Method: 8260B
File ID: 8M411248 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG563757 Cal ID: HPMS8 - 17-FEB-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	54.2	ug/L	0.507	8.49	20	
1,1-Dichloroethene	CCC	50.0	55.5	ug/L	0.502	11.1	20	
1,2-Dichloropropane	CCC	50.0	57.1	ug/L	0.311	14.3	20	
Ethylbenzene	CCC	50.0	50.3	ug/L	0.549	0.598	20	
Toluene	CCC	50.0	53.1	ug/L	1.48	6.17	20	
Vinyl Chloride	CCC	50.0	54.8	ug/L	0.460	9.53	20	
Bromoform	SPCC	50.0	52.1	ug/L	0.183	4.28	20	
Chlorobenzene	SPCC	50.0	51.0	ug/L	0.972	1.91	20	
Chloromethane	SPCC	50.0	58.7	ug/L	0.707	17.4	20	
1,1-Dichloroethane	SPCC	50.0	55.8	ug/L	0.589	11.7	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	48.1	ug/L	0.481	3.83	20	
Tetrachloroethene		50.0	49.7	ug/L	0.278	0.646	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4704441
Report generated 04/08/2016 13:14

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16031613
Instrument ID: HPMS8
Workgroup (AAB#): WG563535

ICAL CCV Number: WG556046-08
CAL ID: HPMS8-17-FEB-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG556046-08	NA	NA	312633	592238	835274
Upper Limit	NA	NA	625266	1184476	1670548
Lower Limit	NA	NA	156317	296119	417637
L16031613-01	1.00	01	348972	704440	882154
L16031613-02	1.00	01	370533	732427	905699
WG563535-01	1.00	01	376022	768869	970096
WG563535-02	1.00	01	449855	789603	993969

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: 4707792
Report generated 04/08/2016 13:14

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16031613
Instrument ID: HPMS8
Workgroup (AAB#): WG563757

ICAL CCV Number: WG556046-08
CAL ID: HPMS8-17-FEB-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG556046-08	NA	NA	312633	592238	835274
Upper Limit	NA	NA	625266	1184476	1670548
Lower Limit	NA	NA	156317	296119	417637
L16031613-01	10.0	DL01	390641	782843	1040712
WG563757-01	1.00	01	369696	747152	980447
WG563757-02	1.00	01	432983	776291	1018921

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: 4707792
Report generated 04/08/2016 13:14

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16031613
Instrument ID: HPMS8
Workgroup (AAB#): WG563535

ICAL CCV Number: WG556046-08
CAL ID: HPMS8-17-FEB-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG556046-08	NA	NA	17.59	14.57	10.71
Upper Limit	NA	NA	18.09	15.07	11.21
Lower Limit	NA	NA	17.09	14.07	10.21
L16031613-01	1.00	01	17.59	14.57	10.71
L16031613-02	1.00	01	17.59	14.58	10.71
WG563535-01	1.00	01	17.59	14.57	10.71
WG563535-02	1.00	01	17.59	14.57	10.71

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: 4707794
Report generated: 04/08/2016 13:14

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16031613
Instrument ID: HPMS8
Workgroup (AAB#): WG563757

ICAL CCV Number: WG556046-08
CAL ID: HPMS8 - 17-FEB-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG556046-08	NA	NA	17.59	14.57	10.71
Upper Limit	NA	NA	18.09	15.07	11.21
Lower Limit	NA	NA	17.09	14.07	10.21
L16031613-01	10.0	DL01	17.6	14.57	10.71
WG563757-01	1.00	01	17.6	14.57	10.72
WG563757-02	1.00	01	17.6	14.57	10.71

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: 4707794
Report generated: 04/08/2016 13:14

2.1.1.3 Sample Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040516\8M411239.D Vial: 23
Acq On : 5 Apr 2016 20:34 Operator: TMB
Sample : L16031613-01 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 06 08:29:11 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

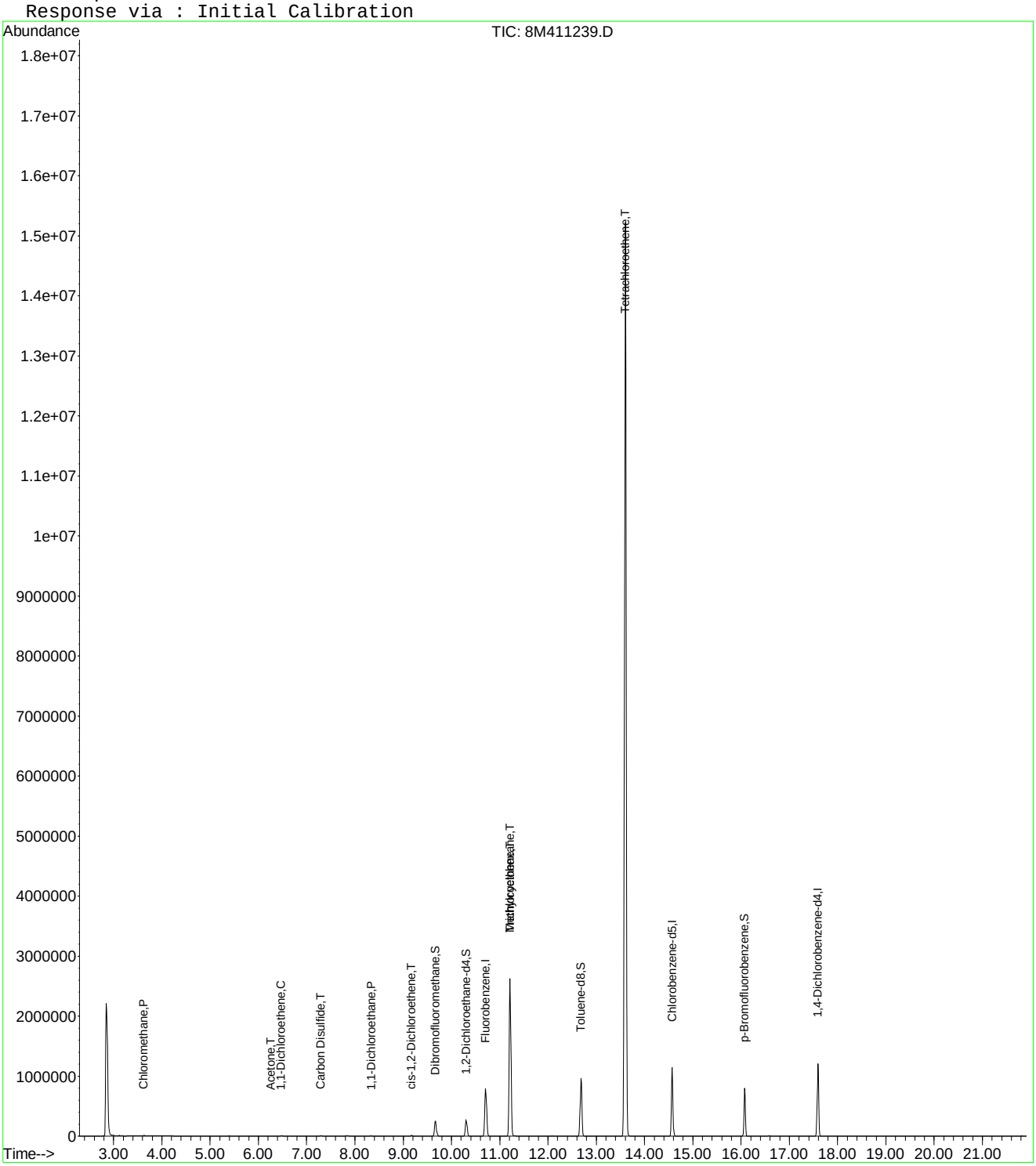
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	882154	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	704440	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	348972	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	223534	24.6855	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.76%			
43) 1,2-Dichloroethane-d4	10.30	65	230939	23.8185	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 95.28%			
58) Toluene-d8	12.68	98	815492	23.4450	ug/L	-0.01
Spiked Amount 25.000	Range 88 - 110		Recovery = 93.76%			
80) p-Bromofluorobenzene	16.07	95	322912	23.8201	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.28%			
Target Compounds						Qvalue
3) Chloromethane	3.63	50	6389	0.3005	ug/L #	54
13) Acetone	6.26	43	3384	2.3455	ug/L	94
14) 1,1-Dichloroethene	6.47	61	7313	0.4588	ug/L	93
20) Carbon Disulfide	7.30	76	19520	0.7125	ug/L	95
27) 1,1-Dichloroethane	8.34	63	12846	0.6909	ug/L #	89
32) cis-1,2-Dichloroethene	9.17	96	6390	0.6658	ug/L	93
47) Trichloroethene	11.21	130	974917	106.0844	ug/L	96
48) Methylcyclohexane	11.21	83	13963	1.0551	ug/L #	1
66) Tetrachloroethene	13.60	164	3836498	486.5465	ug/L	87

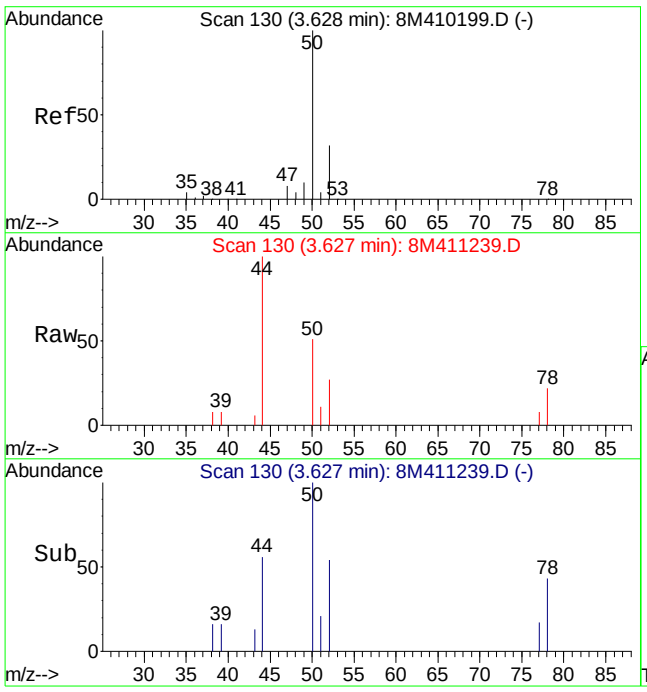
(#) = qualifier out of range (m) = manual integration
8M411239.D 8260WTR.M Wed Apr 06 08:29:12 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040516\8M411239.D Vial: 23
Acq On : 5 Apr 2016 20:34 Operator: TMB
Sample : L16031613-01 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 8:29 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration

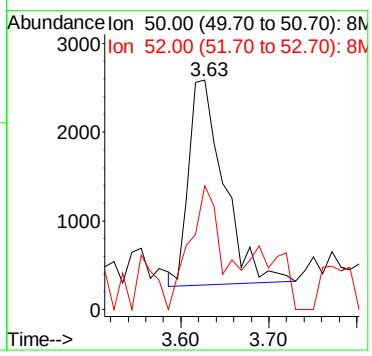


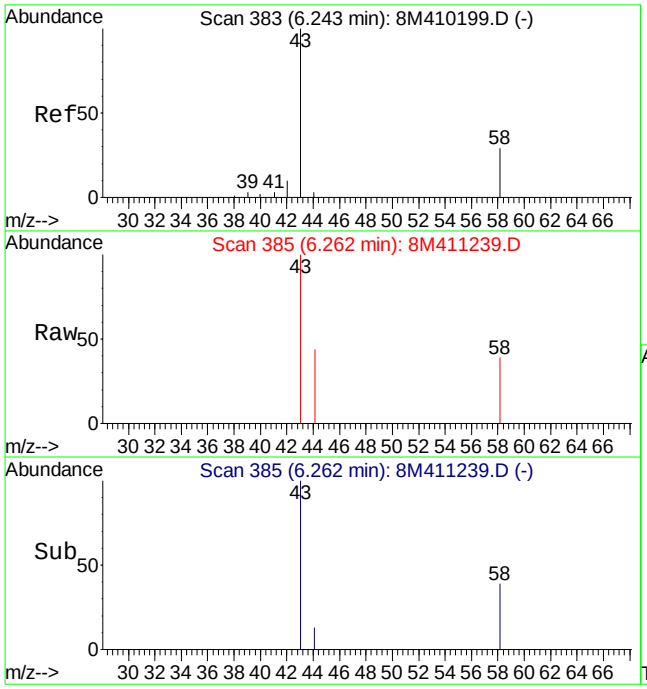


#3
Chloromethane
Concen: 0.30 ug/L
RT: 3.63 min Scan# 130
Delta R.T. 0.01 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 50 Resp: 6389

Ion	Ratio	Lower	Upper
50	100		
52	57.6	19.3	44.9#

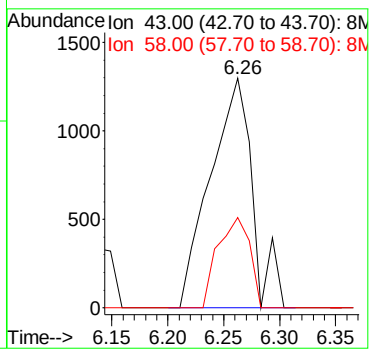


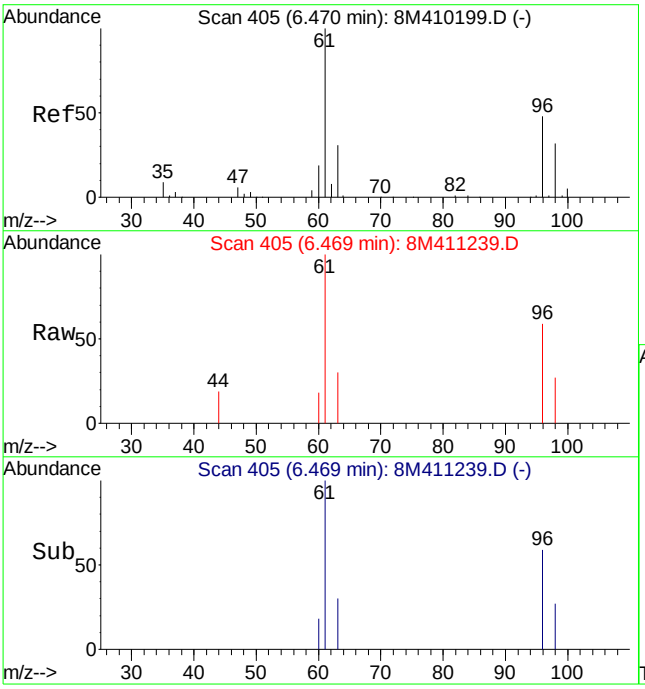


#13
Acetone
Concen: 2.35 ug/L
RT: 6.26 min Scan# 385
Delta R.T. 0.01 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 43 Resp: 3384

Ion	Ratio	Lower	Upper
43	100		
58	29.9	16.2	37.8

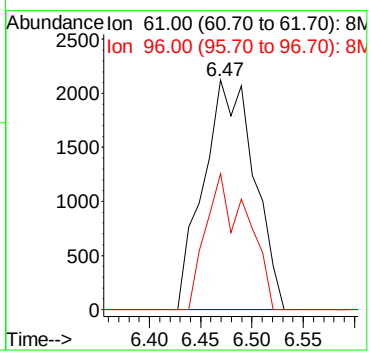


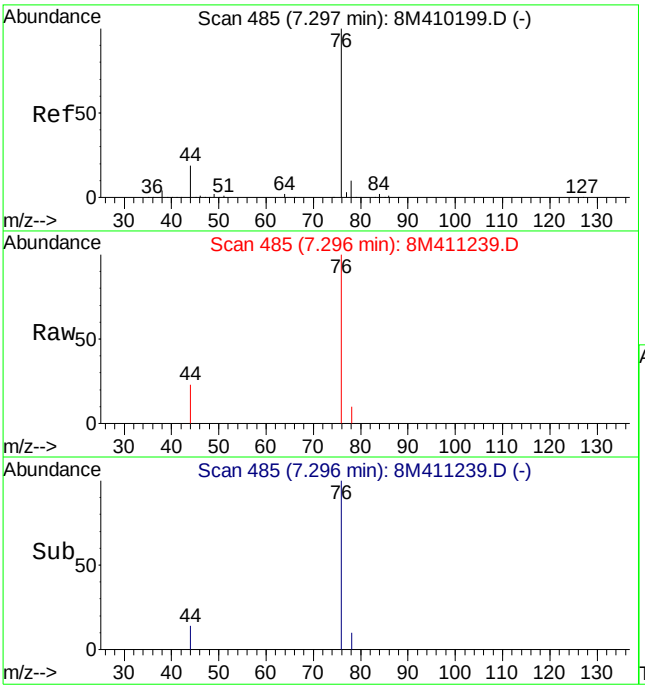


#14
1,1-Dichloroethene
Concen: 0.46 ug/L
RT: 6.47 min Scan# 405
Delta R.T. 0.00 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 61 Resp: 7313

Ion	Ratio	Lower	Upper
61	100		
96	48.2	31.9	74.5

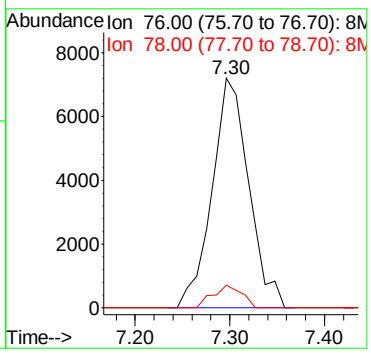


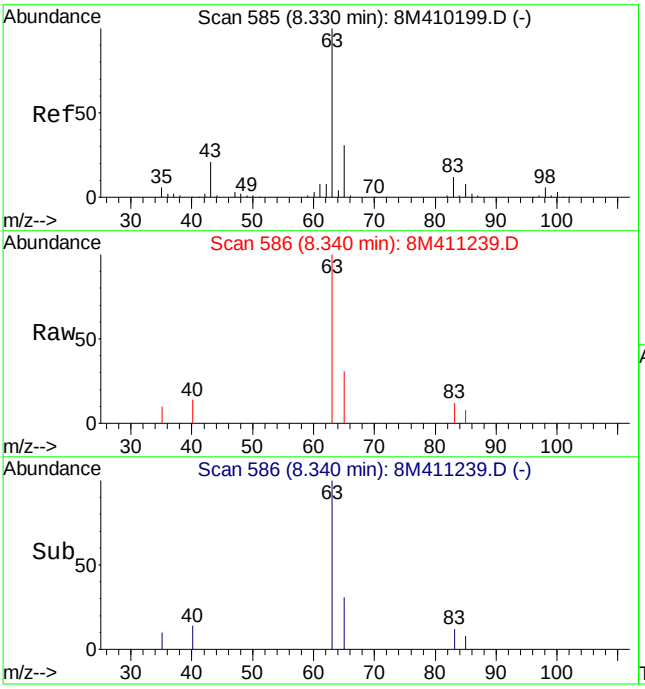


#20
Carbon Disulfide
Concen: 0.71 ug/L
RT: 7.30 min Scan# 485
Delta R.T. 0.00 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 76 Resp: 19520

Ion	Ratio	Lower	Upper
76	100		
78	7.7	5.8	13.4

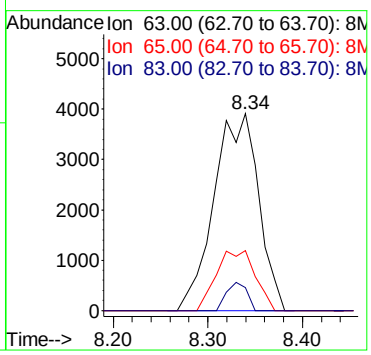


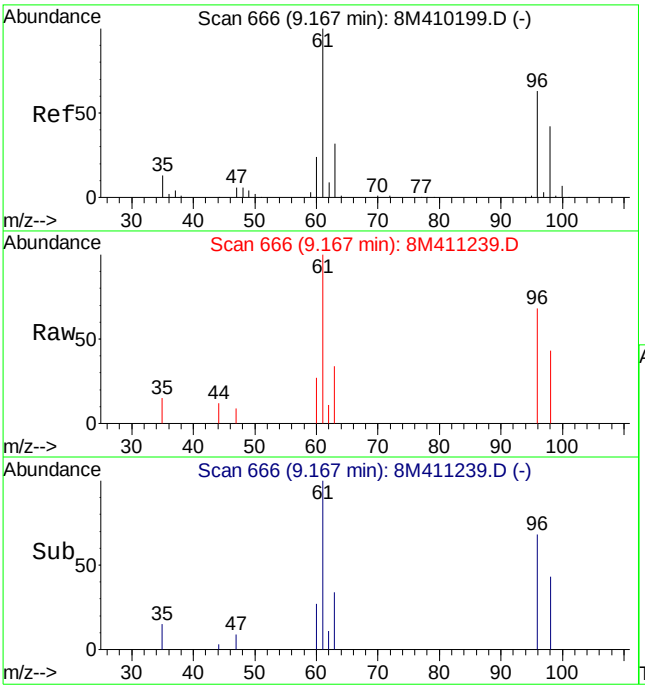


#27
1,1-Dichloroethane
Concen: 0.69 ug/L
RT: 8.34 min Scan# 586
Delta R.T. 0.01 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 63 Resp: 12846

Ion	Ratio	Lower	Upper
63	100		
65	26.8	19.1	44.5
83	6.7	7.7	18.1#

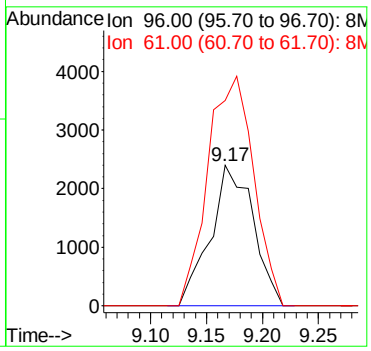


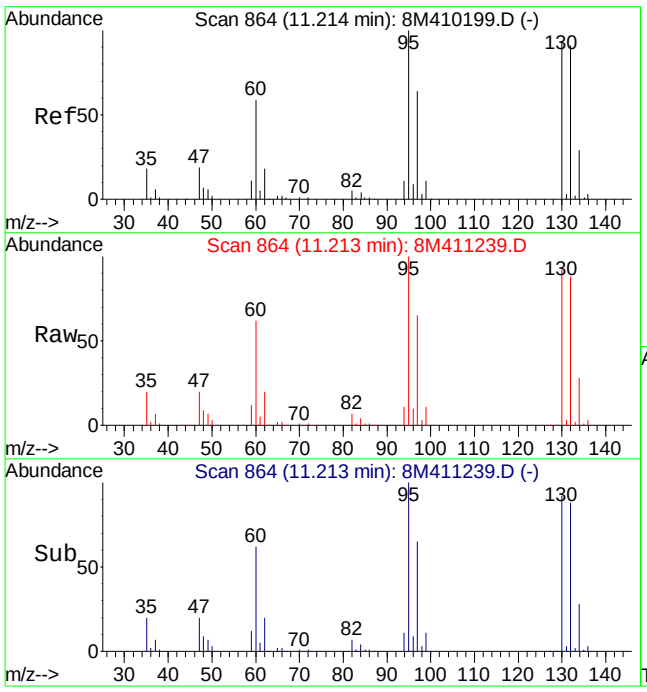


#32
cis-1,2-Dichloroethene
Concen: 0.67 ug/L
RT: 9.17 min Scan# 666
Delta R.T. 0.00 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 96 Resp: 6390

Ion	Ratio	Lower	Upper
96	100		
61	174.4	98.9	230.7

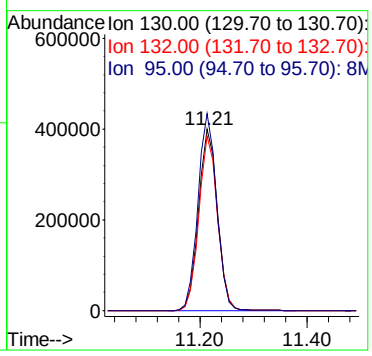


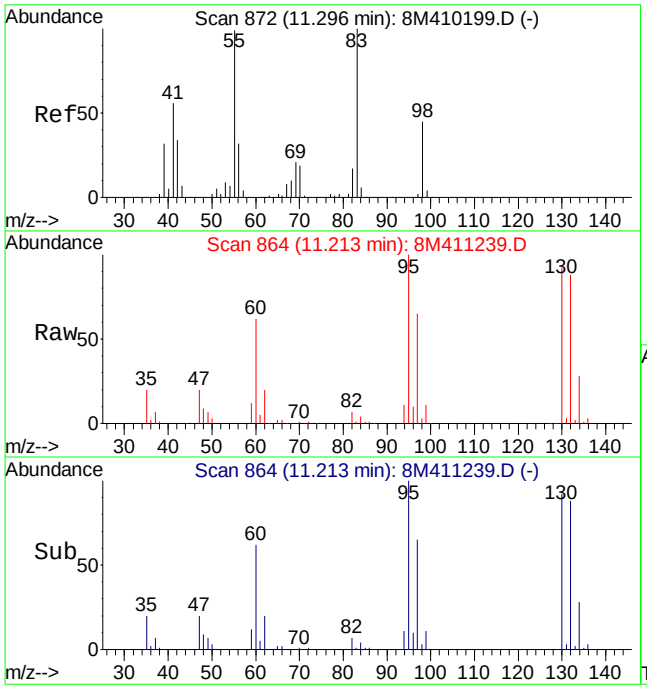


#47
Trichloroethene
Concen: 106.08 ug/L
RT: 11.21 min Scan# 864
Delta R.T. 0.00 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion:130 Resp: 974917

Ion	Ratio	Lower	Upper
130	100		
132	95.1	59.9	139.7
95	107.8	62.3	145.5

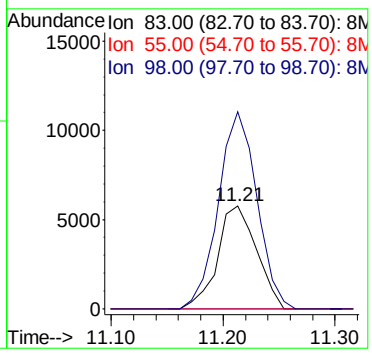


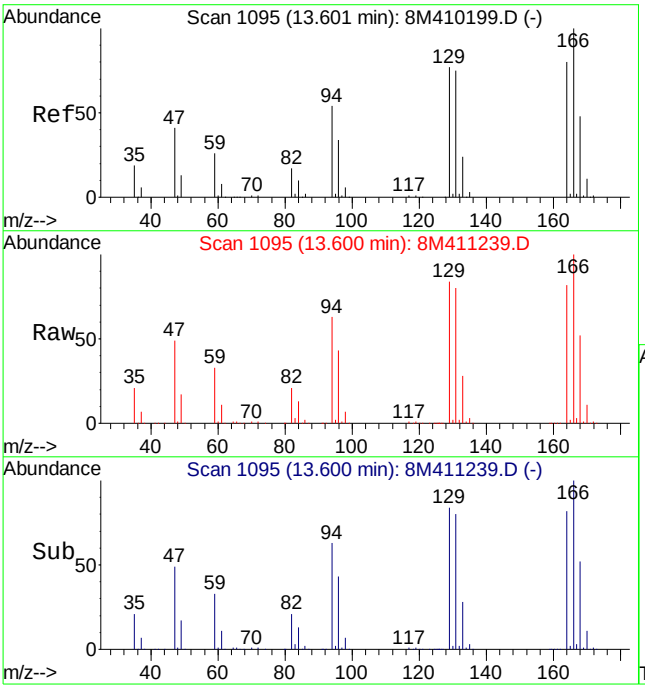


#48
Methylcyclohexane
Concen: 1.06 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.08 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion: 83 Resp: 13963

Ion	Ratio	Lower	Upper
83	100		
55	0.0	55.6	129.8#
98	189.2	28.3	66.1#

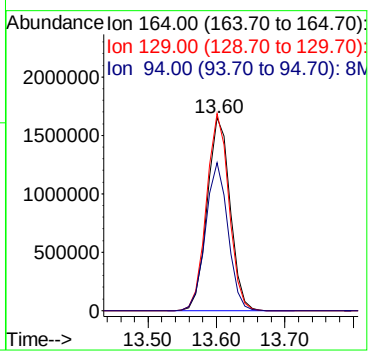




#66
Tetrachloroethene
Concen: 486.55 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. 0.00 min
Lab File: 8M411239.D
Acq: 5 Apr 2016 20:34

Tgt Ion:164 Resp: 3836498

Ion	Ratio	Lower	Upper
164	100		
129	100.1	54.1	126.3
94	74.7	37.6	87.6



Data File : C:\MSDCHEM\2\DATA\040616\8M411257.D Vial: 11
Acq On : 6 Apr 2016 17:29 Operator: TMB
Sample : L16031613-01 B 10X 826-LOW D1 Inst : HPMS8
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 07 08:26:02 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

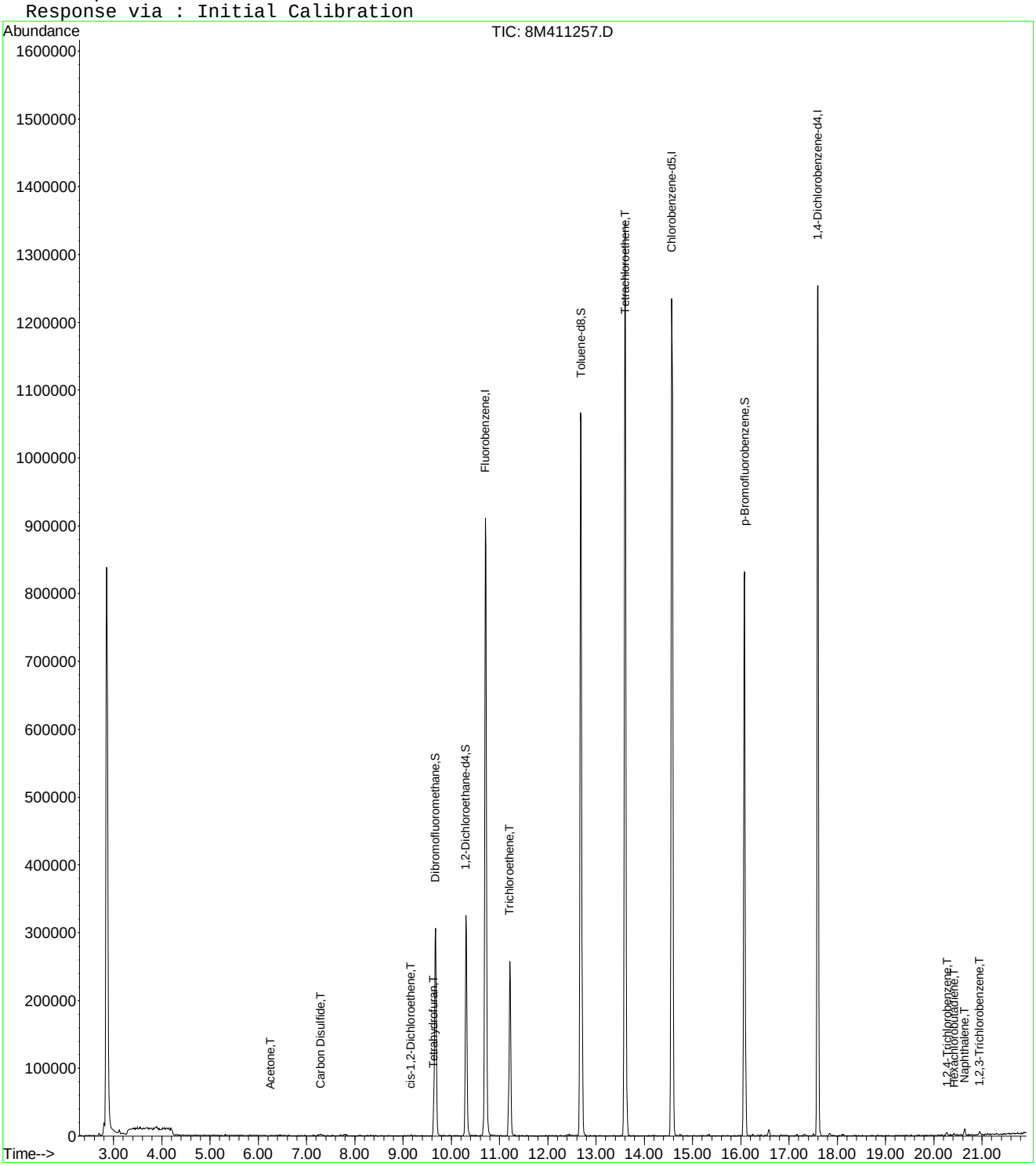
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	1040712	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	782843	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	390641	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	260222	24.3588	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.44%			
43) 1,2-Dichloroethane-d4	10.30	65	278627	24.3587	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.44%			
58) Toluene-d8	12.69	98	925512	23.9432	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.76%			
80) p-Bromofluorobenzene	16.08	95	354837	23.3830	ug/L	0.01
Spiked Amount 25.000	Range 86 - 115		Recovery = 93.52%			
Target Compounds						Qvalue
13) Acetone	6.25	43	704	0.4136	ug/L #	48
20) Carbon Disulfide	7.30	76	4470	0.1383	ug/L #	86
32) cis-1,2-Dichloroethene	9.17	96	1478	0.1305	ug/L #	34
36) Tetrahydrofuran	9.63	42	1408	0.7853	ug/L #	41
47) Trichloroethene	11.21	130	99011	9.1323	ug/L	96
66) Tetrachloroethene	13.60	164	367542	41.9436	ug/L	92
98) 1,2,4-Trichlorobenzene	20.28	180	2690	0.1860	ug/L	91
99) Hexachlorobutadiene	20.42	225	1170	0.1978	ug/L #	56
100) Naphthalene	20.64	128	9302	0.3931	ug/L	88
101) 1,2,3-Trichlorobenzene	20.95	180	2801	0.2328	ug/L #	68

(#) = qualifier out of range (m) = manual integration
8M411257.D 8260WTR.M Thu Apr 07 08:26:03 2016 Page 1

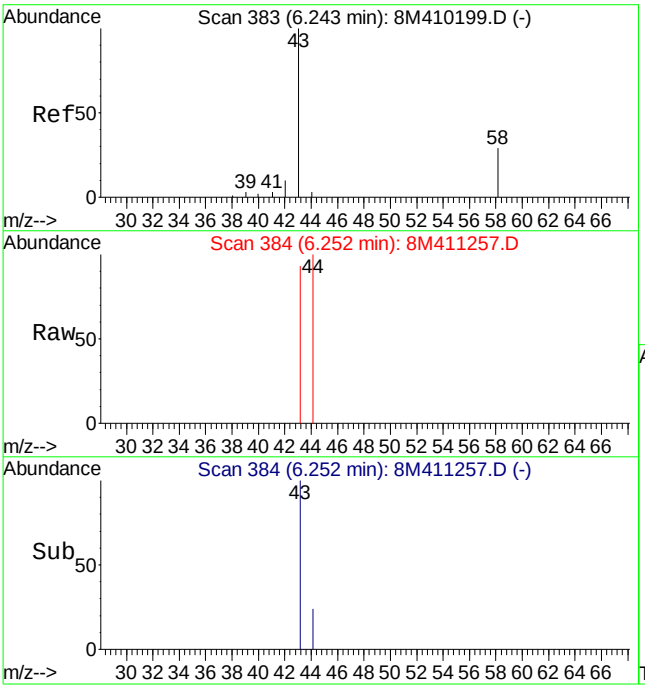
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040616\8M411257.D Vial: 11
Acq On : 6 Apr 2016 17:29 Operator: TMB
Sample : L16031613-01 B 10X 826-LOW D1 Inst : HPMS8
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 7 8:26 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration



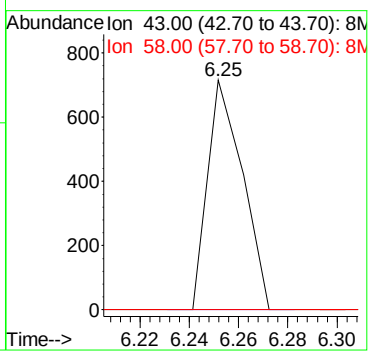
8M411257.D 8260WTR.M Thu Apr 07 08:26:03 2016 Page 2

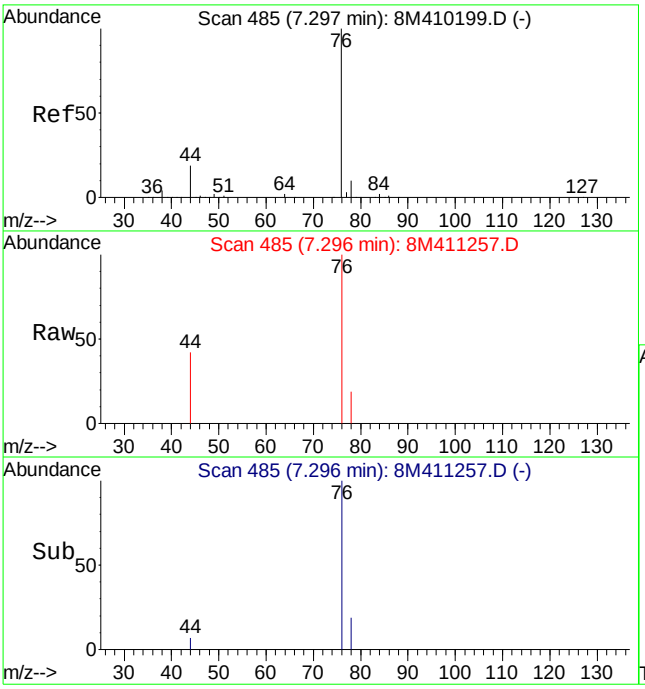


#13
Acetone
Concen: 0.41 ug/L
RT: 6.25 min Scan# 384
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion: 43 Resp: 704

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

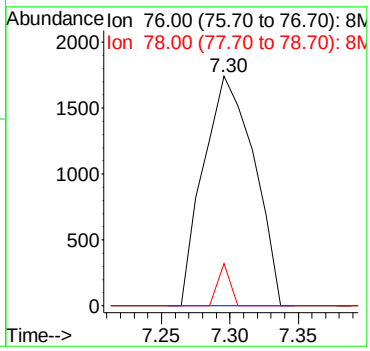


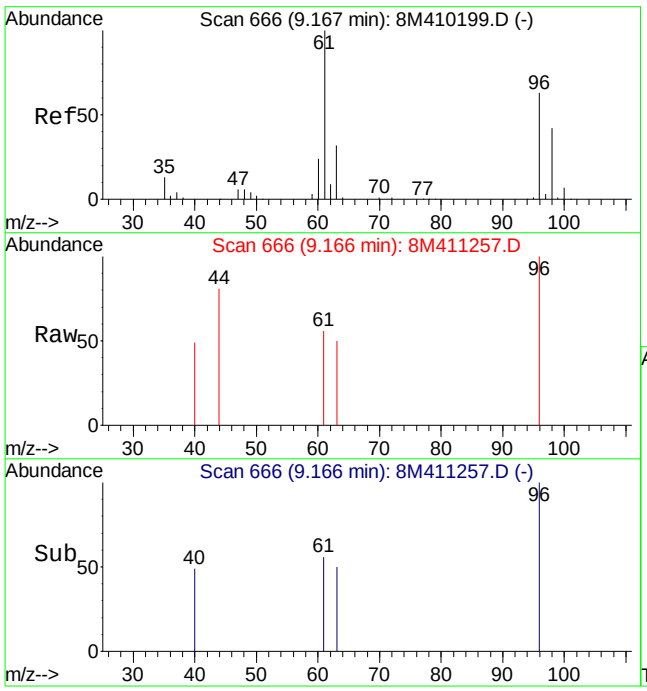


#20
Carbon Disulfide
Concen: 0.14 ug/L
RT: 7.30 min Scan# 485
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion: 76 Resp: 4470

Ion	Ratio	Lower	Upper
76	100		
78	4.5	5.8	13.4#

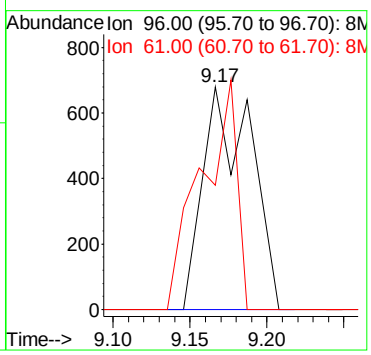


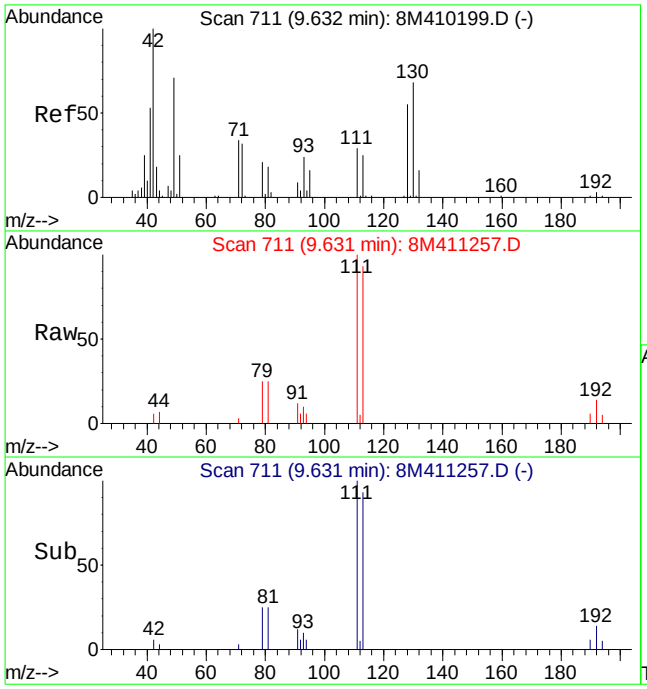


#32
cis-1,2-Dichloroethene
Concen: 0.13 ug/L
RT: 9.17 min Scan# 666
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion: 96 Resp: 1478

Ion	Ratio	Lower	Upper
96	100		
61	76.5	98.9	230.7#

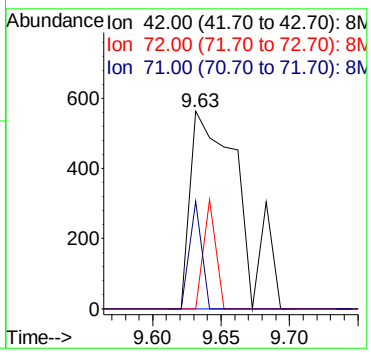


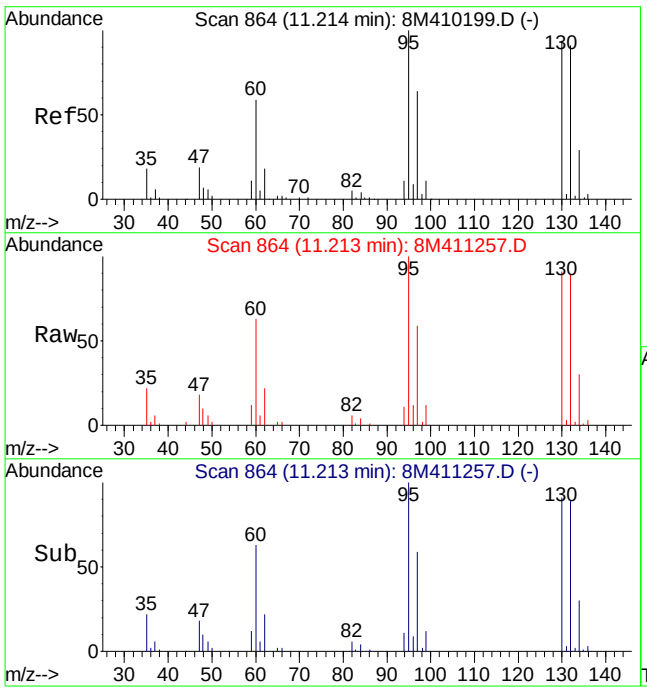


#36
Tetrahydrofuran
Concen: 0.79 ug/L
RT: 9.63 min Scan# 711
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion: 42 Resp: 1408

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

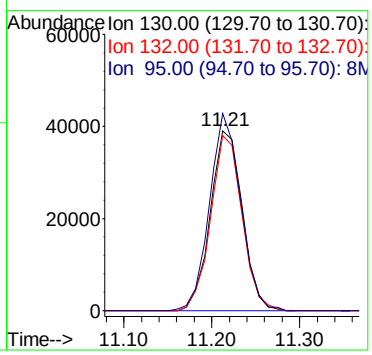


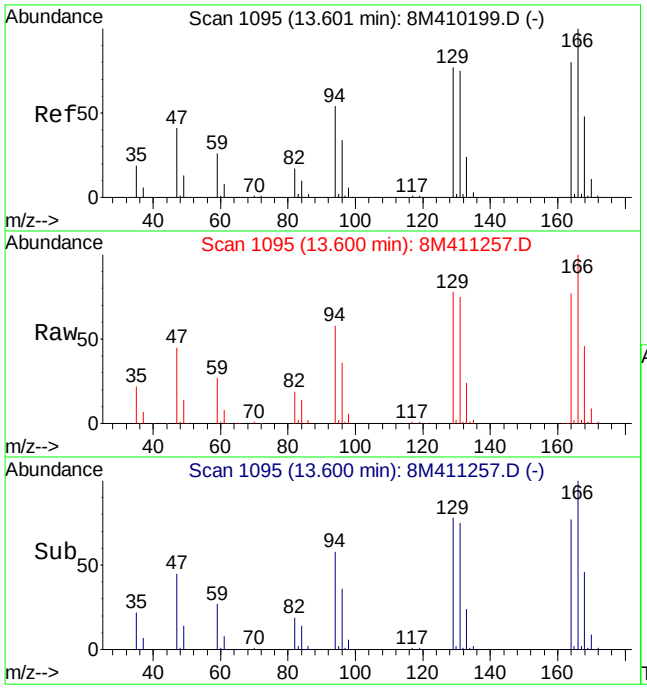


#47
Trichloroethene
Concen: 9.13 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion:130 Resp: 99011

Ion	Ratio	Lower	Upper
130	100		
132	95.3	59.9	139.7
95	106.7	62.3	145.5

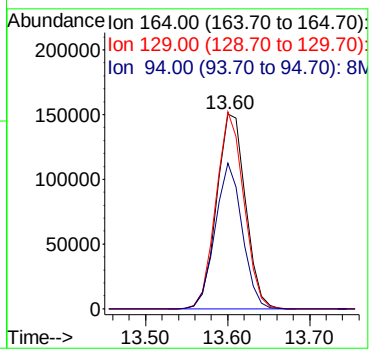


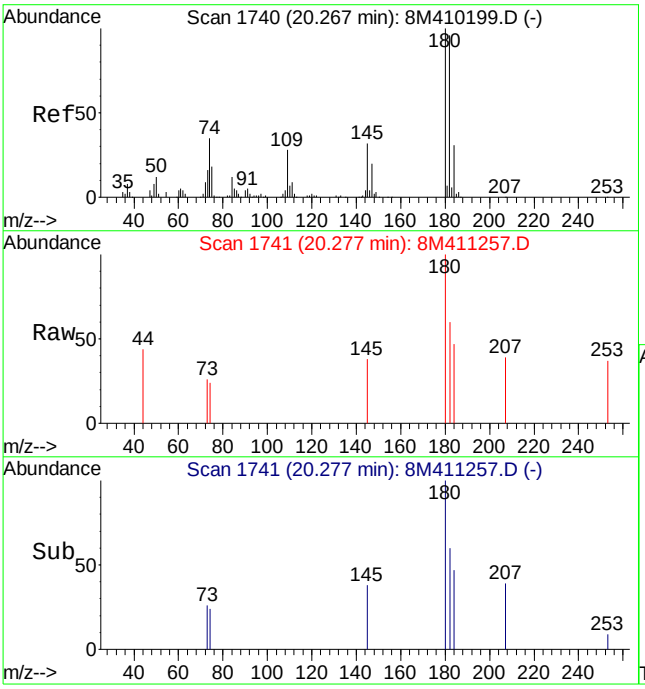


#66
Tetrachloroethene
Concen: 41.94 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion:164 Resp: 367542

Ion	Ratio	Lower	Upper
164	100		
129	97.4	54.1	126.3
94	70.1	37.6	87.6

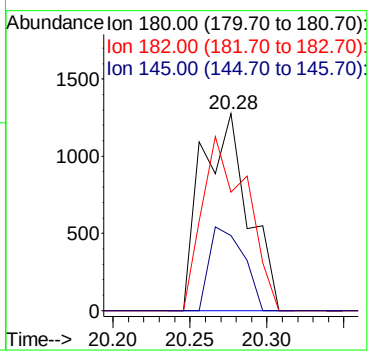


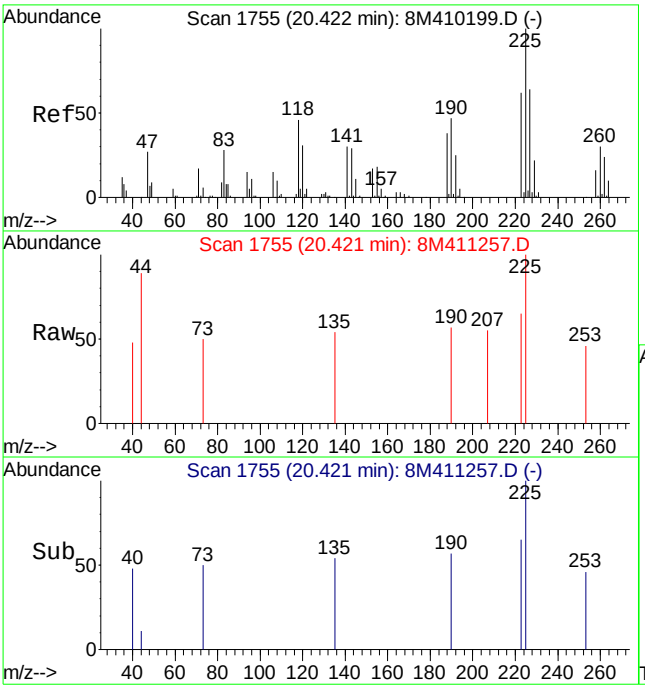


#98
1,2,4-Trichlorobenzene
Concen: 0.19 ug/L
RT: 20.28 min Scan# 1741
Delta R.T. 0.01 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion:180 Resp: 2690

Ion	Ratio	Lower	Upper
180	100		
182	84.3	56.9	132.9
145	31.2	18.4	42.8

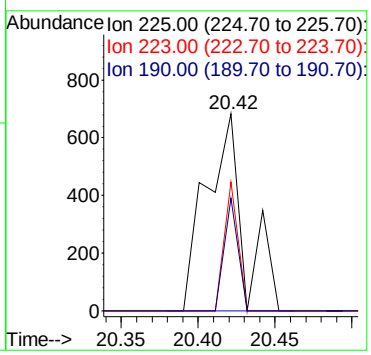


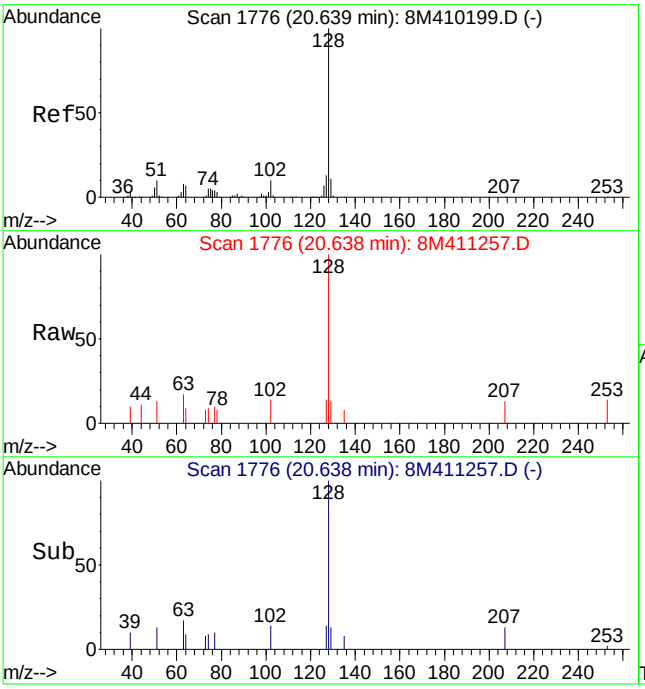


#99
Hexachlorobutadiene
Concen: 0.20 ug/L
RT: 20.42 min Scan# 1755
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion:225 Resp: 1170

Ion	Ratio	Lower	Upper
225	100		
223	23.7	37.0	86.4#
190	20.7	26.8	62.6#

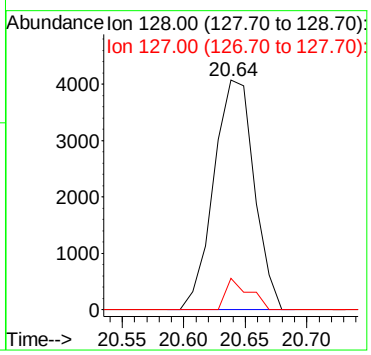


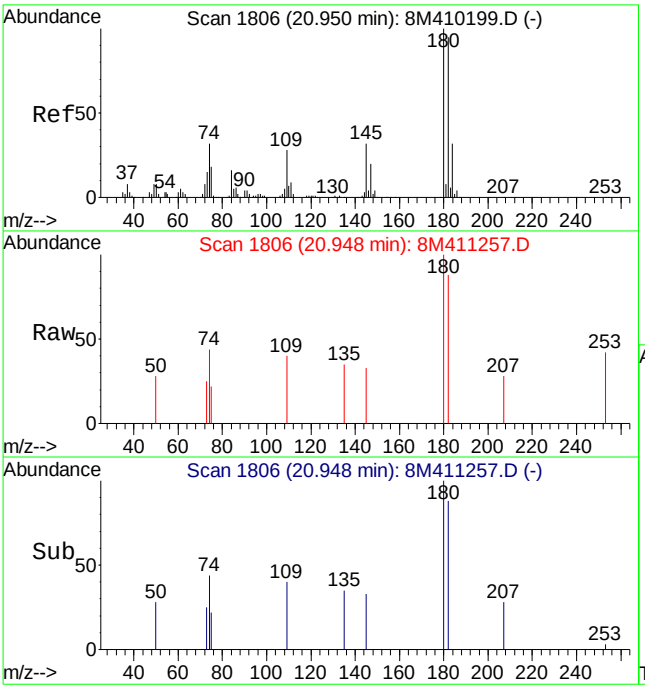


#100
Naphthalene
Concen: 0.39 ug/L
RT: 20.64 min Scan# 1776
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion:128 Resp: 9302

Ion	Ratio	Lower	Upper
128	100		
127	7.8	7.6	17.6

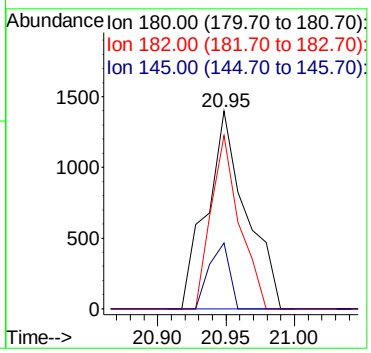




#101
1,2,3-Trichlorobenzene
Concen: 0.23 ug/L
RT: 20.95 min Scan# 1806
Delta R.T. -0.00 min
Lab File: 8M411257.D
Acq: 6 Apr 2016 17:29

Tgt Ion:180 Resp: 2801

Ion	Ratio	Lower	Upper
180	100		
182	62.9	57.3	133.7
145	17.3	19.6	45.6#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040516\8M411231.D Vial: 15
Acq On : 5 Apr 2016 16:38 Operator: TMB
Sample : L16031613-02 A TB 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 06 08:29:00 2016 Quant Results File: 8260WTR.RES

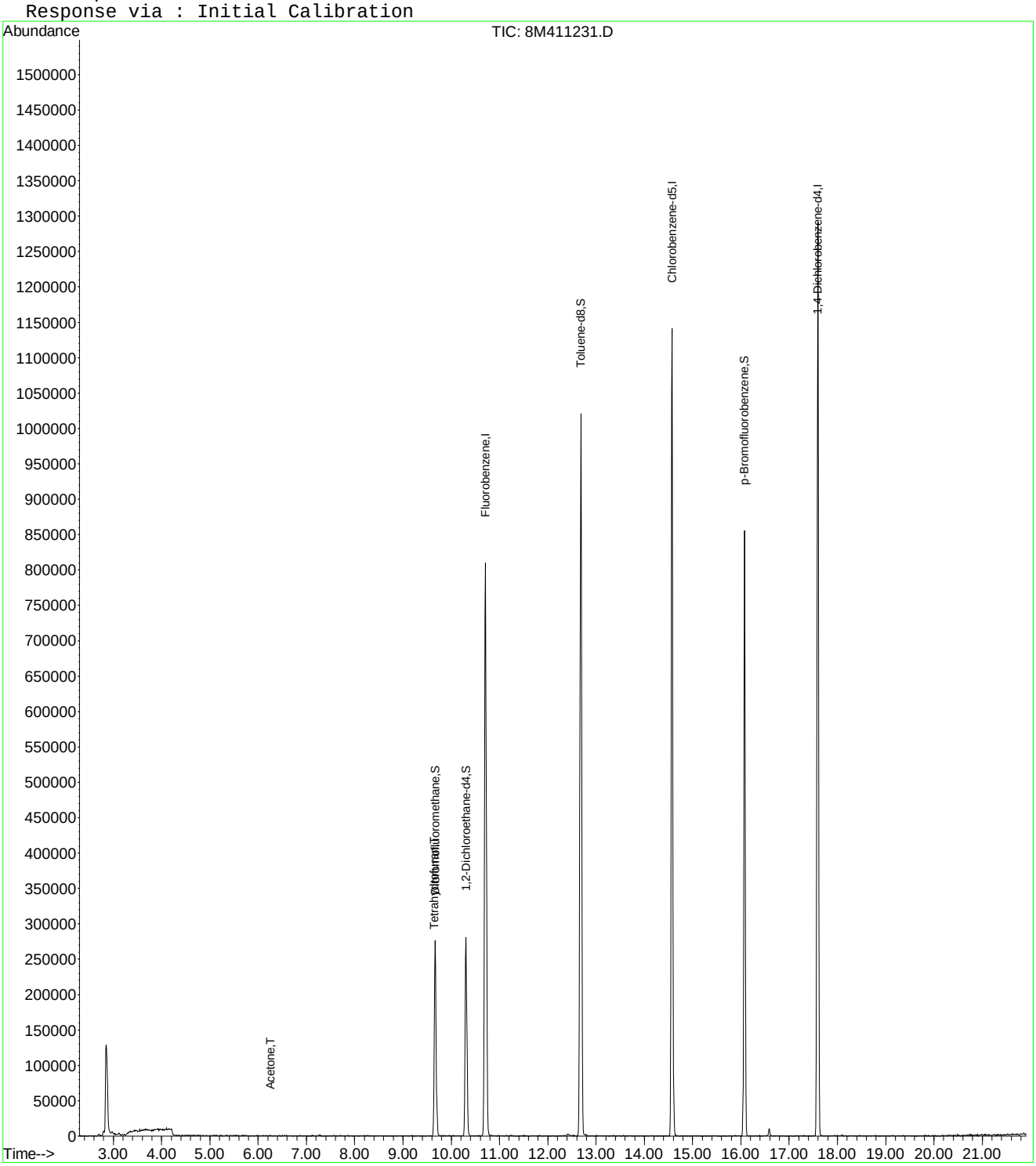
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

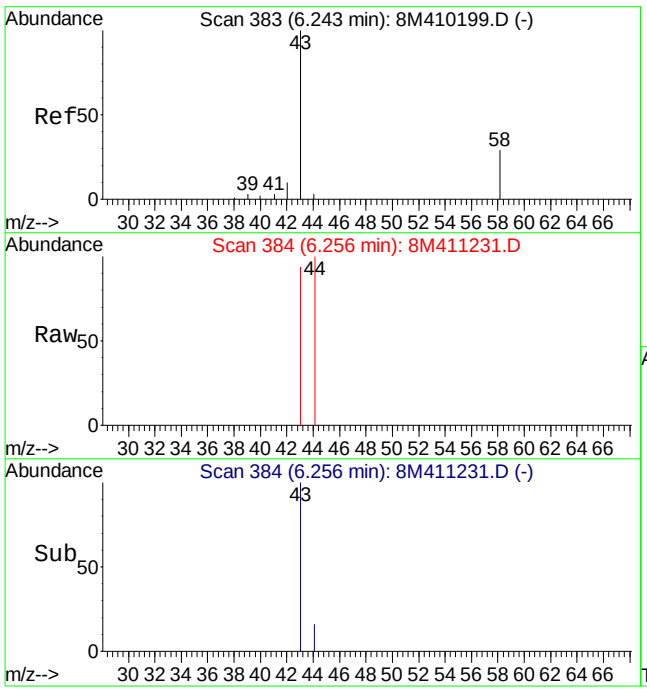
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	905699	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	732427	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	370533	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	231734	24.9258 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 99.72%		
43) 1,2-Dichloroethane-d4	10.31	65	245293	24.6412 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.56%		
58) Toluene-d8	12.68	98	840717	23.2466 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 93.00%		
80) p-Bromofluorobenzene	16.07	95	342370	23.7858 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.16%		
Target Compounds					Qvalue
13) Acetone	6.26	43	570	0.3848 ug/L #	48
36) Tetrahydrofuran	9.66	42	1230	0.7883 ug/L #	41

(#) = qualifier out of range (m) = manual integration
8M411231.D 8260WTR.M Wed Apr 06 08:29:01 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\040516\8M411231.D Vial: 15
Acq On : 5 Apr 2016 16:38 Operator: TMB
Sample : L16031613-02 A TB 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 8:29 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration

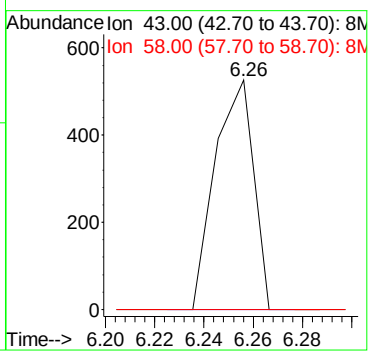


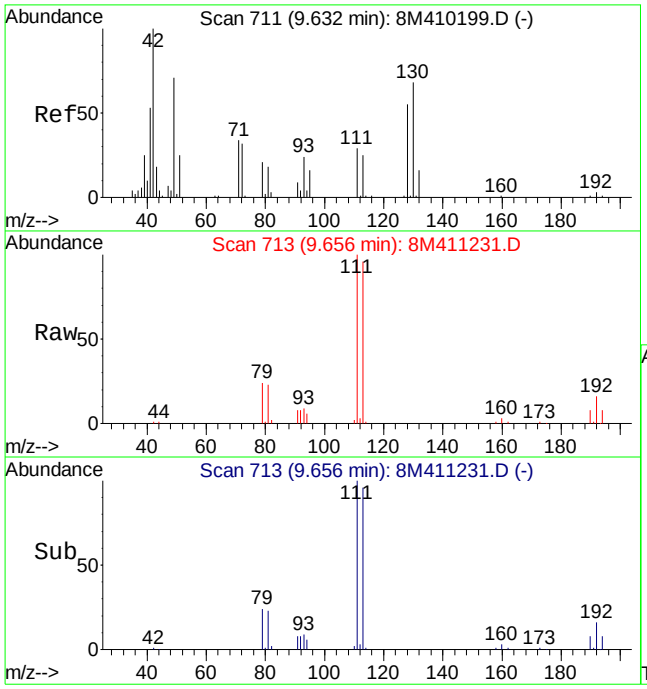


#13
Acetone
Concen: 0.38 ug/L
RT: 6.26 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411231.D
Acq: 5 Apr 2016 16:38

Tgt Ion: 43 Resp: 570

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

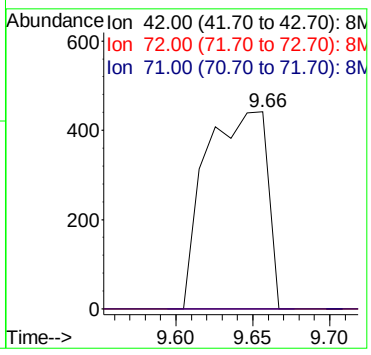




#36
Tetrahydrofuran
Concen: 0.79 ug/L
RT: 9.66 min Scan# 713
Delta R.T. 0.02 min
Lab File: 8M411231.D
Acq: 5 Apr 2016 16:38

Tgt Ion: 42 Resp: 1230

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#



2.1.1.4 Standards Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407828.D Vial: 2
Acq On : 5 Oct 2015 11:49 Operator: TMB
Sample : WG540826-02 5ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:55 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

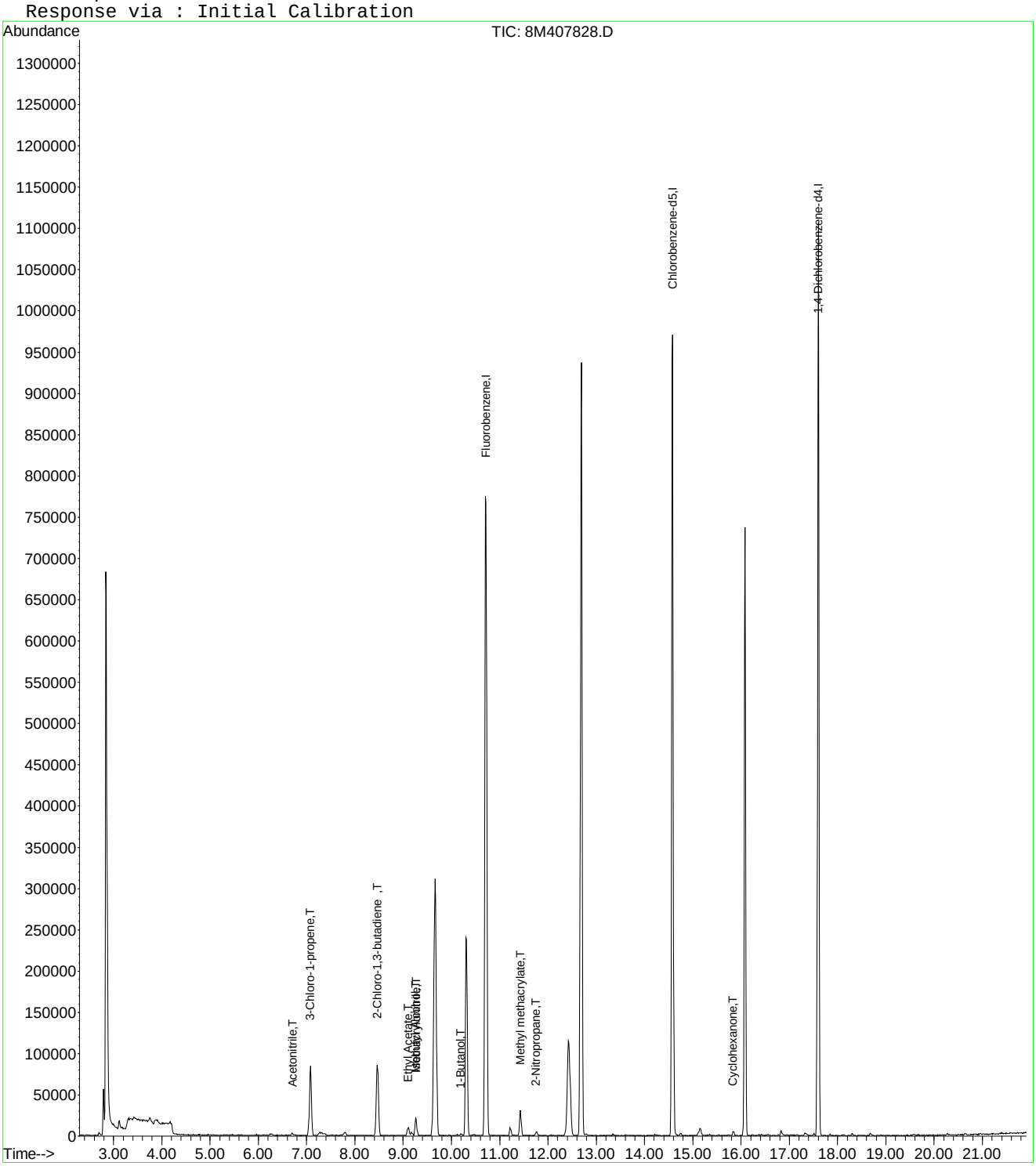
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.72	96	928093	25.00	ug/L		0.00
11) Chlorobenzene-d5	14.58	117	670481	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	347120	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	6.71	41	3724	5.2139	ug/L		81
3) 3-Chloro-1-propene	7.08	41	87895	5.0600	ug/L		95
4) 2-Chloro-1,3-butadiene	8.46	53	83096	4.6491	ug/L		97
5) Ethyl Acetate	9.11	43	19297	4.0869	ug/L		95
6) Methacrylonitrile	9.27	67	8508	4.1055	ug/L		97
7) Isobutyl Alcohol	9.26	43	1318	6.8122	ug/L	#	56
8) 1-Butanol	10.19	56	1930	20.2377	ug/L	#	64
9) Methyl methacrylate	11.43	41	22250	3.8908	ug/L		96
10) 2-Nitropropane	11.75	43	2454	2.5566	ug/L		66
13) Cyclohexanone	15.83	55	2773	3.7471	ug/L	#	43

(#) = qualifier out of range (m) = manual integration
8M407828.D A9FOOWTR.M Tue Oct 06 11:56:56 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407828.D Vial: 2
Acq On : 5 Oct 2015 11:49 Operator: TMB
Sample : WG540826-02 5ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407828.D Vial: 2
Acq On : 5 Oct 2015 11:49 Operator: TMB
Sample : WG540826-02 5ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	5.0000	5.2139	-4.3	100	0.01
3	T	3-Chloro-1-propene	5.0000	5.0600	-1.2	100	0.00
4	T	2-Chloro-1,3-butadiene	5.0000	4.6491	7.0	100	0.00
5	T	Ethyl Acetate	5.0000	4.0869	18.3	100	0.01
6	T	Methacrylonitrile	5.0000	4.1055	17.9	100	0.01
7	T	Isobutyl Alcohol	-1.0000	6.8122	0.0	100	-0.01
8	T	1-Butanol	-1.0000	20.2377	0.0	100	0.00
9	T	Methyl methacrylate	5.0000	3.8908	22.2	100	0.00
10	T	2-Nitropropane	-1.0000	2.5566	0.0	0	-0.01
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	3.7471	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407828.D A9FOOWTR.M Tue Oct 06 11:54:24 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407829.D Vial: 3
Acq On : 5 Oct 2015 12:17 Operator: TMB
Sample : WG540826-03 20ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:56 2015 Quant Results File: A9FOOWTR.RES

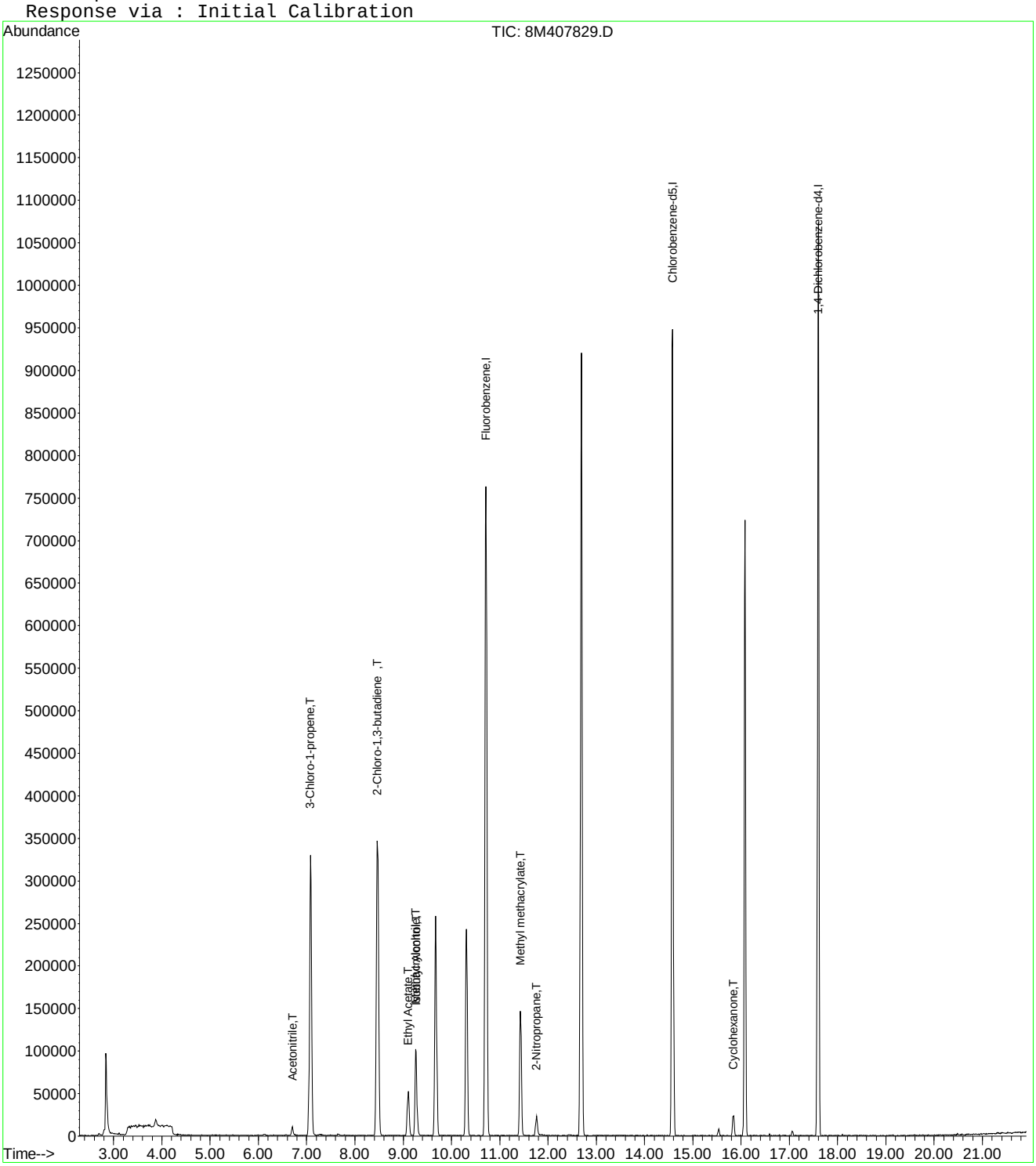
Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	903673	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	657140	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	345767	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.71	41	14085	20.2529	ug/L	98
3) 3-Chloro-1-propene	7.08	41	349549	20.6667	ug/L	100
4) 2-Chloro-1,3-butadiene	8.46	53	347796	19.9846	ug/L	100
5) Ethyl Acetate	9.10	43	93237	20.2805	ug/L	97
6) Methacrylonitrile	9.26	67	40077	19.8617	ug/L	100
7) Isobutyl Alcohol	9.27	43	6436	34.1640	ug/L #	94
9) Methyl methacrylate	11.43	41	106029	19.0419	ug/L	97
10) 2-Nitropropane	11.76	43	12836	13.7339	ug/L	86
13) Cyclohexanone	15.84	55	14620	19.8329	ug/L	92

(#) = qualifier out of range (m) = manual integration
8M407829.D A9FOOWTR.M Tue Oct 06 11:56:56 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407829.D Vial: 3
Acq On : 5 Oct 2015 12:17 Operator: TMB
Sample : WG540826-03 20ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407829.D Vial: 3
Acq On : 5 Oct 2015 12:17 Operator: TMB
Sample : WG540826-03 20ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	20.0000	20.2529	-1.3	100	0.00
3	T	3-Chloro-1-propene	20.0000	20.6667	-3.3	100	0.00
4	T	2-Chloro-1,3-butadiene	20.0000	19.9846	0.1	100	0.00
5	T	Ethyl Acetate	20.0000	20.2805	-1.4	100	0.00
6	T	Methacrylonitrile	20.0000	19.8618	0.7	100	0.00
7	T	Isobutyl Alcohol	-1.0000	34.1640	0.0	100	0.00
8	T	1-Butanol	-1.0000	0.0000	0.0	0	-10.19#
9	T	Methyl methacrylate	20.0000	19.0419	4.8	100	0.00
10	T	2-Nitropropane	-1.0000	13.7339	0.0	0	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	19.8329	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407829.D A9FOOWTR.M Tue Oct 06 11:54:38 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 13:13:37 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

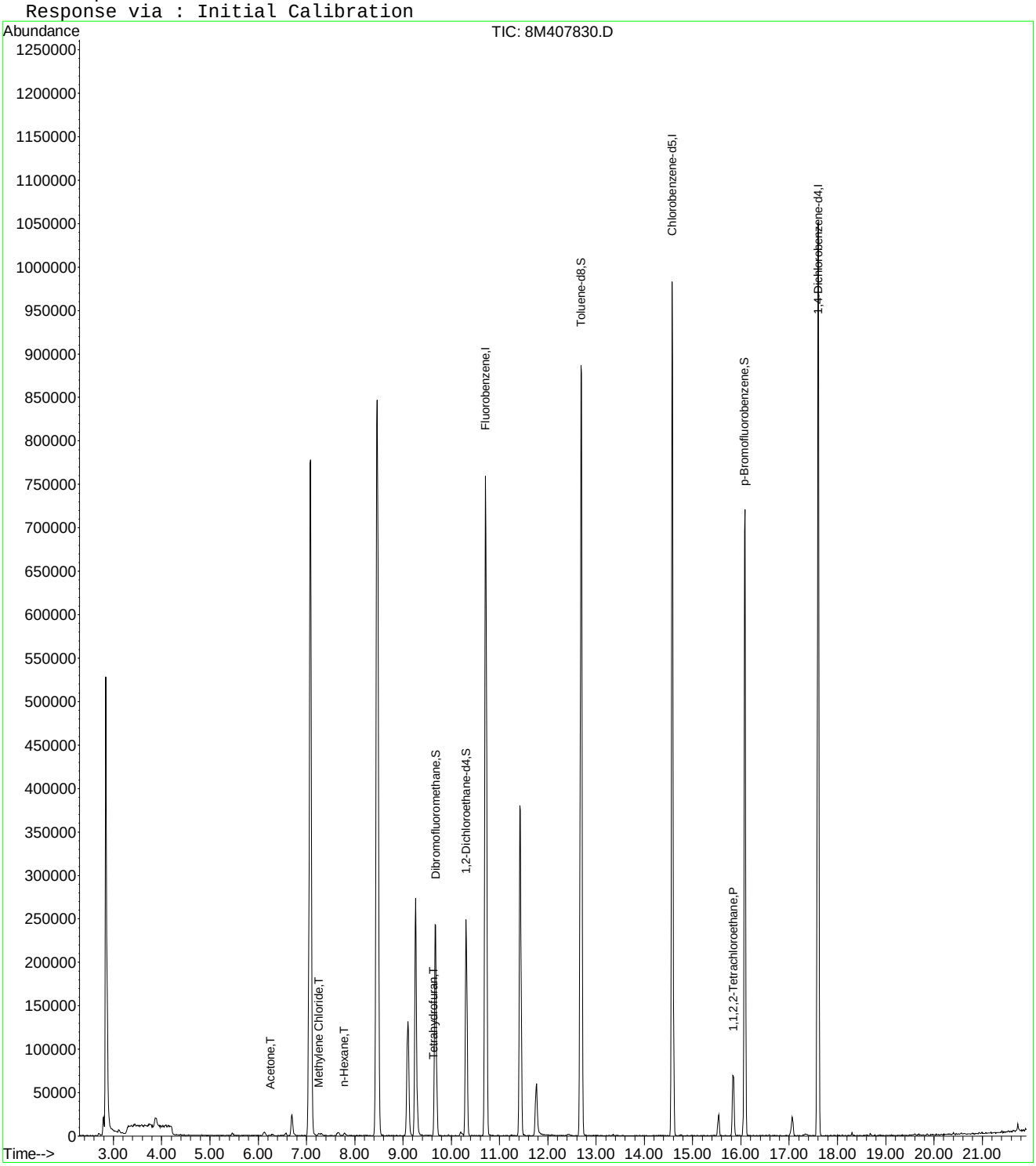
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	883897	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	665815	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	354078	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.68	111	212038	25.2054	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.84%			
43) 1,2-Dichloroethane-d4	10.31	65	214919	25.0573	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.24%			
58) Toluene-d8	12.69	98	784209	25.3851	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.56%			
80) p-Bromofluorobenzene	16.07	95	309869	25.0818	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 100.32%			
Target Compounds						Qvalue
13) Acetone	6.26	43	674	0.5137	ug/L #	48
19) Methylene Chloride	7.26	84	1894	0.2128	ug/L	67
24) n-Hexane	7.79	57	2250	0.1674	ug/L	96
36) Tetrahydrofuran	9.64	42	735	0.4954	ug/L #	40
79) 1,1,2,2-Tetrachloroethane	15.85	83	3323	0.5087	ug/L #	26

(#) = qualifier out of range (m) = manual integration
8M407830.D 8260WT.M Mon Oct 05 13:13:38 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 13:13 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



8M407830.D 8260WT.M Mon Oct 05 13:13:39 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:57 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

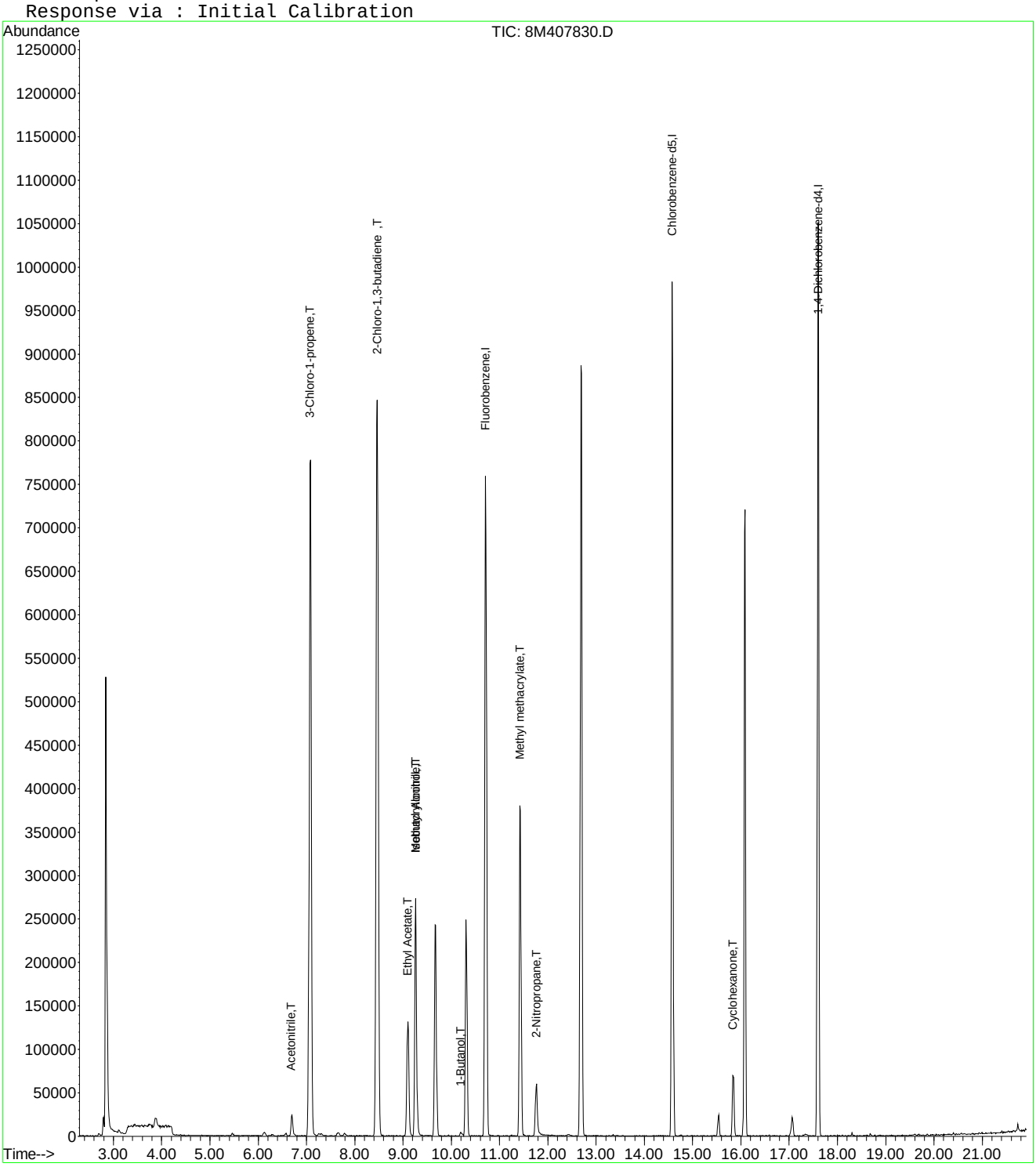
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	883897	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	665815	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	354078	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.69	41	35080	51.5703	ug/L	99
3) 3-Chloro-1-propene	7.07	41	841804	50.8844	ug/L	100
4) 2-Chloro-1,3-butadiene	8.47	53	851495	50.0222	ug/L	100
5) Ethyl Acetate	9.10	43	233139	51.8459	ug/L	97
6) Methacrylonitrile	9.26	67	101702	51.5301	ug/L	97
7) Isobutyl Alcohol	9.26	43	17567	95.3366	ug/L	98
8) 1-Butanol	10.19	56	3729	41.0570	ug/L	92
9) Methyl methacrylate	11.42	41	280126	51.4337	ug/L	98
10) 2-Nitropropane	11.76	43	37061	40.5407	ug/L	95
13) Cyclohexanone	15.84	55	40139	53.1730	ug/L	88

(#) = qualifier out of range (m) = manual integration
8M407830.D A9FOOWTR.M Tue Oct 06 11:56:57 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	50.0000	51.5703	-3.1	100	0.00
3	T	3-Chloro-1-propene	50.0000	50.8844	-1.8	100	0.00
4	T	2-Chloro-1,3-butadiene	50.0000	50.0222	-0.0	100	0.00
5	T	Ethyl Acetate	50.0000	51.8459	-3.7	100	0.00
6	T	Methacrylonitrile	50.0000	51.5301	-3.1	100	0.00
7	T	Isobutyl Alcohol	100.0000	95.3366	4.7	100	0.00
8	T	1-Butanol	50.0000	41.0570	17.9	100	0.00
9	T	Methyl methacrylate	50.0000	51.4337	-2.9	100	0.00
10	T	2-Nitropropane	50.0000	40.5407	18.9	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	50.0000	53.1730	-6.3	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407830.D A9FOOWTR.M Tue Oct 06 11:54:56 2015 Page 1

Data File : C:\MSDchem\2\data\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 13:42:04 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

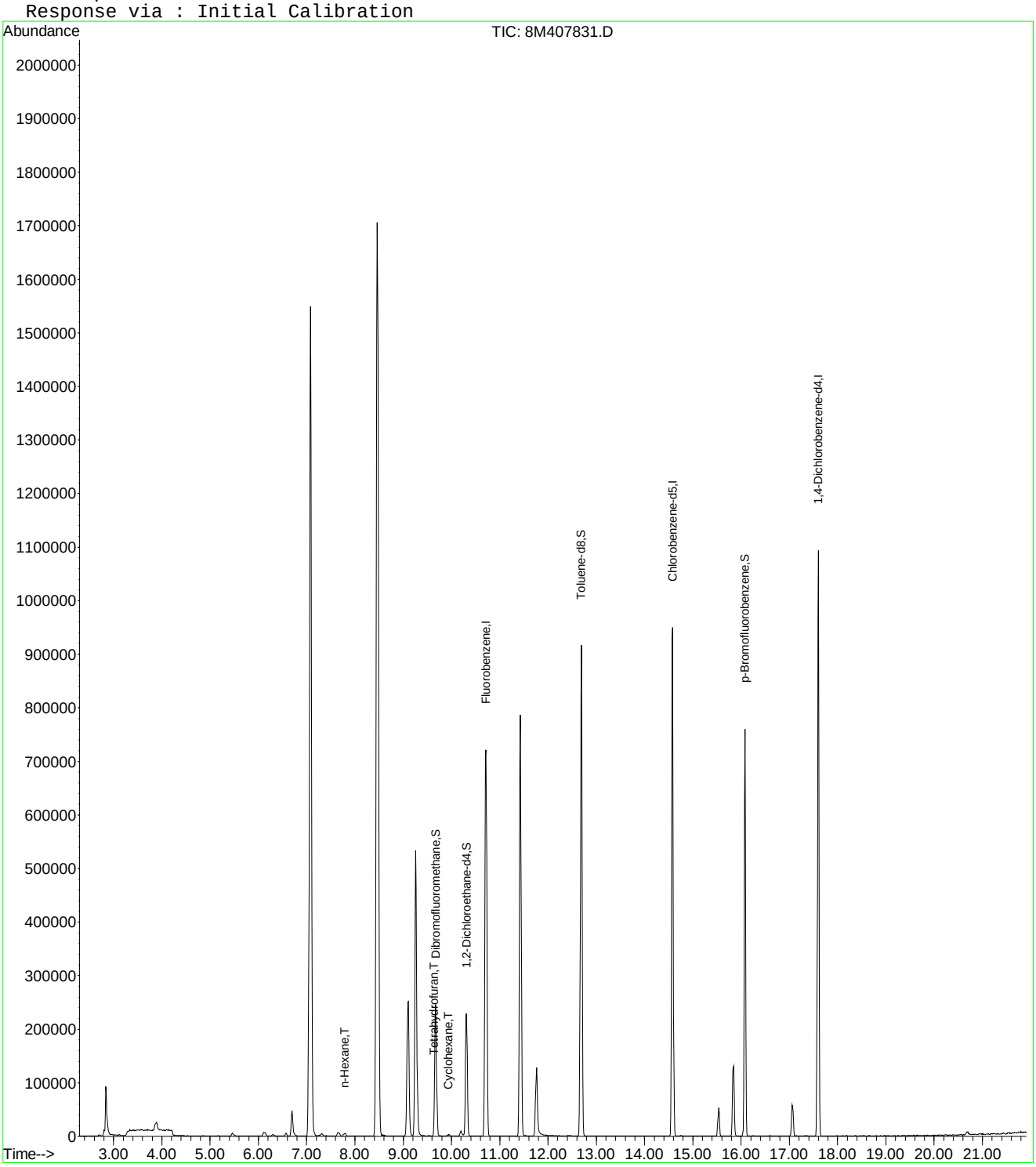
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	866178	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	661111	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	356230	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	202803	24.6008	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.40%			
43) 1,2-Dichloroethane-d4	10.31	65	203632	24.2270	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.92%			
58) Toluene-d8	12.69	98	789106	25.7254	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.92%			
80) p-Bromofluorobenzene	16.08	95	308907	24.8529	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 99.40%			
Target Compounds						Qvalue
24) n-Hexane	7.79	57	3351	0.2544	ug/L	79
36) Tetrahydrofuran	9.64	42	639	0.4395	ug/L #	40
39) Cyclohexane	9.94	56	2379	0.1385	ug/L #	66

(#) = qualifier out of range (m) = manual integration
8M407831.D 8260WT.M Mon Oct 05 13:42:05 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 13:42 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:58 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

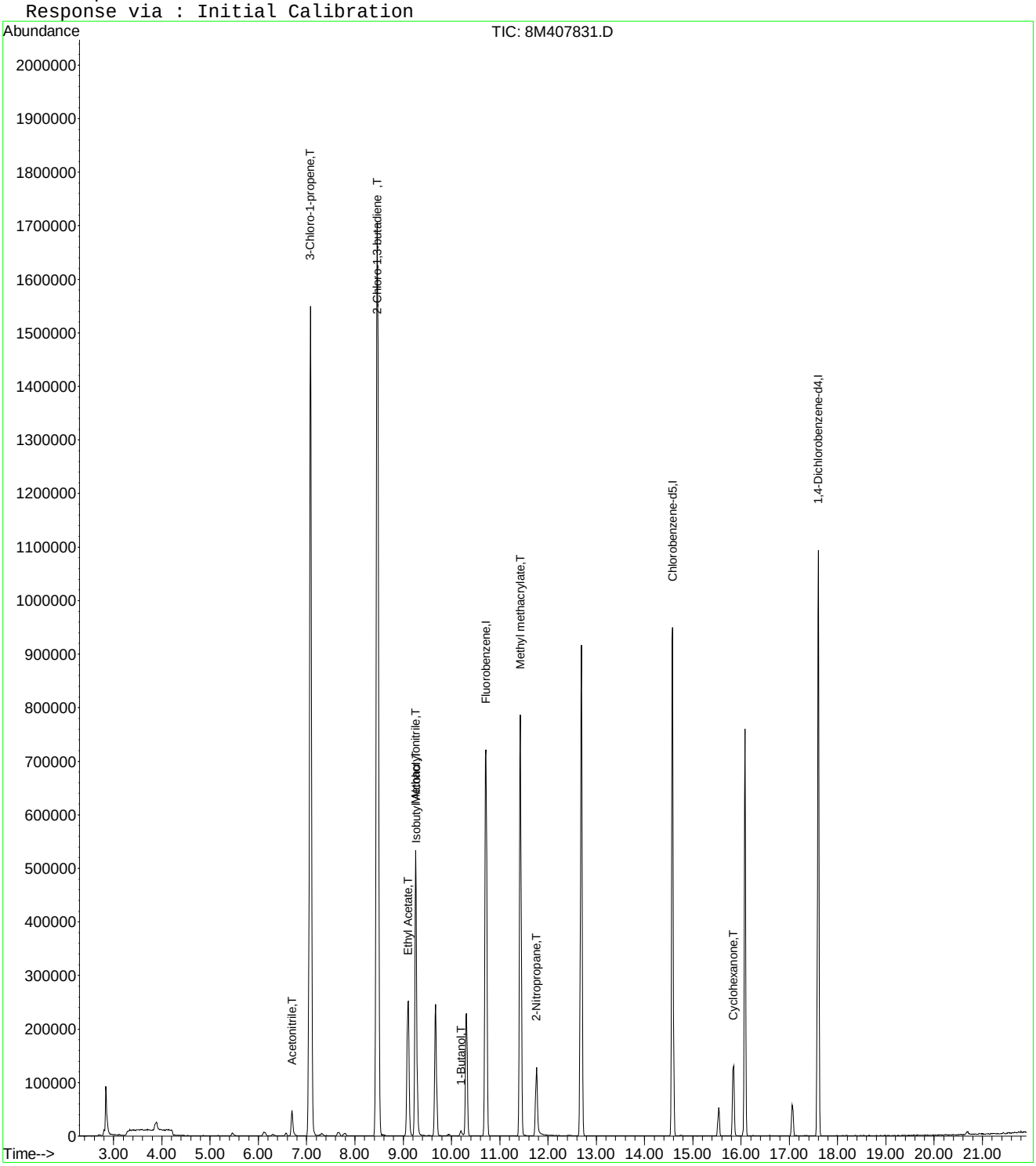
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	866178	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	661111	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	356230	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	67393	101.0995	ug/L	100
3) 3-Chloro-1-propene	7.08	41	1633129	100.7368	ug/L	100
4) 2-Chloro-1,3-butadiene	8.46	53	1684207	100.9649	ug/L	99
5) Ethyl Acetate	9.10	43	453445	102.9007	ug/L	99
6) Methacrylonitrile	9.26	67	196843	101.7762	ug/L	95
7) Isobutyl Alcohol	9.27	43	37534	207.8650	ug/L	92
8) 1-Butanol	10.20	56	8253	92.7258	ug/L	78
9) Methyl methacrylate	11.43	41	562497	105.3924	ug/L	98
10) 2-Nitropropane	11.76	43	77739	86.7776	ug/L	89
13) Cyclohexanone	15.84	55	74077	97.5385	ug/L	84

(#) = qualifier out of range (m) = manual integration
8M407831.D A9FOOWTR.M Tue Oct 06 11:56:58 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	100.0000	101.0995	-1.1	100	0.00
3	T	3-Chloro-1-propene	100.0000	100.7368	-0.7	100	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	100.9649	-1.0	100	0.00
5	T	Ethyl Acetate	100.0000	102.9007	-2.9	100	0.00
6	T	Methacrylonitrile	100.0000	101.7762	-1.8	100	0.00
7	T	Isobutyl Alcohol	200.0000	207.8650	-3.9	100	0.00
8	T	1-Butanol	100.0000	92.7258	7.3	100	0.00
9	T	Methyl methacrylate	100.0000	105.3924	-5.4	100	0.00
10	T	2-Nitropropane	100.0000	86.7776	13.2	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	100.0000	97.5386	2.5	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407831.D A9FOOWTR.M Tue Oct 06 11:55:12 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 14:10:58 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

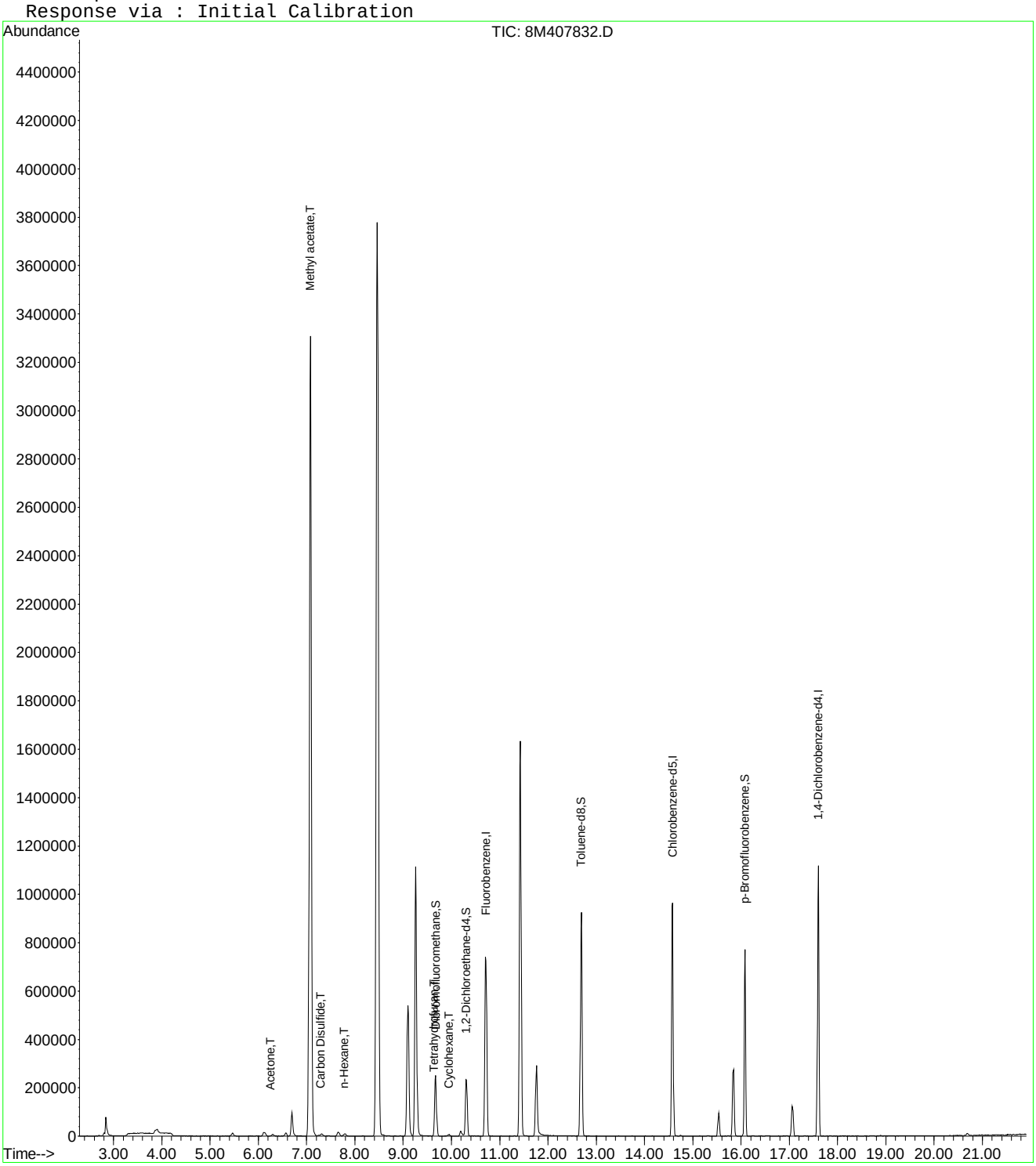
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.72	96	897754	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	673480	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	363907	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	208738	24.4301 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.72%		
43) 1,2-Dichloroethane-d4	10.30	65	213605	24.5197 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.08%		
58) Toluene-d8	12.69	98	807841	25.8525 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.40%		
80) p-Bromofluorobenzene	16.08	95	324104	25.5255 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.12%		
Target Compounds					Qvalue
13) Acetone	6.25	43	677	0.5081 ug/L #	48
18) Methyl acetate	7.08	43	1823	0.3618 ug/L #	1
20) Carbon Disulfide	7.30	76	5054	0.1712 ug/L #	78
24) n-Hexane	7.78	57	7743	0.5671 ug/L	88
36) Tetrahydrofuran	9.64	42	1466	0.9728 ug/L #	40
39) Cyclohexane	9.95	56	4715	0.2647 ug/L	84

(#) = qualifier out of range (m) = manual integration
8M407832.D 8260WT.M Mon Oct 05 14:10:59 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 14:10 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:58 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

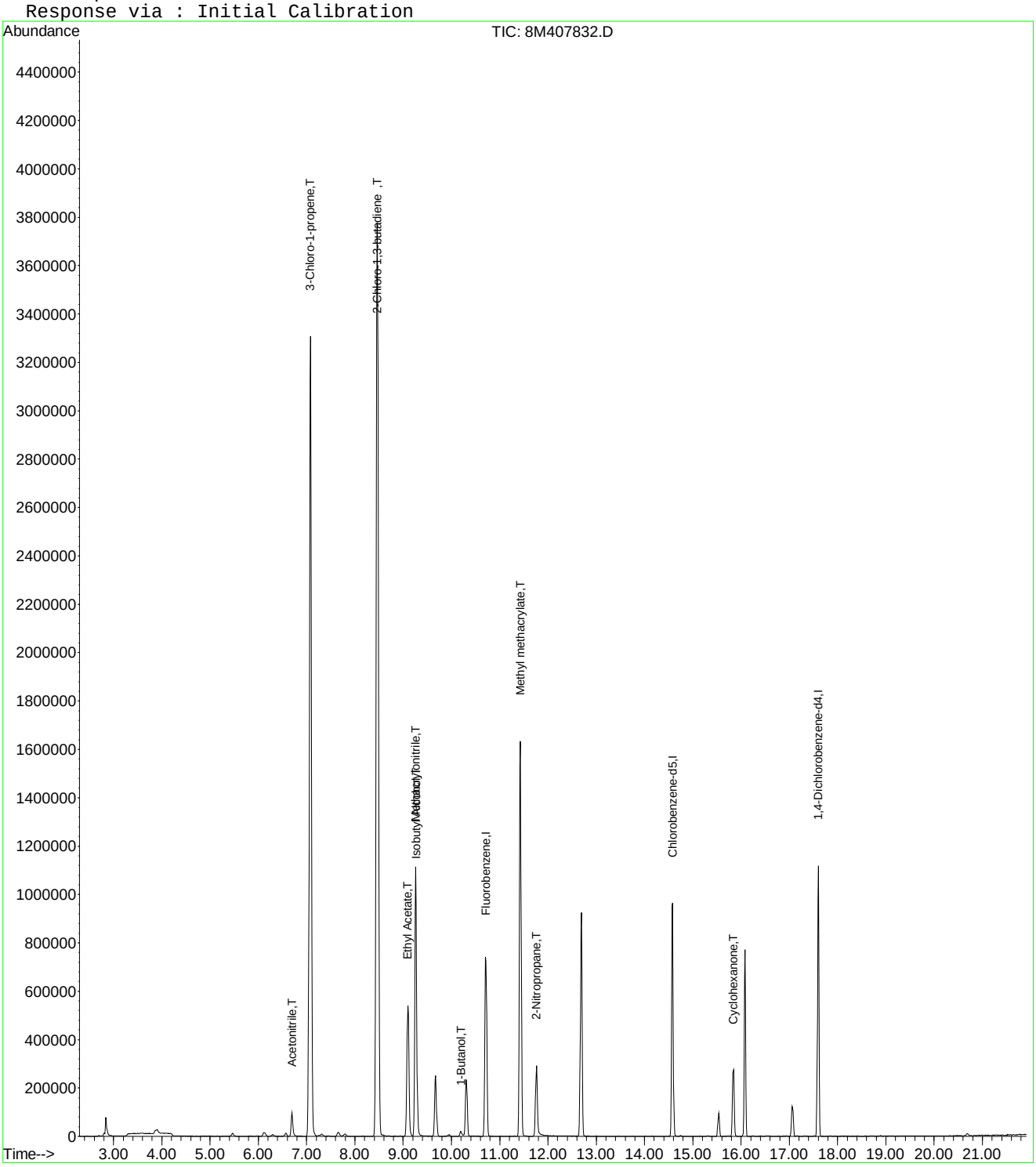
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	897754	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	673480	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	363907	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	138277	200.1400	ug/L	97
3) 3-Chloro-1-propene	7.08	41	3475078	206.8151	ug/L	99
4) 2-Chloro-1,3-butadiene	8.46	53	3691199	213.4973	ug/L	98
5) Ethyl Acetate	9.09	43	949825	207.9635	ug/L	98
6) Methacrylonitrile	9.26	67	412747	205.9018	ug/L	95
7) Isobutyl Alcohol	9.27	43	71985	384.6346	ug/L	94
8) 1-Butanol	10.20	56	18764	203.4062	ug/L	78
9) Methyl methacrylate	11.43	41	1165248	210.6479	ug/L	99
10) 2-Nitropropane	11.76	43	181242	195.1989	ug/L	92
13) Cyclohexanone	15.84	55	156208	201.3429	ug/L	89

(#) = qualifier out of range (m) = manual integration
8M407832.D A9FOOWTR.M Tue Oct 06 11:56:59 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 14:39:56 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

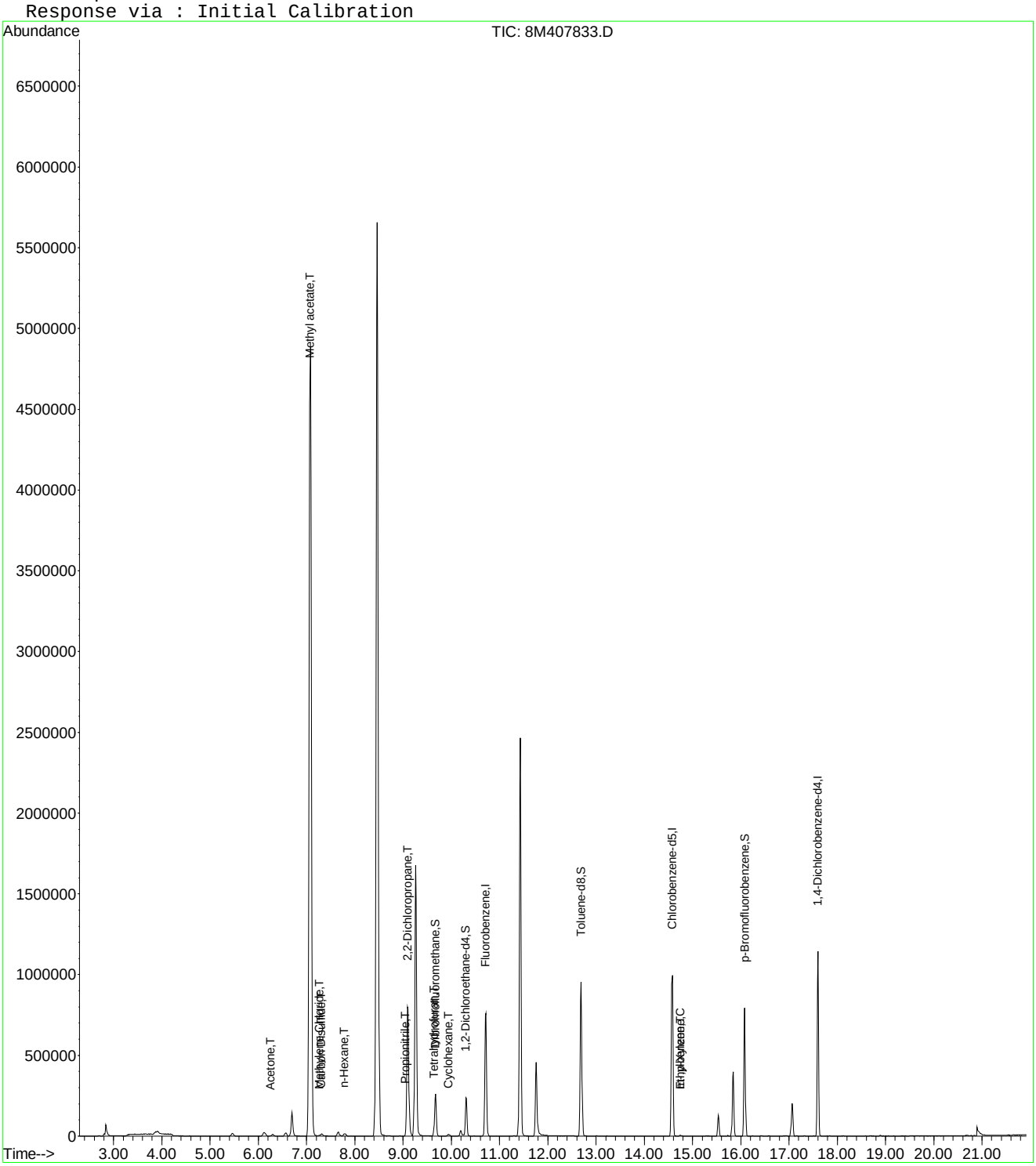
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	914795	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	689423	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	367388	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	213426	24.5135	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.04%			
43) 1,2-Dichloroethane-d4	10.30	65	216408	24.3787	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.52%			
58) Toluene-d8	12.69	98	818846	25.5987	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.40%			
80) p-Bromofluorobenzene	16.08	95	327784	25.5707	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.28%			
Target Compounds						Qvalue
13) Acetone	6.25	43	1107	0.8153	ug/L #	48
18) Methyl acetate	7.07	43	3926	0.7646	ug/L #	1
19) Methylene Chloride	7.26	84	1197	0.1300	ug/L	55
20) Carbon Disulfide	7.31	76	6659	0.2214	ug/L #	86
24) n-Hexane	7.78	57	11874	0.8534	ug/L	97
30) Propionitrile	9.05	54	208	0.3030	ug/L #	1
31) 2,2-Dichloropropane	9.09	77	2023	0.1353	ug/L #	42
36) Tetrahydrofuran	9.64	42	1301	0.8472	ug/L #	40
39) Cyclohexane	9.94	56	6598	0.3636	ug/L	94
72) Ethylbenzene	14.75	106	2422	0.1584	ug/L	54
73) m-,p-Xylene	14.75	106	2422	0.1381	ug/L	82

(#) = qualifier out of range (m) = manual integration
8M407833.D 8260WT.M Mon Oct 05 14:39:57 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 14:39 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:59 2015 Quant Results File: A9FOOWTR.RES

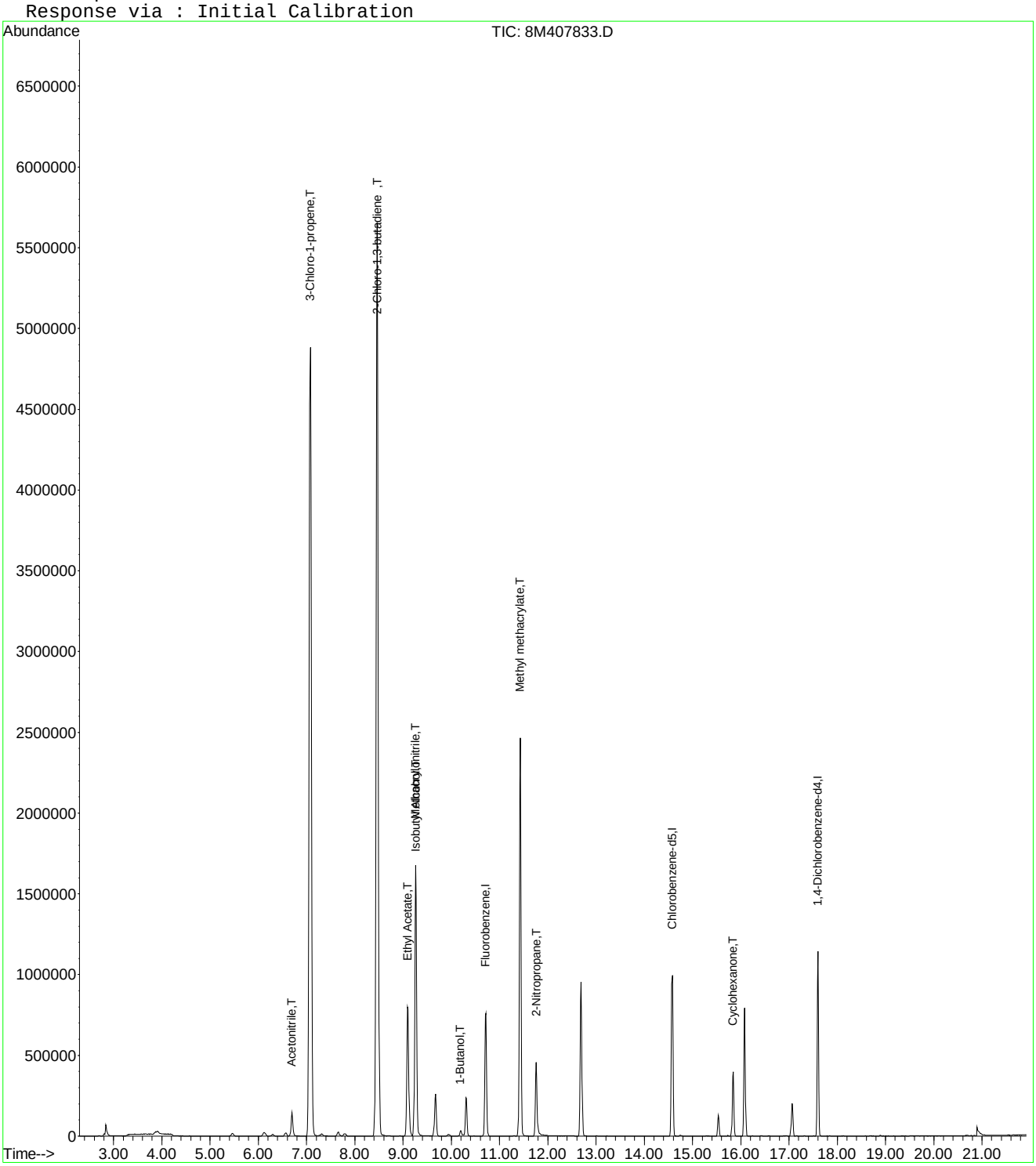
Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	914795	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	689423	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	367388	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	204679	290.7307	ug/L	99
3) 3-Chloro-1-propene	7.08	41	5107808	298.3223	ug/L	99
4) 2-Chloro-1,3-butadiene	8.46	53	5432917	308.3838	ug/L	97
5) Ethyl Acetate	9.09	43	1404245	301.7310	ug/L	99
6) Methacrylonitrile	9.26	67	619787	303.4256	ug/L	96
7) Isobutyl Alcohol	9.27	43	113276	593.9881	ug/L	97
8) 1-Butanol	10.19	56	30662	326.1916	ug/L	85
9) Methyl methacrylate	11.43	41	1738162	308.3633	ug/L	98
10) 2-Nitropropane	11.76	43	289289	305.7623	ug/L	92
13) Cyclohexanone	15.84	55	224807	287.0174	ug/L	90

(#) = qualifier out of range (m) = manual integration
8M407833.D A9FOOWTR.M Tue Oct 06 11:56:59 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 15:09:02 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

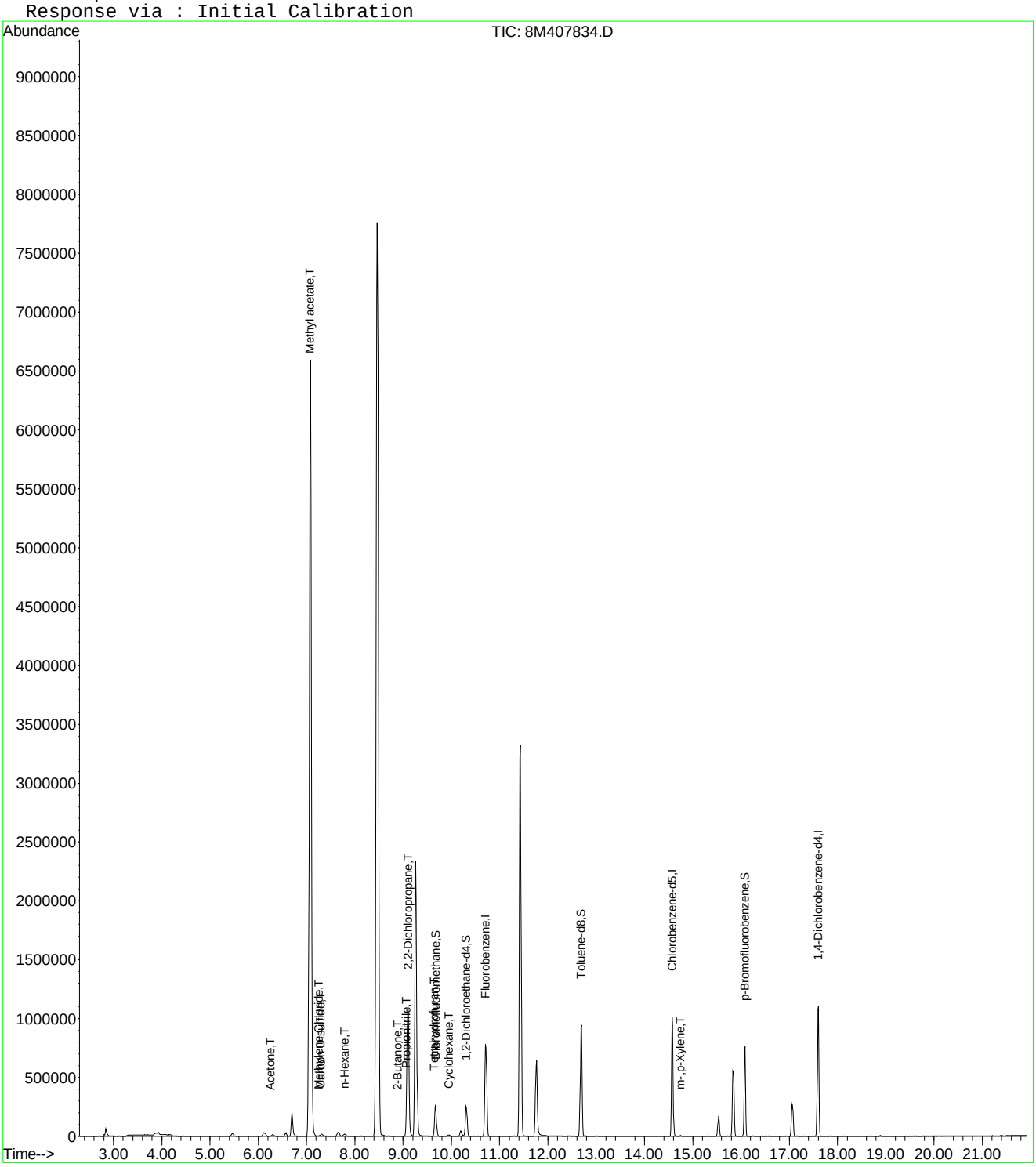
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	933879	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	691340	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	373332	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	222232	25.0033 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.00%		
43) 1,2-Dichloroethane-d4	10.31	65	222556	24.5590 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.24%		
58) Toluene-d8	12.69	98	831940	25.9359 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.76%		
80) p-Bromofluorobenzene	16.08	95	329799	25.3183 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 101.28%		
Target Compounds					Qvalue
13) Acetone	6.25	43	2307	1.6644 ug/L #	48
18) Methyl acetate	7.07	43	5300	1.0111 ug/L #	1
19) Methylene Chloride	7.26	84	1631	0.1735 ug/L #	6
20) Carbon Disulfide	7.30	76	9227	0.3005 ug/L #	79
24) n-Hexane	7.79	57	16005	1.1268 ug/L	89
29) 2-Butanone	8.89	43	1241	0.5197 ug/L #	57
30) Propionitrile	9.07	54	773	1.1032 ug/L #	1
31) 2,2-Dichloropropane	9.11	77	2811	0.1842 ug/L #	42
36) Tetrahydrofuran	9.65	42	1879	1.1986 ug/L #	40
39) Cyclohexane	9.95	56	9653	0.5211 ug/L	94
73) m-,p-Xylene	14.75	106	3655	0.2078 ug/L	100

(#) = qualifier out of range (m) = manual integration
8M407834.D 8260WT.M Mon Oct 05 15:09:03 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 15:09 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:57:00 2015 Quant Results File: A9FOOWTR.RES

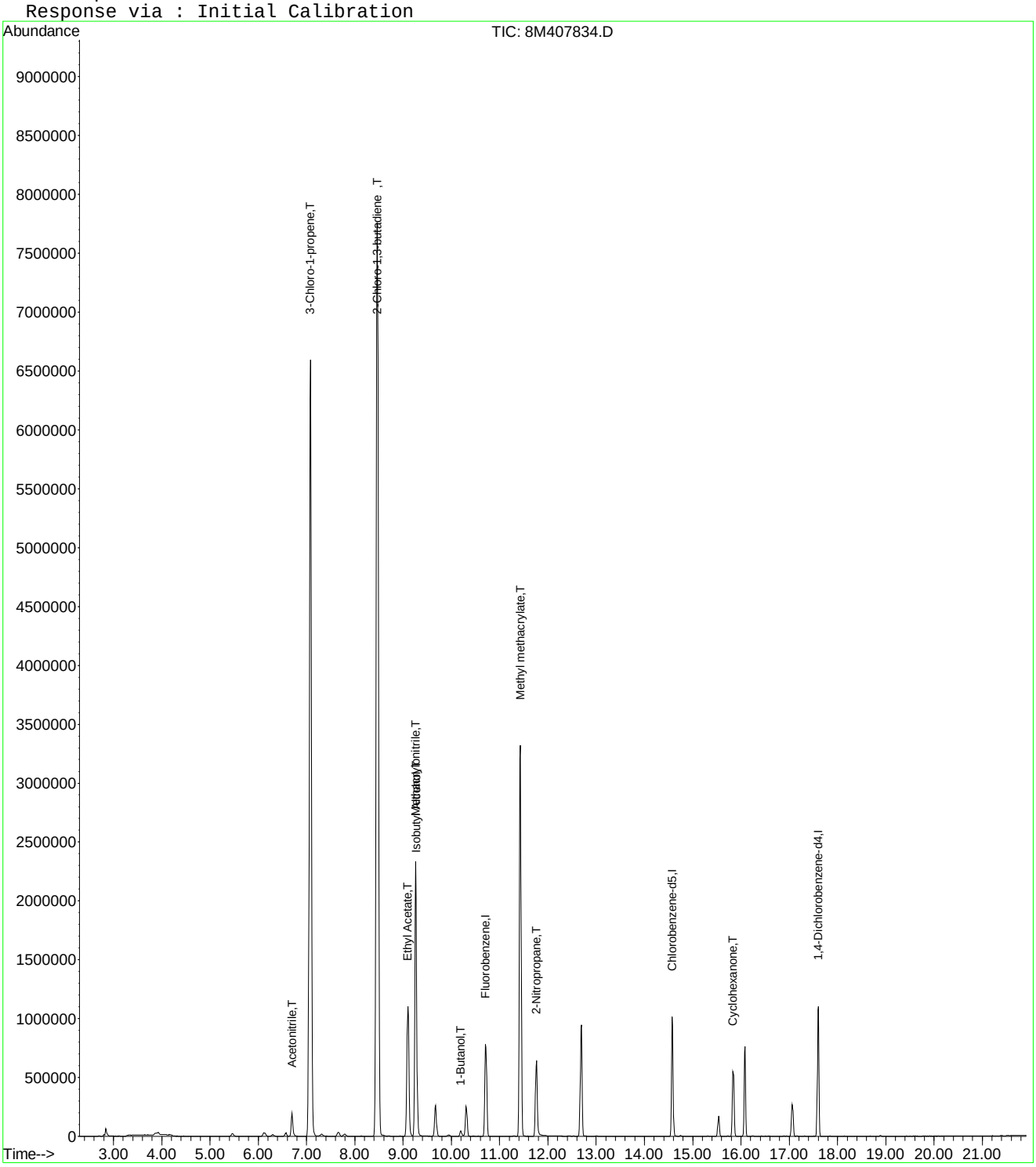
Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	933879	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.57	117	691340	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	373332	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	276454	384.6570	ug/L	96
3) 3-Chloro-1-propene	7.08	41	6839307	391.2880	ug/L	97
4) 2-Chloro-1,3-butadiene	8.47	53	7261886	403.7765	ug/L	94
5) Ethyl Acetate	9.10	43	1919647	404.0467	ug/L	99
6) Methacrylonitrile	9.26	67	856150	410.5753	ug/L	97
7) Isobutyl Alcohol	9.27	43	151941	780.4553	ug/L	92
8) 1-Butanol	10.19	56	39703	413.7412	ug/L	80
9) Methyl methacrylate	11.43	41	2385524	414.5619	ug/L	99
10) 2-Nitropropane	11.76	43	432493	447.7796	ug/L	93
13) Cyclohexanone	15.83	55	313432	393.7962	ug/L	87

(#) = qualifier out of range (m) = manual integration
8M407834.D A9FOOWTR.M Tue Oct 06 11:57:00 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:57 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 15:37:56 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

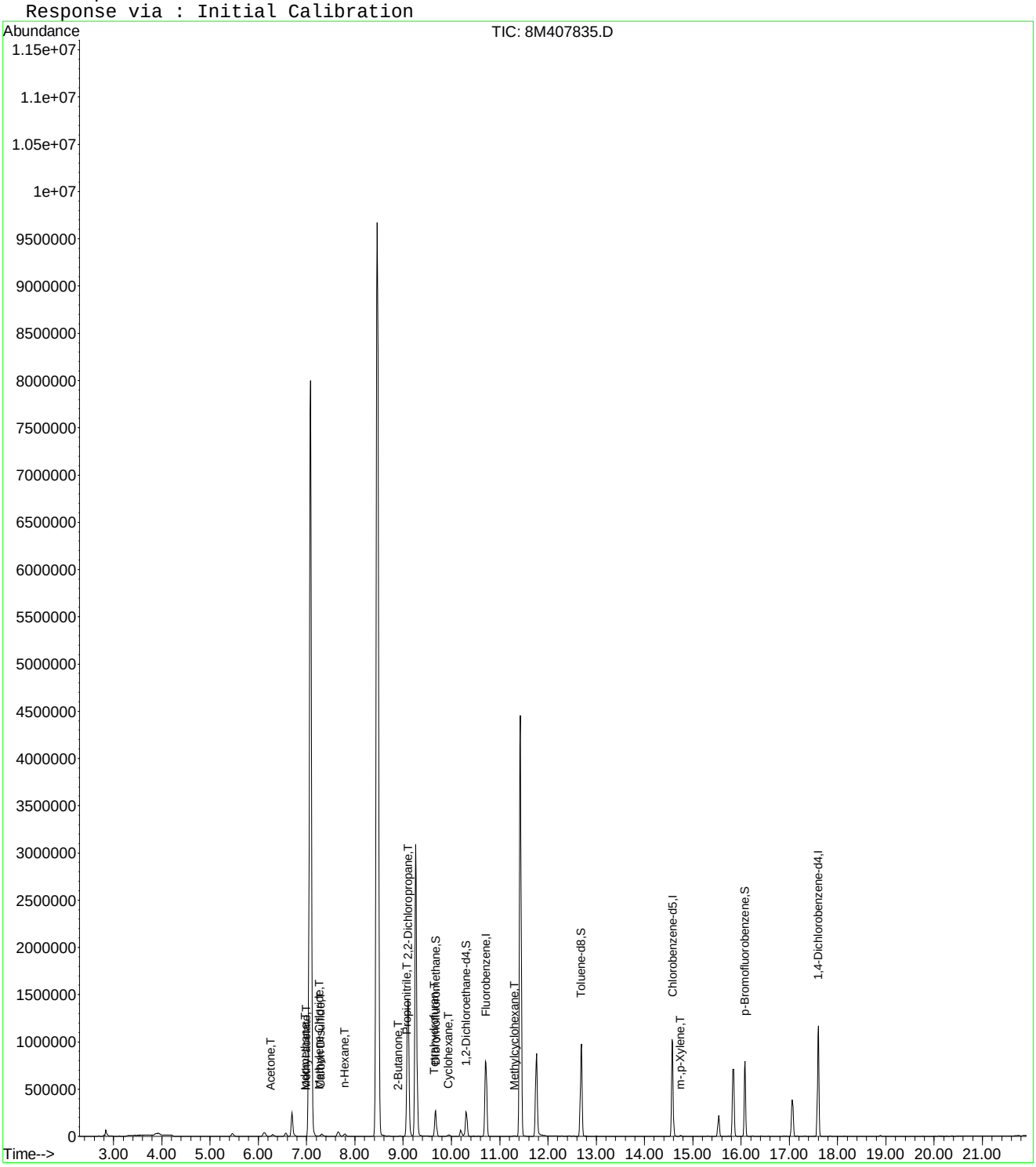
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.72	96	952136	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	712384	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	381907	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	222948	24.6029 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.40%		
43) 1,2-Dichloroethane-d4	10.30	65	229612	24.8518 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.40%		
58) Toluene-d8	12.69	98	849027	25.6867 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.76%		
80) p-Bromofluorobenzene	16.08	95	340742	25.5710 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.28%		
Target Compounds					Qvalue
13) Acetone	6.26	43	2624	1.8568 ug/L #	48
17) Iodomethane	6.98	142	414	1.8830 ug/L #	28
18) Methyl acetate	7.00	43	818	0.1531 ug/L #	64
19) Methylene Chloride	7.27	84	2206	0.2301 ug/L	69
20) Carbon Disulfide	7.30	76	12486	0.3989 ug/L #	78
24) n-Hexane	7.79	57	21760	1.5026 ug/L	96
29) 2-Butanone	8.90	43	1797	0.7381 ug/L #	57
30) Propionitrile	9.07	54	1629	2.2802 ug/L #	1
31) 2,2-Dichloropropane	9.11	77	3861	0.2482 ug/L #	52
36) Tetrahydrofuran	9.65	42	2063	1.2908 ug/L #	40
39) Cyclohexane	9.94	56	13508	0.7152 ug/L	88
48) Methylcyclohexane	11.31	83	2456	0.1572 ug/L #	73
73) m-,p-Xylene	14.75	106	3865	0.2133 ug/L	76

(#) = qualifier out of range (m) = manual integration
8M407835.D 8260WT.M Mon Oct 05 15:37:57 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 15:37 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:57:01 2015 Quant Results File: A9FOOWTR.RES

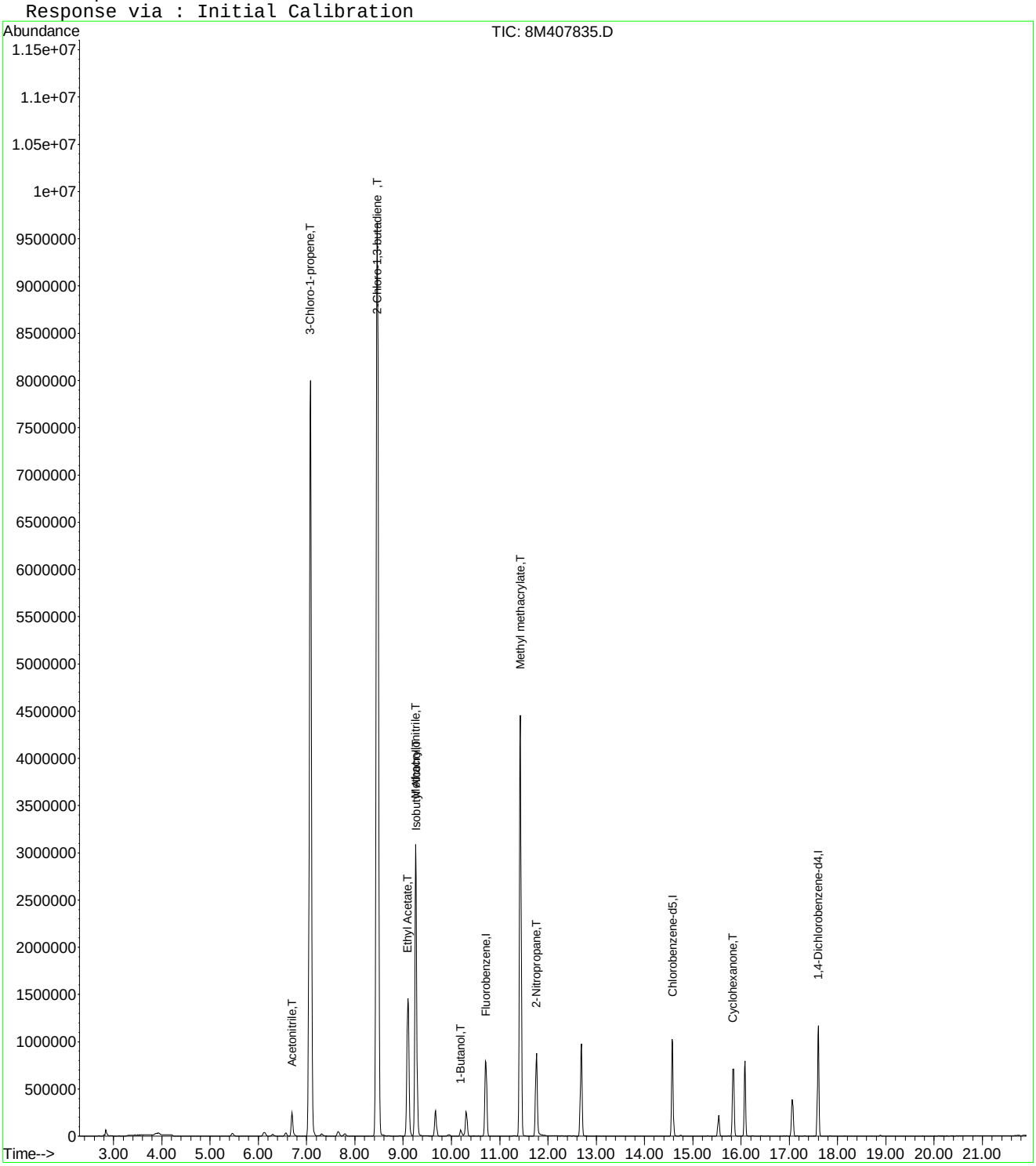
Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	952136	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	712384	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	381907	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	355656	485.3695	ug/L	97
3) 3-Chloro-1-propene	7.08	41	8223448	461.4556	ug/L	95
4) 2-Chloro-1,3-butadiene	8.46	53	8764656	477.9893	ug/L	90
5) Ethyl Acetate	9.09	43	2535700	523.4795	ug/L	100
6) Methacrylonitrile	9.26	67	1137496	535.0377	ug/L	97
7) Isobutyl Alcohol	9.27	43	214402	1080.1734	ug/L	98
8) 1-Butanol	10.19	56	54442	556.4564	ug/L	87
9) Methyl methacrylate	11.43	41	3137676	534.8171	ug/L	99
10) 2-Nitropropane	11.76	43	594174	603.3794	ug/L	94
13) Cyclohexanone	15.83	55	412487	506.6127	ug/L	87

(#) = qualifier out of range (m) = manual integration
8M407835.D A9FOOWTR.M Tue Oct 06 11:57:01 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:57 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 17:10:31 2015 Quant Results File: 8260WT.RES

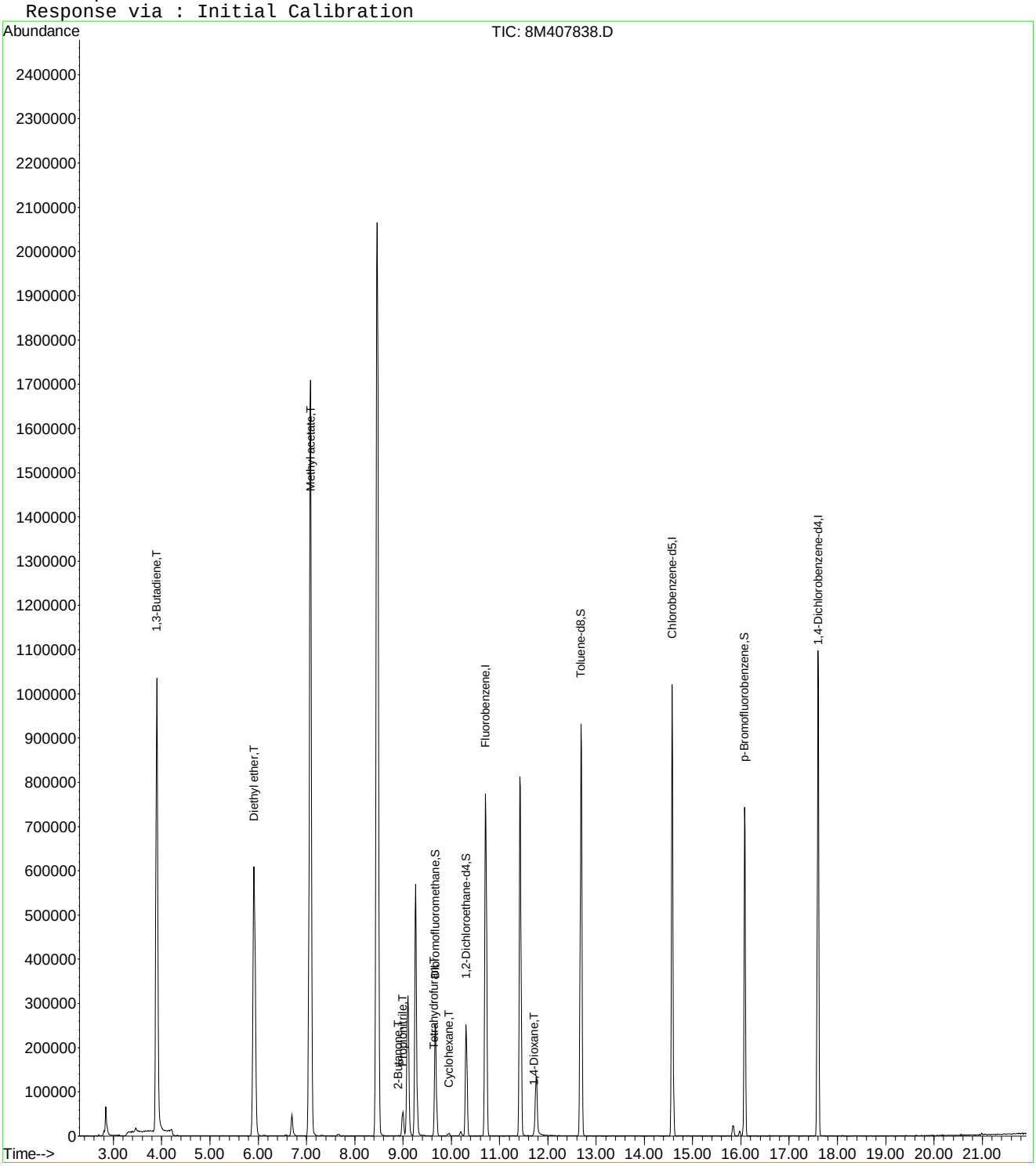
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	910348	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	672710	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	361469	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	216028	24.9336 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 99.72%		
43) 1,2-Dichloroethane-d4	10.31	65	220386	24.9481 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.80%		
58) Toluene-d8	12.68	98	805489	25.8067 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.24%		
80) p-Bromofluorobenzene	16.07	95	318985	25.2918 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 101.16%		
Target Compounds					Qvalue
5) 1,3-Butadiene	3.90	54	680860	64.5479 ug/L	96
9) Diethyl ether	5.91	59	636031	102.4537 ug/L	99
18) Methyl acetate	7.09	43	861	0.1685 ug/L #	1
29) 2-Butanone	8.90	43	1914	0.8222 ug/L	83
30) Propionitrile	8.99	54	68619	100.4600 ug/L	99
36) Tetrahydrofuran	9.65	42	849	0.5556 ug/L #	40
39) Cyclohexane	9.96	56	4155	0.2301 ug/L #	88
51) 1,4-Dioxane	11.71	88	8398	188.8572 ug/L	85

(#) = qualifier out of range (m) = manual integration
8M407838.D 8260WT.M Mon Oct 05 17:10:32 2015 Page 1

Data File : C:\MSDchem\2\data\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 17:10 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:57:03 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

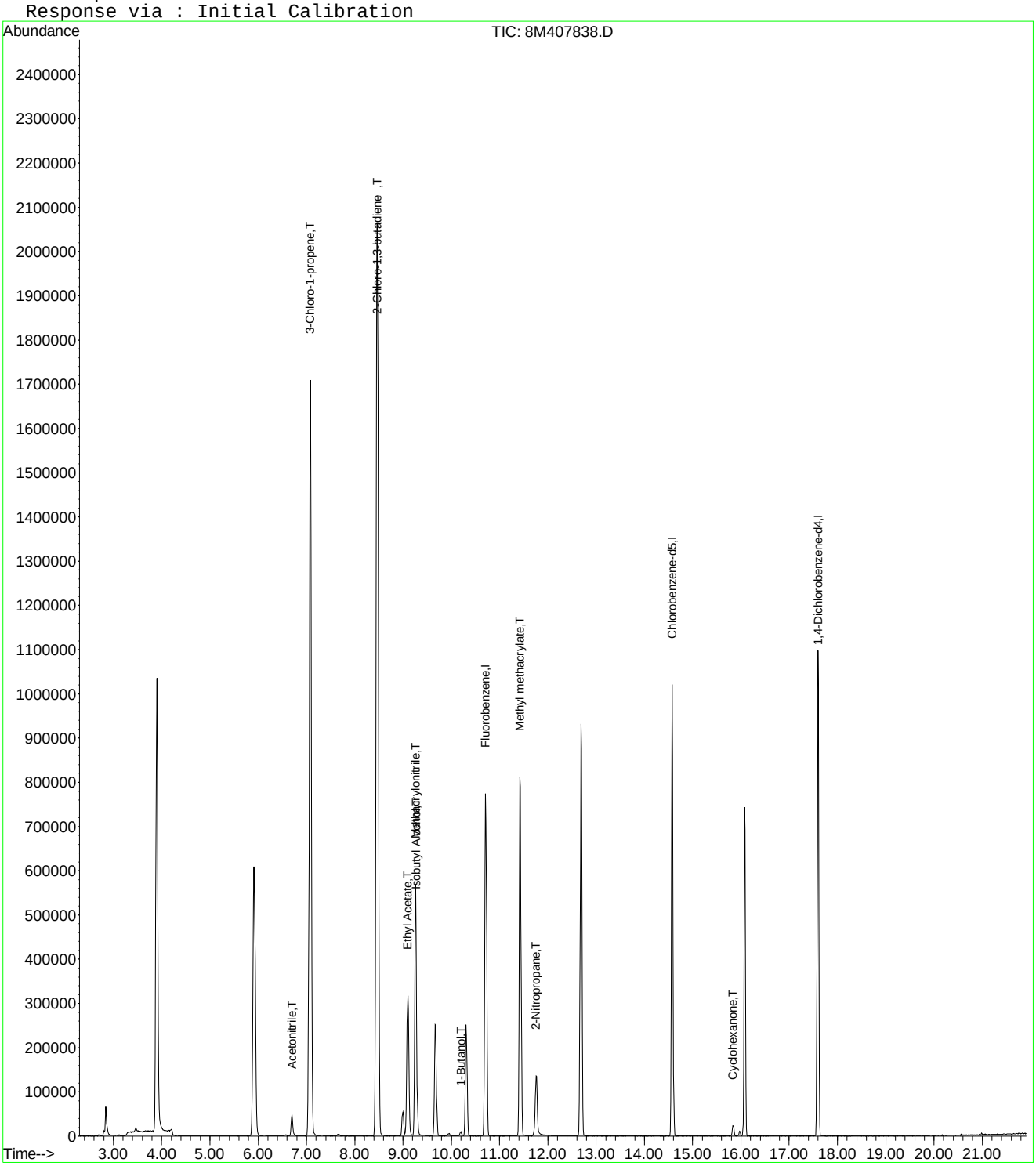
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	910348	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	672710	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	361469	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	68331	97.5330	ug/L	99
3) 3-Chloro-1-propene	7.08	41	1823769	107.0379	ug/L	100
4) 2-Chloro-1,3-butadiene	8.47	53	2081638	118.7353	ug/L	100
5) Ethyl Acetate	9.10	43	556798	120.2240	ug/L	97
6) Methacrylonitrile	9.26	67	209938	103.2802	ug/L	94
7) Isobutyl Alcohol	9.27	43	38987	205.4358	ug/L	96
8) 1-Butanol	10.20	56	7758	82.9351	ug/L	93
9) Methyl methacrylate	11.42	41	590033	105.1877	ug/L	99
10) 2-Nitropropane	11.75	43	94685	100.5656	ug/L	93
13) Cyclohexanone	15.84	55	13964	18.1202	ug/L	94

(#) = qualifier out of range (m) = manual integration
8M407838.D A9FOOWTR.M Tue Oct 06 11:57:03 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:57 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



8M407838.D A9FOOWTR.M Tue Oct 06 11:57:03 2015 Page 2

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG540826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 12:32:35 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

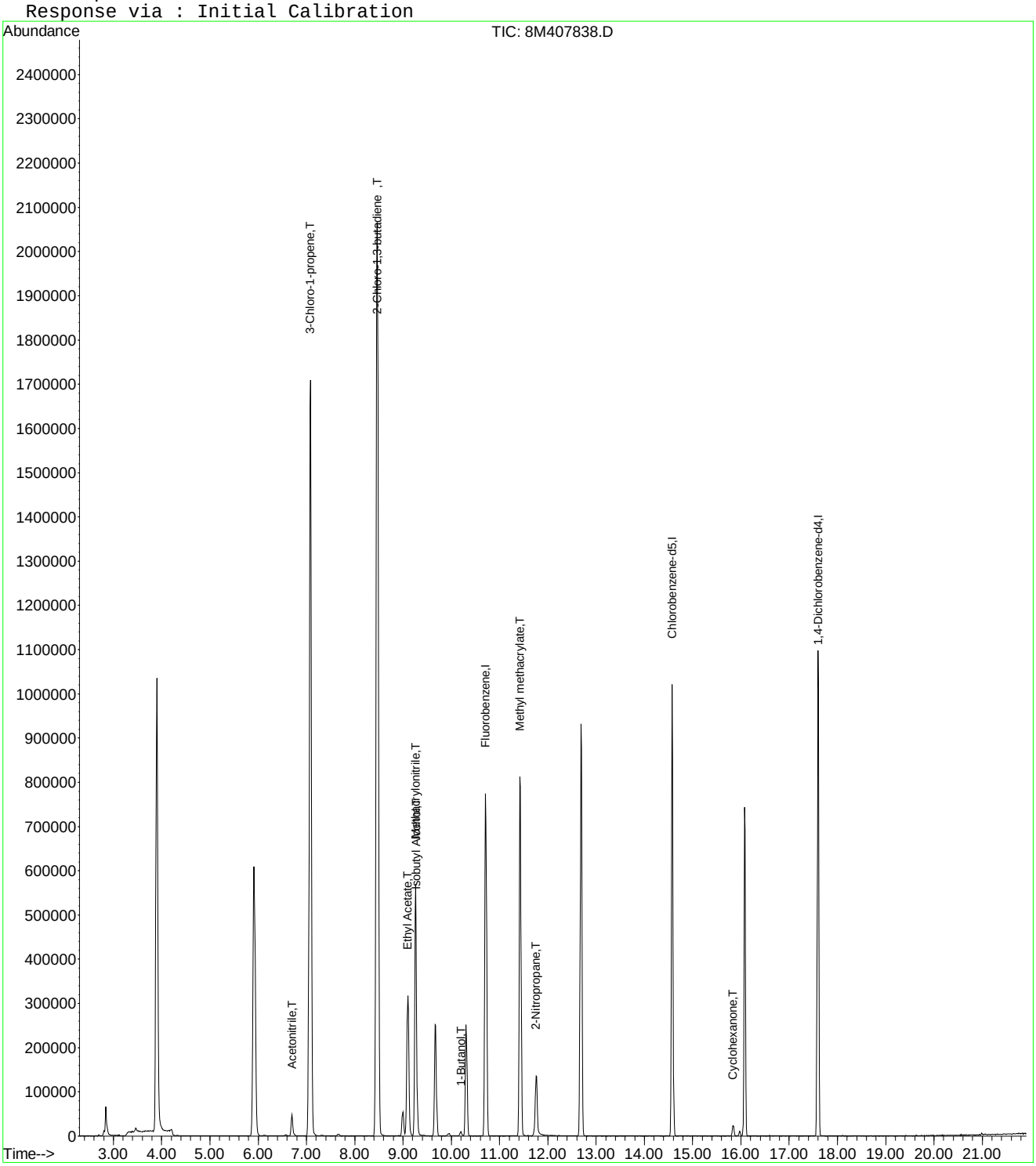
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	910348	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	672710	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	361469	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	68331	97.5330	ug/L	99
3) 3-Chloro-1-propene	7.08	41	1823769	107.0379	ug/L	100
4) 2-Chloro-1,3-butadiene	8.47	53	2081638	118.7353	ug/L	100
5) Ethyl Acetate	9.10	43	556798	120.2240	ug/L	97
6) Methacrylonitrile	9.26	67	209938	103.2802	ug/L	94
7) Isobutyl Alcohol	9.27	43	38987	205.4358	ug/L	96
8) 1-Butanol	10.20	56	7758	82.9351	ug/L	93
9) Methyl methacrylate	11.42	41	590033	105.1877	ug/L	99
10) 2-Nitropropane	11.75	43	94685	100.5656	ug/L	93
13) Cyclohexanone	15.84	55	13964	18.1202	ug/L	94

(#) = qualifier out of range (m) = manual integration
8M407838.D A9FOOWTR.M Tue Oct 06 12:32:36 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG540826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 12:32 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



8M407838.D A9FOOWTR.M Tue Oct 06 12:32:36 2015 Page 2

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG540826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
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	25.0000	25.0000	0.0	105	0.00
2	T	Acetonitrile	100.0000	97.5330	2.5	101	0.00
3	T	3-Chloro-1-propene	100.0000	107.0379	-7.0	112	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	118.7354	-18.7	124	0.00
5	T	Ethyl Acetate	100.0000	120.2240	-20.2	123	0.00
6	T	Methacrylonitrile	100.0000	103.2802	-3.3	107	0.00
7	T	Isobutyl Alcohol	200.0000	205.4358	-2.7	104	0.00
8	T	1-Butanol	100.0000	82.9351	17.1	94	0.01
9	T	Methyl methacrylate	100.0000	105.1877	-5.2	105	0.00
10	T	2-Nitropropane	100.0000	100.5656	-0.6	122	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	102	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	101	0.00
13	T	Cyclohexanone	100.0000	18.1202	81.9#	19	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407838.D A9FOOWTR.M Tue Oct 06 12:32:39 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410193.D Vial: 2
Acq On : 17 Feb 2016 14:49 Operator: TMB
Sample : WG556046-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:05 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	777257	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	550547	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	269341	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	12.68	98	534	0.0196	ug/L	-0.01
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.08%#		
80) p-Bromofluorobenzene	16.07	95	995	0.0951	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	0.40%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.16	85	3421	0.2792	ug/L	79
3) Chloromethane	3.63	50	7898	0.4216	ug/L #	66
4) Vinyl Chloride	3.85	62	4042	0.3099	ug/L	95
5) 1,3-Butadiene	3.90	54	4970	Below Cal		93
6) Bromomethane	4.74	94	1632	0.2634	ug/L	98
7) Chloroethane	4.91	64	1116	0.1894	ug/L #	43
8) Trichlorofluoromethane	5.39	101	3850	0.2754	ug/L #	88
10) Isoprene	5.95	67	2992	0.3159	ug/L	79
12) 1,1,2-Trichloro-1,2,2-Trif	6.18	101	1006	0.1318	ug/L #	34
14) 1,1-Dichloroethene	6.48	61	3709	0.2641	ug/L	96
16) Dimethyl Sulfide	6.74	62	1734	0.2819	ug/L	60
19) Methylene Chloride	7.25	84	2125	0.2764	ug/L	94
20) Carbon Disulfide	7.30	76	8528	0.3533	ug/L	95
22) Methyl Tert Butyl Ether	7.46	73	3897	0.2495	ug/L #	61
23) trans-1,2-Dichloroethene	7.71	61	4093	0.3118	ug/L	85
24) n-Hexane	7.79	57	3138	0.2804	ug/L	84
26) Vinyl Acetate	8.31	43	2147	0.1601	ug/L #	79
27) 1,1-Dichloroethane	8.32	63	4641	0.2833	ug/L #	79
31) 2,2-Dichloropropane	9.09	77	3960	0.3074	ug/L #	73
32) cis-1,2-Dichloroethene	9.17	96	2808	0.3321	ug/L	84
33) Chloroform	9.38	83	4455	0.3065	ug/L	100
35) Bromochloromethane	9.60	130	975	0.2304	ug/L	86
36) Tetrahydrofuran	9.63	42	4679	3.4944	ug/L	93
38) 1,1,1-Trichloroethane	9.91	97	3672	0.2769	ug/L	84
39) Cyclohexane	9.94	56	4507	0.2920	ug/L #	86
40) 1,1-Dichloropropene	10.11	75	3247	0.2814	ug/L	82
42) Carbon Tetrachloride	10.25	117	3376	0.2797	ug/L	87
45) 1,2-Dichloroethane	10.43	62	2598	0.2353	ug/L #	61
46) Benzene	10.47	78	9220	0.3067	ug/L	98
47) Trichloroethene	11.21	130	4137	0.5109	ug/L	88
48) Methylcyclohexane	11.31	83	3561	0.3054	ug/L	91
49) 1,2-Dichloropropane	11.43	63	2195	0.2597	ug/L	77
50) Bromodichloromethane	11.73	83	3110	0.2898	ug/L #	74
52) Dibromomethane	11.81	93	1040	0.2711	ug/L #	56
53) 2-Chloroethyl Vinyl Ether	12.03	63	453	0.1232	ug/L #	51
55) cis-1,3-Dichloropropene	12.36	75	3654	0.3129	ug/L #	68
59) Toluene	12.78	91	9453	0.3081	ug/L	95
60) Ethyl Methacrylate	12.87	69	1112	0.1877	ug/L	95
62) trans-1,3-Dichloropropene	12.96	75	2564	0.2500	ug/L #	59
63) 1,1,2-Trichloroethane	13.18	97	934	0.1915	ug/L	67

(#) = qualifier out of range (m) = manual integration
8M410193.D 8260WTR.M Thu Feb 18 08:46:06 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410193.D Vial: 2
Acq On : 17 Feb 2016 14:49 Operator: TMB
Sample : WG556046-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:05 2016 Quant Results File: 8260WTR.RES

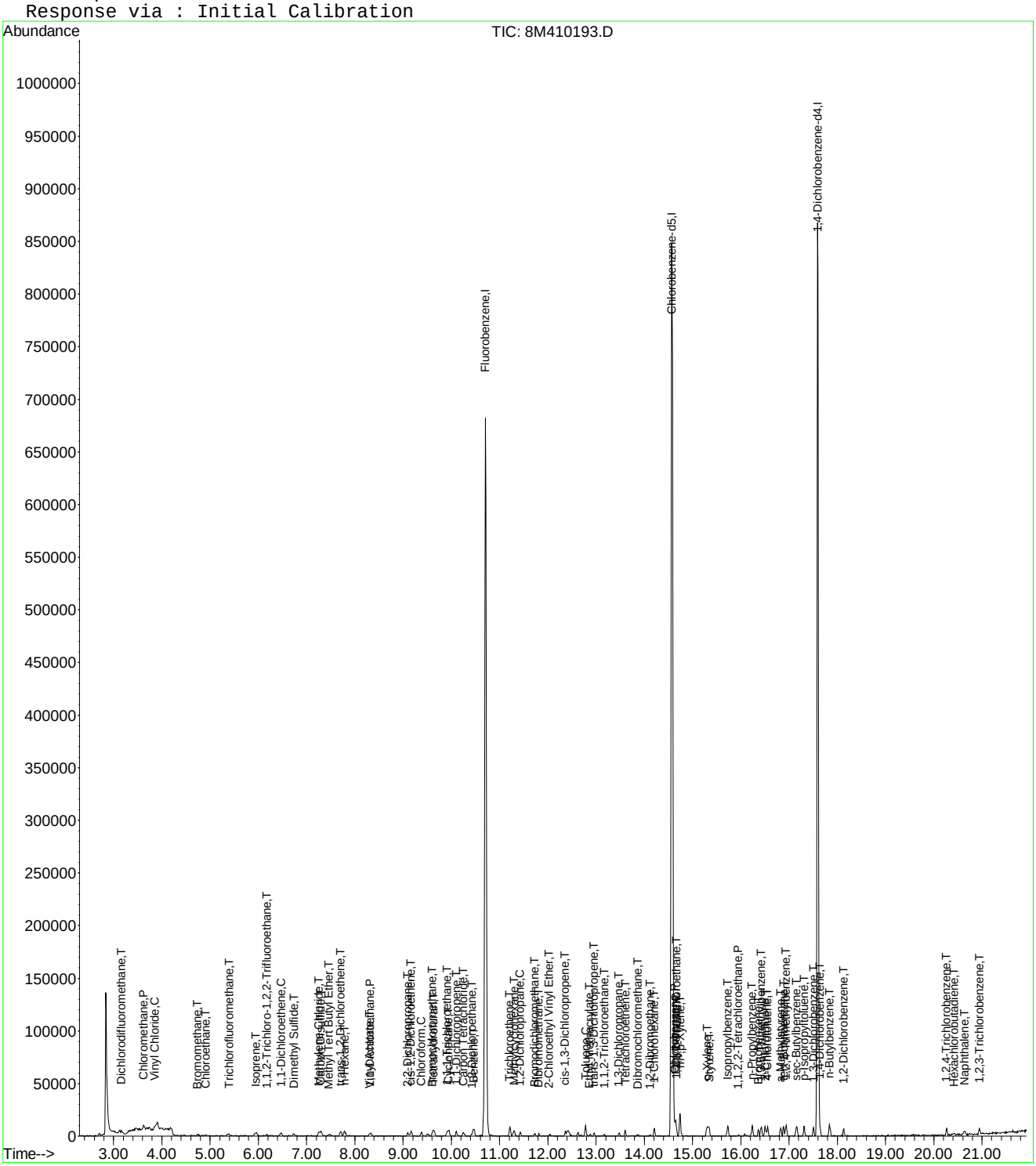
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
65)	1,3-Dichloropropane	13.48	76	1878	0.2100	ug/L		98
66)	Tetrachloroethene	13.61	164	2092	0.3395	ug/L		77
67)	Dibromochloromethane	13.87	129	1449	0.2167	ug/L		99
68)	1,2-Dibromoethane	14.12	107	727	0.1473	ug/L	#	19
69)	1-Chlorohexane	14.21	91	2856	0.2746	ug/L		90
70)	Chlorobenzene	14.62	112	6105	0.2908	ug/L	#	53
71)	1,1,1,2-Tetrachloroethane	14.66	131	1811	0.2405	ug/L		93
72)	Ethylbenzene	14.65	106	3177	0.2645	ug/L		81
73)	m-,p-Xylene	14.75	106	8105	0.5903	ug/L		87
74)	o-Xylene	15.31	106	3485	0.2447	ug/L		85
75)	Styrene	15.35	104	6091	0.2805	ug/L		93
77)	Isopropylbenzene	15.73	105	9880	0.2910	ug/L		94
79)	1,1,2,2-Tetrachloroethane	15.95	83	1189	0.2209	ug/L	#	69
83)	n-Propylbenzene	16.24	91	12897	0.3240	ug/L		86
84)	Bromobenzene	16.37	156	2103	0.2655	ug/L		76
85)	1,3,5-Trimethylbenzene	16.42	105	8493	0.3057	ug/L		96
86)	2-Chlorotoluene	16.50	91	9127	0.3511	ug/L		98
87)	4-Chlorotoluene	16.56	91	7414	0.2908	ug/L		93
88)	a-Methylstyrene	16.82	118	3662	0.2517	ug/L		79
89)	tert-Butylbenzene	16.89	134	1169	0.1953	ug/L	#	17
90)	1,2,4-Trimethylbenzene	16.94	105	8103	0.2826	ug/L		96
91)	sec-Butylbenzene	17.16	105	11348	0.3286	ug/L		98
92)	p-Isopropyltoluene	17.31	119	8622	0.3014	ug/L		100
93)	1,3-Dichlorobenzene	17.51	146	4601	0.2921	ug/L		97
94)	1,4-Dichlorobenzene	17.64	146	4914	0.3107	ug/L	#	1
95)	n-Butylbenzene	17.84	91	9322	0.3239	ug/L	#	85
96)	1,2-Dichlorobenzene	18.13	146	3883	0.2835	ug/L		98
98)	1,2,4-Trichlorobenzene	20.27	180	2603	0.2611	ug/L		90
99)	Hexachlorobutadiene	20.42	225	821	0.2014	ug/L	#	51
100)	Naphthalene	20.64	128	4699	0.2880	ug/L	#	68
101)	1,2,3-Trichlorobenzene	20.95	180	2543	0.3065	ug/L		84

(#) = qualifier out of range (m) = manual integration
8M410193.D 8260WTR.M Thu Feb 18 08:46:06 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410193.D Vial: 2
Acq On : 17 Feb 2016 14:49 Operator: TMB
Sample : WG556046-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410193.D Vial: 2
Acq On : 17 Feb 2016 14:49 Operator: TMB
Sample : WG556046-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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	100	0.00
2	T	Dichlorodifluoromethane	-1.0000	0.2792	0.0	100	0.00
3	P	Chloromethane	-1.0000	0.4216	0.0	100	0.01
4	C	Vinyl Chloride	-1.0000	0.3099	0.0	100	0.01
5	T	1,3-Butadiene	-1.0000	-1.0000	0.0	0	0.01
6	T	Bromomethane	-1.0000	0.2634	0.0	100	0.01
7	T	Chloroethane	-1.0000	0.1894	0.0	100	0.01
8	T	Trichlorofluoromethane	-1.0000	0.2754	0.0	100	0.01
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-5.91#
10	T	Isoprene	-1.0000	0.3159	0.0	100	0.01
11	T	Acrolein	-1.0000	0.0000	0.0	0	-6.15#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.1318	0.0	100	0.02
13	T	Acetone	-1.0000	0.0000	0.0	0	-6.25#
14	C	1,1-Dichloroethene	-1.0000	0.2641	0.0	100	0.01
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-6.59#
16	T	Dimethyl Sulfide	-1.0000	0.2819	0.0	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-6.99#
18	T	Methyl acetate	-1.0000	0.0000	0.0	0	-7.00#
19	T	Methylene Chloride	-1.0000	0.2764	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.3533	0.0	100	0.00
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.44#
22	T	Methyl Tert Butyl Ether	-1.0000	0.2495	0.0	100	-0.01
23	T	trans-1,2-Dichloroethene	-1.0000	0.3118	0.0	100	0.00
24	T	n-Hexane	-1.0000	0.2804	0.0	100	0.01
25	T	Diisopropyl ether	-1.0000	0.0000	0.0	0	-8.13#
26	T	Vinyl Acetate	-1.0000	0.1601	0.0	100	0.01
27	P	1,1-Dichloroethane	-1.0000	0.2833	0.0	100	-0.01
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-8.70#
29	T	2-Butanone	-1.0000	0.0000	0.0	0	-8.89#
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-8.99#
31	T	2,2-Dichloropropane	-1.0000	0.3074	0.0	100	-0.01
32	T	cis-1,2-Dichloroethene	-1.0000	0.3321	0.0	100	0.00
33	C	Chloroform	0.3000	0.3065	-2.2	100	0.01
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-9.52#
35	T	Bromochloromethane	-1.0000	0.2304	0.0	100	-0.01
36	T	Tetrahydrofuran	-1.0000	3.4944	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-9.66#
38	T	1,1,1-Trichloroethane	-1.0000	0.2769	0.0	100	0.00
39	T	Cyclohexane	-1.0000	0.2920	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.2814	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-10.21#
42	T	Carbon Tetrachloride	-1.0000	0.2797	0.0	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-10.30#
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	-1.0000	0.2353	0.0	100	0.00
46	T	Benzene	-1.0000	0.3067	0.0	100	0.00
47	T	Trichloroethene	-1.0000	0.5109	0.0	100	0.00
48	T	Methylcyclohexane	-1.0000	0.3054	0.0	100	0.01
49	C	1,2-Dichloropropane	-1.0000	0.2597	0.0	100	0.00
50	T	Bromodichloromethane	-1.0000	0.2898	0.0	100	0.00
51	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.72#
52	T	Dibromomethane	-1.0000	0.2711	0.0	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.1232	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-12.06#

(#) = Out of Range
8M410193.D 8260WTR.M Thu Feb 18 08:46:31 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410193.D Vial: 2
Acq On : 17 Feb 2016 14:49 Operator: TMB
Sample : WG556046-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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)
55	T	cis-1,3-Dichloropropene	-1.0000	0.3129	0.0	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.1022	0.0	100	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0196	0.0	100	-0.01
59	C	Toluene	-1.0000	0.3081	0.0	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.1877	0.0	100	-0.01
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	-1.0000	0.2500	0.0	100	0.00
63	T	1,1,2-Trichloroethane	-1.0000	0.1915	0.0	100	0.00
64	T	2-Hexanone	-1.0000	0.0000	0.0	0	-13.11#
65	T	1,3-Dichloropropane	-1.0000	0.2100	0.0	100	-0.01
66	T	Tetrachloroethene	-1.0000	0.3395	0.0	100	0.01
67	T	Dibromochloromethane	-1.0000	0.2167	0.0	100	0.00
68	T	1,2-Dibromoethane	-1.0000	0.1473	0.0	100	0.00
69	T	1-Chlorohexane	-1.0000	0.2746	0.0	100	0.00
70	P	Chlorobenzene	-1.0000	0.2908	0.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	-1.0000	0.2405	0.0	100	0.01
72	C	Ethylbenzene	-1.0000	0.2645	0.0	100	0.00
73	T	m-,p-Xylene	-1.0000	0.5903	0.0	100	0.00
74	T	o-Xylene	-1.0000	0.2447	0.0	100	0.00
75	T	Styrene	-1.0000	0.2805	0.0	100	0.00
76	P	Bromoform	-1.0000	0.0695	0.0	100	0.00
77	T	Isopropylbenzene	-1.0000	0.2910	0.0	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	-1.0000	0.2209	0.0	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.0951	0.0	100	0.00
81	T	1,2,3-Trichloropropane	-1.0000	0.0000	0.0	0	-16.13#
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.0000	0.0	0	-16.18#
83	T	n-Propylbenzene	-1.0000	0.3240	0.0	0	0.00
84	T	Bromobenzene	0.3000	0.2655	11.5	100	0.00
85	T	1,3,5-Trimethylbenzene	-1.0000	0.3057	0.0	100	0.00
86	T	2-Chlorotoluene	-1.0000	0.3511	0.0	100	0.00
87	T	4-Chlorotoluene	-1.0000	0.2908	0.0	100	0.00
88	T	a-Methylstyrene	-1.0000	0.2517	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.1953	0.0	100	0.00
90	T	1,2,4-Trimethylbenzene	-1.0000	0.2826	0.0	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.3286	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.3014	0.0	100	-0.01
93	T	1,3-Dichlorobenzene	-1.0000	0.2921	0.0	100	0.00
94	T	1,4-Dichlorobenzene	0.3000	0.3107	-3.6	100	0.00
95	T	n-Butylbenzene	-1.0000	0.3239	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.3000	0.2836	5.5	100	-0.01
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-19.13#
98	T	1,2,4-Trichlorobenzene	-1.0000	0.2611	0.0	100	0.00
99	T	Hexachlorobutadiene	-1.0000	0.2014	0.0	100	0.00
100	T	Naphthalene	-1.0000	0.2880	0.0	100	0.00
101	T	1,2,3-Trichlorobenzene	0.3000	0.3065	-2.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M410193.D 8260WTR.M Thu Feb 18 08:46:31 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410194.D Vial: 3
Acq On : 17 Feb 2016 15:18 Operator: TMB
Sample : WG556046-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:07 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	772738	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	543906	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	269409	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	3.16	85	4341	0.3564	ug/L	82
3) Chloromethane	3.63	50	9512	0.5107	ug/L #	77
4) Vinyl Chloride	3.85	62	5096	0.3930	ug/L	91
5) 1,3-Butadiene	3.90	54	4566	Below Cal	#	41
6) Bromomethane	4.74	94	1656	0.2688	ug/L	95
7) Chloroethane	4.90	64	1946	0.3322	ug/L #	53
8) Trichlorofluoromethane	5.39	101	4405	0.3170	ug/L #	94
10) Isoprene	5.94	67	2957	0.3140	ug/L	90
12) 1,1,2-Trichloro-1,2,2-Trif	6.19	101	2310	0.3045	ug/L #	50
13) Acetone	6.25	43	223	0.1764	ug/L #	48
14) 1,1-Dichloroethene	6.48	61	4315	0.3091	ug/L	100
16) Dimethyl Sulfide	6.75	62	1913	0.3128	ug/L	97
18) Methyl acetate	7.03	43	662	0.1876	ug/L #	66
19) Methylene Chloride	7.26	84	2838	0.3712	ug/L	89
20) Carbon Disulfide	7.29	76	8915	0.3715	ug/L	97
22) Methyl Tert Butyl Ether	7.48	73	5146	0.3314	ug/L #	76
23) trans-1,2-Dichloroethene	7.71	61	4216	0.3230	ug/L	93
24) n-Hexane	7.78	57	3497	0.3143	ug/L	99
26) Vinyl Acetate	8.31	43	3352	0.2515	ug/L #	79
27) 1,1-Dichloroethane	8.33	63	5522	0.3391	ug/L #	88
31) 2,2-Dichloropropane	9.10	77	4726	0.3690	ug/L #	74
32) cis-1,2-Dichloroethene	9.18	96	2932	0.3488	ug/L	76
33) Chloroform	9.37	83	4700	0.3253	ug/L	99
35) Bromochloromethane	9.61	130	1130	0.2686	ug/L	69
36) Tetrahydrofuran	9.64	42	1602	1.2034	ug/L #	55
38) 1,1,1-Trichloroethane	9.91	97	4708	0.3571	ug/L	75
39) Cyclohexane	9.95	56	5119	0.3336	ug/L #	87
40) 1,1-Dichloropropene	10.11	75	3597	0.3136	ug/L	93
42) Carbon Tetrachloride	10.24	117	4028	0.3357	ug/L #	89
45) 1,2-Dichloroethane	10.43	62	3605	0.3284	ug/L #	72
46) Benzene	10.47	78	10695	0.3578	ug/L	99
47) Trichloroethene	11.22	130	2582	0.3207	ug/L	82
48) Methylcyclohexane	11.30	83	3747	0.3232	ug/L	85
49) 1,2-Dichloropropane	11.43	63	2282	0.2716	ug/L	90
50) Bromodichloromethane	11.73	83	3102	0.2908	ug/L #	95
52) Dibromomethane	11.81	93	1080	0.2832	ug/L #	65
53) 2-Chloroethyl Vinyl Ether	12.04	63	830	0.2271	ug/L #	51
55) cis-1,3-Dichloropropene	12.37	75	3273	0.2819	ug/L	97
56) Dimethyl Disulfide	12.62	79	1187	0.1939	ug/L	92
59) Toluene	12.78	91	10834	0.3575	ug/L	92

(#) = qualifier out of range (m) = manual integration
8M410194.D 8260WTR.M Thu Feb 18 08:46:08 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410194.D Vial: 3
Acq On : 17 Feb 2016 15:18 Operator: TMB
Sample : WG556046-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:07 2016 Quant Results File: 8260WTR.RES

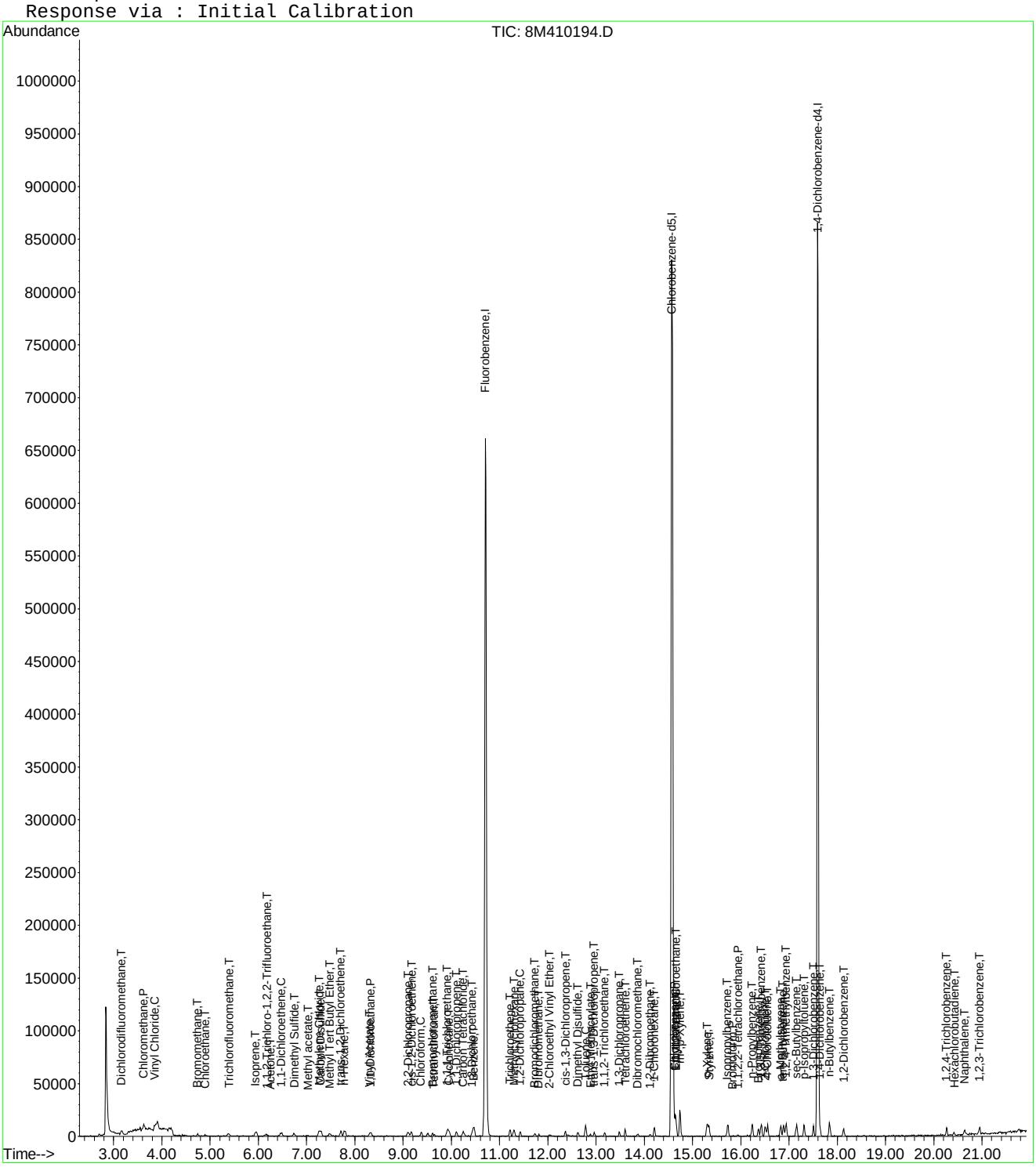
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
60) Ethyl Methacrylate	12.89	69	1714	0.2928 ug/L		90
62) trans-1,3-Dichloropropene	12.96	75	2666	0.2632 ug/L		91
63) 1,1,2-Trichloroethane	13.18	97	1427	0.2961 ug/L		98
65) 1,3-Dichloropropane	13.49	76	2871	0.3250 ug/L		97
66) Tetrachloroethene	13.61	164	1615	0.2653 ug/L		76
67) Dibromochloromethane	13.86	129	1984	0.3003 ug/L		84
68) 1,2-Dibromoethane	14.12	107	1472	0.3018 ug/L		97
69) 1-Chlorohexane	14.21	91	3514	0.3419 ug/L		96
70) Chlorobenzene	14.62	112	7386	0.3561 ug/L		91
71) 1,1,1,2-Tetrachloroethane	14.65	131	2191	0.2945 ug/L		83
72) Ethylbenzene	14.65	106	3945	0.3325 ug/L		86
73) m-,p-Xylene	14.74	106	9041	0.6666 ug/L		87
74) o-Xylene	15.30	106	4500	0.3199 ug/L		94
75) Styrene	15.35	104	5919	0.2759 ug/L		89
76) Bromoform	15.83	173	569	0.1495 ug/L	#	61
77) Isopropylbenzene	15.72	105	11980	0.3571 ug/L		100
79) 1,1,2,2-Tetrachloroethane	15.95	83	1543	0.2866 ug/L	#	93
83) n-Propylbenzene	16.23	91	13353	0.3354 ug/L		99
84) Bromobenzene	16.37	156	3484	0.4397 ug/L		85
85) 1,3,5-Trimethylbenzene	16.42	105	9768	0.3515 ug/L		97
86) 2-Chlorotoluene	16.50	91	10252	0.3942 ug/L		97
87) 4-Chlorotoluene	16.56	91	8071	0.3165 ug/L		90
88) a-Methylstyrene	16.82	118	4229	0.2907 ug/L		96
89) tert-Butylbenzene	16.88	134	1932	0.3227 ug/L		89
90) 1,2,4-Trimethylbenzene	16.94	105	9845	0.3433 ug/L		88
91) sec-Butylbenzene	17.15	105	12403	0.3591 ug/L		89
92) p-Isopropyltoluene	17.31	119	10261	0.3586 ug/L		96
93) 1,3-Dichlorobenzene	17.51	146	5008	0.3179 ug/L		92
94) 1,4-Dichlorobenzene	17.64	146	5067	0.3203 ug/L	#	1
95) n-Butylbenzene	17.84	91	10731	0.3728 ug/L		96
96) 1,2-Dichlorobenzene	18.14	146	4498	0.3284 ug/L		99
98) 1,2,4-Trichlorobenzene	20.27	180	3306	0.3315 ug/L	#	82
99) Hexachlorobutadiene	20.43	225	1103	0.2704 ug/L	#	69
100) Naphthalene	20.64	128	5665	0.3472 ug/L		90
101) 1,2,3-Trichlorobenzene	20.95	180	2955	0.3561 ug/L	#	82

(#) = qualifier out of range (m) = manual integration
8M410194.D 8260WTR.M Thu Feb 18 08:46:08 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410194.D Vial: 3
Acq On : 17 Feb 2016 15:18 Operator: TMB
Sample : WG556046-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410194.D Vial: 3
Acq On : 17 Feb 2016 15:18 Operator: TMB
Sample : WG556046-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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	100	0.00
2	T	Dichlorodifluoromethane	0.4000	0.3564	10.9	100	0.00
3	P	Chloromethane	-1.0000	0.5107	0.0	100	0.00
4	C	Vinyl Chloride	0.4000	0.3930	1.7	100	0.00
5	T	1,3-Butadiene	-1.0000	-1.0000	0.0	0	0.02
6	T	Bromomethane	-1.0000	0.2688	0.0	100	0.00
7	T	Chloroethane	0.4000	0.3322	16.9	100	0.00
8	T	Trichlorofluoromethane	0.4000	0.3170	20.8	100	0.00
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-5.91#
10	T	Isoprene	0.4000	0.3140	21.5	100	0.00
11	T	Acrolein	-1.0000	0.0000	0.0	0	-6.15#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.3045	0.0	100	0.03
13	T	Acetone	-1.0000	0.1764	0.0	100	0.00
14	C	1,1-Dichloroethene	0.4000	0.3090	22.7#	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-6.59#
16	T	Dimethyl Sulfide	0.4000	0.3128	21.8	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-6.99#
18	T	Methyl acetate	-1.0000	0.1876	0.0	100	0.03
19	T	Methylene Chloride	-1.0000	0.3712	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.3715	0.0	100	0.00
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.44#
22	T	Methyl Tert Butyl Ether	-1.0000	0.3314	0.0	100	0.00
23	T	trans-1,2-Dichloroethene	0.4000	0.3230	19.2	100	0.00
24	T	n-Hexane	-1.0000	0.3143	0.0	100	0.00
25	T	Diisopropyl ether	-1.0000	0.0000	0.0	0	-8.13#
26	T	Vinyl Acetate	-1.0000	0.2515	0.0	100	0.00
27	P	1,1-Dichloroethane	0.4000	0.3391	15.2	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-8.70#
29	T	2-Butanone	-1.0000	0.0000	0.0	0	-8.89#
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-8.99#
31	T	2,2-Dichloropropane	0.4000	0.3690	7.8	100	0.00
32	T	cis-1,2-Dichloroethene	0.4000	0.3488	12.8	100	0.00
33	C	Chloroform	0.4000	0.3253	18.7	100	0.00
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-9.52#
35	T	Bromochloromethane	0.4000	0.2686	32.8#	100	0.00
36	T	Tetrahydrofuran	-1.0000	1.2034	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-9.66#
38	T	1,1,1-Trichloroethane	0.4000	0.3571	10.7	100	0.00
39	T	Cyclohexane	-1.0000	0.3336	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.3136	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-10.21#
42	T	Carbon Tetrachloride	0.4000	0.3357	16.1	100	-0.01
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-10.30#
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	0.4000	0.3284	17.9	100	0.00
46	T	Benzene	0.4000	0.3578	10.5	100	0.00
47	T	Trichloroethene	0.4000	0.3207	19.8	100	0.00
48	T	Methylcyclohexane	-1.0000	0.3232	0.0	100	0.00
49	C	1,2-Dichloropropane	0.4000	0.2716	32.1#	100	0.00
50	T	Bromodichloromethane	0.4000	0.2908	27.3#	100	0.00
51	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.72#
52	T	Dibromomethane	0.4000	0.2832	29.2#	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.2271	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-12.06#

(#) = Out of Range
8M410194.D 8260WTR.M Thu Feb 18 08:46:42 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410194.D Vial: 3
Acq On : 17 Feb 2016 15:18 Operator: TMB
Sample : WG556046-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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)
55	T	cis-1,3-Dichloropropene	0.4000	0.2819	29.5#	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.1939	0.0	100	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0000	0.0	0	-12.69#
59	C	Toluene	0.4000	0.3574	10.6	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.2928	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	-1.0000	0.2632	0.0	100	0.00
63	T	1,1,2-Trichloroethane	0.4000	0.2961	26.0#	100	0.00
64	T	2-Hexanone	-1.0000	0.0000	0.0	0	-13.11#
65	T	1,3-Dichloropropane	0.4000	0.3250	18.8	100	0.00
66	T	Tetrachloroethene	0.4000	0.2653	33.7#	100	0.00
67	T	Dibromochloromethane	0.4000	0.3003	24.9	100	-0.01
68	T	1,2-Dibromoethane	0.4000	0.3018	24.6	100	0.00
69	T	1-Chlorohexane	0.4000	0.3419	14.5	100	0.00
70	P	Chlorobenzene	0.4000	0.3561	11.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	0.4000	0.2945	26.4#	100	0.00
72	C	Ethylbenzene	0.4000	0.3325	16.9	100	0.00
73	T	m-,p-Xylene	0.8000	0.6666	16.7	100	-0.01
74	T	o-Xylene	-1.0000	0.3199	0.0	100	0.00
75	T	Styrene	0.4000	0.2759	31.0#	100	0.00
76	P	Bromoform	-1.0000	0.1495	0.0	100	0.00
77	T	Isopropylbenzene	0.4000	0.3571	10.7	100	-0.01
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	0.4000	0.2866	28.4#	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.0000	0.0	0	-16.07#
81	T	1,2,3-Trichloropropane	-1.0000	0.0000	0.0	0	-16.13#
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.1117	0.0	100	0.00
83	T	n-Propylbenzene	0.4000	0.3354	16.1	100	0.00
84	T	Bromobenzene	0.4000	0.4397	-9.9	100	0.00
85	T	1,3,5-Trimethylbenzene	0.4000	0.3515	12.1	100	0.00
86	T	2-Chlorotoluene	0.4000	0.3942	1.4	100	0.00
87	T	4-Chlorotoluene	0.4000	0.3165	20.9	100	0.00
88	T	a-Methylstyrene	-1.0000	0.2907	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.3227	0.0	100	-0.01
90	T	1,2,4-Trimethylbenzene	0.4000	0.3433	14.2	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.3591	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.3586	0.0	100	-0.01
93	T	1,3-Dichlorobenzene	0.4000	0.3179	20.5	100	0.00
94	T	1,4-Dichlorobenzene	0.4000	0.3203	19.9	100	0.00
95	T	n-Butylbenzene	-1.0000	0.3728	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.4000	0.3284	17.9	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-19.13#
98	T	1,2,4-Trichlorobenzene	0.4000	0.3315	17.1	100	0.00
99	T	Hexachlorobutadiene	0.4000	0.2704	32.4#	100	0.00
100	T	Naphthalene	0.4000	0.3472	13.2	100	0.00
101	T	1,2,3-Trichlorobenzene	0.4000	0.3561	11.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 2
8M410194.D 8260WTR.M Thu Feb 18 08:46:42 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410195.D Vial: 4
Acq On : 17 Feb 2016 15:47 Operator: TMB
Sample : WG556046-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:08 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	785884	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	555926	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	273984	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	4031	0.4997	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	2.00%#		
43) 1,2-Dichloroethane-d4	10.31	65	4398	0.5092	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	2.04%#		
58) Toluene-d8	12.68	98	14634	0.5331	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	2.12%#		
80) p-Bromofluorobenzene	16.07	95	6061	0.5695	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	2.28%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	11557	0.9329	ug/L	100
3) Chloromethane	3.63	50	22216	1.1728	ug/L	95
4) Vinyl Chloride	3.86	62	14444	1.0953	ug/L	97
5) 1,3-Butadiene	3.91	54	14933	Below Cal		75
6) Bromomethane	4.73	94	5536	0.8836	ug/L	85
7) Chloroethane	4.90	64	5632	0.9454	ug/L	88
8) Trichlorofluoromethane	5.39	101	14190	1.0040	ug/L	99
9) Diethyl ether	5.91	59	25069	4.8436	ug/L	95
10) Isoprene	5.95	67	9108	0.9510	ug/L	94
11) Acrolein	6.14	56	1675	2.0840	ug/L	83
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	7205	0.9338	ug/L	86
13) Acetone	6.26	43	1243	0.9671	ug/L #	48
14) 1,1-Dichloroethene	6.48	61	14865	1.0469	ug/L	94
15) Tert-Butyl Alcohol	6.57	59	2583	7.9129	ug/L #	55
16) Dimethyl Sulfide	6.74	62	5888	0.9467	ug/L	100
17) Iodomethane	7.00	142	1150	1.4137	ug/L #	60
18) Methyl acetate	7.02	43	3094	0.8621	ug/L #	66
19) Methylene Chloride	7.26	84	6957	0.8948	ug/L	74
20) Carbon Disulfide	7.30	76	24458	1.0021	ug/L	100
21) Acrylonitrile	7.44	53	3599	1.9860	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	15081	0.9550	ug/L	99
23) trans-1,2-Dichloroethene	7.71	61	13220	0.9959	ug/L	95
24) n-Hexane	7.79	57	11770	1.0400	ug/L	93
25) Diisopropyl ether	8.13	45	145771	4.9427	ug/L	99
26) Vinyl Acetate	8.31	43	11641	0.8587	ug/L #	84
27) 1,1-Dichloroethane	8.33	63	16334	0.9862	ug/L	95
28) Ethyl-Tert-Butyl ether	8.70	59	111811	4.7270	ug/L	99
29) 2-Butanone	8.89	43	1302	0.6442	ug/L #	57
30) Propionitrile	8.99	54	2259	3.8911	ug/L #	56
31) 2,2-Dichloropropane	9.11	77	13330	1.0234	ug/L	97
32) cis-1,2-Dichloroethene	9.17	96	7971	0.9323	ug/L	76
33) Chloroform	9.38	83	15065	1.0252	ug/L	98
34) 1-Bromopropane	9.51	122	797	1.0758	ug/L	86
35) Bromochloromethane	9.61	130	4486	1.0486	ug/L	91
36) Tetrahydrofuran	9.64	42	7901	5.8360	ug/L	96
38) 1,1,1-Trichloroethane	9.90	97	12741	0.9502	ug/L	94
39) Cyclohexane	9.94	56	14543	0.9320	ug/L	98
40) 1,1-Dichloropropene	10.11	75	11745	1.0067	ug/L	91
41) Tert-Amyl-Methyl ether	10.21	73	79511	4.7826	ug/L	96
42) Carbon Tetrachloride	10.24	117	11507	0.9430	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M410195.D 8260WTR.M Thu Feb 18 08:46:09 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410195.D Vial: 4
Acq On : 17 Feb 2016 15:47 Operator: TMB
Sample : WG556046-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:08 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

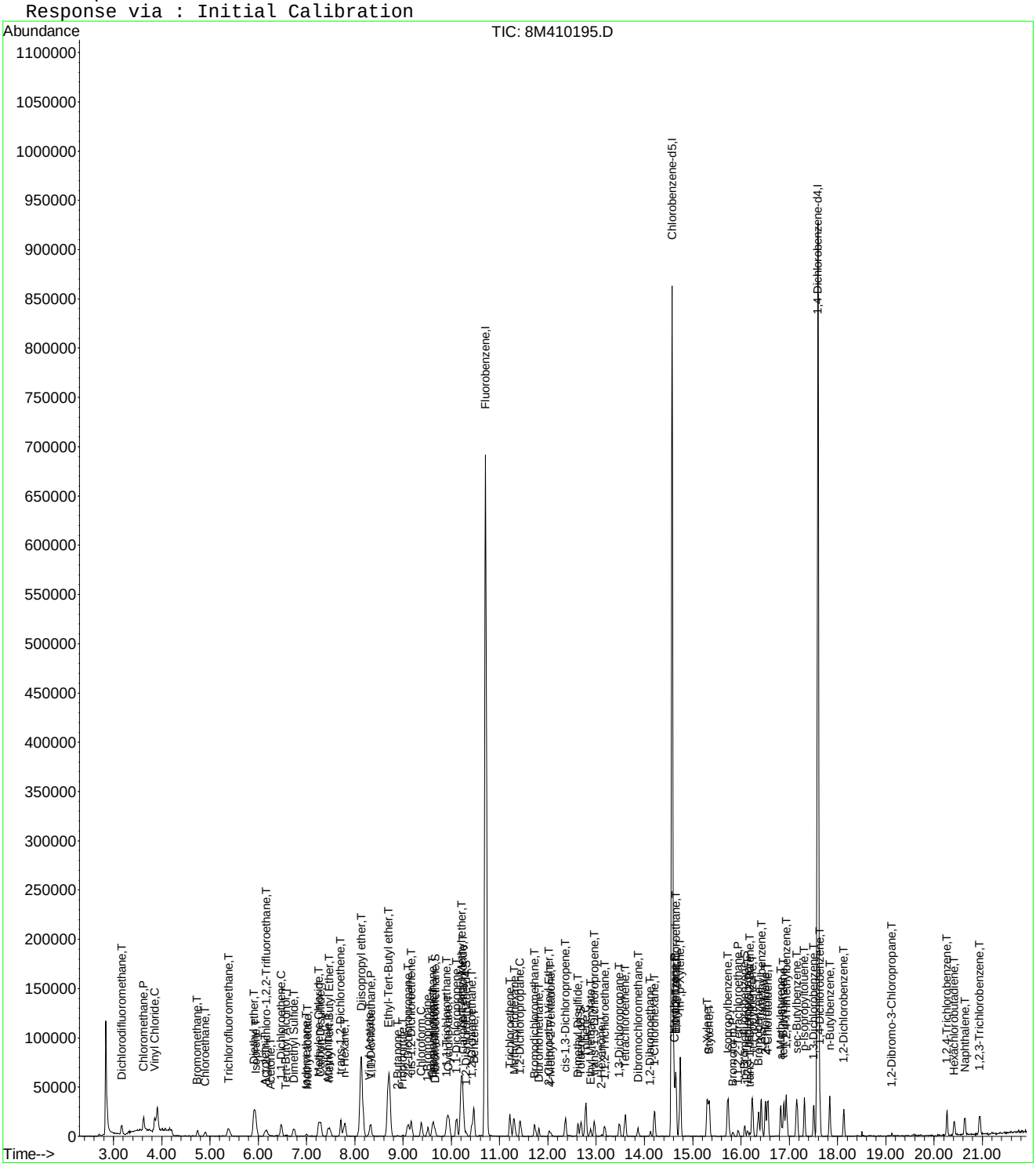
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	11516	1.0315 ug/L		99
46)	Benzene	10.47	78	32435	1.0670 ug/L		96
47)	Trichloroethene	11.21	130	8509	1.0393 ug/L		96
48)	Methylcyclohexane	11.31	83	11261	0.9552 ug/L		91
49)	1,2-Dichloropropane	11.42	63	8242	0.9644 ug/L		99
50)	Bromodichloromethane	11.72	83	11142	1.0270 ug/L		95
52)	Dibromomethane	11.81	93	3486	0.8988 ug/L		98
53)	2-Chloroethyl Vinyl Ether	12.02	63	2937	0.7901 ug/L	#	67
54)	4-Methyl-2-Pentanone	12.06	58	1260	0.7278 ug/L	#	41
55)	cis-1,3-Dichloropropene	12.36	75	12149	1.0288 ug/L		90
56)	Dimethyl Disulfide	12.62	79	4873	0.7829 ug/L		85
59)	Toluene	12.79	91	33426	1.0790 ug/L		98
60)	Ethyl Methacrylate	12.89	69	4879	0.8154 ug/L		97
62)	trans-1,3-Dichloropropene	12.96	75	9736	0.9403 ug/L		95
63)	1,1,2-Trichloroethane	13.18	97	4471	0.9077 ug/L		90
64)	2-Hexanone	13.12	58	841	0.5487 ug/L	#	49
65)	1,3-Dichloropropane	13.48	76	8634	0.9562 ug/L		96
66)	Tetrachloroethene	13.60	164	6230	1.0012 ug/L		89
67)	Dibromochloromethane	13.87	129	6456	0.9561 ug/L		91
68)	1,2-Dibromoethane	14.12	107	4749	0.9526 ug/L		98
69)	1-Chlorohexane	14.21	91	10007	0.9527 ug/L		89
70)	Chlorobenzene	14.63	112	21998	1.0377 ug/L		96
71)	1,1,1,2-Tetrachloroethane	14.66	131	7085	0.9317 ug/L		98
72)	Ethylbenzene	14.66	106	11454	0.9444 ug/L		91
73)	m-,p-Xylene	14.74	106	29042	2.0949 ug/L		98
74)	o-Xylene	15.30	106	14229	0.9895 ug/L		97
75)	Styrene	15.34	104	21487	0.9800 ug/L		91
76)	Bromoform	15.83	173	3207	0.8242 ug/L		91
77)	Isopropylbenzene	15.73	105	35968	1.0490 ug/L		98
79)	1,1,2,2-Tetrachloroethane	15.94	83	5419	0.9897 ug/L	#	91
81)	1,2,3-Trichloropropane	16.13	110	1131	0.7381 ug/L		74
82)	trans-1,4-Dichloro-2-Buten	16.19	53	1677	0.8225 ug/L	#	74
83)	n-Propylbenzene	16.24	91	43550	1.0757 ug/L		98
84)	Bromobenzene	16.36	156	7902	0.9806 ug/L		80
85)	1,3,5-Trimethylbenzene	16.42	105	29663	1.0497 ug/L		100
86)	2-Chlorotoluene	16.51	91	29168	1.1029 ug/L		95
87)	4-Chlorotoluene	16.56	91	27279	1.0517 ug/L		92
88)	a-Methylstyrene	16.83	118	12336	0.8337 ug/L		94
89)	tert-Butylbenzene	16.88	134	5513	0.9054 ug/L		78
90)	1,2,4-Trimethylbenzene	16.94	105	31016	1.0636 ug/L		91
91)	sec-Butylbenzene	17.16	105	37691	1.0731 ug/L		95
92)	p-Isopropyltoluene	17.31	119	30310	1.0417 ug/L		92
93)	1,3-Dichlorobenzene	17.51	146	16779	1.0473 ug/L		90
94)	1,4-Dichlorobenzene	17.63	146	17242	1.0716 ug/L	#	62
95)	n-Butylbenzene	17.84	91	30515	1.0424 ug/L		94
96)	1,2-Dichlorobenzene	18.13	146	14104	1.0125 ug/L		97
97)	1,2-Dibromo-3-Chloropropan	19.12	75	766	1.2255 ug/L		65
98)	1,2,4-Trichlorobenzene	20.27	180	10252	1.0108 ug/L		98
99)	Hexachlorobutadiene	20.41	225	4087	0.9854 ug/L		94
100)	Naphthalene	20.64	128	17272	1.0408 ug/L		98
101)	1,2,3-Trichlorobenzene	20.94	180	7861	0.9315 ug/L		94

(#) = qualifier out of range (m) = manual integration
8M410195.D 8260WTR.M Thu Feb 18 08:46:09 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410195.D Vial: 4
Acq On : 17 Feb 2016 15:47 Operator: TMB
Sample : WG556046-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410195.D Vial: 4
Acq On : 17 Feb 2016 15:47 Operator: TMB
Sample : WG556046-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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	100	0.00
2	T	Dichlorodifluoromethane	1.0000	0.9329	6.7	100	0.01
3	P	Chloromethane	1.0000	1.1728	-17.3	100	0.01
4	C	Vinyl Chloride	1.0000	1.0954	-9.5	100	0.01
5	T	1,3-Butadiene	-1.0000	-1.0000	0.0	0	0.02
6	T	Bromomethane	1.0000	0.8836	11.6	100	0.00
7	T	Chloroethane	1.0000	0.9454	5.5	100	0.00
8	T	Trichlorofluoromethane	1.0000	1.0040	-0.4	100	0.00
9	T	Diethyl ether	5.0000	4.8436	3.1	100	0.00
10	T	Isoprene	1.0000	0.9510	4.9	100	0.01
11	T	Acrolein	2.5000	2.0840	16.6	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	1.0000	0.9338	6.6	100	0.01
13	T	Acetone	-1.0000	0.9671	0.0	100	0.01
14	C	1,1-Dichloroethene	1.0000	1.0469	-4.7	100	0.01
15	T	Tert-Butyl Alcohol	-1.0000	7.9129	0.0	100	-0.02
16	T	Dimethyl Sulfide	1.0000	0.9467	5.3	100	0.00
17	T	Iodomethane	1.0000	1.4137	-41.4#	100	0.01
18	T	Methyl acetate	-1.0000	0.8621	0.0	100	0.02
19	T	Methylene Chloride	1.0000	0.8948	10.5	100	0.00
20	T	Carbon Disulfide	1.0000	1.0022	-0.2	100	0.00
21	T	Acrylonitrile	2.5000	1.9860	20.6	100	0.00
22	T	Methyl Tert Butyl Ether	1.0000	0.9550	4.5	100	0.00
23	T	trans-1,2-Dichloroethene	1.0000	0.9959	0.4	100	0.00
24	T	n-Hexane	-1.0000	1.0400	0.0	100	0.01
25	T	Diisopropyl ether	5.0000	4.9427	1.1	100	0.00
26	T	Vinyl Acetate	-1.0000	0.8587	0.0	100	0.01
27	P	1,1-Dichloroethane	1.0000	0.9862	1.4	100	0.00
28	T	Ethyl-Tert-Butyl ether	5.0000	4.7270	5.5	100	0.00
29	T	2-Butanone	-1.0000	0.6442	0.0	100	0.00
30	T	Propionitrile	5.0000	3.8912	22.2	100	0.00
31	T	2,2-Dichloropropane	1.0000	1.0234	-2.3	100	0.00
32	T	cis-1,2-Dichloroethene	1.0000	0.9323	6.8	100	0.00
33	C	Chloroform	1.0000	1.0252	-2.5	100	0.00
34		1-Bromopropane	1.0000	1.0758	-7.6	100	0.00
35	T	Bromochloromethane	1.0000	1.0486	-4.9	100	0.00
36	T	Tetrahydrofuran	5.0000	5.8360	-16.7	100	0.01
37	S	Dibromofluoromethane	0.5000	0.4997	0.1	100	0.00
38	T	1,1,1-Trichloroethane	1.0000	0.9502	5.0	100	0.00
39	T	Cyclohexane	1.0000	0.9320	6.8	100	0.00
40	T	1,1-Dichloropropene	1.0000	1.0067	-0.7	100	0.00
41	T	Tert-Amyl-Methyl ether	5.0000	4.7826	4.3	100	0.00
42	T	Carbon Tetrachloride	1.0000	0.9430	5.7	100	0.00
43	S	1,2-Dichloroethane-d4	0.5000	0.5092	-1.8	100	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	1.0000	1.0315	-3.2	100	0.00
46	T	Benzene	1.0000	1.0670	-6.7	100	0.00
47	T	Trichloroethene	1.0000	1.0393	-3.9	100	0.00
48	T	Methylcyclohexane	-1.0000	0.9552	0.0	100	0.01
49	C	1,2-Dichloropropane	1.0000	0.9644	3.6	100	0.00
50	T	Bromodichloromethane	1.0000	1.0270	-2.7	100	0.00
51	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.72#
52	T	Dibromomethane	1.0000	0.8988	10.1	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.7901	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.7278	0.0	100	0.00

(#) = Out of Range
8M410195.D 8260WTR.M Thu Feb 18 08:47:00 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410195.D Vial: 4
Acq On : 17 Feb 2016 15:47 Operator: TMB
Sample : WG556046-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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)
55	T	cis-1,3-Dichloropropene	1.0000	1.0288	-2.9	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.7829	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	0.5000	0.5331	-6.6	100	0.00
59	C	Toluene	1.0000	1.0790	-7.9	100	0.00
60	T	Ethyl Methacrylate	1.0000	0.8154	18.5	100	0.01
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	1.0000	0.9403	6.0	100	0.00
63	T	1,1,2-Trichloroethane	1.0000	0.9077	9.2	100	0.00
64	T	2-Hexanone	-1.0000	0.5487	0.0	100	0.00
65	T	1,3-Dichloropropane	1.0000	0.9562	4.4	100	0.00
66	T	Tetrachloroethene	1.0000	1.0012	-0.1	100	0.00
67	T	Dibromochloromethane	1.0000	0.9561	4.4	100	0.00
68	T	1,2-Dibromoethane	1.0000	0.9526	4.7	100	0.00
69	T	1-Chlorohexane	1.0000	0.9527	4.7	100	0.00
70	P	Chlorobenzene	1.0000	1.0377	-3.8	100	0.00
71	T	1,1,1,2-Tetrachloroethane	1.0000	0.9317	6.8	100	0.00
72	C	Ethylbenzene	1.0000	0.9444	5.6	100	0.00
73	T	m-,p-Xylene	2.0000	2.0949	-4.7	100	0.00
74	T	o-Xylene	1.0000	0.9895	1.0	100	0.00
75	T	Styrene	1.0000	0.9800	2.0	100	0.00
76	P	Bromoform	1.0000	0.8242	17.6	100	0.00
77	T	Isopropylbenzene	1.0000	1.0490	-4.9	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	1.0000	0.9897	1.0	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.5695	0.0	100	0.00
81	T	1,2,3-Trichloropropane	1.0000	0.7381	26.2#	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	1.0000	0.8225	17.7	100	0.00
83	T	n-Propylbenzene	1.0000	1.0757	-7.6	100	0.00
84	T	Bromobenzene	1.0000	0.9806	1.9	100	0.00
85	T	1,3,5-Trimethylbenzene	1.0000	1.0497	-5.0	100	0.00
86	T	2-Chlorotoluene	1.0000	1.1029	-10.3	100	0.00
87	T	4-Chlorotoluene	1.0000	1.0517	-5.2	100	0.00
88	T	a-Methylstyrene	-1.0000	0.8337	0.0	100	0.00
89	T	tert-Butylbenzene	1.0000	0.9054	9.5	100	0.00
90	T	1,2,4-Trimethylbenzene	1.0000	1.0636	-6.4	100	0.00
91	T	sec-Butylbenzene	1.0000	1.0731	-7.3	100	0.00
92	T	p-Isopropyltoluene	1.0000	1.0417	-4.2	100	0.00
93	T	1,3-Dichlorobenzene	1.0000	1.0474	-4.7	100	0.00
94	T	1,4-Dichlorobenzene	1.0000	1.0716	-7.2	100	0.00
95	T	n-Butylbenzene	1.0000	1.0424	-4.2	100	0.00
96	T	1,2-Dichlorobenzene	1.0000	1.0125	-1.2	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	1.2255	0.0	0	0.00
98	T	1,2,4-Trichlorobenzene	1.0000	1.0108	-1.1	100	0.00
99	T	Hexachlorobutadiene	1.0000	0.9853	1.5	100	0.00
100	T	Naphthalene	1.0000	1.0408	-4.1	100	0.00
101	T	1,2,3-Trichlorobenzene	1.0000	0.9315	6.8	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M410195.D 8260WTR.M Thu Feb 18 08:47:00 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410196.D Vial: 5
Acq On : 17 Feb 2016 16:23 Operator: TMB
Sample : WG556046-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:10 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	785085	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	557240	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	280270	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	7734	0.9597	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	3.84%#		
43) 1,2-Dichloroethane-d4	10.30	65	8223	0.9530	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	3.80%#		
58) Toluene-d8	12.68	98	25965	0.9437	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	3.76%#		
80) p-Bromofluorobenzene	16.07	95	9408	0.8641	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	3.44%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	23918	1.9327	ug/L	100
3) Chloromethane	3.62	50	40791	2.1556	ug/L	91
4) Vinyl Chloride	3.85	62	29503	2.2396	ug/L	98
5) 1,3-Butadiene	3.90	54	29376	1.1089	ug/L	98
6) Bromomethane	4.75	94	12067	1.9280	ug/L	96
7) Chloroethane	4.89	64	11615	1.9518	ug/L	98
8) Trichlorofluoromethane	5.39	101	29119	2.0625	ug/L	98
9) Diethyl ether	5.91	59	131394	25.4127	ug/L	99
10) Isoprene	5.93	67	18814	1.9664	ug/L	97
11) Acrolein	6.14	56	10267	12.7870	ug/L	100
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	15394	1.9973	ug/L	97
13) Acetone	6.25	43	2673	2.0818	ug/L #	48
14) 1,1-Dichloroethene	6.47	61	28926	2.0392	ug/L	95
15) Tert-Butyl Alcohol	6.59	59	17349	53.2017	ug/L #	87
16) Dimethyl Sulfide	6.73	62	12337	1.9856	ug/L	98
17) Iodomethane	6.99	142	3228	1.8283	ug/L	97
18) Methyl acetate	7.00	43	8170	2.2787	ug/L #	80
19) Methylene Chloride	7.25	84	16270	2.0948	ug/L	96
20) Carbon Disulfide	7.30	76	51176	2.0990	ug/L	97
21) Acrylonitrile	7.43	53	21751	12.0148	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	31237	1.9802	ug/L	100
23) trans-1,2-Dichloroethene	7.70	61	26849	2.0247	ug/L	96
24) n-Hexane	7.80	57	23319	2.0626	ug/L	95
25) Diisopropyl ether	8.13	45	765203	25.9721	ug/L	99
26) Vinyl Acetate	8.30	43	27022	1.9954	ug/L	94
27) 1,1-Dichloroethane	8.33	63	33058	1.9979	ug/L	100
28) Ethyl-Tert-Butyl ether	8.70	59	607833	25.7231	ug/L	100
29) 2-Butanone	8.89	43	3996	1.9793	ug/L #	79
30) Propionitrile	8.99	54	13597	23.4448	ug/L	99
31) 2,2-Dichloropropane	9.11	77	27313	2.0990	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	17242	2.0187	ug/L	87
33) Chloroform	9.38	83	29447	2.0060	ug/L	100
34) 1-Bromopropane	9.51	122	1876	1.9235	ug/L	62
35) Bromochloromethane	9.60	130	7895	1.8473	ug/L	77
36) Tetrahydrofuran	9.63	42	34153	25.2524	ug/L	98
38) 1,1,1-Trichloroethane	9.90	97	27001	2.0157	ug/L	99
39) Cyclohexane	9.95	56	30568	1.9609	ug/L	98
40) 1,1-Dichloropropene	10.11	75	23584	2.0235	ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	427656	25.7499	ug/L	98
42) Carbon Tetrachloride	10.26	117	24856	2.0389	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M410196.D 8260WTR.M Thu Feb 18 08:46:10 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410196.D Vial: 5
Acq On : 17 Feb 2016 16:23 Operator: TMB
Sample : WG556046-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:10 2016 Quant Results File: 8260WTR.RES

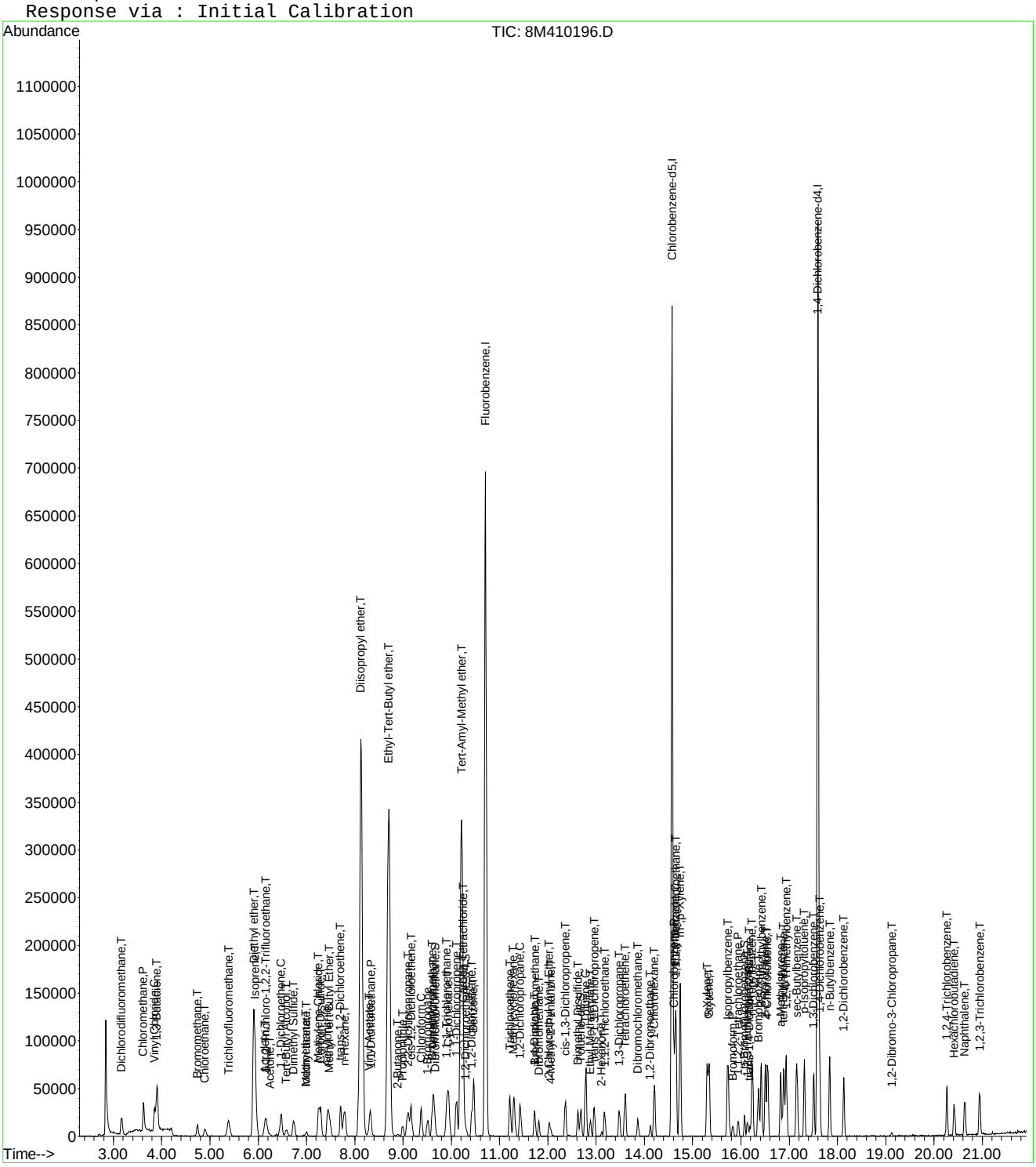
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.42	62	22413	2.0097 ug/L		95
46)	Benzene	10.46	78	63830	2.1020 ug/L		99
47)	Trichloroethene	11.22	130	17061	2.0860 ug/L		97
48)	Methylcyclohexane	11.29	83	24208	2.0555 ug/L		95
49)	1,2-Dichloropropane	11.42	63	16914	1.9811 ug/L		99
50)	Bromodichloromethane	11.73	83	21484	1.9823 ug/L		96
51)	1,4-Dioxane	11.72	88	1262	36.6474 ug/L		75
52)	Dibromomethane	11.82	93	7726	1.9939 ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	6611	1.7802 ug/L		99
54)	4-Methyl-2-Pentanone	12.06	58	2130	1.2316 ug/L	#	83
55)	cis-1,3-Dichloropropene	12.36	75	22670	1.9218 ug/L		99
56)	Dimethyl Disulfide	12.62	79	8915	1.4337 ug/L		91
59)	Toluene	12.79	91	65706	2.1160 ug/L		98
60)	Ethyl Methacrylate	12.88	69	11326	1.8885 ug/L		94
62)	trans-1,3-Dichloropropene	12.96	75	19385	1.8678 ug/L		95
63)	1,1,2-Trichloroethane	13.18	97	9784	1.9817 ug/L		98
64)	2-Hexanone	13.12	58	2742	1.7849 ug/L	#	87
65)	1,3-Dichloropropane	13.48	76	18626	2.0580 ug/L		98
66)	Tetrachloroethene	13.60	164	12489	2.0023 ug/L		91
67)	Dibromochloromethane	13.86	129	12453	1.8399 ug/L		99
68)	1,2-Dibromoethane	14.12	107	9978	1.9968 ug/L		95
69)	1-Chlorohexane	14.20	91	21195	2.0131 ug/L		91
70)	Chlorobenzene	14.62	112	42771	2.0129 ug/L		81
71)	1,1,1,2-Tetrachloroethane	14.66	131	14580	1.9127 ug/L		99
72)	Ethylbenzene	14.65	106	24594	2.0230 ug/L		99
73)	m-,p-Xylene	14.74	106	56617	4.0743 ug/L		96
74)	o-Xylene	15.30	106	27322	1.8956 ug/L		97
75)	Styrene	15.34	104	44351	2.0181 ug/L		99
76)	Bromoform	15.84	173	6936	1.7783 ug/L		89
77)	Isopropylbenzene	15.73	105	71932	2.0929 ug/L		97
79)	1,1,2,2-Tetrachloroethane	15.94	83	11637	2.0776 ug/L	#	98
81)	1,2,3-Trichloropropane	16.14	110	3486	2.2241 ug/L		93
82)	trans-1,4-Dichloro-2-Buten	16.18	53	3453	1.6556 ug/L	#	56
83)	n-Propylbenzene	16.23	91	86680	2.0930 ug/L		99
84)	Bromobenzene	16.36	156	16288	1.9759 ug/L		92
85)	1,3,5-Trimethylbenzene	16.43	105	59253	2.0498 ug/L		100
86)	2-Chlorotoluene	16.51	91	55801	2.0627 ug/L		98
87)	4-Chlorotoluene	16.55	91	54177	2.0419 ug/L		94
88)	a-Methylstyrene	16.83	118	26242	1.7337 ug/L		99
89)	tert-Butylbenzene	16.88	134	12039	1.9328 ug/L		90
90)	1,2,4-Trimethylbenzene	16.94	105	61435	2.0594 ug/L		96
91)	sec-Butylbenzene	17.16	105	74823	2.0824 ug/L		95
92)	p-Isopropyltoluene	17.31	119	60435	2.0304 ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	34022	2.0760 ug/L		99
94)	1,4-Dichlorobenzene	17.63	146	32632	1.9826 ug/L		75
95)	n-Butylbenzene	17.84	91	65161	2.1761 ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	29661	2.0815 ug/L		96
97)	1,2-Dibromo-3-Chloropropan	19.13	75	1345	1.7462 ug/L		71
98)	1,2,4-Trichlorobenzene	20.27	180	20454	1.9715 ug/L		96
99)	Hexachlorobutadiene	20.41	225	8230	1.9397 ug/L		97
100)	Naphthalene	20.63	128	34116	2.0097 ug/L		98
101)	1,2,3-Trichlorobenzene	20.95	180	16966	1.9654 ug/L		98

(#) = qualifier out of range (m) = manual integration
8M410196.D 8260WTR.M Thu Feb 18 08:46:10 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410196.D Vial: 5
Acq On : 17 Feb 2016 16:23 Operator: TMB
Sample : WG556046-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410196.D Vial: 5
Acq On : 17 Feb 2016 16:23 Operator: TMB
Sample : WG556046-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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	100	0.00
2	T	Dichlorodifluoromethane	2.0000	1.9327	3.4	100	0.00
3	P	Chloromethane	2.0000	2.1556	-7.8	100	0.00
4	C	Vinyl Chloride	2.0000	2.2396	-12.0	100	0.00
5	T	1,3-Butadiene	2.0000	1.1090	44.6#	100	0.01
6	T	Bromomethane	2.0000	1.9280	3.6	100	0.01
7	T	Chloroethane	2.0000	1.9518	2.4	100	0.00
8	T	Trichlorofluoromethane	2.0000	2.0625	-3.1	100	0.00
9	T	Diethyl ether	25.0000	25.4127	-1.7	100	0.00
10	T	Isoprene	2.0000	1.9664	1.7	100	0.00
11	T	Acrolein	12.5000	12.7870	-2.3	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	2.0000	1.9973	0.1	100	0.00
13	T	Acetone	-1.0000	2.0818	0.0	100	0.00
14	C	1,1-Dichloroethene	2.0000	2.0392	-2.0	100	0.00
15	T	Tert-Butyl Alcohol	50.0000	53.2017	-6.4	100	0.00
16	T	Dimethyl Sulfide	2.0000	1.9856	0.7	100	0.00
17	T	Iodomethane	2.0000	1.8283	8.6	100	0.00
18	T	Methyl acetate	-1.0000	2.2787	0.0	100	0.00
19	T	Methylene Chloride	2.0000	2.0948	-4.7	100	0.00
20	T	Carbon Disulfide	2.0000	2.0990	-5.0	100	0.00
21	T	Acrylonitrile	12.5000	12.0148	3.9	100	0.00
22	T	Methyl Tert Butyl Ether	2.0000	1.9802	1.0	100	0.00
23	T	trans-1,2-Dichloroethene	2.0000	2.0247	-1.2	100	0.00
24	T	n-Hexane	-1.0000	2.0626	0.0	100	0.01
25	T	Diisopropyl ether	25.0000	25.9721	-3.9	100	0.00
26	T	Vinyl Acetate	2.0000	1.9954	0.2	100	0.00
27	P	1,1-Dichloroethane	2.0000	1.9979	0.1	100	0.00
28	T	Ethyl-Tert-Butyl ether	25.0000	25.7231	-2.9	100	0.00
29	T	2-Butanone	-1.0000	1.9793	0.0	100	0.00
30	T	Propionitrile	25.0000	23.4448	6.2	100	0.00
31	T	2,2-Dichloropropane	2.0000	2.0990	-5.0	100	0.00
32	T	cis-1,2-Dichloroethene	2.0000	2.0187	-0.9	100	0.00
33	C	Chloroform	2.0000	2.0060	-0.3	100	0.00
34		1-Bromopropane	2.0000	1.9235	3.8	100	0.00
35	T	Bromochloromethane	2.0000	1.8474	7.6	100	0.00
36	T	Tetrahydrofuran	25.0000	25.2524	-1.0	100	0.00
37	S	Dibromofluoromethane	1.0000	0.9597	4.0	100	0.00
38	T	1,1,1-Trichloroethane	2.0000	2.0157	-0.8	100	0.00
39	T	Cyclohexane	2.0000	1.9609	2.0	100	0.00
40	T	1,1-Dichloropropene	2.0000	2.0235	-1.2	100	0.00
41	T	Tert-Amyl-Methyl ether	25.0000	25.7498	-3.0	100	0.00
42	T	Carbon Tetrachloride	2.0000	2.0389	-1.9	100	0.00
43	S	1,2-Dichloroethane-d4	1.0000	0.9530	4.7	100	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	2.0000	2.0097	-0.5	100	0.00
46	T	Benzene	2.0000	2.1020	-5.1	100	0.00
47	T	Trichloroethene	2.0000	2.0860	-4.3	100	0.00
48	T	Methylcyclohexane	-1.0000	2.0555	0.0	100	0.00
49	C	1,2-Dichloropropane	2.0000	1.9811	0.9	100	0.00
50	T	Bromodichloromethane	2.0000	1.9823	0.9	100	0.00
51	T	1,4-Dioxane	-1.0000	36.6474	0.0	0	0.00
52	T	Dibromomethane	2.0000	1.9939	0.3	100	0.00
53	T	2-Chloroethyl Vinyl Ether	2.0000	1.7802	11.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	1.2316	0.0	100	0.00

(#) = Out of Range
8M410196.D 8260WTR.M Thu Feb 18 08:47:11 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410196.D Vial: 5
Acq On : 17 Feb 2016 16:23 Operator: TMB
Sample : WG556046-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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)
55	T	cis-1,3-Dichloropropene	2.0000	1.9218	3.9	100	0.00
56	T	Dimethyl Disulfide	-1.0000	1.4337	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	1.0000	0.9437	5.6	100	0.00
59	C	Toluene	2.0000	2.1160	-5.8	100	0.00
60	T	Ethyl Methacrylate	2.0000	1.8885	5.6	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	2.0000	1.8678	6.6	100	0.00
63	T	1,1,2-Trichloroethane	2.0000	1.9817	0.9	100	0.00
64	T	2-Hexanone	-1.0000	1.7849	0.0	100	0.00
65	T	1,3-Dichloropropane	2.0000	2.0580	-2.9	100	0.00
66	T	Tetrachloroethene	2.0000	2.0023	-0.1	100	0.00
67	T	Dibromochloromethane	2.0000	1.8399	8.0	100	0.00
68	T	1,2-Dibromoethane	2.0000	1.9968	0.2	100	0.00
69	T	1-Chlorohexane	2.0000	2.0130	-0.7	100	0.00
70	P	Chlorobenzene	2.0000	2.0129	-0.6	100	0.00
71	T	1,1,1,2-Tetrachloroethane	2.0000	1.9127	4.4	100	0.00
72	C	Ethylbenzene	2.0000	2.0230	-1.1	100	0.00
73	T	m-,p-Xylene	4.0000	4.0743	-1.9	100	0.00
74	T	o-Xylene	2.0000	1.8956	5.2	100	0.00
75	T	Styrene	2.0000	2.0181	-0.9	100	0.00
76	P	Bromoform	2.0000	1.7783	11.1	100	0.00
77	T	Isopropylbenzene	2.0000	2.0929	-4.6	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	2.0000	2.0776	-3.9	100	0.00
80	S	p-Bromofluorobenzene	1.0000	0.8641	13.6	100	0.00
81	T	1,2,3-Trichloropropane	2.0000	2.2241	-11.2	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	2.0000	1.6556	17.2	100	0.00
83	T	n-Propylbenzene	2.0000	2.0930	-4.6	100	0.00
84	T	Bromobenzene	2.0000	1.9759	1.2	100	0.00
85	T	1,3,5-Trimethylbenzene	2.0000	2.0498	-2.5	100	0.00
86	T	2-Chlorotoluene	2.0000	2.0627	-3.1	100	0.00
87	T	4-Chlorotoluene	2.0000	2.0419	-2.1	100	0.00
88	T	a-Methylstyrene	-1.0000	1.7337	0.0	100	0.00
89	T	tert-Butylbenzene	2.0000	1.9328	3.4	100	0.00
90	T	1,2,4-Trimethylbenzene	2.0000	2.0594	-3.0	100	0.00
91	T	sec-Butylbenzene	2.0000	2.0824	-4.1	100	0.00
92	T	p-Isopropyltoluene	2.0000	2.0304	-1.5	100	0.00
93	T	1,3-Dichlorobenzene	2.0000	2.0760	-3.8	100	0.00
94	T	1,4-Dichlorobenzene	2.0000	1.9827	0.9	100	0.00
95	T	n-Butylbenzene	2.0000	2.1761	-8.8	100	0.00
96	T	1,2-Dichlorobenzene	2.0000	2.0815	-4.1	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	2.0000	1.7462	12.7	100	0.00
98	T	1,2,4-Trichlorobenzene	2.0000	1.9715	1.4	100	0.00
99	T	Hexachlorobutadiene	2.0000	1.9397	3.0	100	0.00
100	T	Naphthalene	2.0000	2.0097	-0.5	100	0.00
101	T	1,2,3-Trichlorobenzene	2.0000	1.9654	1.7	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M410196.D 8260WTR.M Thu Feb 18 08:47:11 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410197.D Vial: 6
Acq On : 17 Feb 2016 16:52 Operator: TMB
Sample : WG556046-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:11 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	797042	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	557350	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	280695	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	20034	2.4487	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	9.80%#		
43) 1,2-Dichloroethane-d4	10.30	65	21857	2.4950	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	9.96%#		
58) Toluene-d8	12.69	98	69308	2.5184	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	10.08%#		
80) p-Bromofluorobenzene	16.07	95	28356	2.6005	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	10.40%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	59051	4.7001	ug/L	98
3) Chloromethane	3.63	50	99779	5.1936	ug/L	100
4) Vinyl Chloride	3.85	62	72392	5.4129	ug/L	97
5) 1,3-Butadiene	3.90	54	72409	5.2942	ug/L	98
6) Bromomethane	4.74	94	30020	4.7245	ug/L	100
7) Chloroethane	4.90	64	29817	4.9352	ug/L	98
8) Trichlorofluoromethane	5.38	101	70622	4.9270	ug/L	97
9) Diethyl ether	5.91	59	257952	49.1417	ug/L	98
10) Isoprene	5.95	67	49020	5.0467	ug/L	100
11) Acrolein	6.15	56	19757	24.2371	ug/L	100
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	39355	5.0294	ug/L	89
13) Acetone	6.25	43	6934	5.3193	ug/L #	79
14) 1,1-Dichloroethene	6.47	61	72079	5.0051	ug/L	98
15) Tert-Butyl Alcohol	6.58	59	32950	99.5272	ug/L	93
16) Dimethyl Sulfide	6.74	62	31526	4.9980	ug/L	99
17) Iodomethane	6.99	142	14146	3.9631	ug/L	95
18) Methyl acetate	7.01	43	18793	5.1630	ug/L	96
19) Methylene Chloride	7.25	84	38505	4.8832	ug/L	91
20) Carbon Disulfide	7.30	76	123292	4.9811	ug/L	100
21) Acrylonitrile	7.44	53	42420	23.0804	ug/L	100
22) Methyl Tert Butyl Ether	7.48	73	80646	5.0356	ug/L	98
23) trans-1,2-Dichloroethene	7.71	61	67401	5.0066	ug/L	94
24) n-Hexane	7.79	57	58077	5.0599	ug/L	94
25) Diisopropyl ether	8.13	45	1492563	49.8998	ug/L	100
26) Vinyl Acetate	8.30	43	67337	4.8978	ug/L	98
27) 1,1-Dichloroethane	8.33	63	85443	5.0864	ug/L	99
28) Ethyl-Tert-Butyl ether	8.70	59	1179180	49.1535	ug/L	99
29) 2-Butanone	8.90	43	9514	4.6417	ug/L	97
30) Propionitrile	8.99	54	29950	50.8669	ug/L	99
31) 2,2-Dichloropropane	9.10	77	70099	5.3063	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	44445	5.1256	ug/L	88
33) Chloroform	9.37	83	77696	5.2133	ug/L	100
34) 1-Bromopropane	9.51	122	5993	5.0847	ug/L	100
35) Bromochloromethane	9.61	130	23460	5.4070	ug/L	98
36) Tetrahydrofuran	9.63	42	64479	46.9599	ug/L	99
38) 1,1,1-Trichloroethane	9.91	97	69234	5.0911	ug/L	100
39) Cyclohexane	9.94	56	75971	4.8003	ug/L	99
40) 1,1-Dichloropropene	10.11	75	58581	4.9509	ug/L	98
41) Tert-Amyl-Methyl ether	10.21	73	831325	49.3045	ug/L	98
42) Carbon Tetrachloride	10.25	117	61888	5.0005	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M410197.D 8260WTR.M Thu Feb 18 08:46:11 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410197.D Vial: 6
Acq On : 17 Feb 2016 16:52 Operator: TMB
Sample : WG556046-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:11 2016 Quant Results File: 8260WTR.RES

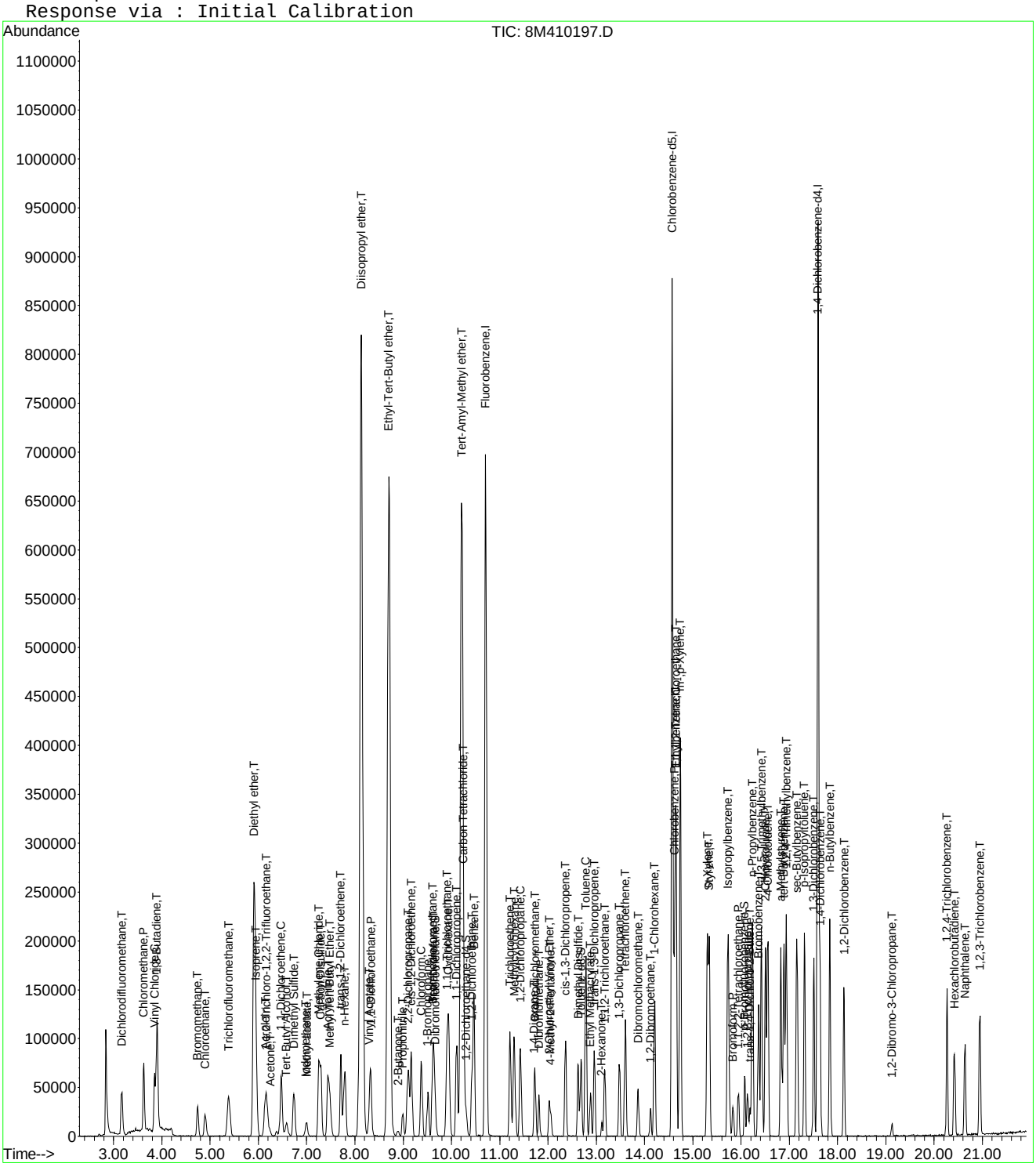
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	58329	5.1516	ug/L		97
46)	Benzene	10.47	78	164703	5.3424	ug/L		99
47)	Trichloroethene	11.21	130	42379	5.1039	ug/L		98
48)	Methylcyclohexane	11.31	83	57276	4.7903	ug/L		92
49)	1,2-Dichloropropane	11.43	63	45273	5.2232	ug/L		99
50)	Bromodichloromethane	11.73	83	56810	5.1631	ug/L		98
51)	1,4-Dioxane	11.71	88	2779	79.4892	ug/L		89
52)	Dibromomethane	11.81	93	20879	5.3076	ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.03	63	18148	4.8136	ug/L		92
54)	4-Methyl-2-Pentanone	12.05	58	8288	4.7205	ug/L		91
55)	cis-1,3-Dichloropropene	12.36	75	62255	5.1983	ug/L		99
56)	Dimethyl Disulfide	12.63	79	25812	4.0888	ug/L		92
59)	Toluene	12.78	91	167982	5.4086	ug/L		100
60)	Ethyl Methacrylate	12.88	69	28551	4.7596	ug/L		96
62)	trans-1,3-Dichloropropene	12.96	75	51347	4.9464	ug/L		98
63)	1,1,2-Trichloroethane	13.18	97	25950	5.2551	ug/L		100
64)	2-Hexanone	13.11	58	6598	4.2940	ug/L	#	98
65)	1,3-Dichloropropane	13.48	76	46524	5.1395	ug/L		94
66)	Tetrachloroethene	13.60	164	32842	5.2642	ug/L		95
67)	Dibromochloromethane	13.87	129	33402	4.9341	ug/L		100
68)	1,2-Dibromoethane	14.13	107	25664	5.1349	ug/L		99
69)	1-Chlorohexane	14.21	91	56163	5.3332	ug/L		96
70)	Chlorobenzene	14.62	112	114284	5.3774	ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.65	131	37976	4.9811	ug/L		99
72)	Ethylbenzene	14.65	106	61306	5.0417	ug/L		96
73)	m-,p-Xylene	14.74	106	150534	10.8306	ug/L		97
74)	o-Xylene	15.31	106	72683	5.0418	ug/L		100
75)	Styrene	15.34	104	115749	5.2659	ug/L		98
76)	Bromoform	15.83	173	18418	4.7211	ug/L		97
77)	Isopropylbenzene	15.73	105	187588	5.4570	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	29461	5.2519	ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	8012	5.1040	ug/L		84
82)	trans-1,4-Dichloro-2-Buten	16.18	53	10811	5.1757	ug/L		79
83)	n-Propylbenzene	16.24	91	231310	5.5767	ug/L		98
84)	Bromobenzene	16.36	156	40784	4.9401	ug/L		85
85)	1,3,5-Trimethylbenzene	16.42	105	157000	5.4230	ug/L		100
86)	2-Chlorotoluene	16.50	91	141253	5.2135	ug/L		91
87)	4-Chlorotoluene	16.56	91	149342	5.6202	ug/L		87
88)	a-Methylstyrene	16.82	118	75916	5.0078	ug/L		95
89)	tert-Butylbenzene	16.89	134	31884	5.1110	ug/L		91
90)	1,2,4-Trimethylbenzene	16.94	105	163834	5.4836	ug/L		99
91)	sec-Butylbenzene	17.16	105	195859	5.4427	ug/L		97
92)	p-Isopropyltoluene	17.31	119	159918	5.3645	ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	87076	5.3053	ug/L		94
94)	1,4-Dichlorobenzene	17.64	146	85643	5.1956	ug/L		88
95)	n-Butylbenzene	17.84	91	163635	5.4563	ug/L		97
96)	1,2-Dichlorobenzene	18.14	146	74818	5.2424	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.13	75	5241	5.3520	ug/L		85
98)	1,2,4-Trichlorobenzene	20.27	180	54277	5.2236	ug/L		99
99)	Hexachlorobutadiene	20.42	225	21872	5.1472	ug/L		95
100)	Naphthalene	20.64	128	89617	5.2710	ug/L		99
101)	1,2,3-Trichlorobenzene	20.95	180	44963	5.2007	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M410197.D 8260WTR.M Thu Feb 18 08:46:11 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410197.D Vial: 6
Acq On : 17 Feb 2016 16:52 Operator: TMB
Sample : WG556046-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410197.D Vial: 6
Acq On : 17 Feb 2016 16:52 Operator: TMB
Sample : WG556046-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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	100	0.00
2	T	Dichlorodifluoromethane	5.0000	4.7001	6.0	100	0.01
3	P	Chloromethane	5.0000	5.1936	-3.9	100	0.01
4	C	Vinyl Chloride	5.0000	5.4129	-8.3	100	0.01
5	T	1,3-Butadiene	5.0000	5.2942	-5.9	100	0.01
6	T	Bromomethane	5.0000	4.7245	5.5	100	0.01
7	T	Chloroethane	5.0000	4.9352	1.3	100	0.00
8	T	Trichlorofluoromethane	5.0000	4.9270	1.5	100	0.00
9	T	Diethyl ether	50.0000	49.1417	1.7	100	0.00
10	T	Isoprene	5.0000	5.0467	-0.9	100	0.01
11	T	Acrolein	25.0000	24.2371	3.1	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	5.0000	5.0294	-0.6	100	0.01
13	T	Acetone	5.0000	5.3193	-6.4	100	0.00
14	C	1,1-Dichloroethene	5.0000	5.0050	-0.1	100	0.00
15	T	Tert-Butyl Alcohol	100.0000	99.5272	0.5	100	-0.01
16	T	Dimethyl Sulfide	5.0000	4.9980	0.0	100	0.00
17	T	Iodomethane	5.0000	3.9631	20.7	100	0.00
18	T	Methyl acetate	5.0000	5.1630	-3.3	100	0.01
19	T	Methylene Chloride	5.0000	4.8832	2.3	100	0.00
20	T	Carbon Disulfide	5.0000	4.9811	0.4	100	0.00
21	T	Acrylonitrile	25.0000	23.0803	7.7	100	0.00
22	T	Methyl Tert Butyl Ether	5.0000	5.0356	-0.7	100	0.01
23	T	trans-1,2-Dichloroethene	5.0000	5.0065	-0.1	100	0.00
24	T	n-Hexane	5.0000	5.0599	-1.2	100	0.01
25	T	Diisopropyl ether	50.0000	49.8998	0.2	100	0.00
26	T	Vinyl Acetate	5.0000	4.8978	2.0	100	0.00
27	P	1,1-Dichloroethane	5.0000	5.0864	-1.7	100	0.00
28	T	Ethyl-Tert-Butyl ether	50.0000	49.1535	1.7	100	0.00
29	T	2-Butanone	5.0000	4.6417	7.2	100	0.01
30	T	Propionitrile	50.0000	50.8670	-1.7	100	0.00
31	T	2,2-Dichloropropane	5.0000	5.3063	-6.1	100	0.00
32	T	cis-1,2-Dichloroethene	5.0000	5.1257	-2.5	100	0.00
33	C	Chloroform	5.0000	5.2133	-4.3	100	0.00
34		1-Bromopropane	5.0000	5.0847	-1.7	100	0.00
35	T	Bromochloromethane	5.0000	5.4070	-8.1	100	0.00
36	T	Tetrahydrofuran	50.0000	46.9599	6.1	100	0.00
37	S	Dibromofluoromethane	2.5000	2.4487	2.1	100	0.00
38	T	1,1,1-Trichloroethane	5.0000	5.0911	-1.8	100	0.00
39	T	Cyclohexane	5.0000	4.8003	4.0	100	0.00
40	T	1,1-Dichloropropene	5.0000	4.9509	1.0	100	0.00
41	T	Tert-Amyl-Methyl ether	50.0000	49.3045	1.4	100	0.00
42	T	Carbon Tetrachloride	5.0000	5.0005	-0.0	100	0.00
43	S	1,2-Dichloroethane-d4	2.5000	2.4950	0.2	100	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	5.0000	5.1517	-3.0	100	0.00
46	T	Benzene	5.0000	5.3424	-6.8	100	0.00
47	T	Trichloroethene	5.0000	5.1039	-2.1	100	0.00
48	T	Methylcyclohexane	5.0000	4.7903	4.2	100	0.01
49	C	1,2-Dichloropropane	5.0000	5.2232	-4.5	100	0.00
50	T	Bromodichloromethane	5.0000	5.1631	-3.3	100	0.00
51	T	1,4-Dioxane	100.0000	79.4892	20.5	100	0.00
52	T	Dibromomethane	5.0000	5.3076	-6.2	100	0.00
53	T	2-Chloroethyl Vinyl Ether	5.0000	4.8136	3.7	100	0.00
54	T	4-Methyl-2-Pentanone	5.0000	4.7205	5.6	100	-0.01

(#) = Out of Range
8M410197.D 8260WTR.M Thu Feb 18 08:47:24 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410197.D Vial: 6
Acq On : 17 Feb 2016 16:52 Operator: TMB
Sample : WG556046-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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)
55	T	cis-1,3-Dichloropropene	5.0000	5.1983	-4.0	100	0.00
56	T	Dimethyl Disulfide	5.0000	4.0888	18.2	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	2.5000	2.5184	-0.7	100	0.00
59	C	Toluene	5.0000	5.4086	-8.2	100	0.00
60	T	Ethyl Methacrylate	5.0000	4.7596	4.8	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	5.0000	4.9464	1.1	100	0.00
63	T	1,1,2-Trichloroethane	5.0000	5.2551	-5.1	100	0.00
64	T	2-Hexanone	5.0000	4.2940	14.1	100	0.00
65	T	1,3-Dichloropropane	5.0000	5.1395	-2.8	100	-0.01
66	T	Tetrachloroethene	5.0000	5.2642	-5.3	100	0.00
67	T	Dibromochloromethane	5.0000	4.9341	1.3	100	0.00
68	T	1,2-Dibromoethane	5.0000	5.1349	-2.7	100	0.01
69	T	1-Chlorohexane	5.0000	5.3332	-6.7	100	0.00
70	P	Chlorobenzene	5.0000	5.3774	-7.5	100	0.00
71	T	1,1,1,2-Tetrachloroethane	5.0000	4.9810	0.4	100	0.00
72	C	Ethylbenzene	5.0000	5.0418	-0.8	100	0.00
73	T	m-,p-Xylene	10.0000	10.8306	-8.3	100	-0.01
74	T	o-Xylene	5.0000	5.0418	-0.8	100	0.00
75	T	Styrene	5.0000	5.2659	-5.3	100	-0.01
76	P	Bromoform	5.0000	4.7211	5.6	100	0.00
77	T	Isopropylbenzene	5.0000	5.4570	-9.1	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	-0.01
79	P	1,1,2,2-Tetrachloroethane	5.0000	5.2519	-5.0	100	0.00
80	S	p-Bromofluorobenzene	2.5000	2.6005	-4.0	100	0.00
81	T	1,2,3-Trichloropropane	5.0000	5.1040	-2.1	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	5.0000	5.1757	-3.5	100	0.00
83	T	n-Propylbenzene	5.0000	5.5767	-11.5	100	0.00
84	T	Bromobenzene	5.0000	4.9401	1.2	100	-0.01
85	T	1,3,5-Trimethylbenzene	5.0000	5.4230	-8.5	100	0.00
86	T	2-Chlorotoluene	5.0000	5.2135	-4.3	100	0.00
87	T	4-Chlorotoluene	5.0000	5.6202	-12.4	100	0.00
88	T	a-Methylstyrene	5.0000	5.0078	-0.2	100	0.00
89	T	tert-Butylbenzene	5.0000	5.1110	-2.2	100	0.00
90	T	1,2,4-Trimethylbenzene	5.0000	5.4836	-9.7	100	0.00
91	T	sec-Butylbenzene	5.0000	5.4427	-8.9	100	0.00
92	T	p-Isopropyltoluene	5.0000	5.3645	-7.3	100	-0.01
93	T	1,3-Dichlorobenzene	5.0000	5.3053	-6.1	100	0.00
94	T	1,4-Dichlorobenzene	5.0000	5.1956	-3.9	100	0.00
95	T	n-Butylbenzene	5.0000	5.4563	-9.1	100	0.00
96	T	1,2-Dichlorobenzene	5.0000	5.2424	-4.8	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	5.0000	5.3520	-7.0	100	0.00
98	T	1,2,4-Trichlorobenzene	5.0000	5.2236	-4.5	100	0.00
99	T	Hexachlorobutadiene	5.0000	5.1471	-2.9	100	0.00
100	T	Naphthalene	5.0000	5.2710	-5.4	100	0.00
101	T	1,2,3-Trichlorobenzene	5.0000	5.2007	-4.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M410197.D 8260WTR.M Thu Feb 18 08:47:24 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410198.D Vial: 7
Acq On : 17 Feb 2016 17:21 Operator: TMB
Sample : WG556046-07 20ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:12 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	823727	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	577593	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	295141	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	87309	10.3257	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 41.32%#			
43) 1,2-Dichloroethane-d4	10.30	65	92239	10.1881	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 40.76%#			
58) Toluene-d8	12.68	98	299824	10.5128	ug/L	-0.01
Spiked Amount 25.000	Range 88 - 110		Recovery = 42.04%#			
80) p-Bromofluorobenzene	16.07	95	120192	10.4832	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 41.92%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	288132	22.1907	ug/L	100
3) Chloromethane	3.63	50	412247	20.7629	ug/L	99
4) Vinyl Chloride	3.85	62	306309	22.1615	ug/L	98
5) 1,3-Butadiene	3.90	54	308554	28.6584	ug/L	97
6) Bromomethane	4.74	94	124777	19.0010	ug/L	96
7) Chloroethane	4.90	64	128070	20.5110	ug/L	99
8) Trichlorofluoromethane	5.38	101	309967	20.9246	ug/L	98
9) Diethyl ether	5.92	59	412082	75.9614	ug/L	99
10) Isoprene	5.95	67	206506	20.5715	ug/L	97
11) Acrolein	6.15	56	32355	38.4061	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	162586	20.1047	ug/L	94
13) Acetone	6.25	43	27531	20.4356	ug/L	99
14) 1,1-Dichloroethene	6.48	61	306515	20.5944	ug/L	94
15) Tert-Butyl Alcohol	6.58	59	56104	163.9751	ug/L	95
16) Dimethyl Sulfide	6.74	62	133779	20.5215	ug/L	96
17) Iodomethane	7.00	142	83366	17.0267	ug/L	96
18) Methyl acetate	7.01	43	72219	19.1979	ug/L	99
19) Methylene Chloride	7.25	84	163490	20.0621	ug/L	96
20) Carbon Disulfide	7.30	76	531297	20.7693	ug/L	99
21) Acrylonitrile	7.44	53	69771	36.7320	ug/L	96
22) Methyl Tert Butyl Ether	7.47	73	326460	19.7242	ug/L	97
23) trans-1,2-Dichloroethene	7.71	61	283266	20.3594	ug/L	92
24) n-Hexane	7.79	57	234124	19.7372	ug/L	96
25) Diisopropyl ether	8.13	45	2443113	79.0328	ug/L	100
26) Vinyl Acetate	8.30	43	283060	19.9215	ug/L	99
27) 1,1-Dichloroethane	8.33	63	356159	20.5153	ug/L	97
28) Ethyl-Tert-Butyl ether	8.71	59	1970314	79.4708	ug/L	99
29) 2-Butanone	8.89	43	41256	19.4760	ug/L	96
30) Propionitrile	9.00	54	49449	81.2633	ug/L	98
31) 2,2-Dichloropropane	9.10	77	263742	19.3177	ug/L	100
32) cis-1,2-Dichloroethene	9.18	96	183241	20.4478	ug/L	88
33) Chloroform	9.38	83	318837	20.7007	ug/L	100
34) 1-Bromopropane	9.52	122	26063	19.9503	ug/L	98
35) Bromochloromethane	9.61	130	92999	20.7400	ug/L	93
36) Tetrahydrofuran	9.64	42	105134	74.0884	ug/L	98
38) 1,1,1-Trichloroethane	9.91	97	286634	20.3946	ug/L	99
39) Cyclohexane	9.94	56	332633	20.3368	ug/L	97
40) 1,1-Dichloropropene	10.11	75	241787	19.7723	ug/L	98
41) Tert-Amyl-Methyl ether	10.21	73	1355434	77.7843	ug/L	97
42) Carbon Tetrachloride	10.25	117	262820	20.5478	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M410198.D 8260WTR.M Thu Feb 18 08:46:13 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410198.D Vial: 7
Acq On : 17 Feb 2016 17:21 Operator: TMB
Sample : WG556046-07 20ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:12 2016 Quant Results File: 8260WTR.RES

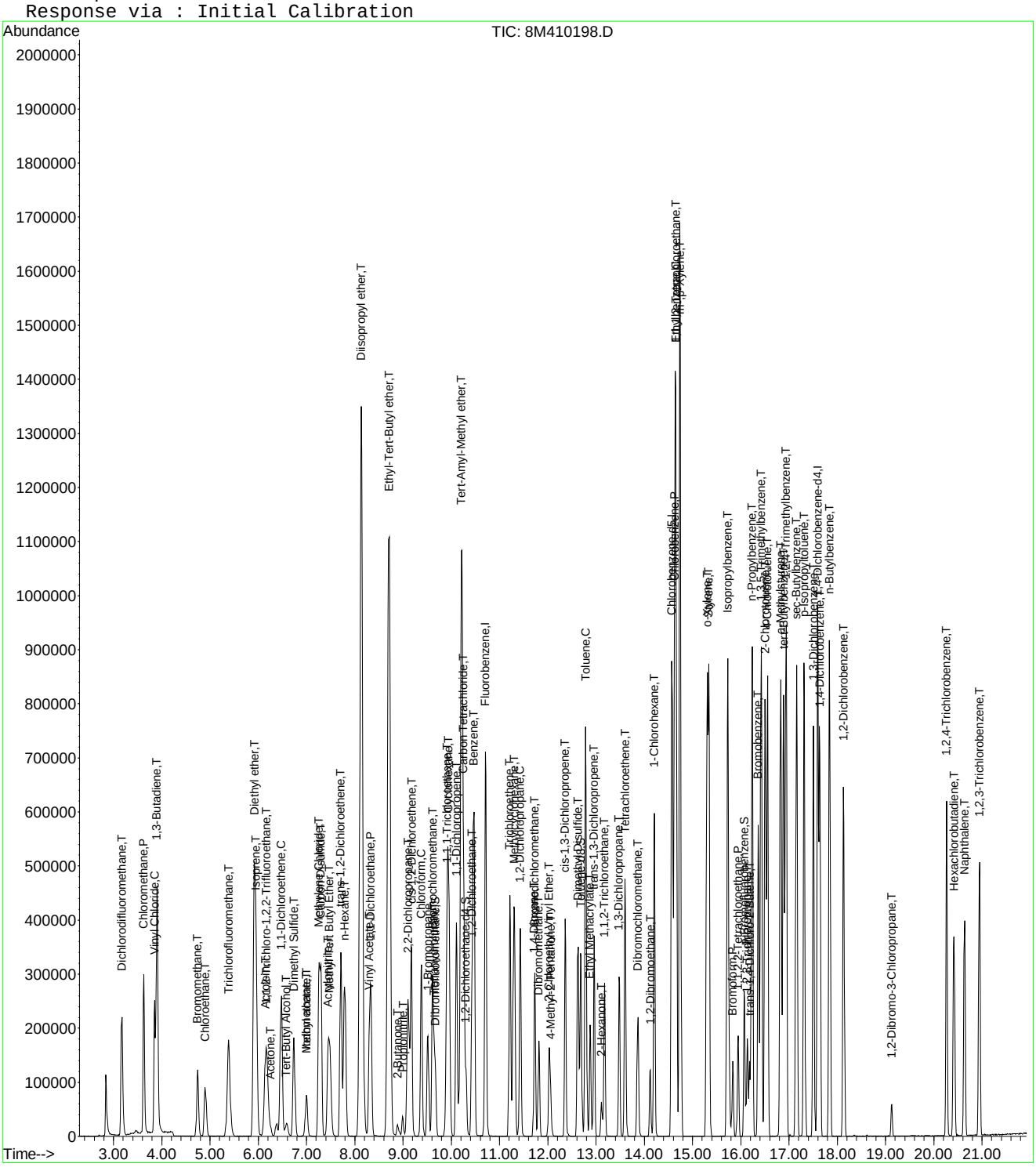
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	238823	20.4097	ug/L		96
46)	Benzene	10.47	78	673798	21.1478	ug/L		98
47)	Trichloroethene	11.21	130	175099	20.4046	ug/L		98
48)	Methylcyclohexane	11.31	83	253261	20.4952	ug/L		96
49)	1,2-Dichloropropane	11.43	63	185391	20.6959	ug/L		98
50)	Bromodichloromethane	11.73	83	235412	20.7018	ug/L		99
51)	1,4-Dioxane	11.72	88	5613	155.3505	ug/L		99
52)	Dibromomethane	11.81	93	85288	20.9787	ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.03	63	76501	19.6338	ug/L		98
54)	4-Methyl-2-Pentanone	12.06	58	34788	19.1719	ug/L		98
55)	cis-1,3-Dichloropropene	12.36	75	257004	20.7646	ug/L		99
56)	Dimethyl Disulfide	12.63	79	126729	19.4242	ug/L		99
59)	Toluene	12.78	91	695071	21.5954	ug/L		99
60)	Ethyl Methacrylate	12.88	69	131425	21.1414	ug/L		97
62)	trans-1,3-Dichloropropene	12.96	75	217105	20.1812	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	107486	21.0041	ug/L		99
64)	2-Hexanone	13.11	58	30881	19.3931	ug/L	#	93
65)	1,3-Dichloropropane	13.48	76	193371	20.6130	ug/L		94
66)	Tetrachloroethene	13.60	164	135742	20.9955	ug/L		93
67)	Dibromochloromethane	13.87	129	146543	20.8885	ug/L		99
68)	1,2-Dibromoethane	14.13	107	107361	20.7283	ug/L		100
69)	1-Chlorohexane	14.21	91	229265	21.0077	ug/L		93
70)	Chlorobenzene	14.62	112	453571	20.5939	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.65	131	161638	20.4579	ug/L		99
72)	Ethylbenzene	14.65	106	254478	20.1946	ug/L		100
73)	m-,p-Xylene	14.74	106	613555	42.5970	ug/L		98
74)	o-Xylene	15.31	106	298414	19.9744	ug/L		99
75)	Styrene	15.34	104	491369	21.5711	ug/L		97
76)	Bromoform	15.83	173	80430	19.8940	ug/L		99
77)	Isopropylbenzene	15.73	105	780984	21.9227	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	119916	20.3306	ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	32413	19.6379	ug/L		87
82)	trans-1,4-Dichloro-2-Buten	16.18	53	45061	20.5166	ug/L		87
83)	n-Propylbenzene	16.24	91	947796	21.7322	ug/L		99
84)	Bromobenzene	16.36	156	176903	20.3791	ug/L		89
85)	1,3,5-Trimethylbenzene	16.42	105	660417	21.6951	ug/L		99
86)	2-Chlorotoluene	16.50	91	576854	20.2490	ug/L		91
87)	4-Chlorotoluene	16.56	91	610186	21.8391	ug/L		90
88)	a-Methylstyrene	16.82	118	324226	20.3406	ug/L		99
89)	tert-Butylbenzene	16.89	134	131402	20.0327	ug/L		88
90)	1,2,4-Trimethylbenzene	16.94	105	689555	21.9502	ug/L		99
91)	sec-Butylbenzene	17.16	105	830718	21.9549	ug/L		97
92)	p-Isopropyltoluene	17.31	119	674945	21.5331	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	359899	20.8545	ug/L		94
94)	1,4-Dichlorobenzene	17.64	146	356534	20.5707	ug/L		93
95)	n-Butylbenzene	17.84	91	683032	21.6606	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	316865	21.1157	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.13	75	21395	19.3410	ug/L		87
98)	1,2,4-Trichlorobenzene	20.27	180	223420	20.4493	ug/L		100
99)	Hexachlorobutadiene	20.42	225	92782	20.7657	ug/L		97
100)	Naphthalene	20.64	128	372235	20.8222	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	184489	20.2948	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M410198.D 8260WTR.M Thu Feb 18 08:46:13 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410198.D Vial: 7
Acq On : 17 Feb 2016 17:21 Operator: TMB
Sample : WG556046-07 20ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410199.D Vial: 8
Acq On : 17 Feb 2016 17:50 Operator: TMB
Sample : WG556046-08 50ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:14 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	835274	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	592238	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	312633	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	214477	25.0146	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.04%			
43) 1,2-Dichloroethane-d4	10.30	65	233352	25.4181	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 101.68%			
58) Toluene-d8	12.68	98	749387	25.6262	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.52%			
80) p-Bromofluorobenzene	16.07	95	305463	25.1520	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 100.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.16	85	721282	54.7820	ug/L	99
3) Chloromethane	3.63	50	1027734	51.0464	ug/L	99
4) Vinyl Chloride	3.84	62	733207	52.3142	ug/L	98
5) 1,3-Butadiene	3.90	54	592954	59.3556	ug/L	93
6) Bromomethane	4.74	94	336011	50.4603	ug/L	100
7) Chloroethane	4.90	64	326014	51.4908	ug/L	99
8) Trichlorofluoromethane	5.38	101	770080	51.2663	ug/L	99
9) Diethyl ether	5.91	59	533035	96.8990	ug/L	99
10) Isoprene	5.95	67	514801	50.5739	ug/L	98
11) Acrolein	6.14	56	41897	49.0451	ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	409046	49.8818	ug/L	93
13) Acetone	6.24	43	69466	50.8500	ug/L	100
14) 1,1-Dichloroethene	6.47	61	775236	51.3672	ug/L	94
15) Tert-Butyl Alcohol	6.58	59	66373	191.3066	ug/L	97
16) Dimethyl Sulfide	6.74	62	331415	50.1359	ug/L	99
17) Iodomethane	6.99	142	256295	49.2035	ug/L	97
18) Methyl acetate	7.01	43	183066	47.9915	ug/L	100
19) Methylene Chloride	7.26	84	416883	50.4490	ug/L	96
20) Carbon Disulfide	7.30	76	1292800	49.8392	ug/L	99
21) Acrylonitrile	7.44	53	100176	52.0101	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	842736	50.2128	ug/L	97
23) trans-1,2-Dichloroethene	7.71	61	728370	51.6270	ug/L	92
24) n-Hexane	7.78	57	565010	46.9732	ug/L	94
25) Diisopropyl ether	8.13	45	3141690	100.2263	ug/L	100
26) Vinyl Acetate	8.30	43	715107	49.6328	ug/L	100
27) 1,1-Dichloroethane	8.33	63	912395	51.8288	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	2537926	100.9498	ug/L	99
29) 2-Butanone	8.89	43	105385	49.0620	ug/L	99
30) Propionitrile	8.99	54	62101	100.6444	ug/L	99
31) 2,2-Dichloropropane	9.11	77	674566	48.7254	ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	467788	51.4787	ug/L	89
33) Chloroform	9.37	83	811667	51.9694	ug/L	99
34) 1-Bromopropane	9.52	122	64557	48.0824	ug/L	100
35) Bromochloromethane	9.61	130	240807	52.9607	ug/L	93
36) Tetrahydrofuran	9.63	42	135480	94.1535	ug/L	99
38) 1,1,1-Trichloroethane	9.91	97	730602	51.2652	ug/L	99
39) Cyclohexane	9.94	56	807134	48.6651	ug/L	97
40) 1,1-Dichloropropene	10.11	75	619589	49.9668	ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	1767449	100.0264	ug/L	98
42) Carbon Tetrachloride	10.25	117	681525	52.5464	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M410199.D 8260WTR.M Thu Feb 18 08:46:14 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410199.D Vial: 8
Acq On : 17 Feb 2016 17:50 Operator: TMB
Sample : WG556046-08 50ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:14 2016 Quant Results File: 8260WTR.RES

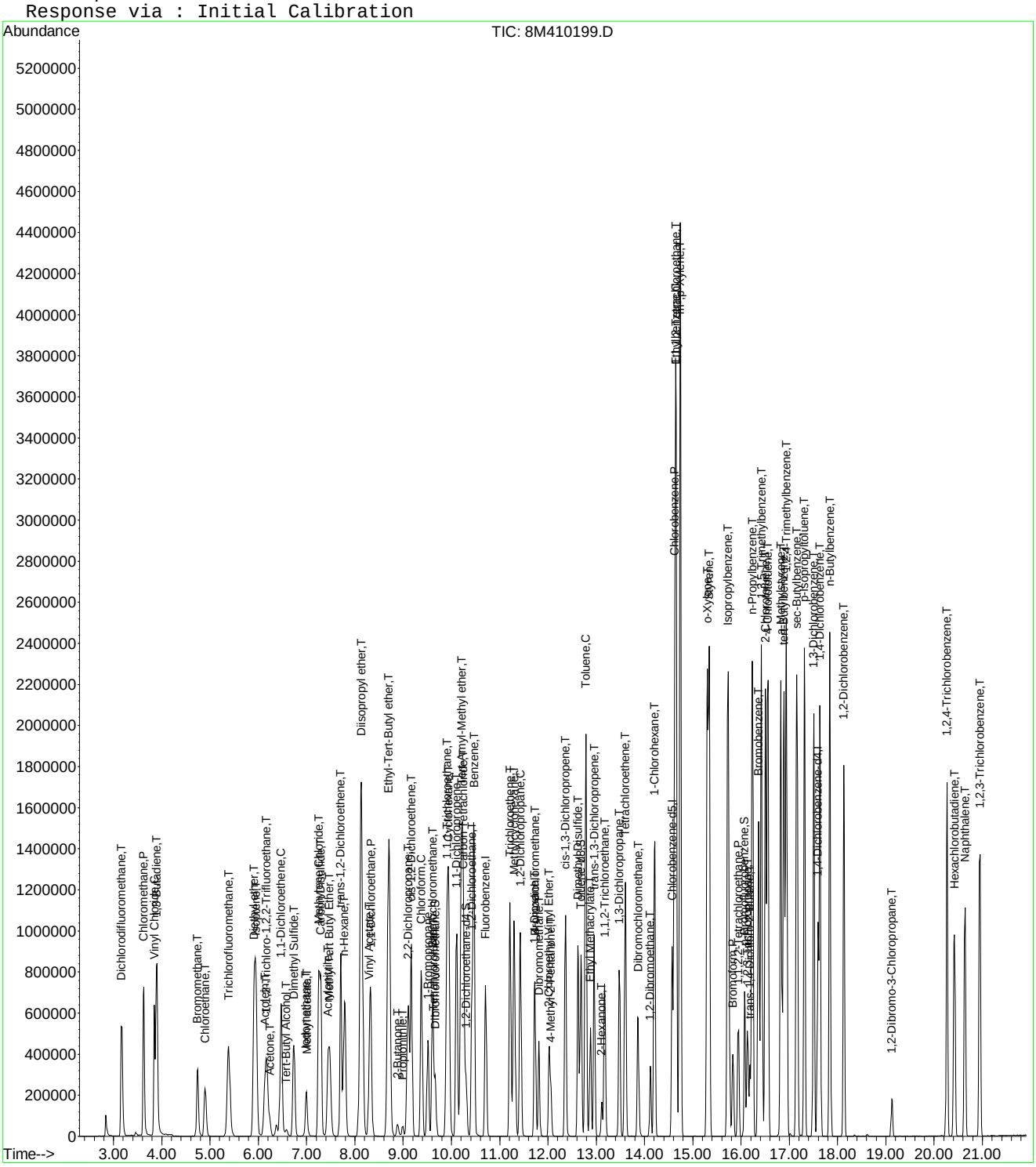
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	619162	52.1817 ug/L		96
46)	Benzene	10.47	78	1699725	52.6101 ug/L		97
47)	Trichloroethene	11.21	130	444753	51.1115 ug/L		98
48)	Methylcyclohexane	11.30	83	612738	48.9006 ug/L		96
49)	1,2-Dichloropropane	11.43	63	481617	53.0215 ug/L		100
50)	Bromodichloromethane	11.73	83	608651	52.7840 ug/L		99
51)	1,4-Dioxane	11.72	88	7116	194.2263 ug/L		97
52)	Dibromomethane	11.81	93	220726	53.5424 ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	203656	51.5453 ug/L		99
54)	4-Methyl-2-Pentanone	12.06	58	91485	49.7210 ug/L		99
55)	cis-1,3-Dichloropropene	12.36	75	667924	53.2187 ug/L		99
56)	Dimethyl Disulfide	12.62	79	332655	50.2825 ug/L		99
59)	Toluene	12.78	91	1762446	53.4039 ug/L		99
60)	Ethyl Methacrylate	12.88	69	328729	51.5727 ug/L		98
62)	trans-1,3-Dichloropropene	12.96	75	579282	52.5162 ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	283473	54.0244 ug/L		99
64)	2-Hexanone	13.12	58	82143	50.3098 ug/L	#	92
65)	1,3-Dichloropropane	13.48	76	511486	53.1751 ug/L		95
66)	Tetrachloroethene	13.60	164	342897	51.7250 ug/L		93
67)	Dibromochloromethane	13.87	129	396784	55.1596 ug/L		99
68)	1,2-Dibromoethane	14.12	107	288531	54.3294 ug/L		98
69)	1-Chlorohexane	14.21	91	568699	50.8218 ug/L		93
70)	Chlorobenzene	14.62	112	1184148	52.4355 ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.66	131	437522	54.0062 ug/L		100
72)	Ethylbenzene	14.66	106	660497	51.1188 ug/L		99
73)	m-,p-Xylene	14.74	106	1587940	107.5191 ug/L		99
74)	o-Xylene	15.31	106	787640	51.4172 ug/L		99
75)	Styrene	15.34	104	1314879	56.2957 ug/L		96
76)	Bromoform	15.83	173	229214	55.2931 ug/L		99
77)	Isopropylbenzene	15.73	105	2008012	54.9722 ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	339093	54.2734 ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	91604	52.3945 ug/L		91
82)	trans-1,4-Dichloro-2-Buten	16.18	53	122745	52.7598 ug/L		86
83)	n-Propylbenzene	16.24	91	2421064	52.4072 ug/L		99
84)	Bromobenzene	16.36	156	475611	51.7245 ug/L		87
85)	1,3,5-Trimethylbenzene	16.42	105	1737839	53.8949 ug/L		100
86)	2-Chlorotoluene	16.51	91	1558978	51.6622 ug/L		99
87)	4-Chlorotoluene	16.56	91	1599988	54.0609 ug/L		97
88)	a-Methylstyrene	16.83	118	842979	49.9261 ug/L		99
89)	tert-Butylbenzene	16.89	134	350928	50.5068 ug/L		90
90)	1,2,4-Trimethylbenzene	16.94	105	1815097	54.5462 ug/L		99
91)	sec-Butylbenzene	17.16	105	2145835	53.5389 ug/L		98
92)	p-Isopropyltoluene	17.31	119	1775425	53.4730 ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	974599	53.3139 ug/L		93
94)	1,4-Dichlorobenzene	17.63	146	961360	52.3636 ug/L		92
95)	n-Butylbenzene	17.84	91	1765145	52.8452 ug/L		99
96)	1,2-Dichlorobenzene	18.13	146	862493	54.2603 ug/L		91
97)	1,2-Dibromo-3-Chloropropan	19.12	75	62184	52.1991 ug/L		88
98)	1,2,4-Trichlorobenzene	20.27	180	625598	54.0562 ug/L		99
99)	Hexachlorobutadiene	20.42	225	250126	52.8490 ug/L		96
100)	Naphthalene	20.64	128	1052890	55.6016 ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	521877	54.1972 ug/L		100

(#) = qualifier out of range (m) = manual integration
8M410199.D 8260WTR.M Thu Feb 18 08:46:14 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410199.D Vial: 8
Acq On : 17 Feb 2016 17:50 Operator: TMB
Sample : WG556046-08 50ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410200.D Vial: 9
Acq On : 17 Feb 2016 18:19 Operator: TMB
Sample : WG556046-09 100ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:15 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	903347	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	637319	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	336830	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	468963	50.5739	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 202.28%#			
43) 1,2-Dichloroethane-d4	10.30	65	509308	51.2964	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 205.20%#			
58) Toluene-d8	12.68	98	1569538	49.8757	ug/L	-0.01
Spiked Amount 25.000	Range 88 - 110		Recovery = 199.52%#			
80) p-Bromofluorobenzene	16.07	95	652340	49.8554	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 199.44%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	1433681	100.6839	ug/L	99
3) Chloromethane	3.63	50	2046102	93.9692	ug/L	100
4) Vinyl Chloride	3.84	62	1388202	91.5841	ug/L	100
5) 1,3-Butadiene	3.89	54	815853	79.1082	ug/L	89
6) Bromomethane	4.74	94	719896	99.9632	ug/L	99
7) Chloroethane	4.90	64	687141	100.3491	ug/L	99
8) Trichlorofluoromethane	5.38	101	1611966	99.2261	ug/L	100
9) Diethyl ether	5.91	59	1248419	209.8449	ug/L	99
10) Isoprene	5.94	67	1143199	103.8445	ug/L	97
11) Acrolein	6.15	56	99364	107.5514	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	851054	95.9624	ug/L	94
13) Acetone	6.24	43	145476	98.4656	ug/L	91
14) 1,1-Dichloroethene	6.47	61	1637015	100.2950	ug/L	95
15) Tert-Butyl Alcohol	6.58	59	164137	437.4408	ug/L	96
16) Dimethyl Sulfide	6.74	62	759272	106.2058	ug/L	99
17) Iodomethane	6.99	142	584203	102.3505	ug/L	97
18) Methyl acetate	7.00	43	438076	106.1892	ug/L	99
19) Methylene Chloride	7.25	84	891713	99.7788	ug/L	95
20) Carbon Disulfide	7.30	76	2782313	99.1790	ug/L	100
21) Acrylonitrile	7.44	53	233985	112.3276	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	1891075	104.1852	ug/L	97
23) trans-1,2-Dichloroethene	7.71	61	1553137	101.7909	ug/L	92
24) n-Hexane	7.79	57	1256661	96.6021	ug/L	95
25) Diisopropyl ether	8.13	45	6957088	205.2202	ug/L	99
26) Vinyl Acetate	8.30	43	1617440	103.8007	ug/L	99
27) 1,1-Dichloroethane	8.33	63	1936758	101.7273	ug/L	99
28) Ethyl-Tert-Butyl ether	8.70	59	5732317	210.8294	ug/L	98
29) 2-Butanone	8.89	43	254274	109.4567	ug/L	99
30) Propionitrile	8.99	54	150086	224.9084	ug/L	98
31) 2,2-Dichloropropane	9.10	77	1476332	98.6029	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	995286	101.2746	ug/L	86
33) Chloroform	9.37	83	1716606	101.6283	ug/L	99
34) 1-Bromopropane	9.52	122	141797	97.1880	ug/L	100
35) Bromochloromethane	9.61	130	520554	105.8582	ug/L	94
36) Tetrahydrofuran	9.63	42	319359	205.2176	ug/L	99
38) 1,1,1-Trichloroethane	9.91	97	1556799	101.0064	ug/L	100
39) Cyclohexane	9.94	56	1782227	99.3595	ug/L	96
40) 1,1-Dichloropropene	10.11	75	1307923	97.5292	ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	4037773	211.2925	ug/L	96
42) Carbon Tetrachloride	10.25	117	1435237	102.3197	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M410200.D 8260WTR.M Thu Feb 18 08:46:15 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410200.D Vial: 9
Acq On : 17 Feb 2016 18:19 Operator: TMB
Sample : WG556046-09 100ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:15 2016 Quant Results File: 8260WTR.RES

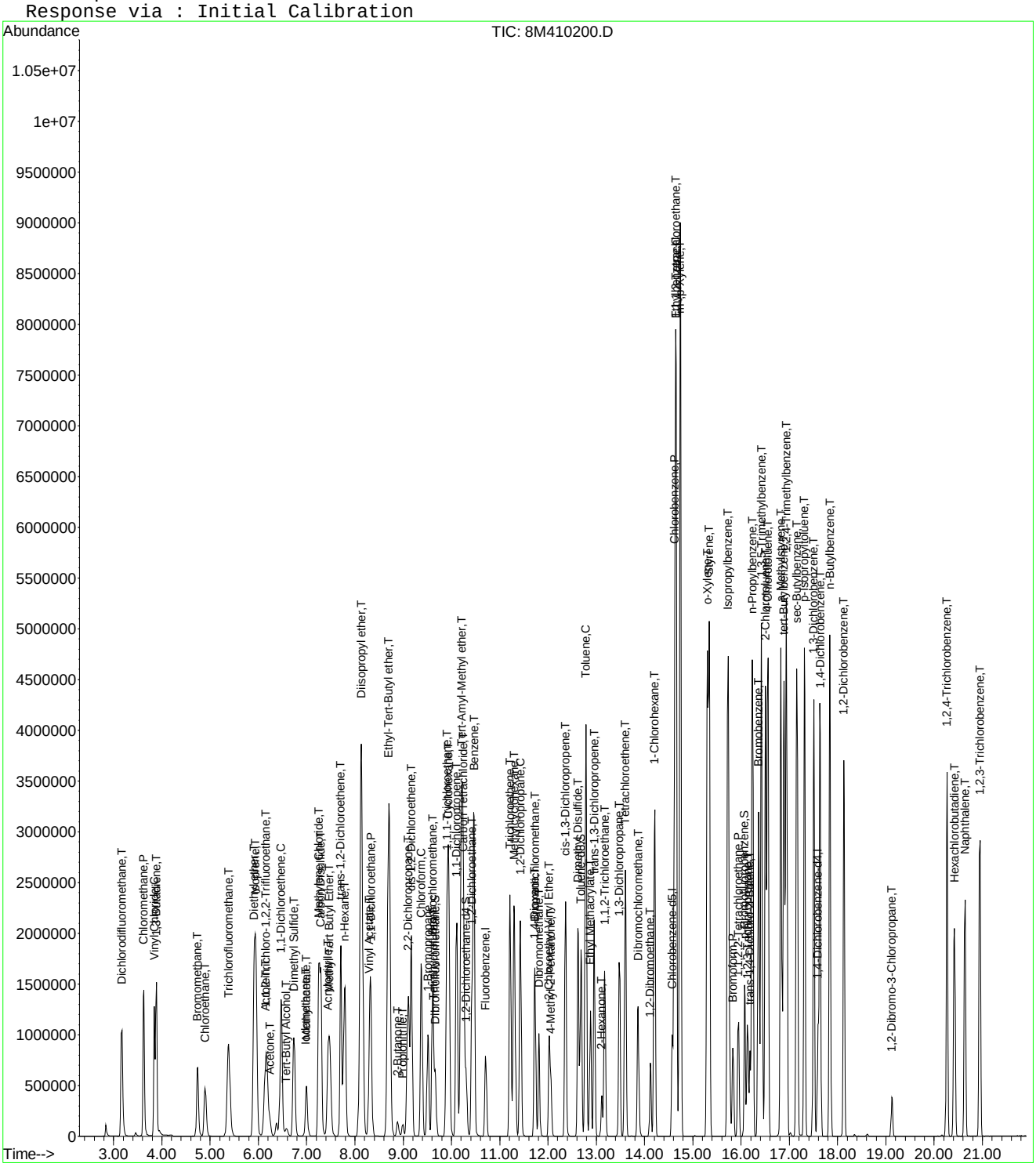
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	1340737	104.4797 ug/L		96
46)	Benzene	10.47	78	3497550	100.0987 ug/L		94
47)	Trichloroethene	11.21	130	934321	99.2819 ug/L		98
48)	Methylcyclohexane	11.30	83	1326547	97.8895 ug/L		94
49)	1,2-Dichloropropane	11.43	63	1027383	104.5820 ug/L		99
50)	Bromodichloromethane	11.73	83	1315657	105.4996 ug/L		99
51)	1,4-Dioxane	11.72	88	18464	465.9852 ug/L		96
52)	Dibromomethane	11.81	93	482157	108.1452 ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.02	63	461514	108.0067 ug/L		98
54)	4-Methyl-2-Pentanone	12.06	58	210364	105.7147 ug/L		99
55)	cis-1,3-Dichloropropene	12.36	75	1446960	106.6027 ug/L		99
56)	Dimethyl Disulfide	12.62	79	760668	106.3144 ug/L		99
59)	Toluene	12.78	91	3588819	101.0528 ug/L		97
60)	Ethyl Methacrylate	12.88	69	765654	111.6230 ug/L		98
62)	trans-1,3-Dichloropropene	12.96	75	1276094	107.5041 ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	611318	108.2641 ug/L		99
64)	2-Hexanone	13.11	58	193867	110.3380 ug/L	#	92
65)	1,3-Dichloropropane	13.48	76	1101893	106.4520 ug/L		95
66)	Tetrachloroethene	13.60	164	730579	102.4103 ug/L		92
67)	Dibromochloromethane	13.87	129	856678	110.6685 ug/L		100
68)	1,2-Dibromoethane	14.12	107	615818	107.7542 ug/L		99
69)	1-Chlorohexane	14.21	91	1234803	102.5426 ug/L		91
70)	Chlorobenzene	14.62	112	2490690	102.4894 ug/L		97
71)	1,1,1,2-Tetrachloroethane	14.65	131	956138	109.6739 ug/L		98
72)	Ethylbenzene	14.65	106	1433262	103.0801 ug/L		90
73)	m-,p-Xylene	14.74	106	3318826	208.8215 ug/L		89
74)	o-Xylene	15.31	106	1659760	100.6851 ug/L		96
75)	Styrene	15.34	104	2744935	109.2096 ug/L		94
76)	Bromoform	15.83	173	495939	111.1725 ug/L		100
77)	Isopropylbenzene	15.73	105	4054328	103.1419 ug/L		96
79)	1,1,2,2-Tetrachloroethane	15.95	83	726241	107.8880 ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	201190	106.8074 ug/L		90
82)	trans-1,4-Dichloro-2-Buten	16.18	53	273166	108.9807 ug/L		88
83)	n-Propylbenzene	16.24	91	4758905	95.6127 ug/L		96
84)	Bromobenzene	16.36	156	980332	98.9559 ug/L		87
85)	1,3,5-Trimethylbenzene	16.42	105	3548144	102.1323 ug/L		98
86)	2-Chlorotoluene	16.50	91	3080378	94.7460 ug/L		89
87)	4-Chlorotoluene	16.56	91	3275680	102.7288 ug/L		91
88)	a-Methylstyrene	16.82	118	1822200	100.1685 ug/L		99
89)	tert-Butylbenzene	16.89	134	736282	98.3559 ug/L		94
90)	1,2,4-Trimethylbenzene	16.94	105	3679498	102.6307 ug/L		96
91)	sec-Butylbenzene	17.16	105	4282594	99.1755 ug/L		100
92)	p-Isopropyltoluene	17.31	119	3601403	100.6765 ug/L		99
93)	1,3-Dichlorobenzene	17.51	146	2007576	101.9319 ug/L		91
94)	1,4-Dichlorobenzene	17.64	146	1983749	100.2892 ug/L		92
95)	n-Butylbenzene	17.84	91	3551291	98.6814 ug/L		99
96)	1,2-Dichlorobenzene	18.13	146	1771782	103.4573 ug/L		90
97)	1,2-Dibromo-3-Chloropropan	19.12	75	137946	106.9493 ug/L		86
98)	1,2,4-Trichlorobenzene	20.27	180	1296017	103.9406 ug/L		99
99)	Hexachlorobutadiene	20.42	225	524135	102.7887 ug/L		97
100)	Naphthalene	20.64	128	2166531	106.1924 ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	1088968	104.9658 ug/L		99

(#) = qualifier out of range (m) = manual integration
8M410200.D 8260WTR.M Thu Feb 18 08:46:16 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410200.D Vial: 9
Acq On : 17 Feb 2016 18:19 Operator: TMB
Sample : WG556046-09 100ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410201.D Vial: 10
Acq On : 17 Feb 2016 18:49 Operator: TMB
Sample : WG556046-10 200ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:16 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.71	96	956583	25.00	ug/L		0.00
57) Chlorobenzene-d5	14.57	117	687631	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	351072	25.00	ug/L		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	9.67	111	997283	101.5636	ug/L		0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 406.24%#				
43) 1,2-Dichloroethane-d4	10.30	65	1054235	100.2710	ug/L		0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 401.08%#				
58) Toluene-d8	12.68	98	3312230	97.5527	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 390.20%#				
80) p-Bromofluorobenzene	16.07	95	1404127	102.9579	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 411.84%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.16	85	3207125	212.6940	ug/L		98
3) Chloromethane	3.62	50	4218032	182.9364	ug/L		96
4) Vinyl Chloride	3.84	62	2842345	177.0828	ug/L		98
5) 1,3-Butadiene	3.89	54	1493970	169.3326	ug/L		91
6) Bromomethane	4.73	94	1725839	226.3095	ug/L		99
7) Chloroethane	4.90	64	1596246	220.1402	ug/L		99
8) Trichlorofluoromethane	5.38	101	3695131	214.7988	ug/L		99
10) Isoprene	5.94	67	2535752	217.5206	ug/L		97
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	1996391	212.5797	ug/L		94
13) Acetone	6.25	43	315092	201.4015	ug/L		97
14) 1,1-Dichloroethene	6.47	61	3702570	214.2209	ug/L		95
15) Tert-Butyl Alcohol	6.57	59	6262	15.7601	ug/L	#	69
16) Dimethyl Sulfide	6.74	62	1652751	218.3184	ug/L		100
17) Iodomethane	7.00	142	1265211	207.9212	ug/L		97
18) Methyl acetate	7.01	43	863527	197.6690	ug/L		99
19) Methylene Chloride	7.26	84	1981498	209.3817	ug/L		95
20) Carbon Disulfide	7.30	76	5864970	197.4292	ug/L		98
21) Acrylonitrile	7.47	53	50942	23.0944	ug/L	#	32
22) Methyl Tert Butyl Ether	7.47	73	3951157	205.5671	ug/L		95
23) trans-1,2-Dichloroethene	7.71	61	3497569	216.4698	ug/L		91
24) n-Hexane	7.79	57	2877796	208.9106	ug/L		95
26) Vinyl Acetate	8.30	43	3301434	200.0815	ug/L		98
27) 1,1-Dichloroethane	8.33	63	4293451	212.9613	ug/L		99
29) 2-Butanone	8.89	43	497150	202.0970	ug/L		100
30) Propionitrile	8.98	54	214	0.3028	ug/L	#	56
31) 2,2-Dichloropropane	9.11	77	3277205	206.7004	ug/L		98
32) cis-1,2-Dichloroethene	9.17	96	2220701	213.3902	ug/L		87
33) Chloroform	9.37	83	3724924	208.2541	ug/L		97
34) 1-Bromopropane	9.52	122	308611	199.2751	ug/L		99
35) Bromochloromethane	9.61	130	1125830	216.2039	ug/L		94
36) Tetrahydrofuran	9.64	42	4028	2.4443	ug/L	#	67
38) 1,1,1-Trichloroethane	9.91	97	3479442	213.1856	ug/L		99
39) Cyclohexane	9.94	56	4055633	213.5193	ug/L		95
40) 1,1-Dichloropropene	10.11	75	2944518	207.3473	ug/L		98
42) Carbon Tetrachloride	10.25	117	3192786	214.9499	ug/L		100
45) 1,2-Dichloroethane	10.43	62	2825501	207.9292	ug/L		98
46) Benzene	10.47	78	7136625	192.8809	ug/L		88
47) Trichloroethene	11.21	130	2082554	208.9787	ug/L		97
48) Methylcyclohexane	11.30	83	2958611	206.1737	ug/L		93
49) 1,2-Dichloropropane	11.43	63	2286532	219.8032	ug/L		100

(#) = qualifier out of range (m) = manual integration
8M410201.D 8260WTR.M Thu Feb 18 08:46:17 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410201.D Vial: 10
Acq On : 17 Feb 2016 18:49 Operator: TMB
Sample : WG556046-10 200ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:16 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

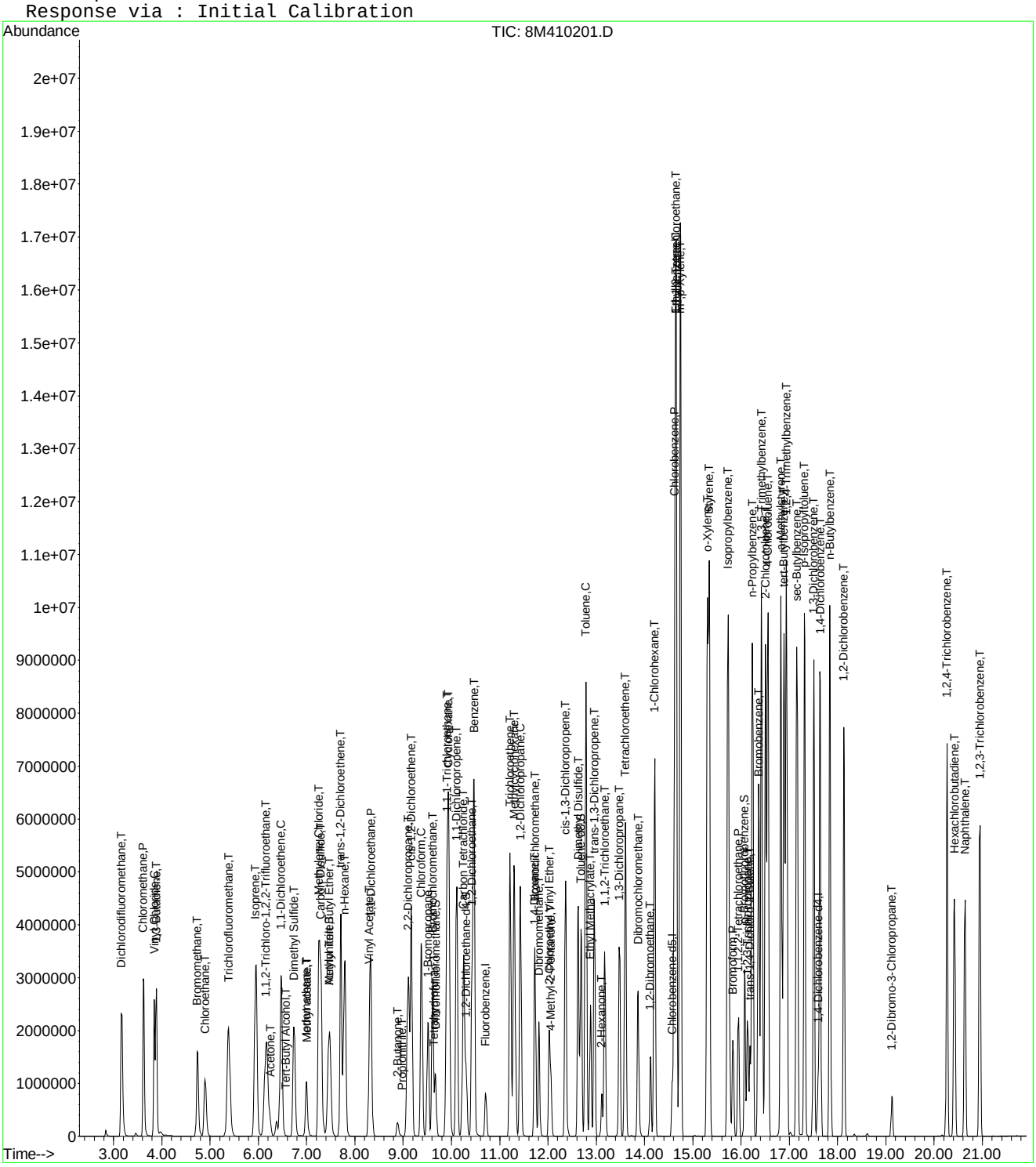
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
50)	Bromodichloromethane	11.73	83	2817911	213.3868 ug/L		98
51)	1,4-Dioxane	11.72	88	4608	109.8224 ug/L	#	29
52)	Dibromomethane	11.81	93	1022585	216.5958 ug/L		96
53)	2-Chloroethyl Vinyl Ether	12.03	63	946919	209.2718 ug/L		98
54)	4-Methyl-2-Pentanone	12.06	58	427769	203.0043 ug/L		98
55)	cis-1,3-Dichloropropene	12.36	75	3096808	215.4556 ug/L		98
56)	Dimethyl Disulfide	12.63	79	1628540	214.9449 ug/L		98
59)	Toluene	12.78	91	7196894	187.8206 ug/L		89
60)	Ethyl Methacrylate	12.88	69	1556070	210.2576 ug/L		98
62)	trans-1,3-Dichloropropene	12.96	75	2651231	207.0100 ug/L		98
63)	1,1,2-Trichloroethane	13.18	97	1298808	213.1885 ug/L		99
64)	2-Hexanone	13.12	58	388009	204.6749 ug/L	#	91
65)	1,3-Dichloropropane	13.48	76	2313774	207.1747 ug/L		95
66)	Tetrachloroethene	13.60	164	1675803	217.7213 ug/L		94
67)	Dibromochloromethane	13.87	129	1819960	217.9063 ug/L		99
68)	1,2-Dibromoethane	14.12	107	1296002	210.1788 ug/L		98
69)	1-Chlorohexane	14.21	91	2650311	203.9882 ug/L		87
70)	Chlorobenzene	14.62	112	5266219	200.8443 ug/L		94
71)	1,1,1,2-Tetrachloroethane	14.66	131	2104814	223.7680 ug/L		99
72)	Ethylbenzene	14.66	106	3293664	219.5482 ug/L		66
73)	m-,p-Xylene	14.75	106	6845381	399.1994 ug/L		67
74)	o-Xylene	15.31	106	3703866	208.2459 ug/L		82
75)	Styrene	15.34	104	5701446	210.2400 ug/L		91
76)	Bromoform	15.83	173	1037882	215.6347 ug/L		99
77)	Isopropylbenzene	15.73	105	7855864	185.2302 ug/L		88
79)	1,1,2,2-Tetrachloroethane	15.95	83	1439550	205.1793 ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	401727	204.6165 ug/L		90
82)	trans-1,4-Dichloro-2-Buten	16.18	53	563568	215.7168 ug/L		90
83)	n-Propylbenzene	16.24	91	8643474	166.6140 ug/L		84
84)	Bromobenzene	16.37	156	2109944	204.3404 ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	7012987	193.6777 ug/L		90
86)	2-Chlorotoluene	16.51	91	6864917	202.5847 ug/L		92
87)	4-Chlorotoluene	16.56	91	5395143	162.3335 ug/L		91
88)	a-Methylstyrene	16.83	118	3872958	204.2643 ug/L		98
89)	tert-Butylbenzene	16.89	134	1650907	211.5891 ug/L		96
90)	1,2,4-Trimethylbenzene	16.94	105	7099816	189.9985 ug/L		86
91)	sec-Butylbenzene	17.16	105	8103104	180.0377 ug/L		92
92)	p-Isopropyltoluene	17.31	119	6978546	187.1698 ug/L		93
93)	1,3-Dichlorobenzene	17.51	146	4155181	202.4151 ug/L		89
94)	1,4-Dichlorobenzene	17.64	146	4053106	196.5938 ug/L		88
95)	n-Butylbenzene	17.84	91	6771269	180.5235 ug/L		93
96)	1,2-Dichlorobenzene	18.13	146	3634804	203.6321 ug/L		88
97)	1,2-Dibromo-3-Chloropropan	19.12	75	273206	202.7744 ug/L		85
98)	1,2,4-Trichlorobenzene	20.27	180	2662342	204.8580 ug/L		98
99)	Hexachlorobutadiene	20.42	225	1179047	221.8441 ug/L		97
100)	Naphthalene	20.64	128	4088314	192.2593 ug/L		98
101)	1,2,3-Trichlorobenzene	20.95	180	2212178	204.5819 ug/L		99

(#) = qualifier out of range (m) = manual integration
8M410201.D 8260WTR.M Thu Feb 18 08:46:17 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410201.D Vial: 10
Acq On : 17 Feb 2016 18:49 Operator: TMB
Sample : WG556046-10 200ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410202.D Vial: 11
Acq On : 17 Feb 2016 19:18 Operator: TMB
Sample : WG556046-11 300ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:17 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	1008689	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	733562	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	373286	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	1555004	150.1816	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 600.72%#			
43) 1,2-Dichloroethane-d4	10.30	65	1607347	144.9817	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 579.92%#			
58) Toluene-d8	12.69	98	5071107	140.0039	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 560.00%#			
80) p-Bromofluorobenzene	16.07	95	2206855	152.1884	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 608.76%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.16	85	4742513	298.2725	ug/L	96
3) Chloromethane	3.62	50	5815191	239.1772	ug/L	93
4) Vinyl Chloride	3.84	62	3879738	229.2278	ug/L	96
5) 1,3-Butadiene	3.89	54	2012878	Below Cal		91
6) Bromomethane	4.73	94	2694799	335.1153	ug/L	99
7) Chloroethane	4.90	64	2526714	330.4617	ug/L	99
8) Trichlorofluoromethane	5.38	101	5708944	314.7192	ug/L	99
9) Diethyl ether	5.91	59	2119585	319.0702	ug/L	99
10) Isoprene	5.94	67	4076181	331.5983	ug/L	95
11) Acrolein	6.15	56	179096	173.6082	ug/L	94
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	3078534	310.8748	ug/L	95
13) Acetone	6.25	43	458158	277.7192	ug/L	95
14) 1,1-Dichloroethene	6.47	61	5625075	308.6400	ug/L	97
15) Tert-Butyl Alcohol	6.59	59	217629	519.4298	ug/L	97
16) Dimethyl Sulfide	6.74	62	2625688	328.9208	ug/L	99
17) Iodomethane	6.99	142	1892743	294.2921	ug/L	96
18) Methyl acetate	7.00	43	1374996	298.4898	ug/L	99
19) Methylene Chloride	7.25	84	3066708	307.3143	ug/L	97
20) Carbon Disulfide	7.30	76	8814282	281.3831	ug/L	96
21) Acrylonitrile	7.44	53	432432	185.9146	ug/L	93
22) Methyl Tert Butyl Ether	7.47	73	6004862	296.2768	ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	5275304	309.6306	ug/L	93
24) n-Hexane	7.78	57	4580413	315.3337	ug/L	95
25) Diisopropyl ether	8.13	45	10882775	287.4946	ug/L	97
26) Vinyl Acetate	8.30	43	5196820	298.6808	ug/L	98
27) 1,1-Dichloroethane	8.33	63	6412833	301.6543	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	8966752	295.3476	ug/L	95
29) 2-Butanone	8.89	43	787190	303.4711	ug/L	100
30) Propionitrile	8.99	54	249973	335.4717	ug/L	99
31) 2,2-Dichloropropane	9.10	77	4932564	295.0365	ug/L	97
32) cis-1,2-Dichloroethene	9.17	96	3389566	308.8829	ug/L	90
33) Chloroform	9.37	83	5444181	288.6517	ug/L	95
34) 1-Bromopropane	9.52	122	499152	305.4202	ug/L	100
35) Bromochloromethane	9.61	130	1711364	311.6725	ug/L	94
36) Tetrahydrofuran	9.63	42	514819	296.2698	ug/L	99
38) 1,1,1-Trichloroethane	9.91	97	5214542	302.9910	ug/L	98
39) Cyclohexane	9.94	56	6466550	322.8617	ug/L	95
40) 1,1-Dichloropropene	10.11	75	4453616	297.4147	ug/L	100
41) Tert-Amyl-Methyl ether	10.21	73	6339266	297.0835	ug/L	94
42) Carbon Tetrachloride	10.25	117	4801994	306.5875	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M410202.D 8260WTR.M Thu Feb 18 08:46:18 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410202.D Vial: 11
Acq On : 17 Feb 2016 19:18 Operator: TMB
Sample : WG556046-11 300ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:17 2016 Quant Results File: 8260WTR.RES

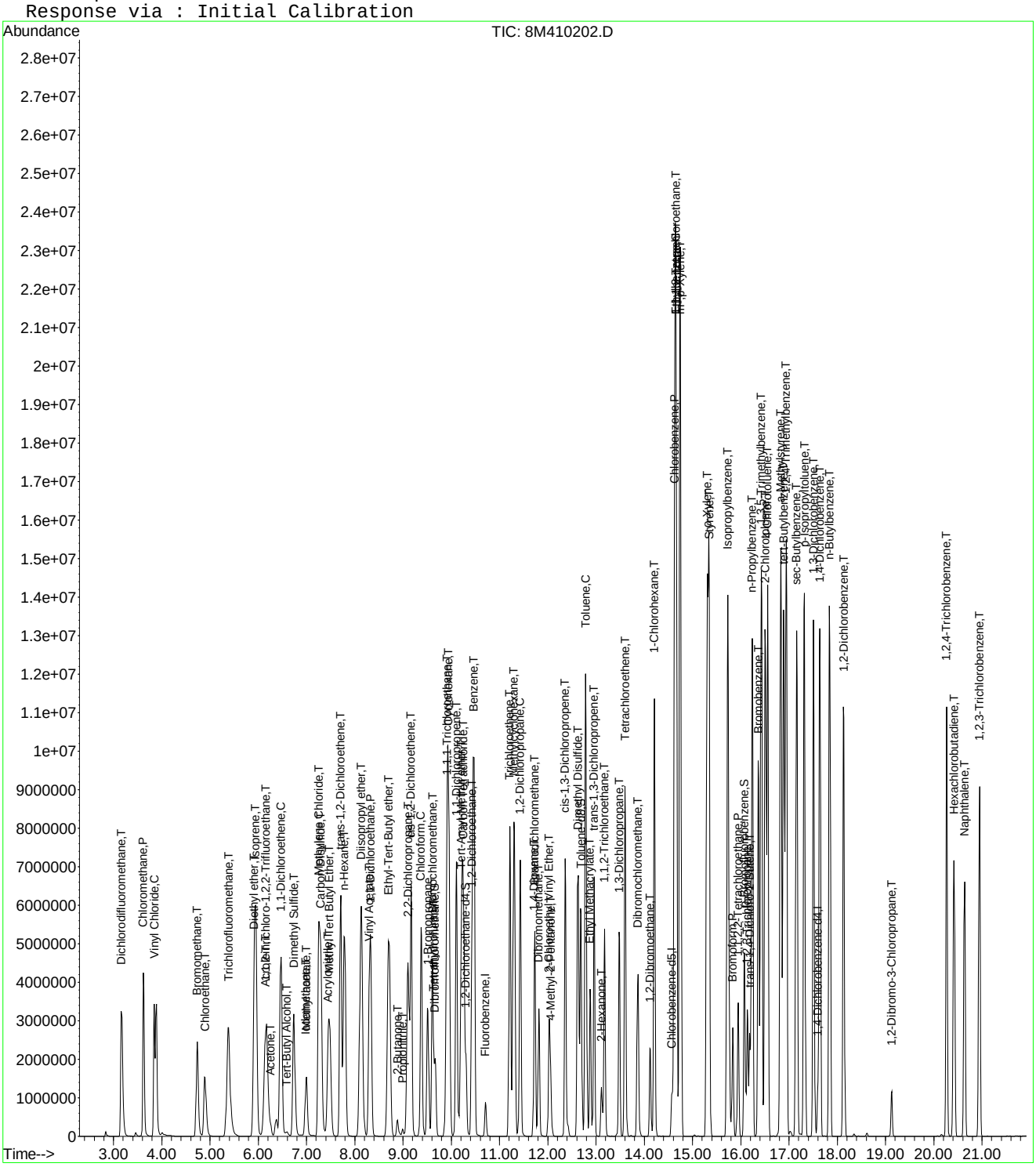
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

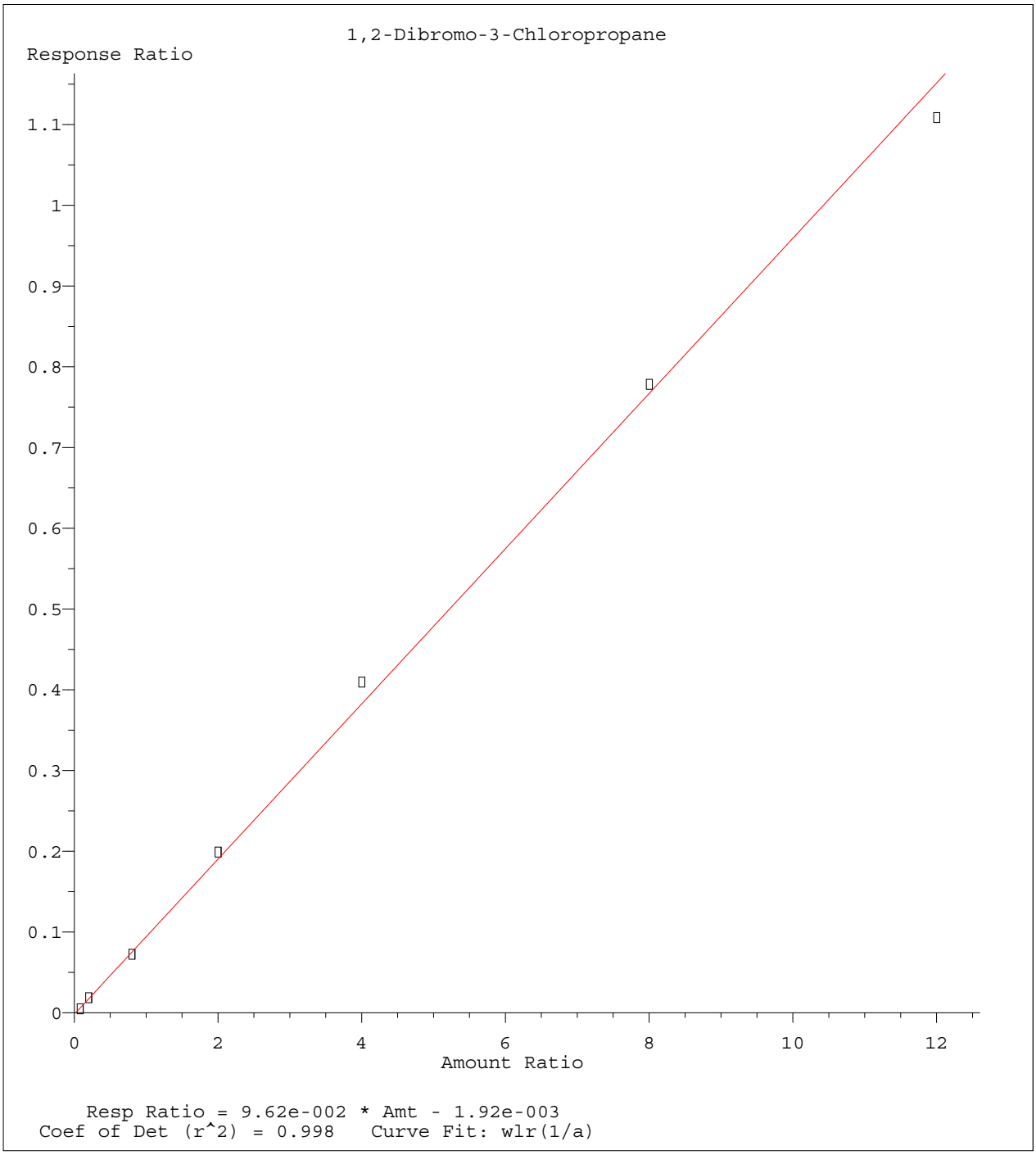
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	4142690	289.1132 ug/L		98
46)	Benzene	10.47	78	9878306	253.1886 ug/L	#	81
47)	Trichloroethene	11.21	130	3199385	304.4652 ug/L		98
48)	Methylcyclohexane	11.30	83	4673038	308.8233 ug/L		92
49)	1,2-Dichloropropane	11.43	63	3558824	324.4357 ug/L		97
50)	Bromodichloromethane	11.73	83	4217604	302.8805 ug/L		97
51)	1,4-Dioxane	11.72	88	29150	658.8435 ug/L		94
52)	Dibromomethane	11.81	93	1569045	315.1747 ug/L		97
53)	2-Chloroethyl Vinyl Ether	12.03	63	1443066	302.4472 ug/L		98
54)	4-Methyl-2-Pentanone	12.06	58	687070	309.2162 ug/L		98
55)	cis-1,3-Dichloropropene	12.36	75	4637758	305.9968 ug/L		96
56)	Dimethyl Disulfide	12.63	79	2558598	320.2552 ug/L		95
59)	Toluene	12.78	91	9689919	237.0483 ug/L		82
60)	Ethyl Methacrylate	12.88	69	2445173	309.7068 ug/L		98
62)	trans-1,3-Dichloropropene	12.96	75	3963876	290.1232 ug/L		95
63)	1,1,2-Trichloroethane	13.18	97	2009765	309.2308 ug/L		99
64)	2-Hexanone	13.11	58	630123	311.5779 ug/L	#	86
65)	1,3-Dichloropropane	13.49	76	3502124	293.9449 ug/L		95
66)	Tetrachloroethene	13.60	164	2672024	325.4145 ug/L		96
67)	Dibromochloromethane	13.87	129	2786535	312.7456 ug/L		99
68)	1,2-Dibromoethane	14.12	107	2005051	304.8086 ug/L		99
69)	1-Chlorohexane	14.21	91	4187732	302.1383 ug/L		87
70)	Chlorobenzene	14.62	112	7405610	264.7524 ug/L		89
71)	1,1,1,2-Tetrachloroethane	14.65	131	3193835	318.2844 ug/L		99
72)	Ethylbenzene	14.65	106	5012485	313.2004 ug/L		48
73)	m-,p-Xylene	14.75	106	9170400	501.3016 ug/L		58
74)	o-Xylene	15.31	106	5573611	293.7491 ug/L		70
75)	Styrene	15.35	104	7985647	276.0318 ug/L		85
76)	Bromoform	15.83	173	1620565	315.6136 ug/L		99
77)	Isopropylbenzene	15.73	105	10413717	230.1666 ug/L	#	77
79)	1,1,2,2-Tetrachloroethane	15.95	83	2233257	299.3643 ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	631306	302.4155 ug/L		94
82)	trans-1,4-Dichloro-2-Buten	16.18	53	887643	319.5438 ug/L		94
83)	n-Propylbenzene	16.24	91	11061244	200.5310 ug/L	#	72
84)	Bromobenzene	16.37	156	3275875	298.3768 ug/L		96
85)	1,3,5-Trimethylbenzene	16.42	105	9351351	242.8877 ug/L		80
86)	2-Chlorotoluene	16.50	91	8986138	249.4014 ug/L		82
87)	4-Chlorotoluene	16.56	91	7331626	207.4723 ug/L		79
88)	a-Methylstyrene	16.82	118	5805469	287.9661 ug/L		95
89)	tert-Butylbenzene	16.89	134	2620155	315.8291 ug/L		82
90)	1,2,4-Trimethylbenzene	16.94	105	9380563	236.0948 ug/L		74
91)	sec-Butylbenzene	17.16	105	10576965	221.0180 ug/L	#	82
92)	p-Isopropyltoluene	17.32	119	9294639	234.4541 ug/L		84
93)	1,3-Dichlorobenzene	17.51	146	6013808	275.5224 ug/L		84
94)	1,4-Dichlorobenzene	17.64	146	5876289	268.0646 ug/L		84
95)	n-Butylbenzene	17.84	91	8960384	224.6699 ug/L	#	83
96)	1,2-Dichlorobenzene	18.14	146	5343587	281.5482 ug/L		85
97)	1,2-Dibromo-3-Chloropropan	19.13	75	413804	288.6380 ug/L		87
98)	1,2,4-Trichlorobenzene	20.27	180	3991013	288.8197 ug/L		98
99)	Hexachlorobutadiene	20.42	225	1876505	332.0634 ug/L		97
100)	Naphthalene	20.64	128	5805822	256.7801 ug/L		95
101)	1,2,3-Trichlorobenzene	20.95	180	3319180	288.6905 ug/L		98

(#) = qualifier out of range (m) = manual integration
8M410202.D 8260WTR.M Thu Feb 18 08:46:18 2016 Page 2

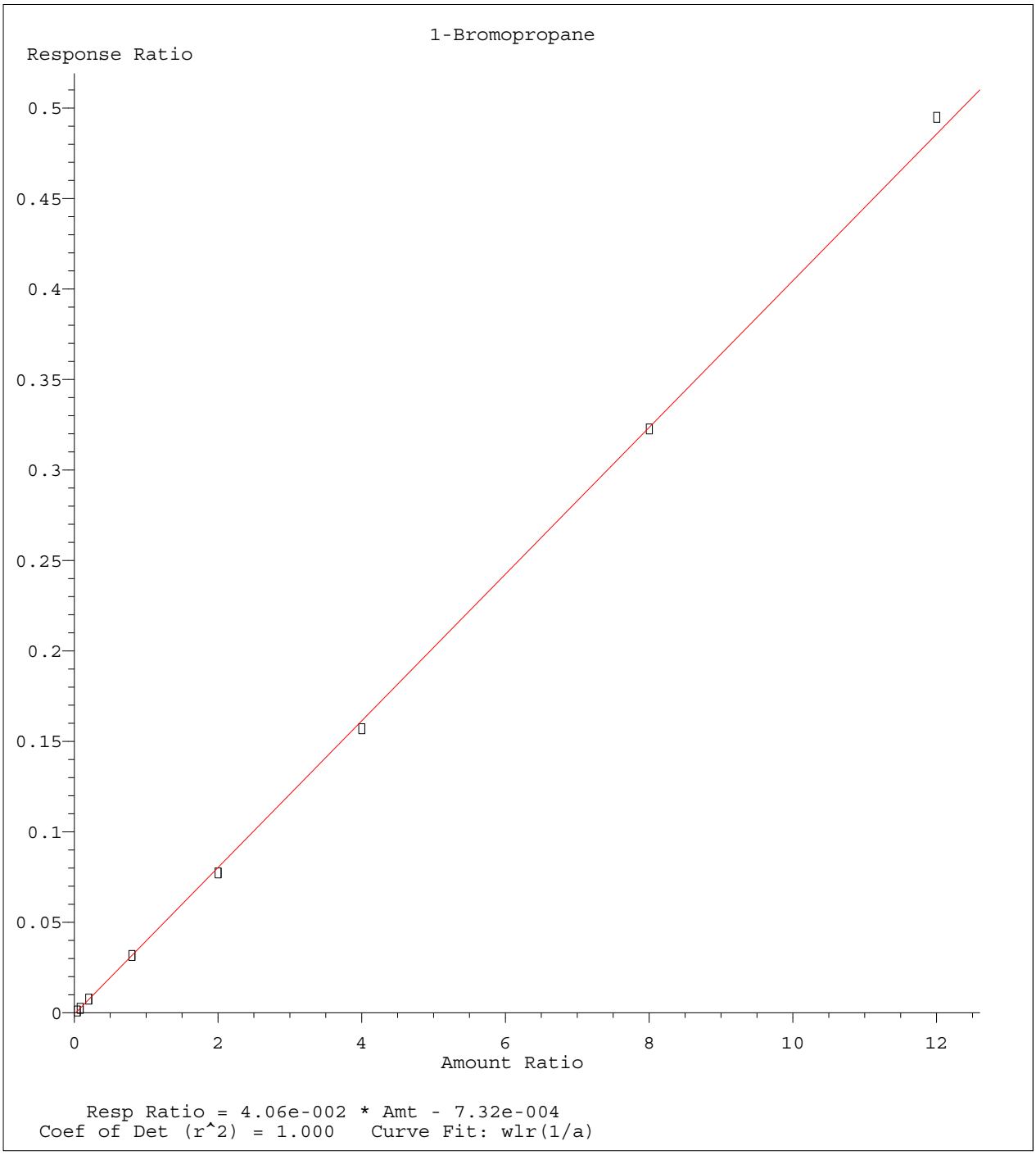
Data File : C:\MSDCHEM\2\DATA\021716\8M410202.D Vial: 11
Acq On : 17 Feb 2016 19:18 Operator: TMB
Sample : WG556046-11 300ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD74773 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration

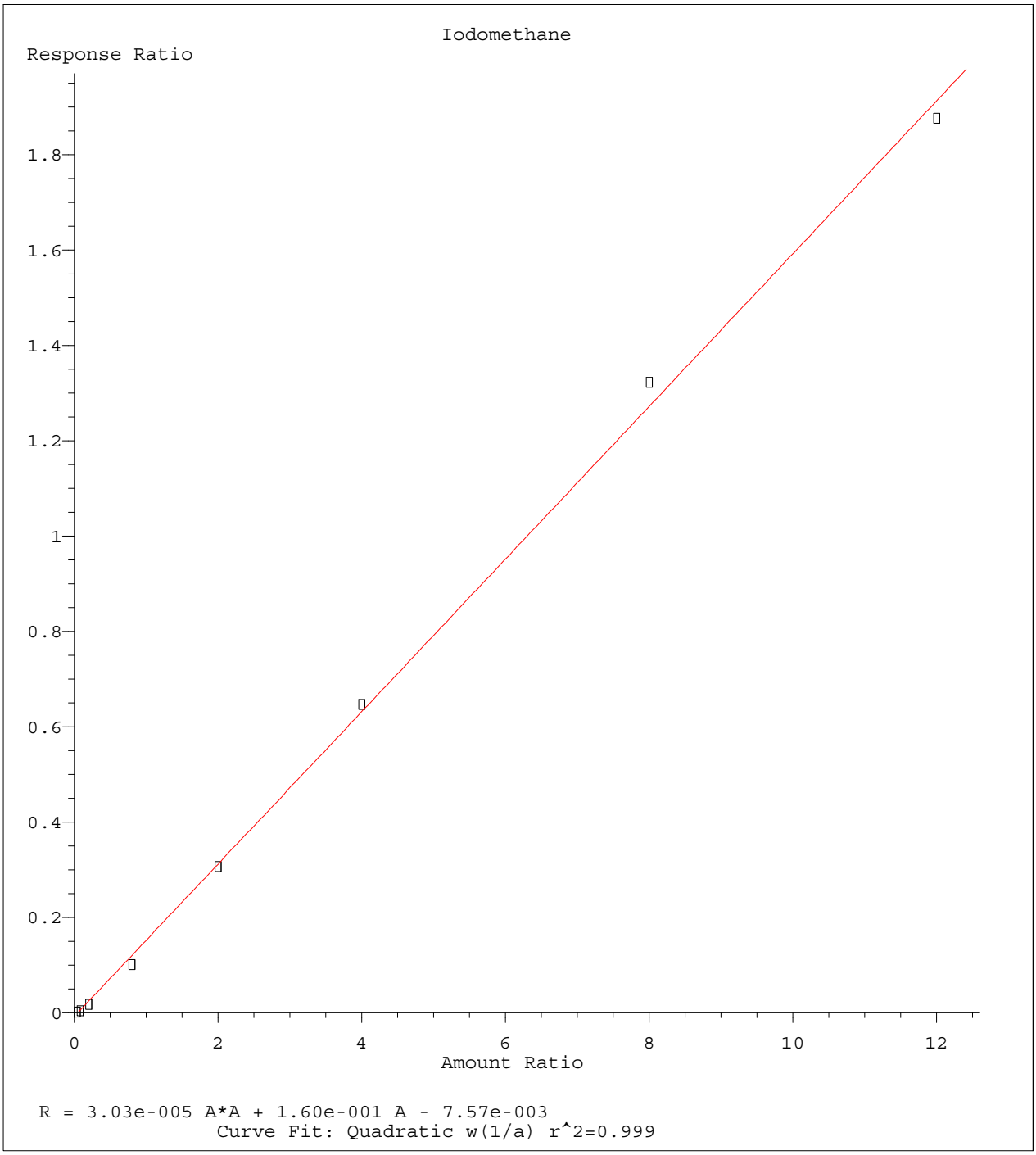




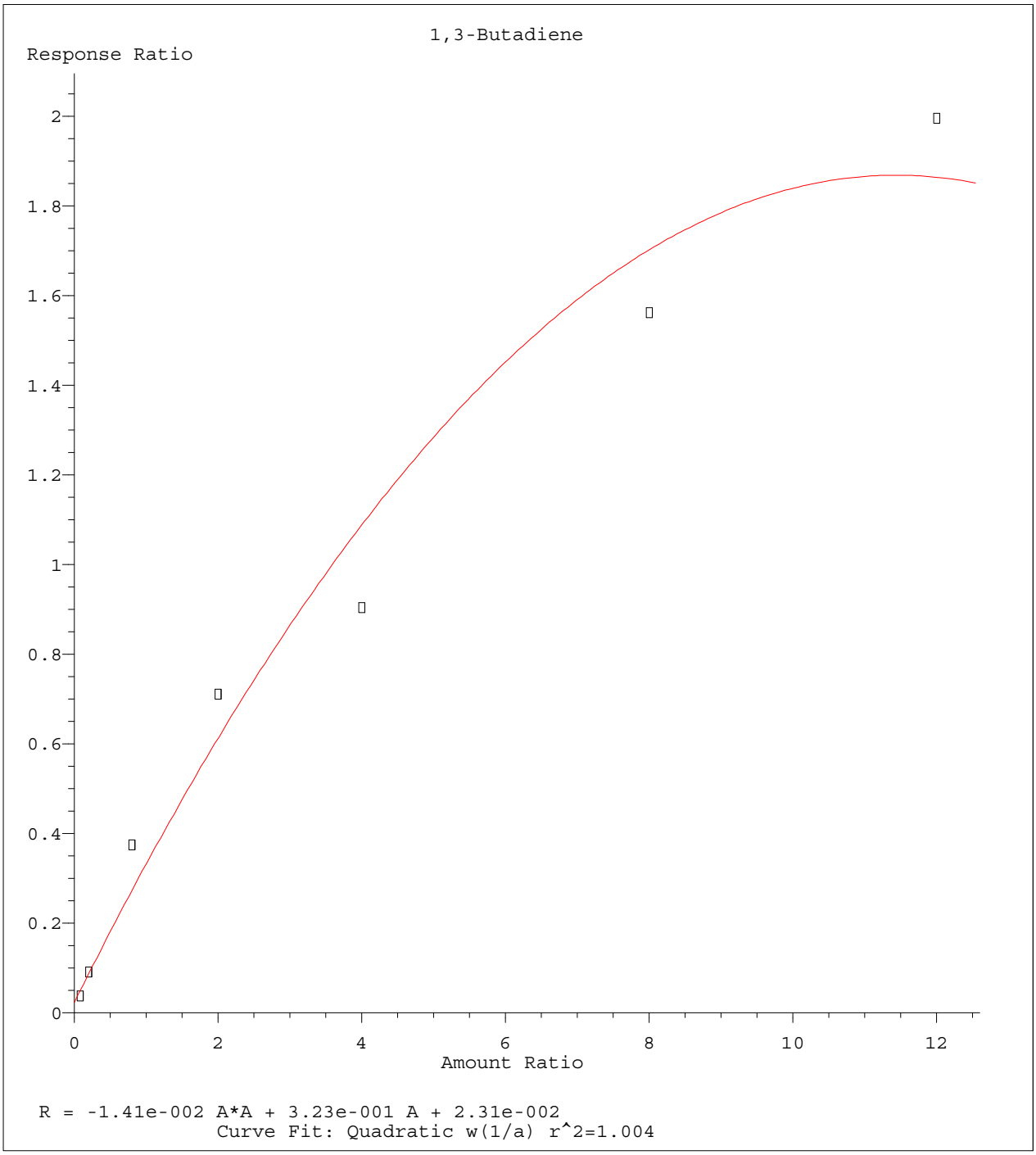
Method Name: C:\MSDCHEM\2\METHODS\8260WTR.M
Calibration Table Last Updated: Thu Feb 18 08:47:33 2016



Method Name: C:\MSDCHEM\2\METHODS\8260WTR.M
Calibration Table Last Updated: Thu Feb 18 08:47:33 2016



Method Name: C:\MSDCHEM\2\METHODS\8260WTR.M
Calibration Table Last Updated: Thu Feb 18 08:47:33 2016



Method Name: C:\MSDCHEM\2\METHODS\8260WTR.M
Calibration Table Last Updated: Thu Feb 18 08:47:33 2016

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\021716\8M410205.D Vial: 14
Acq On : 17 Feb 2016 20:44 Operator: TMB
Sample : WG556046-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD74755 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:19 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	976244	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	675638	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	348468	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.66	111	247596	24.7074 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.84%		
43) 1,2-Dichloroethane-d4	10.30	65	253347	23.6112 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.44%		
58) Toluene-d8	12.68	98	852761	25.5616 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.24%		
80) p-Bromofluorobenzene	16.07	95	353968	26.1487 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 104.60%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.16	85	808654	52.5492 ug/L	100
3) Chloromethane	3.62	50	1099502	46.7251 ug/L	99
4) Vinyl Chloride	3.84	62	698028	42.6125 ug/L	98
5) 1,3-Butadiene	3.89	54	144967	9.8810 ug/L	93
6) Bromomethane	4.73	94	385658	49.5529 ug/L	98
7) Chloroethane	4.90	64	407329	55.0439 ug/L	99
8) Trichlorofluoromethane	5.37	101	861620	49.0775 ug/L	99
9) Diethyl ether	5.91	59	618680	96.2278 ug/L	98
10) Isoprene	5.94	67	760979	63.9632 ug/L	97
11) Acrolein	6.15	56	86733	86.8695 ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	477348	49.8053 ug/L	95
13) Acetone	6.25	43	80544	50.4455 ug/L	97
14) 1,1-Dichloroethene	6.47	61	867778	49.1962 ug/L	95
15) Tert-Butyl Alcohol	6.58	59	78677	194.0246 ug/L	95
16) Dimethyl Sulfide	6.74	62	604240	78.2090 ug/L	99
17) Iodomethane	6.99	142	289966	47.6676 ug/L	98
18) Methyl acetate	7.00	43	233759	52.4319 ug/L	98
19) Methylene Chloride	7.26	84	479742	49.6726 ug/L	93
20) Carbon Disulfide	7.30	76	1455366	48.0045 ug/L	99
21) Acrylonitrile	7.43	53	119025	52.8729 ug/L	96
22) Methyl Tert Butyl Ether	7.47	73	978729	49.8949 ug/L	97
23) trans-1,2-Dichloroethene	7.71	61	871366	52.8440 ug/L	90
24) n-Hexane	7.78	57	720742	51.2678 ug/L	93
25) Diisopropyl ether	8.13	45	3638969	99.3270 ug/L	98
26) Vinyl Acetate	8.30	43	726709	43.1548 ug/L	100
27) 1,1-Dichloroethane	8.33	63	1013898	49.2780 ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	2801608	95.3464 ug/L	99
29) 2-Butanone	8.89	43	119204	47.4818 ug/L	99
30) Propionitrile	8.99	54	73439	101.8330 ug/L	99
31) 2,2-Dichloropropane	9.11	77	815209	50.3815 ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	547762	51.5752 ug/L	87
33) Chloroform	9.37	83	910688	49.8896 ug/L	98
34) 1-Bromopropane	9.51	122	126753	80.4675 ug/L	99
35) Bromochloromethane	9.61	130	266686	50.1828 ug/L	96
36) Tetrahydrofuran	9.63	42	150924	89.7408 ug/L	98
38) 1,1,1-Trichloroethane	9.91	97	835487	50.1594 ug/L	100
39) Cyclohexane	9.94	56	1035909	53.4397 ug/L	96
40) 1,1-Dichloropropene	10.11	75	699121	48.2393 ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	2047058	99.1217 ug/L	97
42) Carbon Tetrachloride	10.25	117	751391	49.5676 ug/L	99

(#) = qualifier out of range (m) = manual integration
8M410205.D 8260WTR.M Thu Feb 18 08:46:19 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410205.D Vial: 14
Acq On : 17 Feb 2016 20:44 Operator: TMB
Sample : WG556046-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD74755 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 08:46:19 2016 Quant Results File: 8260WTR.RES

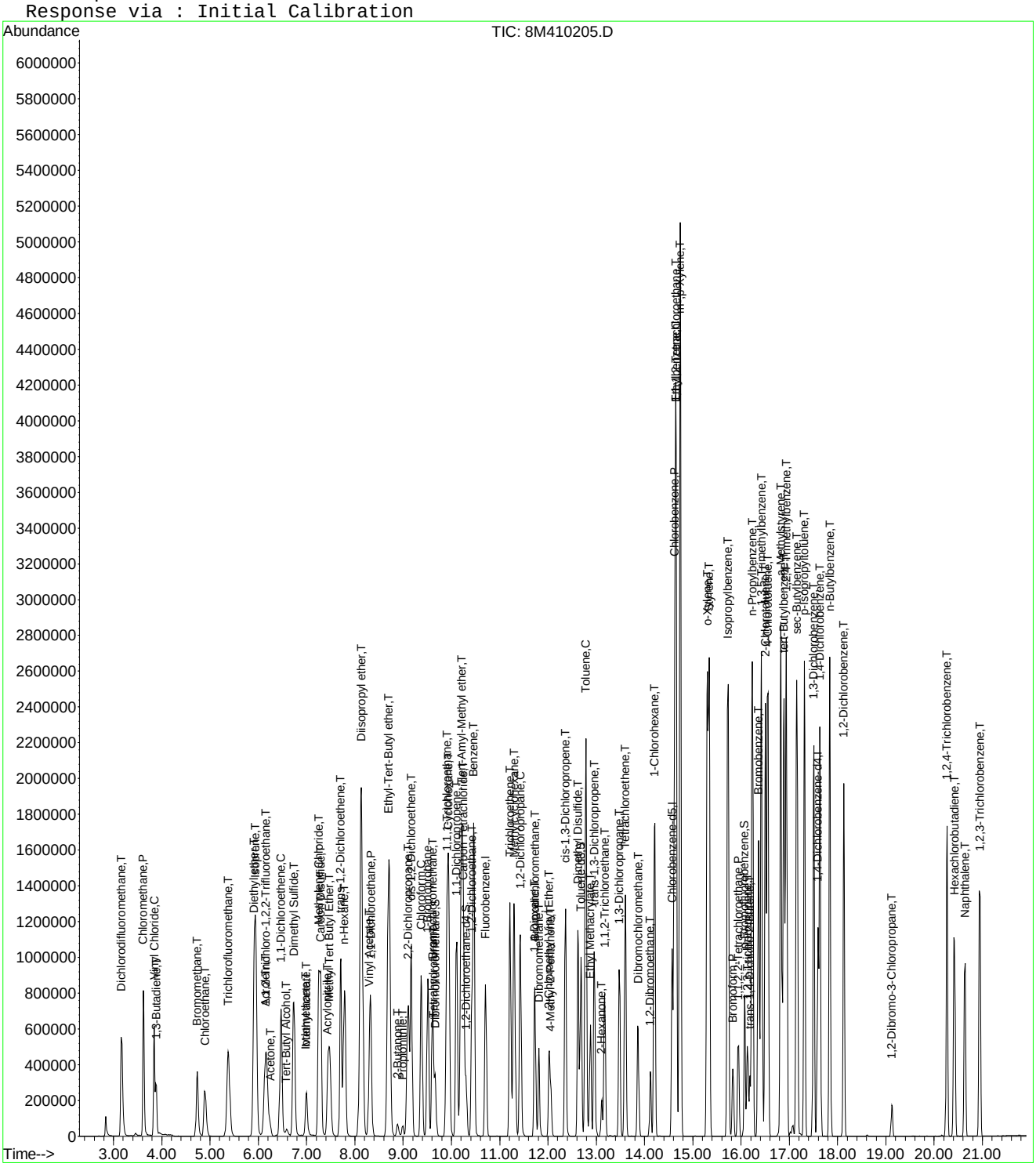
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	694894	50.1075	ug/L		97
46)	Benzene	10.46	78	1955621	51.7899	ug/L		97
47)	Trichloroethene	11.21	130	521512	51.2784	ug/L		97
48)	Methylcyclohexane	11.30	83	762983	52.0984	ug/L		93
49)	1,2-Dichloropropane	11.43	63	574415	54.1062	ug/L		98
50)	Bromodichloromethane	11.73	83	682792	50.6632	ug/L		100
51)	1,4-Dioxane	11.72	88	7599	177.4594	ug/L		93
52)	Dibromomethane	11.81	93	230246	47.7867	ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.02	63	235486	50.9950	ug/L		98
54)	4-Methyl-2-Pentanone	12.05	58	105559	49.0857	ug/L		97
55)	cis-1,3-Dichloropropene	12.36	75	822786	56.0912	ug/L		100
56)	Dimethyl Disulfide	12.62	79	422139	54.5945	ug/L		99
59)	Toluene	12.78	91	2013734	53.4862	ug/L		98
60)	Ethyl Methacrylate	12.88	69	415338	57.1170	ug/L		96
62)	trans-1,3-Dichloropropene	12.96	75	643114	51.1061	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	310746	51.9118	ug/L		99
64)	2-Hexanone	13.12	58	96369	51.7370	ug/L	#	86
65)	1,3-Dichloropropane	13.48	76	600011	54.6785	ug/L		97
66)	Tetrachloroethene	13.60	164	393140	51.9836	ug/L		95
67)	Dibromochloromethane	13.87	129	425141	51.8063	ug/L		99
68)	1,2-Dibromoethane	14.12	107	312164	51.5237	ug/L		100
69)	1-Chlorohexane	14.21	91	709973	55.6149	ug/L		91
70)	Chlorobenzene	14.62	112	1374147	53.3378	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.66	131	482124	52.1656	ug/L		98
72)	Ethylbenzene	14.66	106	769203	52.1835	ug/L		96
73)	m-,p-Xylene	14.74	106	1846902	109.6169	ug/L		98
74)	o-Xylene	15.31	106	930708	53.2569	ug/L		99
75)	Styrene	15.34	104	1494770	56.0978	ug/L		97
76)	Bromoform	15.83	173	223351	47.2280	ug/L		99
77)	Isopropylbenzene	15.73	105	2326705	55.8342	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	340363	48.8745	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	96719	49.6312	ug/L		93
82)	trans-1,4-Dichloro-2-Buten	16.19	53	117135	45.1708	ug/L		78
83)	n-Propylbenzene	16.24	91	2805201	54.4779	ug/L		98
84)	Bromobenzene	16.36	156	509646	49.7262	ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	2032788	56.5590	ug/L		100
86)	2-Chlorotoluene	16.51	91	1779453	52.9043	ug/L		100
87)	4-Chlorotoluene	16.56	91	1826278	55.3612	ug/L		98
88)	a-Methylstyrene	16.83	118	1134796	60.2977	ug/L		100
89)	tert-Butylbenzene	16.89	134	411892	53.1848	ug/L		93
90)	1,2,4-Trimethylbenzene	16.94	105	2027362	54.6598	ug/L		99
91)	sec-Butylbenzene	17.16	105	2451245	54.8696	ug/L		98
92)	p-Isopropyltoluene	17.31	119	2006459	54.2169	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	1078732	52.9419	ug/L		93
94)	1,4-Dichlorobenzene	17.63	146	1080656	52.8084	ug/L		94
95)	n-Butylbenzene	17.84	91	1948431	52.3338	ug/L		99
96)	1,2-Dichlorobenzene	18.13	146	950125	53.6265	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	64103	48.3139	ug/L		83
98)	1,2,4-Trichlorobenzene	20.27	180	648347	50.2609	ug/L		99
99)	Hexachlorobutadiene	20.42	225	300524	56.9678	ug/L		98
100)	Naphthalene	20.64	128	952570	45.1308	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	537378	50.0680	ug/L		100

(#) = qualifier out of range (m) = manual integration
8M410205.D 8260WTR.M Thu Feb 18 08:46:19 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\021716\8M410205.D Vial: 14
Acq On : 17 Feb 2016 20:44 Operator: TMB
Sample : WG556046-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD74755 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Feb 18 8:46 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\021716\8M410205.D Vial: 14
Acq On : 17 Feb 2016 20:44 Operator: TMB
Sample : WG556046-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD74755 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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	117	0.00
2	T	Dichlorodifluoromethane	50.0000	52.5492	-5.1	112	0.00
3	P	Chloromethane	50.0000	46.7251	6.5	107	0.00
4	C	Vinyl Chloride	50.0000	42.6125	14.8	95	0.00
5	T	1,3-Butadiene	50.0000	9.8810	80.2#	24	0.00
6	T	Bromomethane	50.0000	49.5529	0.9	115	0.00
7	T	Chloroethane	50.0000	55.0439	-10.1	125	0.00
8	T	Trichlorofluoromethane	50.0000	49.0775	1.8	112	0.00
9	T	Diethyl ether	100.0000	96.2278	3.8	116	0.00
10	T	Isoprene	50.0000	63.9632	-27.9#	148	0.00
11	T	Acrolein	50.0000	86.8695	-73.7#	207	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	49.8053	0.4	117	0.00
13	T	Acetone	50.0000	50.4455	-0.9	116	0.00
14	C	1,1-Dichloroethene	50.0000	49.1962	1.6	112	0.00
15	T	Tert-Butyl Alcohol	200.0000	194.0246	3.0	119	0.00
16	T	Dimethyl Sulfide	50.0000	78.2090	-56.4#	182	0.00
17	T	Iodomethane	50.0000	47.6676	4.7	113	0.00
18	T	Methyl acetate	50.0000	52.4319	-4.9	128	0.00
19	T	Methylene Chloride	50.0000	49.6726	0.7	115	0.00
20	T	Carbon Disulfide	50.0000	48.0045	4.0	113	0.00
21	T	Acrylonitrile	50.0000	52.8729	-5.7	119	0.00
22	T	Methyl Tert Butyl Ether	50.0000	49.8949	0.2	116	0.00
23	T	trans-1,2-Dichloroethene	50.0000	52.8440	-5.7	120	0.00
24	T	n-Hexane	50.0000	51.2678	-2.5	128	0.00
25	T	Diisopropyl ether	100.0000	99.3270	0.7	116	0.00
26	T	Vinyl Acetate	50.0000	43.1548	13.7	102	0.00
27	P	1,1-Dichloroethane	50.0000	49.2780	1.4	111	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	95.3465	4.7	110	0.00
29	T	2-Butanone	50.0000	47.4818	5.0	113	0.00
30	T	Propionitrile	100.0000	101.8330	-1.8	118	0.00
31	T	2,2-Dichloropropane	50.0000	50.3815	-0.8	121	0.00
32	T	cis-1,2-Dichloroethene	50.0000	51.5752	-3.2	117	0.00
33	C	Chloroform	50.0000	49.8896	0.2	112	0.00
34		1-Bromopropane	50.0000	80.4675	-60.9#	196	0.00
35	T	Bromochloromethane	50.0000	50.1828	-0.4	111	0.00
36	T	Tetrahydrofuran	100.0000	89.7408	10.3	111	0.00
37	S	Dibromofluoromethane	25.0000	24.7074	1.2	115	0.00
38	T	1,1,1-Trichloroethane	50.0000	50.1594	-0.3	114	0.00
39	T	Cyclohexane	50.0000	53.4397	-6.9	128	0.00
40	T	1,1-Dichloropropene	50.0000	48.2393	3.5	113	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	99.1217	0.9	116	0.00
42	T	Carbon Tetrachloride	50.0000	49.5676	0.9	110	0.00
43	S	1,2-Dichloroethane-d4	25.0000	23.6112	5.6	109	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	50.1075	-0.2	112	0.00
46	T	Benzene	50.0000	51.7899	-3.6	115	0.00
47	T	Trichloroethene	50.0000	51.2784	-2.6	117	0.00
48	T	Methylcyclohexane	50.0000	52.0984	-4.2	125	0.00
49	C	1,2-Dichloropropane	50.0000	54.1062	-8.2	119	0.00
50	T	Bromodichloromethane	50.0000	50.6632	-1.3	112	0.00
51	T	1,4-Dioxane	200.0000	177.4594	11.3	107	0.00
52	T	Dibromomethane	50.0000	47.7867	4.4	104	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	50.9950	-2.0	116	0.00
54	T	4-Methyl-2-Pentanone	50.0000	49.0857	1.8	115	0.00

(#) = Out of Range
8M410205.D 8260WTR.M Thu Feb 18 08:47:57 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\021716\8M410205.D Vial: 14
Acq On : 17 Feb 2016 20:44 Operator: TMB
Sample : WG556046-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD74755 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:44:45 2016
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)
55	T	cis-1,3-Dichloropropene	50.0000	56.0912	-12.2	123	0.00
56	T	Dimethyl Disulfide	50.0000	54.5945	-9.2	127	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	114	0.00
58	S	Toluene-d8	25.0000	25.5616	-2.2	114	0.00
59	C	Toluene	50.0000	53.4862	-7.0	114	0.00
60	T	Ethyl Methacrylate	50.0000	57.1170	-14.2	126	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	51.1061	-2.2	111	0.00
63	T	1,1,2-Trichloroethane	50.0000	51.9118	-3.8	110	0.00
64	T	2-Hexanone	50.0000	51.7370	-3.5	117	0.00
65	T	1,3-Dichloropropane	50.0000	54.6785	-9.4	117	0.00
66	T	Tetrachloroethene	50.0000	51.9836	-4.0	115	0.00
67	T	Dibromochloromethane	50.0000	51.8063	-3.6	107	0.00
68	T	1,2-Dibromoethane	50.0000	51.5237	-3.0	108	0.00
69	T	1-Chlorohexane	50.0000	55.6149	-11.2	125	0.00
70	P	Chlorobenzene	50.0000	53.3378	-6.7	116	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	52.1656	-4.3	110	0.00
72	C	Ethylbenzene	50.0000	52.1835	-4.4	116	0.00
73	T	m-,p-Xylene	100.0000	109.6169	-9.6	116	0.00
74	T	o-Xylene	50.0000	53.2569	-6.5	118	0.00
75	T	Styrene	50.0000	56.0978	-12.2	114	0.00
76	P	Bromoform	50.0000	47.2280	5.5	97	0.00
77	T	Isopropylbenzene	50.0000	55.8342	-11.7	116	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	111	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	48.8745	2.3	100	0.00
80	S	p-Bromofluorobenzene	25.0000	26.1487	-4.6	116	0.00
81	T	1,2,3-Trichloropropane	50.0000	49.6312	0.7	106	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	45.1708	9.7	95	0.00
83	T	n-Propylbenzene	50.0000	54.4779	-9.0	116	0.00
84	T	Bromobenzene	50.0000	49.7262	0.5	107	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	56.5590	-13.1	117	0.00
86	T	2-Chlorotoluene	50.0000	52.9043	-5.8	114	0.00
87	T	4-Chlorotoluene	50.0000	55.3612	-10.7	114	0.00
88	T	a-Methylstyrene	50.0000	60.2977	-20.6	135	0.00
89	T	tert-Butylbenzene	50.0000	53.1848	-6.4	117	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	54.6598	-9.3	112	0.00
91	T	sec-Butylbenzene	50.0000	54.8696	-9.7	114	0.00
92	T	p-Isopropyltoluene	50.0000	54.2169	-8.4	113	0.00
93	T	1,3-Dichlorobenzene	50.0000	52.9419	-5.9	111	0.00
94	T	1,4-Dichlorobenzene	50.0000	52.8084	-5.6	112	0.00
95	T	n-Butylbenzene	50.0000	52.3338	-4.7	110	0.00
96	T	1,2-Dichlorobenzene	50.0000	53.6265	-7.3	110	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	48.3139	3.4	103	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	50.2609	-0.5	104	0.00
99	T	Hexachlorobutadiene	50.0000	56.9678	-13.9	120	0.00
100	T	Naphthalene	50.0000	45.1308	9.7	90	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	50.0680	-0.1	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M410205.D 8260WTR.M Thu Feb 18 08:47:57 2016 Page 2

Data File : C:\MSDchem\2\data\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:33:46 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	1024914	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	820290	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	468128	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	250083	23.7705	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.08%			
43) 1,2-Dichloroethane-d4	10.30	65	262728	23.3227	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 93.28%			
58) Toluene-d8	12.68	98	935193	23.0892	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 92.36%			
80) p-Bromofluorobenzene	16.07	95	406523	22.3548	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 89.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	948449	58.7068	ug/L	99
3) Chloromethane	3.63	50	1499352	60.6917	ug/L	97
4) Vinyl Chloride	3.86	62	976179	56.7629	ug/L	98
5) 1,3-Butadiene	3.90	54	894369	75.8655	ug/L	99
6) Bromomethane	4.74	94	349737	42.8035	ug/L	100
7) Chloroethane	4.90	64	441089	56.7755	ug/L	96
8) Trichlorofluoromethane	5.38	101	998609	54.1792	ug/L	99
9) Diethyl ether	5.91	59	700135	103.7259	ug/L	95
10) Isoprene	5.95	67	699864	56.0328	ug/L	91
11) Acrolein	6.15	56	39982	38.1433	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	546944	54.3568	ug/L	91
13) Acetone	6.24	43	86997	51.8997	ug/L	89
14) 1,1-Dichloroethene	6.47	61	1063453	57.4265	ug/L	93
15) Tert-Butyl Alcohol	6.58	59	101464	238.3373	ug/L	96
16) Dimethyl Sulfide	6.74	62	452630	55.8035	ug/L	91
17) Iodomethane	6.99	142	201226	31.9140	ug/L	96
18) Methyl acetate	7.00	43	297059	63.4659	ug/L	95
19) Methylene Chloride	7.26	84	554800	54.7163	ug/L	82
20) Carbon Disulfide	7.30	76	1793111	56.3363	ug/L	99
21) Acrylonitrile	7.44	53	142743	60.3977	ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	1060989	51.5199	ug/L	95
23) trans-1,2-Dichloroethene	7.71	61	987097	57.0198	ug/L	91
24) n-Hexane	7.78	57	914105	61.9344	ug/L	98
25) Diisopropyl ether	8.13	45	4501746	117.0418	ug/L	98
26) Vinyl Acetate	8.30	43	1026537	58.0650	ug/L	98
27) 1,1-Dichloroethane	8.33	63	1249632	57.8511	ug/L	99
28) Ethyl-Tert-Butyl ether	8.70	59	3302492	107.0557	ug/L	97
29) 2-Butanone	8.88	43	151242	57.3826	ug/L	95
30) Propionitrile	8.99	54	97006	128.1242	ug/L	100
31) 2,2-Dichloropropane	9.11	77	988323	58.1797	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	624238	55.9848	ug/L	82
33) Chloroform	9.37	83	1069064	55.7847	ug/L	99
34) 1-Bromopropane	9.51	122	96928	58.7339	ug/L	100
35) Bromochloromethane	9.61	130	304728	54.6183	ug/L	80
36) Tetrahydrofuran	9.63	42	242467	137.3268	ug/L	94
38) 1,1,1-Trichloroethane	9.91	97	949151	54.2774	ug/L	100
39) Cyclohexane	9.94	56	1189609	58.4545	ug/L	92
40) 1,1-Dichloropropene	10.11	75	825728	54.2696	ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	2227773	102.7497	ug/L	94
42) Carbon Tetrachloride	10.25	117	873624	54.8943	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411218.D 8260WTR.M Tue Apr 05 10:33:46 2016 Page 1

Data File : C:\MSDchem\2\data\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 10:33:46 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

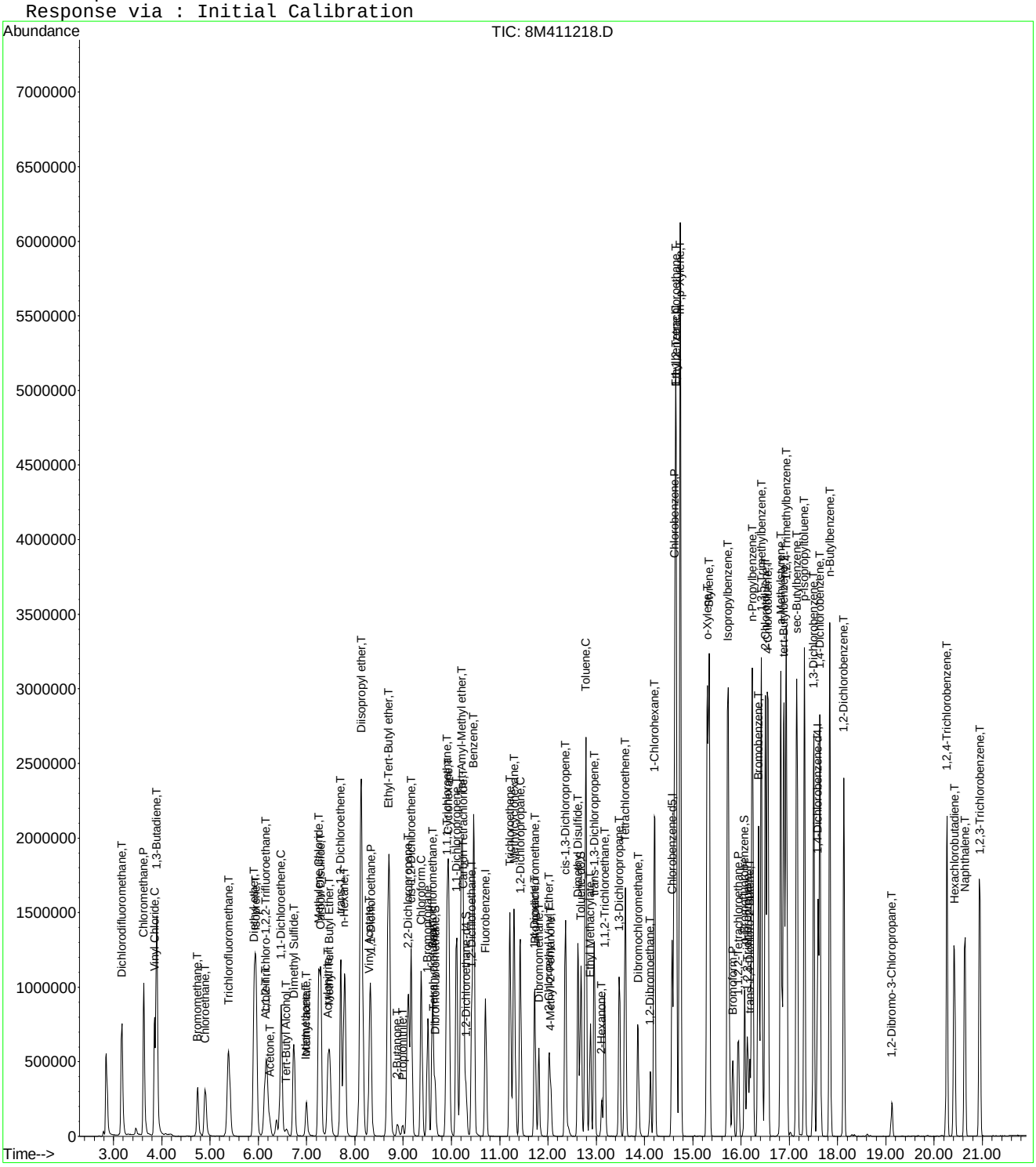
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.42	62	783803	53.8347	ug/L		97
46)	Benzene	10.46	78	2276962	57.4364	ug/L		93
47)	Trichloroethene	11.21	130	572028	53.5745	ug/L		97
48)	Methylcyclohexane	11.30	83	854556	55.5803	ug/L		91
49)	1,2-Dichloropropane	11.43	63	659374	59.1594	ug/L		94
50)	Bromodichloromethane	11.73	83	787003	55.6227	ug/L		99
51)	1,4-Dioxane	11.72	88	11647	259.0763	ug/L		90
52)	Dibromomethane	11.81	93	282563	55.8600	ug/L		93
53)	2-Chloroethyl Vinyl Ether	12.02	63	252364	52.0548	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	124140	54.9848	ug/L		92
55)	cis-1,3-Dichloropropene	12.36	75	897685	58.2912	ug/L		99
56)	Dimethyl Disulfide	12.62	79	451957	55.6751	ug/L		98
59)	Toluene	12.78	91	2369160	51.8299	ug/L		100
60)	Ethyl Methacrylate	12.88	69	461443	52.2671	ug/L		90
62)	trans-1,3-Dichloropropene	12.96	75	775061	50.7303	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	369263	50.8092	ug/L		98
64)	2-Hexanone	13.12	58	118200	52.2671	ug/L	#	99
65)	1,3-Dichloropropane	13.48	76	662779	49.7476	ug/L		89
66)	Tetrachloroethene	13.60	164	450825	49.0992	ug/L		92
67)	Dibromochloromethane	13.87	129	494109	49.5928	ug/L		100
68)	1,2-Dibromoethane	14.12	107	359921	48.9304	ug/L		100
69)	1-Chlorohexane	14.21	91	804649	51.9162	ug/L		86
70)	Chlorobenzene	14.62	112	1564505	50.0179	ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.66	131	566720	50.5058	ug/L		98
72)	Ethylbenzene	14.66	106	897018	50.1233	ug/L		98
73)	m-,p-Xylene	14.74	106	2120599	103.6666	ug/L		97
74)	o-Xylene	15.31	106	1034089	48.7379	ug/L		100
75)	Styrene	15.34	104	1742090	53.8504	ug/L		97
76)	Bromoform	15.83	173	286930	49.9729	ug/L		99
77)	Isopropylbenzene	15.73	105	2673646	52.8457	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	431879	46.1637	ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	113356	43.2998	ug/L	#	46
82)	trans-1,4-Dichloro-2-Buten	16.18	53	179156	51.4281	ug/L		65
83)	n-Propylbenzene	16.24	91	3296414	47.6537	ug/L		100
84)	Bromobenzene	16.36	156	611640	44.4233	ug/L		91
85)	1,3,5-Trimethylbenzene	16.42	105	2268878	46.9915	ug/L		98
86)	2-Chlorotoluene	16.51	91	2055426	45.4888	ug/L		99
87)	4-Chlorotoluene	16.56	91	2098307	47.3485	ug/L		99
88)	a-Methylstyrene	16.83	118	1189274	47.0395	ug/L		98
89)	tert-Butylbenzene	16.89	134	470127	45.1874	ug/L		91
90)	1,2,4-Trimethylbenzene	16.94	105	2423983	48.6479	ug/L		99
91)	sec-Butylbenzene	17.16	105	2884124	48.0571	ug/L		98
92)	p-Isopropyltoluene	17.31	119	2401315	48.3005	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	1291829	47.1943	ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	1263368	45.9561	ug/L		93
95)	n-Butylbenzene	17.84	91	2481455	49.6137	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	1118917	47.0105	ug/L		93
97)	1,2-Dibromo-3-Chloropropan	19.12	75	76630	43.0472	ug/L		84
98)	1,2,4-Trichlorobenzene	20.27	180	776267	44.7952	ug/L		99
99)	Hexachlorobutadiene	20.42	225	332426	46.9076	ug/L		98
100)	Naphthalene	20.64	128	1262806	44.5360	ug/L		99
101)	1,2,3-Trichlorobenzene	20.95	180	646244	44.8204	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411218.D 8260WTR.M Tue Apr 05 10:33:47 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 10:33 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration



8M411218.D 8260WTR.M Tue Apr 05 10:33:47 2016 Page 3

Continuing Calibration Area and RT check

Instrument: HPMS8
Initial cal date: 17 Feb 2016 17:50
CCV date: 5 Apr 2016 10:11
CCV Filename: 8M411218.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	835274	10.71	592238	14.57	312633	17.59
CCV	1024914	10.71	820290	14.57	468128	17.59

Data File : C:\MSDCHEM\2\DATA\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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	123	0.00
2	T	Dichlorodifluoromethane	0.3941	0.4627	-17.4	131	0.01
3	P	Chloromethane	0.6026	0.7315	-21.4	146	0.01
4	C	Vinyl Chloride	0.4195	0.4762	-13.5	133	0.01
5	T	1,3-Butadiene	0.3333	0.4363	-30.9#	151#	0.01
6	T	Bromomethane	0.1993	0.1706	14.4	104	0.01
7	T	Chloroethane	0.1895	0.2152	-13.6	135	0.00
8	T	Trichlorofluoromethane	0.4496	0.4872	-8.4	130	0.00
9	T	Diethyl ether	0.1646	0.1708	-3.7	131	0.00
10	T	Isoprene	0.3047	0.3414	-12.1	136	0.01
11	T	Acrolein	0.0256	0.0195	23.7	95	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2454	0.2668	-8.7	134	0.00
13	T	Acetone	0.0409	0.0424	-3.8	125	0.00
14	C	1,1-Dichloroethene	0.4517	0.5188	-14.9	137	0.00
15	T	Tert-Butyl Alcohol	0.0104	0.0124	-19.2	153#	0.00
16	T	Dimethyl Sulfide	0.1979	0.2208	-11.6	137	0.00
17	T	Iodomethane	0.1175	0.0982	16.5	79	0.00
18	T	Methyl acetate	0.1142	0.1449	-26.9#	162#	0.00
19	T	Methylene Chloride	0.2473	0.2707	-9.4	133	0.00
20	T	Carbon Disulfide	0.7764	0.8748	-12.7	139	0.00
21	T	Acrylonitrile	0.0577	0.0696	-20.8	142	0.00
22	T	Methyl Tert Butyl Ether	0.5023	0.5176	-3.0	126	0.00
23	T	trans-1,2-Dichloroethene	0.4223	0.4815	-14.0	136	0.00
24	T	n-Hexane	0.3600	0.4459	-23.9	162#	0.00
25	T	Diisopropyl ether	0.9382	1.0981	-17.0	143	0.00
26	T	Vinyl Acetate	0.4312	0.5008	-16.1	144	0.00
27	P	1,1-Dichloroethane	0.5269	0.6096	-15.7	137	0.00
28	T	Ethyl-Tert-Butyl ether	0.7525	0.8055	-7.1	130	0.00
29	T	2-Butanone	0.0643	0.0738	-14.8	144	0.00
30	T	Propionitrile	0.0185	0.0237	-28.1#	156#	0.00
31	T	2,2-Dichloropropane	0.4144	0.4822	-16.4	147	0.00
32	T	cis-1,2-Dichloroethene	0.2720	0.3045	-12.0	133	0.00
33	C	Chloroform	0.4675	0.5215	-11.6	132	0.00
34		1-Bromopropane	0.0365	0.0473	-29.6#	150#	0.00
35	T	Bromochloromethane	0.1361	0.1487	-9.2	127	0.00
36	T	Tetrahydrofuran	0.0431	0.0591	-37.3#	179#	0.00
37	S	Dibromofluoromethane	0.2566	0.2440	4.9	117	0.00
38	T	1,1,1-Trichloroethane	0.4265	0.4630	-8.6	130	0.00
39	T	Cyclohexane	0.4964	0.5804	-16.9	147	0.00
40	T	1,1-Dichloropropene	0.3711	0.4028	-8.5	133	0.00
41	T	Tert-Amyl-Methyl ether	0.5289	0.5434	-2.7	126	0.00
42	T	Carbon Tetrachloride	0.3882	0.4262	-9.8	128	0.00
43	S	1,2-Dichloroethane-d4	0.2748	0.2563	6.7	113	0.00
44		Heptane	0.0000	0.0000	0.0	0#	-2.54#
45	T	1,2-Dichloroethane	0.3551	0.3824	-7.7	127	0.00
46	T	Benzene	0.9670	1.1108	-14.9	134	0.00
47	T	Trichloroethene	0.2604	0.2791	-7.1	129	0.00
48	T	Methylcyclohexane	0.3750	0.4169	-11.2	139	0.00
49	C	1,2-Dichloropropane	0.2719	0.3217	-18.3	137	0.00
50	T	Bromodichloromethane	0.3451	0.3839	-11.2	129	0.00
51	T	1,4-Dioxane	0.0011	0.0014	-29.1#	164#	0.00
52	T	Dibromomethane	0.1234	0.1379	-11.7	128	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1182	0.1231	-4.1	124	0.00
54	T	4-Methyl-2-Pentanone	0.0551	0.0606	-10.0	136	0.00

(#) = Out of Range
8M411218.D 8260WTR.M Tue Apr 05 11:04:05 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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)
55	T	cis-1,3-Dichloropropene	0.3756	0.4379	-16.6	134	0.00
56	T	Dimethyl Disulfide	0.1980	0.2205	-11.4	136	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	139	0.00
58	S	Toluene-d8	1.2344	1.1401	7.6	125	0.00
59	C	Toluene	1.3931	1.4441	-3.7	134	0.00
60	T	Ethyl Methacrylate	0.2691	0.2813	-4.5	140	0.00
61		Paraldehyde	0.0000	0.0000	0.0	0#	-13.14#
62	T	trans-1,3-Dichloropropene	0.4656	0.4724	-1.5	134	0.00
63	T	1,1,2-Trichloroethane	0.2215	0.2251	-1.6	130	0.00
64	T	2-Hexanone	0.0689	0.0721	-4.5	144	0.00
65	T	1,3-Dichloropropane	0.4060	0.4040	0.5	130	0.00
66	T	Tetrachloroethene	0.2798	0.2748	1.8	131	0.00
67	T	Dibromochloromethane	0.3036	0.3012	0.8	125	0.00
68	T	1,2-Dibromoethane	0.2242	0.2194	2.1	125	0.00
69	T	1-Chlorohexane	0.4724	0.4905	-3.8	141	0.00
70	P	Chlorobenzene	0.9533	0.9536	-0.0	132	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3420	0.3454	-1.0	130	0.00
72	C	Ethylbenzene	0.5454	0.5468	-0.2	136	0.00
73	T	m-,p-Xylene	0.6234	0.6463	-3.7	134	0.00
74	T	o-Xylene	0.6466	0.6303	2.5	131	0.00
75	T	Styrene	0.9859	1.0619	-7.7	132	0.00
76	P	Bromoform	0.1750	0.1749	0.1	125	0.00
77	T	Isopropylbenzene	1.5419	1.6297	-5.7	133	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	150	0.00
79	P	1,1,2,2-Tetrachloroethane	0.4996	0.4613	7.7	127	0.00
80	S	p-Bromofluorobenzene	0.9712	0.8684	10.6	133	0.00
81	T	1,2,3-Trichloropropane	0.1398	0.1211	13.4	124	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.1860	0.1913	-2.9	146	0.00
83	T	n-Propylbenzene	3.6942	3.5208	4.7	136	0.00
84	T	Bromobenzene	0.7353	0.6533	11.2	129	0.00
85	T	1,3,5-Trimethylbenzene	2.5785	2.4234	6.0	131	0.00
86	T	2-Chlorotoluene	2.4131	2.1954	9.0	132	0.00
87	T	4-Chlorotoluene	2.3667	2.2412	5.3	131	0.00
88	T	a-Methylstyrene	1.3502	1.2702	5.9	141	0.00
89	T	tert-Butylbenzene	0.5556	0.5021	9.6	134	0.00
90	T	1,2,4-Trimethylbenzene	2.6610	2.5890	2.7	134	0.00
91	T	sec-Butylbenzene	3.2050	3.0805	3.9	134	0.00
92	T	p-Isopropyltoluene	2.6551	2.5648	3.4	135	0.00
93	T	1,3-Dichlorobenzene	1.4618	1.3798	5.6	133	0.00
94	T	1,4-Dichlorobenzene	1.4681	1.3494	8.1	131	0.00
95	T	n-Butylbenzene	2.6710	2.6504	0.8	141	0.00
96	T	1,2-Dichlorobenzene	1.2711	1.1951	6.0	130	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.0908	0.0819	9.8	123	0.00
98	T	1,2,4-Trichlorobenzene	0.9254	0.8291	10.4	124	0.00
99	T	Hexachlorobutadiene	0.3785	0.3551	6.2	133	0.00
100	T	Naphthalene	1.5143	1.3488	10.9	120	0.00
101	T	1,2,3-Trichlorobenzene	0.7700	0.6902	10.4	124	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411218.D 8260WTR.M Tue Apr 05 11:04:05 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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	123	0.00
2	T	Dichlorodifluoromethane	50.0000	58.7068	-17.4	131	0.01
3	P	Chloromethane	50.0000	60.6917	-21.4	146	0.01
4	C	Vinyl Chloride	50.0000	56.7629	-13.5	133	0.01
5	T	1,3-Butadiene	50.0000	75.8655	-51.7#	151	0.01
6	T	Bromomethane	50.0000	42.8035	14.4	104	0.01
7	T	Chloroethane	50.0000	56.7755	-13.6	135	0.00
8	T	Trichlorofluoromethane	50.0000	54.1792	-8.4	130	0.00
9	T	Diethyl ether	100.0000	103.7258	-3.7	131	0.00
10	T	Isoprene	50.0000	56.0328	-12.1	136	0.01
11	T	Acrolein	50.0000	38.1433	23.7	95	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	54.3568	-8.7	134	0.00
13	T	Acetone	50.0000	51.8997	-3.8	125	0.00
14	C	1,1-Dichloroethene	50.0000	57.4265	-14.9	137	0.00
15	T	Tert-Butyl Alcohol	200.0000	238.3373	-19.2	153	0.00
16	T	Dimethyl Sulfide	50.0000	55.8035	-11.6	137	0.00
17	T	Iodomethane	50.0000	31.9140	36.2#	79	0.00
18	T	Methyl acetate	50.0000	63.4659	-26.9#	162	0.00
19	T	Methylene Chloride	50.0000	54.7163	-9.4	133	0.00
20	T	Carbon Disulfide	50.0000	56.3363	-12.7	139	0.00
21	T	Acrylonitrile	50.0000	60.3977	-20.8	142	0.00
22	T	Methyl Tert Butyl Ether	50.0000	51.5199	-3.0	126	0.00
23	T	trans-1,2-Dichloroethene	50.0000	57.0198	-14.0	136	0.00
24	T	n-Hexane	50.0000	61.9344	-23.9	162	0.00
25	T	Diisopropyl ether	100.0000	117.0418	-17.0	143	0.00
26	T	Vinyl Acetate	50.0000	58.0650	-16.1	144	0.00
27	P	1,1-Dichloroethane	50.0000	57.8511	-15.7	137	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	107.0557	-7.1	130	0.00
29	T	2-Butanone	50.0000	57.3826	-14.8	144	0.00
30	T	Propionitrile	100.0000	128.1242	-28.1#	156	0.00
31	T	2,2-Dichloropropane	50.0000	58.1797	-16.4	147	0.00
32	T	cis-1,2-Dichloroethene	50.0000	55.9848	-12.0	133	0.00
33	C	Chloroform	50.0000	55.7847	-11.6	132	0.00
34		1-Bromopropane	50.0000	58.7339	-17.5	150	0.00
35	T	Bromochloromethane	50.0000	54.6183	-9.2	127	0.00
36	T	Tetrahydrofuran	100.0000	137.3268	-37.3#	179	0.00
37	S	Dibromofluoromethane	25.0000	23.7706	4.9	117	0.00
38	T	1,1,1-Trichloroethane	50.0000	54.2774	-8.6	130	0.00
39	T	Cyclohexane	50.0000	58.4545	-16.9	147	0.00
40	T	1,1-Dichloropropene	50.0000	54.2696	-8.5	133	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	102.7497	-2.7	126	0.00
42	T	Carbon Tetrachloride	50.0000	54.8943	-9.8	128	0.00
43	S	1,2-Dichloroethane-d4	25.0000	23.3227	6.7	113	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	53.8347	-7.7	127	0.00
46	T	Benzene	50.0000	57.4364	-14.9	134	0.00
47	T	Trichloroethene	50.0000	53.5745	-7.1	129	0.00
48	T	Methylcyclohexane	50.0000	55.5803	-11.2	139	0.00
49	C	1,2-Dichloropropane	50.0000	59.1594	-18.3	137	0.00
50	T	Bromodichloromethane	50.0000	55.6227	-11.2	129	0.00
51	T	1,4-Dioxane	200.0000	259.0763	-29.5#	164	0.00
52	T	Dibromomethane	50.0000	55.8600	-11.7	128	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	52.0548	-4.1	124	0.00
54	T	4-Methyl-2-Pentanone	50.0000	54.9848	-10.0	136	0.00

(#) = Out of Range
8M411218.D 8260WTR.M Tue Apr 05 11:04:06 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\040516\8M411218.D Vial: 2
Acq On : 5 Apr 2016 10:11 Operator: TMB
Sample : WG563534-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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)
55	T	cis-1,3-Dichloropropene	50.0000	58.2912	-16.6	134	0.00
56	T	Dimethyl Disulfide	50.0000	55.6751	-11.4	136	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	139	0.00
58	S	Toluene-d8	25.0000	23.0892	7.6	125	0.00
59	C	Toluene	50.0000	51.8299	-3.7	134	0.00
60	T	Ethyl Methacrylate	50.0000	52.2671	-4.5	140	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	50.7303	-1.5	134	0.00
63	T	1,1,2-Trichloroethane	50.0000	50.8092	-1.6	130	0.00
64	T	2-Hexanone	50.0000	52.2671	-4.5	144	0.00
65	T	1,3-Dichloropropane	50.0000	49.7476	0.5	130	0.00
66	T	Tetrachloroethene	50.0000	49.0992	1.8	131	0.00
67	T	Dibromochloromethane	50.0000	49.5928	0.8	125	0.00
68	T	1,2-Dibromoethane	50.0000	48.9304	2.1	125	0.00
69	T	1-Chlorohexane	50.0000	51.9162	-3.8	141	0.00
70	P	Chlorobenzene	50.0000	50.0179	-0.0	132	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	50.5058	-1.0	130	0.00
72	C	Ethylbenzene	50.0000	50.1233	-0.2	136	0.00
73	T	m-,p-Xylene	100.0000	103.6666	-3.7	134	0.00
74	T	o-Xylene	50.0000	48.7379	2.5	131	0.00
75	T	Styrene	50.0000	53.8504	-7.7	132	0.00
76	P	Bromoform	50.0000	49.9729	0.1	125	0.00
77	T	Isopropylbenzene	50.0000	52.8457	-5.7	133	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	150	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	46.1637	7.7	127	0.00
80	S	p-Bromofluorobenzene	25.0000	22.3547	10.6	133	0.00
81	T	1,2,3-Trichloropropane	50.0000	43.2998	13.4	124	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	51.4281	-2.9	146	0.00
83	T	n-Propylbenzene	50.0000	47.6537	4.7	136	0.00
84	T	Bromobenzene	50.0000	44.4233	11.2	129	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	46.9915	6.0	131	0.00
86	T	2-Chlorotoluene	50.0000	45.4888	9.0	132	0.00
87	T	4-Chlorotoluene	50.0000	47.3485	5.3	131	0.00
88	T	a-Methylstyrene	50.0000	47.0395	5.9	141	0.00
89	T	tert-Butylbenzene	50.0000	45.1874	9.6	134	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	48.6479	2.7	134	0.00
91	T	sec-Butylbenzene	50.0000	48.0571	3.9	134	0.00
92	T	p-Isopropyltoluene	50.0000	48.3005	3.4	135	0.00
93	T	1,3-Dichlorobenzene	50.0000	47.1943	5.6	133	0.00
94	T	1,4-Dichlorobenzene	50.0000	45.9561	8.1	131	0.00
95	T	n-Butylbenzene	50.0000	49.6137	0.8	141	0.00
96	T	1,2-Dichlorobenzene	50.0000	47.0105	6.0	130	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	43.0472	13.9	123	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	44.7952	10.4	124	0.00
99	T	Hexachlorobutadiene	50.0000	46.9076	6.2	133	0.00
100	T	Naphthalene	50.0000	44.5360	10.9	120	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	44.8204	10.4	124	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411218.D 8260WTR.M Tue Apr 05 11:04:06 2016 Page 2

Data File : C:\MSDchem\2\data\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 06 13:26:38 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	1055221	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	797930	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	460643	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	260236	24.0252	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.12%			
43) 1,2-Dichloroethane-d4	10.31	65	269534	23.2397	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 92.96%			
58) Toluene-d8	12.68	98	938948	23.8315	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.32%			
80) p-Bromofluorobenzene	16.07	95	392825	21.9525	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 87.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	946363	56.8953	ug/L	99
3) Chloromethane	3.63	50	1492920	58.6957	ug/L	98
4) Vinyl Chloride	3.85	62	969676	54.7653	ug/L	98
5) 1,3-Butadiene	3.90	54	938361	77.6260	ug/L	98
6) Bromomethane	4.75	94	351281	41.7577	ug/L	98
7) Chloroethane	4.90	64	442766	55.3545	ug/L	97
8) Trichlorofluoromethane	5.39	101	985302	51.9219	ug/L	99
9) Diethyl ether	5.91	59	728827	104.8754	ug/L	94
10) Isoprene	5.96	67	736193	57.2485	ug/L	93
11) Acrolein	6.14	56	37780	35.0074	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	548368	52.9331	ug/L	92
13) Acetone	6.24	43	87036	50.4317	ug/L	93
14) 1,1-Dichloroethene	6.47	61	1059031	55.5452	ug/L	93
15) Tert-Butyl Alcohol	6.59	59	97949	223.4724	ug/L	96
16) Dimethyl Sulfide	6.74	62	471667	56.4804	ug/L	91
17) Iodomethane	7.00	142	218141	33.5400	ug/L	97
18) Methyl acetate	7.00	43	315252	65.4184	ug/L	95
19) Methylene Chloride	7.26	84	557012	53.3567	ug/L	82
20) Carbon Disulfide	7.30	76	1854485	56.5911	ug/L	100
21) Acrylonitrile	7.43	53	145808	59.9226	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	1066832	50.3158	ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	989150	55.4974	ug/L	90
24) n-Hexane	7.79	57	959592	63.1490	ug/L	99
25) Diisopropyl ether	8.14	45	4641856	117.2183	ug/L	98
26) Vinyl Acetate	8.30	43	1058148	58.1340	ug/L	98
27) 1,1-Dichloroethane	8.33	63	1241906	55.8421	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	3397544	106.9737	ug/L	97
29) 2-Butanone	8.89	43	149366	55.0432	ug/L	94
30) Propionitrile	8.99	54	98137	125.8953	ug/L	99
31) 2,2-Dichloropropane	9.11	77	976735	55.8462	ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	624469	54.3969	ug/L	85
33) Chloroform	9.38	83	1070324	54.2464	ug/L	99
34) 1-Bromopropane	9.52	122	102139	60.1034	ug/L	97
35) Bromochloromethane	9.61	130	315328	54.8950	ug/L	83
36) Tetrahydrofuran	9.63	42	256684	141.2035	ug/L	96
38) 1,1,1-Trichloroethane	9.91	97	947942	52.6513	ug/L	99
39) Cyclohexane	9.94	56	1231588	58.7791	ug/L	92
40) 1,1-Dichloropropene	10.11	75	814478	51.9928	ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	2256970	101.1065	ug/L	93
42) Carbon Tetrachloride	10.25	117	865683	52.8330	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411248.D 8260WTR.M Wed Apr 06 13:26:38 2016 Page 1

Data File : C:\MSDchem\2\data\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 06 13:26:38 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

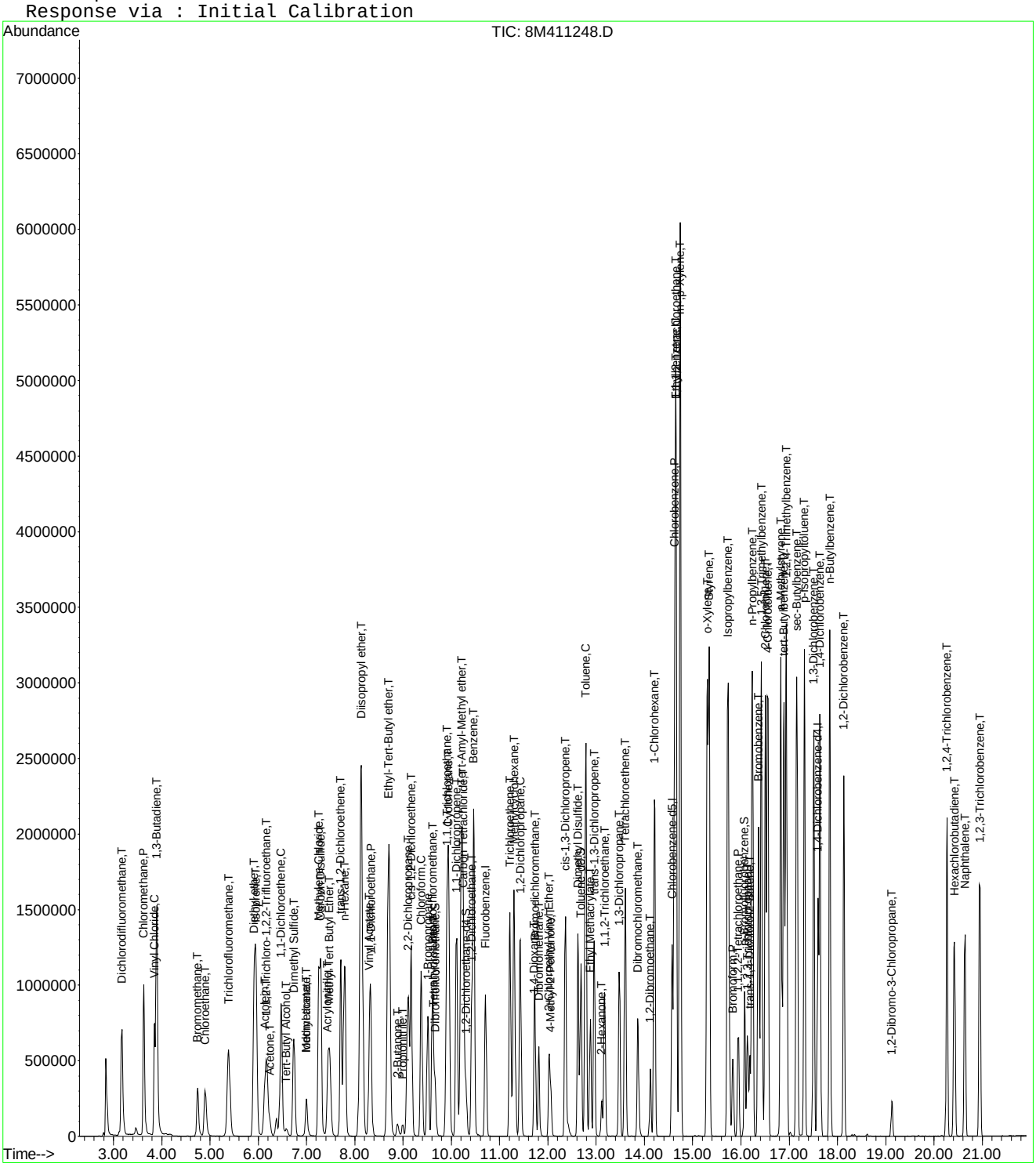
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.42	62	795838	53.0914	ug/L		97
46)	Benzene	10.46	78	2281723	55.9034	ug/L		94
47)	Trichloroethene	11.22	130	564845	51.3824	ug/L		96
48)	Methylcyclohexane	11.30	83	887431	56.0608	ug/L		90
49)	1,2-Dichloropropane	11.43	63	655678	57.1382	ug/L		93
50)	Bromodichloromethane	11.73	83	794374	54.5311	ug/L		100
51)	1,4-Dioxane	11.71	88	12965	280.1109	ug/L		100
52)	Dibromomethane	11.82	93	283414	54.4191	ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	250926	50.2716	ug/L		93
54)	4-Methyl-2-Pentanone	12.05	58	120340	51.7708	ug/L		91
55)	cis-1,3-Dichloropropene	12.36	75	902154	56.8988	ug/L		99
56)	Dimethyl Disulfide	12.62	79	460495	55.0976	ug/L		99
59)	Toluene	12.79	91	2360387	53.0850	ug/L		99
60)	Ethyl Methacrylate	12.88	69	477861	55.6435	ug/L		90
62)	trans-1,3-Dichloropropene	12.96	75	776581	52.2542	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	365108	51.6453	ug/L		97
64)	2-Hexanone	13.12	58	114323	51.9693	ug/L	#	96
65)	1,3-Dichloropropane	13.48	76	670333	51.7246	ug/L		89
66)	Tetrachloroethene	13.60	164	443698	49.6771	ug/L		91
67)	Dibromochloromethane	13.86	129	507131	52.3262	ug/L		100
68)	1,2-Dibromoethane	14.12	107	365376	51.0639	ug/L		99
69)	1-Chlorohexane	14.21	91	831629	55.1605	ug/L		87
70)	Chlorobenzene	14.63	112	1550311	50.9530	ug/L		97
71)	1,1,1,2-Tetrachloroethane	14.66	131	556978	51.0285	ug/L		100
72)	Ethylbenzene	14.66	106	875622	50.2988	ug/L		100
73)	m-,p-Xylene	14.74	106	2084247	104.7447	ug/L		98
74)	o-Xylene	15.31	106	1026570	49.7394	ug/L		100
75)	Styrene	15.34	104	1737558	55.2154	ug/L		97
76)	Bromoform	15.84	173	291220	52.1414	ug/L		99
77)	Isopropylbenzene	15.73	105	2648599	53.8177	ug/L		98
79)	1,1,2,2-Tetrachloroethane	15.94	83	442639	48.0826	ug/L		99
81)	1,2,3-Trichloropropane	16.14	110	116004	45.0313	ug/L	#	44
82)	trans-1,4-Dichloro-2-Buten	16.19	53	185101	53.9981	ug/L		67
83)	n-Propylbenzene	16.24	91	3264424	47.9580	ug/L		99
84)	Bromobenzene	16.36	156	608969	44.9480	ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	2252900	47.4188	ug/L		99
86)	2-Chlorotoluene	16.51	91	2078098	46.7379	ug/L		99
87)	4-Chlorotoluene	16.56	91	2064323	47.3385	ug/L		98
88)	a-Methylstyrene	16.83	118	1203753	48.3859	ug/L		98
89)	tert-Butylbenzene	16.89	134	461378	45.0671	ug/L		91
90)	1,2,4-Trimethylbenzene	16.94	105	2396597	48.8798	ug/L		98
91)	sec-Butylbenzene	17.16	105	2862876	48.4782	ug/L		98
92)	p-Isopropyltoluene	17.31	119	2368140	48.4072	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	1277395	47.4253	ug/L		93
94)	1,4-Dichlorobenzene	17.63	146	1253907	46.3531	ug/L		93
95)	n-Butylbenzene	17.84	91	2438312	49.5433	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	1097828	46.8739	ug/L		91
97)	1,2-Dibromo-3-Chloropropan	19.12	75	75775	43.2561	ug/L		88
98)	1,2,4-Trichlorobenzene	20.27	180	761131	44.6355	ug/L		99
99)	Hexachlorobutadiene	20.42	225	320691	45.9870	ug/L		96
100)	Naphthalene	20.64	128	1247736	44.7196	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	622257	43.8580	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411248.D 8260WTR.M Wed Apr 06 13:26:39 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 13:26 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration



8M411248.D 8260WTR.M Wed Apr 06 13:26:39 2016 Page 3

Continuing Calibration Area and RT check

Instrument: HPMS8
Initial cal date: 17 Feb 2016 17:50
CCV date: 6 Apr 2016 13:04
CCV Filename: 8M411248.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	835274	10.71	592238	14.57	312633	17.59
CCV	1055221	10.71	797930	14.57	460643	17.59

Data File : C:\MSDCHEM\2\DATA\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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	126	0.00
2	T	Dichlorodifluoromethane	0.3941	0.4484	-13.8	131	0.01
3	P	Chloromethane	0.6026	0.7074	-17.4	145	0.01
4	C	Vinyl Chloride	0.4195	0.4595	-9.5	132	0.00
5	T	1,3-Butadiene	0.3333	0.4446	-33.4#	158#	0.01
6	T	Bromomethane	0.1993	0.1664	16.5	105	0.01
7	T	Chloroethane	0.1895	0.2098	-10.7	136	0.00
8	T	Trichlorofluoromethane	0.4496	0.4669	-3.8	128	0.00
9	T	Diethyl ether	0.1646	0.1727	-4.9	137	0.00
10	T	Isoprene	0.3047	0.3488	-14.5	143	0.01
11	T	Acrolein	0.0256	0.0179	30.0#	90	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2454	0.2598	-5.9	134	0.01
13	T	Acetone	0.0409	0.0412	-0.9	125	0.00
14	C	1,1-Dichloroethene	0.4517	0.5018	-11.1	137	0.00
15	T	Tert-Butyl Alcohol	0.0104	0.0116	-11.8	148	0.00
16	T	Dimethyl Sulfide	0.1979	0.2235	-13.0	142	0.00
17	T	Iodomethane	0.1175	0.1034	12.0	85	0.01
18	T	Methyl acetate	0.1142	0.1494	-30.8#	172#	0.00
19	T	Methylene Chloride	0.2473	0.2639	-6.7	134	0.00
20	T	Carbon Disulfide	0.7764	0.8787	-13.2	143	0.00
21	T	Acrylonitrile	0.0577	0.0691	-19.8	146	0.00
22	T	Methyl Tert Butyl Ether	0.5023	0.5055	-0.6	127	0.00
23	T	trans-1,2-Dichloroethene	0.4223	0.4687	-11.0	136	0.00
24	T	n-Hexane	0.3600	0.4547	-26.3#	170#	0.01
25	T	Diisopropyl ether	0.9382	1.0997	-17.2	148	0.00
26	T	Vinyl Acetate	0.4312	0.5014	-16.3	148	0.00
27	P	1,1-Dichloroethane	0.5269	0.5885	-11.7	136	0.00
28	T	Ethyl-Tert-Butyl ether	0.7525	0.8049	-7.0	134	0.00
29	T	2-Butanone	0.0643	0.0708	-10.1	142	0.00
30	T	Propionitrile	0.0185	0.0233	-25.9#	158#	0.00
31	T	2,2-Dichloropropane	0.4144	0.4628	-11.7	145	0.00
32	T	cis-1,2-Dichloroethene	0.2720	0.2959	-8.8	133	0.00
33	C	Chloroform	0.4675	0.5072	-8.5	132	0.00
34		1-Bromopropane	0.0365	0.0484	-32.7#	158#	0.00
35	T	Bromochloromethane	0.1361	0.1494	-9.8	131	0.00
36	T	Tetrahydrofuran	0.0431	0.0608	-41.2#	189#	0.00
37	S	Dibromofluoromethane	0.2566	0.2466	3.9	121	0.00
38	T	1,1,1-Trichloroethane	0.4265	0.4492	-5.3	130	0.00
39	T	Cyclohexane	0.4964	0.5836	-17.6	153#	0.00
40	T	1,1-Dichloropropene	0.3711	0.3859	-4.0	131	0.00
41	T	Tert-Amyl-Methyl ether	0.5289	0.5347	-1.1	128	0.00
42	T	Carbon Tetrachloride	0.3882	0.4102	-5.7	127	0.00
43	S	1,2-Dichloroethane-d4	0.2748	0.2554	7.0	116	0.00
44		Heptane	0.0000	0.0000	0.0	0#	-2.54#
45	T	1,2-Dichloroethane	0.3551	0.3771	-6.2	129	0.00
46	T	Benzene	0.9670	1.0812	-11.8	134	0.00
47	T	Trichloroethene	0.2604	0.2676	-2.8	127	0.00
48	T	Methylcyclohexane	0.3750	0.4205	-12.1	145	0.00
49	C	1,2-Dichloropropane	0.2719	0.3107	-14.3	136	0.00
50	T	Bromodichloromethane	0.3451	0.3764	-9.1	131	0.00
51	T	1,4-Dioxane	0.0011	0.0015	-40.0#	182#	0.00
52	T	Dibromomethane	0.1234	0.1343	-8.8	128	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1182	0.1189	-0.5	123	0.00
54	T	4-Methyl-2-Pentanone	0.0551	0.0570	-3.5	132	0.00

(#) = Out of Range
8M411248.D 8260WTR.M Wed Apr 06 13:30:36 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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)
55	T	cis-1,3-Dichloropropene	0.3756	0.4275	-13.8	135	0.00
56	T	Dimethyl Disulfide	0.1980	0.2182	-10.2	138	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	135	0.00
58	S	Toluene-d8	1.2344	1.1767	4.7	125	0.00
59	C	Toluene	1.3931	1.4791	-6.2	134	0.00
60	T	Ethyl Methacrylate	0.2691	0.2994	-11.3	145	0.00
61		Paraldehyde	0.0000	0.0000	0.0	0#	-13.14#
62	T	trans-1,3-Dichloropropene	0.4656	0.4866	-4.5	134	0.00
63	T	1,1,2-Trichloroethane	0.2215	0.2288	-3.3	129	0.00
64	T	2-Hexanone	0.0689	0.0716	-3.9	139	0.00
65	T	1,3-Dichloropropane	0.4060	0.4200	-3.4	131	0.00
66	T	Tetrachloroethene	0.2798	0.2780	0.6	129	0.00
67	T	Dibromochloromethane	0.3036	0.3178	-4.7	128	0.00
68	T	1,2-Dibromoethane	0.2242	0.2289	-2.1	127	0.00
69	T	1-Chlorohexane	0.4724	0.5211	-10.3	146	0.00
70	P	Chlorobenzene	0.9533	0.9715	-1.9	131	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3420	0.3490	-2.1	127	0.00
72	C	Ethylbenzene	0.5454	0.5487	-0.6	133	0.00
73	T	m-,p-Xylene	0.6234	0.6530	-4.7	131	0.00
74	T	o-Xylene	0.6466	0.6433	0.5	130	0.00
75	T	Styrene	0.9859	1.0888	-10.4	132	0.00
76	P	Bromoform	0.1750	0.1825	-4.3	127	0.00
77	T	Isopropylbenzene	1.5419	1.6597	-7.6	132	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	147	0.00
79	P	1,1,2,2-Tetrachloroethane	0.4996	0.4805	3.8	131	0.00
80	S	p-Bromofluorobenzene	0.9712	0.8528	12.2	129	0.00
81	T	1,2,3-Trichloropropane	0.1398	0.1259	9.9	127	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.1860	0.2009	-8.0	151#	0.00
83	T	n-Propylbenzene	3.6942	3.5433	4.1	135	0.00
84	T	Bromobenzene	0.7353	0.6610	10.1	128	0.00
85	T	1,3,5-Trimethylbenzene	2.5785	2.4454	5.2	130	0.00
86	T	2-Chlorotoluene	2.4131	2.2557	6.5	133	0.00
87	T	4-Chlorotoluene	2.3667	2.2407	5.3	129	0.00
88	T	a-Methylstyrene	1.3502	1.3066	3.2	143	0.00
89	T	tert-Butylbenzene	0.5556	0.5008	9.9	131	0.00
90	T	1,2,4-Trimethylbenzene	2.6610	2.6014	2.2	132	0.00
91	T	sec-Butylbenzene	3.2050	3.1075	3.0	133	0.00
92	T	p-Isopropyltoluene	2.6551	2.5705	3.2	133	0.00
93	T	1,3-Dichlorobenzene	1.4618	1.3865	5.1	131	0.00
94	T	1,4-Dichlorobenzene	1.4681	1.3610	7.3	130	0.00
95	T	n-Butylbenzene	2.6710	2.6466	0.9	138	0.00
96	T	1,2-Dichlorobenzene	1.2711	1.1916	6.3	127	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.0908	0.0823	9.4	122	0.00
98	T	1,2,4-Trichlorobenzene	0.9254	0.8262	10.7	122	0.00
99	T	Hexachlorobutadiene	0.3785	0.3481	8.0	128	0.00
100	T	Naphthalene	1.5143	1.3543	10.6	119	0.00
101	T	1,2,3-Trichlorobenzene	0.7700	0.6754	12.3	119	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411248.D 8260WTR.M Wed Apr 06 13:30:36 2016 Page 2

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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	126	0.00
2	T	Dichlorodifluoromethane	50.0000	56.8953	-13.8	131	0.01
3	P	Chloromethane	50.0000	58.6957	-17.4	145	0.01
4	C	Vinyl Chloride	50.0000	54.7653	-9.5	132	0.00
5	T	1,3-Butadiene	50.0000	77.6260	-55.3#	158	0.01
6	T	Bromomethane	50.0000	41.7577	16.5	105	0.01
7	T	Chloroethane	50.0000	55.3545	-10.7	136	0.00
8	T	Trichlorofluoromethane	50.0000	51.9219	-3.8	128	0.00
9	T	Diethyl ether	100.0000	104.8754	-4.9	137	0.00
10	T	Isoprene	50.0000	57.2485	-14.5	143	0.01
11	T	Acrolein	50.0000	35.0074	30.0#	90	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	52.9331	-5.9	134	0.01
13	T	Acetone	50.0000	50.4317	-0.9	125	0.00
14	C	1,1-Dichloroethene	50.0000	55.5452	-11.1	137	0.00
15	T	Tert-Butyl Alcohol	200.0000	223.4724	-11.7	148	0.00
16	T	Dimethyl Sulfide	50.0000	56.4804	-13.0	142	0.00
17	T	Iodomethane	50.0000	33.5400	32.9#	85	0.01
18	T	Methyl acetate	50.0000	65.4184	-30.8#	172	0.00
19	T	Methylene Chloride	50.0000	53.3567	-6.7	134	0.00
20	T	Carbon Disulfide	50.0000	56.5911	-13.2	143	0.00
21	T	Acrylonitrile	50.0000	59.9226	-19.8	146	0.00
22	T	Methyl Tert Butyl Ether	50.0000	50.3158	-0.6	127	0.00
23	T	trans-1,2-Dichloroethene	50.0000	55.4974	-11.0	136	0.00
24	T	n-Hexane	50.0000	63.1490	-26.3#	170	0.01
25	T	Diisopropyl ether	100.0000	117.2183	-17.2	148	0.00
26	T	Vinyl Acetate	50.0000	58.1340	-16.3	148	0.00
27	P	1,1-Dichloroethane	50.0000	55.8421	-11.7	136	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	106.9737	-7.0	134	0.00
29	T	2-Butanone	50.0000	55.0432	-10.1	142	0.00
30	T	Propionitrile	100.0000	125.8953	-25.9#	158	0.00
31	T	2,2-Dichloropropane	50.0000	55.8462	-11.7	145	0.00
32	T	cis-1,2-Dichloroethene	50.0000	54.3969	-8.8	133	0.00
33	C	Chloroform	50.0000	54.2464	-8.5	132	0.00
34		1-Bromopropane	50.0000	60.1034	-20.2	158	0.00
35	T	Bromochloromethane	50.0000	54.8950	-9.8	131	0.00
36	T	Tetrahydrofuran	100.0000	141.2035	-41.2#	189	0.00
37	S	Dibromofluoromethane	25.0000	24.0252	3.9	121	0.00
38	T	1,1,1-Trichloroethane	50.0000	52.6513	-5.3	130	0.00
39	T	Cyclohexane	50.0000	58.7791	-17.6	153	0.00
40	T	1,1-Dichloropropene	50.0000	51.9928	-4.0	131	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	101.1065	-1.1	128	0.00
42	T	Carbon Tetrachloride	50.0000	52.8330	-5.7	127	0.00
43	S	1,2-Dichloroethane-d4	25.0000	23.2397	7.0	116	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	53.0914	-6.2	129	0.00
46	T	Benzene	50.0000	55.9034	-11.8	134	0.00
47	T	Trichloroethene	50.0000	51.3824	-2.8	127	0.00
48	T	Methylcyclohexane	50.0000	56.0608	-12.1	145	0.00
49	C	1,2-Dichloropropane	50.0000	57.1382	-14.3	136	0.00
50	T	Bromodichloromethane	50.0000	54.5311	-9.1	131	0.00
51	T	1,4-Dioxane	200.0000	280.1109	-40.1#	182	0.00
52	T	Dibromomethane	50.0000	54.4191	-8.8	128	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	50.2716	-0.5	123	0.00
54	T	4-Methyl-2-Pentanone	50.0000	51.7708	-3.5	132	0.00

(#) = Out of Range
8M411248.D 8260WTR.M Wed Apr 06 13:30:37 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\040616\8M411248.D Vial: 2
Acq On : 6 Apr 2016 13:04 Operator: TMB
Sample : WG563756-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75490 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
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%

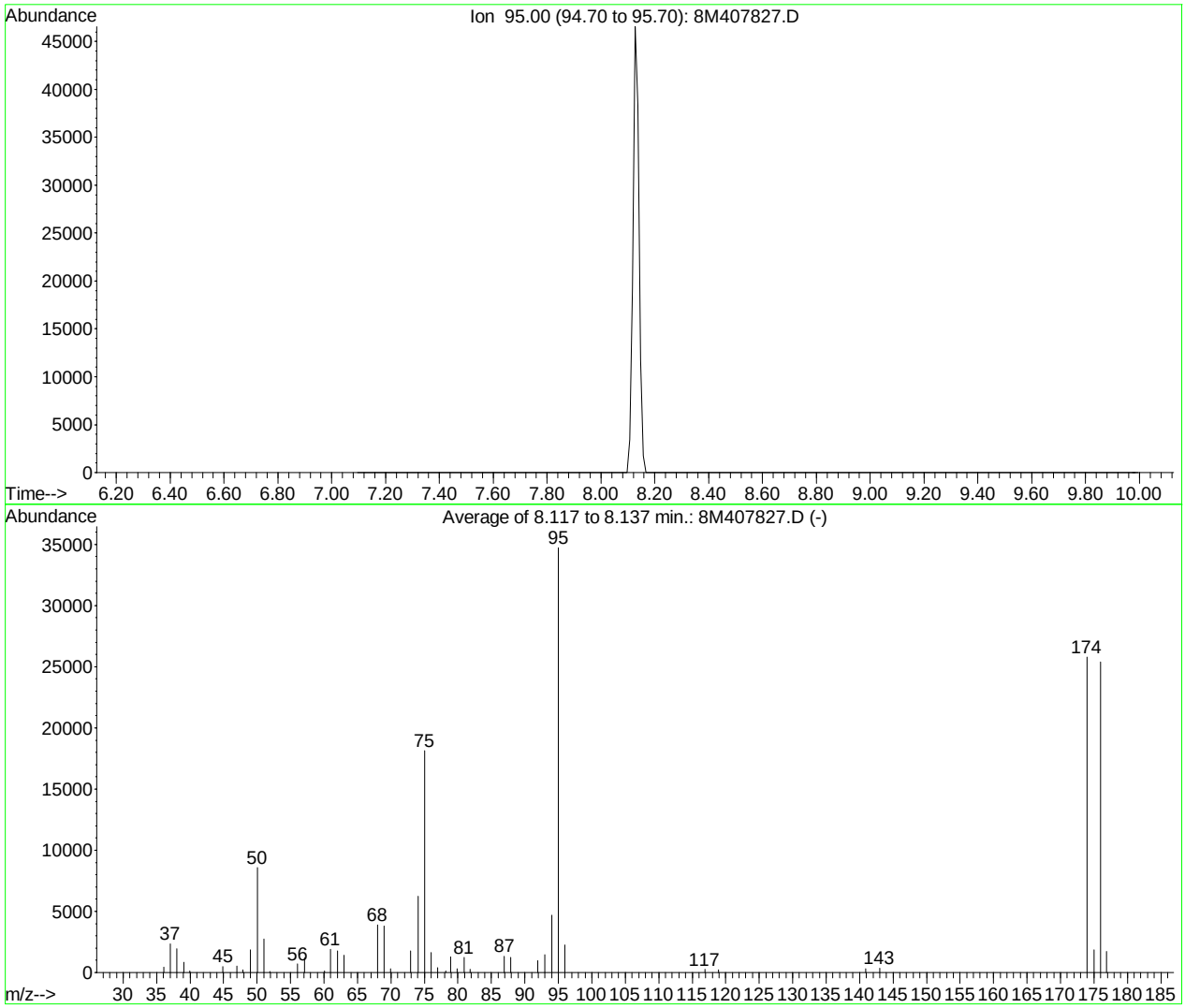
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	50.0000	56.8988	-13.8	135	0.00
56	T	Dimethyl Disulfide	50.0000	55.0976	-10.2	138	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	135	0.00
58	S	Toluene-d8	25.0000	23.8315	4.7	125	0.00
59	C	Toluene	50.0000	53.0850	-6.2	134	0.00
60	T	Ethyl Methacrylate	50.0000	55.6435	-11.3	145	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	52.2542	-4.5	134	0.00
63	T	1,1,2-Trichloroethane	50.0000	51.6453	-3.3	129	0.00
64	T	2-Hexanone	50.0000	51.9693	-3.9	139	0.00
65	T	1,3-Dichloropropane	50.0000	51.7246	-3.4	131	0.00
66	T	Tetrachloroethene	50.0000	49.6771	0.6	129	0.00
67	T	Dibromochloromethane	50.0000	52.3262	-4.7	128	0.00
68	T	1,2-Dibromoethane	50.0000	51.0639	-2.1	127	0.00
69	T	1-Chlorohexane	50.0000	55.1605	-10.3	146	0.00
70	P	Chlorobenzene	50.0000	50.9530	-1.9	131	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	51.0285	-2.1	127	0.00
72	C	Ethylbenzene	50.0000	50.2988	-0.6	133	0.00
73	T	m-,p-Xylene	100.0000	104.7447	-4.7	131	0.00
74	T	o-Xylene	50.0000	49.7394	0.5	130	0.00
75	T	Styrene	50.0000	55.2154	-10.4	132	0.00
76	P	Bromoform	50.0000	52.1414	-4.3	127	0.00
77	T	Isopropylbenzene	50.0000	53.8177	-7.6	132	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	147	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	48.0826	3.8	131	0.00
80	S	p-Bromofluorobenzene	25.0000	21.9525	12.2	129	0.00
81	T	1,2,3-Trichloropropane	50.0000	45.0313	9.9	127	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	53.9980	-8.0	151	0.00
83	T	n-Propylbenzene	50.0000	47.9580	4.1	135	0.00
84	T	Bromobenzene	50.0000	44.9480	10.1	128	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	47.4188	5.2	130	0.00
86	T	2-Chlorotoluene	50.0000	46.7379	6.5	133	0.00
87	T	4-Chlorotoluene	50.0000	47.3385	5.3	129	0.00
88	T	a-Methylstyrene	50.0000	48.3859	3.2	143	0.00
89	T	tert-Butylbenzene	50.0000	45.0671	9.9	131	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	48.8798	2.2	132	0.00
91	T	sec-Butylbenzene	50.0000	48.4782	3.0	133	0.00
92	T	p-Isopropyltoluene	50.0000	48.4072	3.2	133	0.00
93	T	1,3-Dichlorobenzene	50.0000	47.4253	5.1	131	0.00
94	T	1,4-Dichlorobenzene	50.0000	46.3531	7.3	130	0.00
95	T	n-Butylbenzene	50.0000	49.5433	0.9	138	0.00
96	T	1,2-Dichlorobenzene	50.0000	46.8739	6.3	127	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	43.2561	13.5	122	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	44.6355	10.7	122	0.00
99	T	Hexachlorobutadiene	50.0000	45.9870	8.0	128	0.00
100	T	Naphthalene	50.0000	44.7196	10.6	119	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	43.8580	12.3	119	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411248.D 8260WTR.M Wed Apr 06 13:30:37 2016 Page 2

2.1.1.5 Raw QC Data

BFB

Data File : C:\MSDCHEM\2\DATA\100515\8M407827.D Vial: 1
Acq On : 5 Oct 2015 11:26 Operator: TMB
Sample : WG540826-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD72715 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



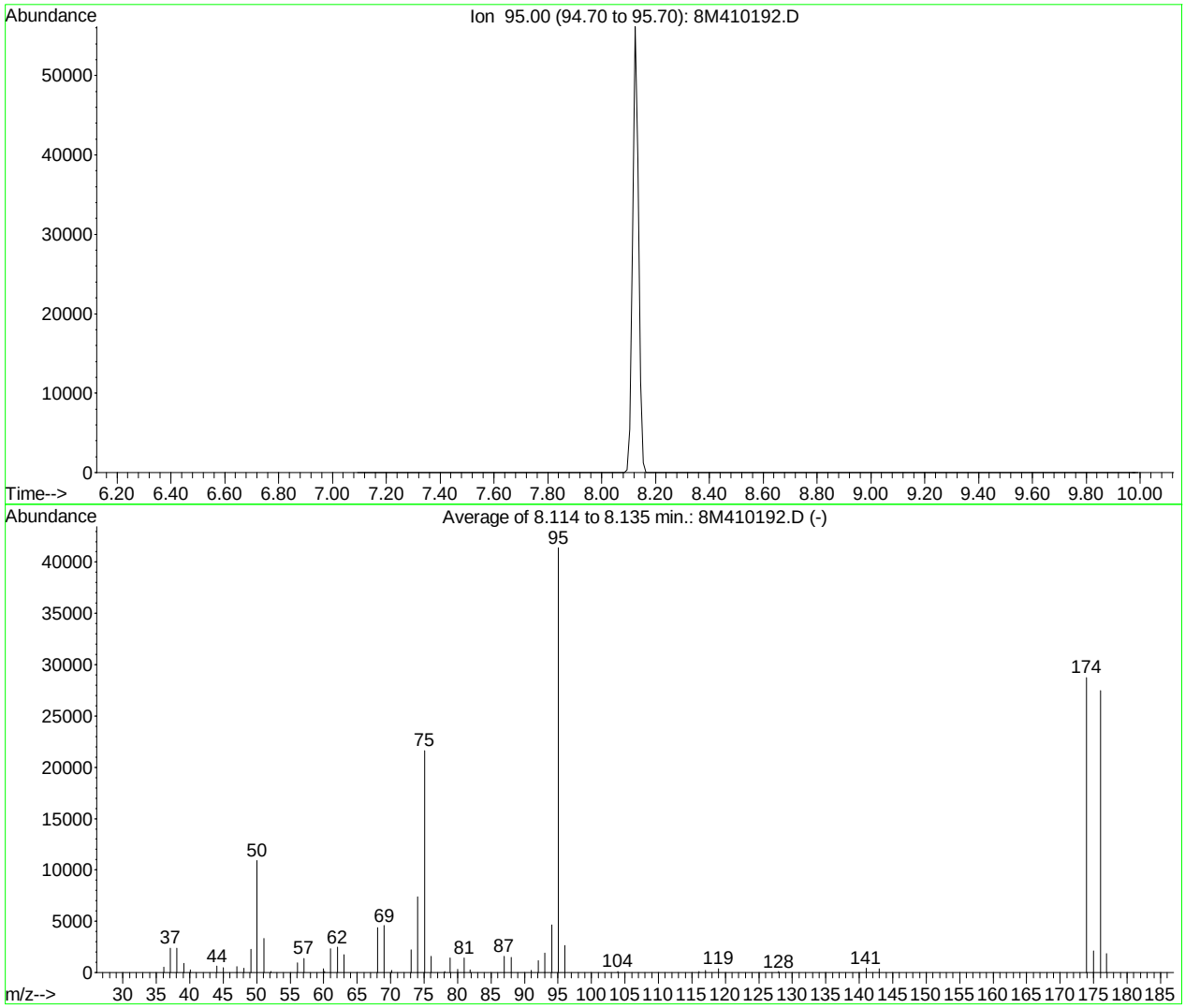
AutoFind: Scans 101, 102, 103; Background Corrected with Scan 97

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.7	8565	PASS
75	95	30	60	52.2	18121	PASS
95	95	100	100	100.0	34714	PASS
96	95	5	9	6.5	2262	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.2	25773	PASS
175	174	5	9	7.2	1845	PASS
176	174	95	101	98.5	25378	PASS
177	176	5	9	6.9	1746	PASS

8M407827.D BFB.M Mon Oct 05 12:46:56 2015

BFB

Data File : C:\MSDCHEM\2\DATA\021716\8M410192.D Vial: 2
Acq On : 17 Feb 2016 14:25 Operator: TMB
Sample : WG556046-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD74606 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



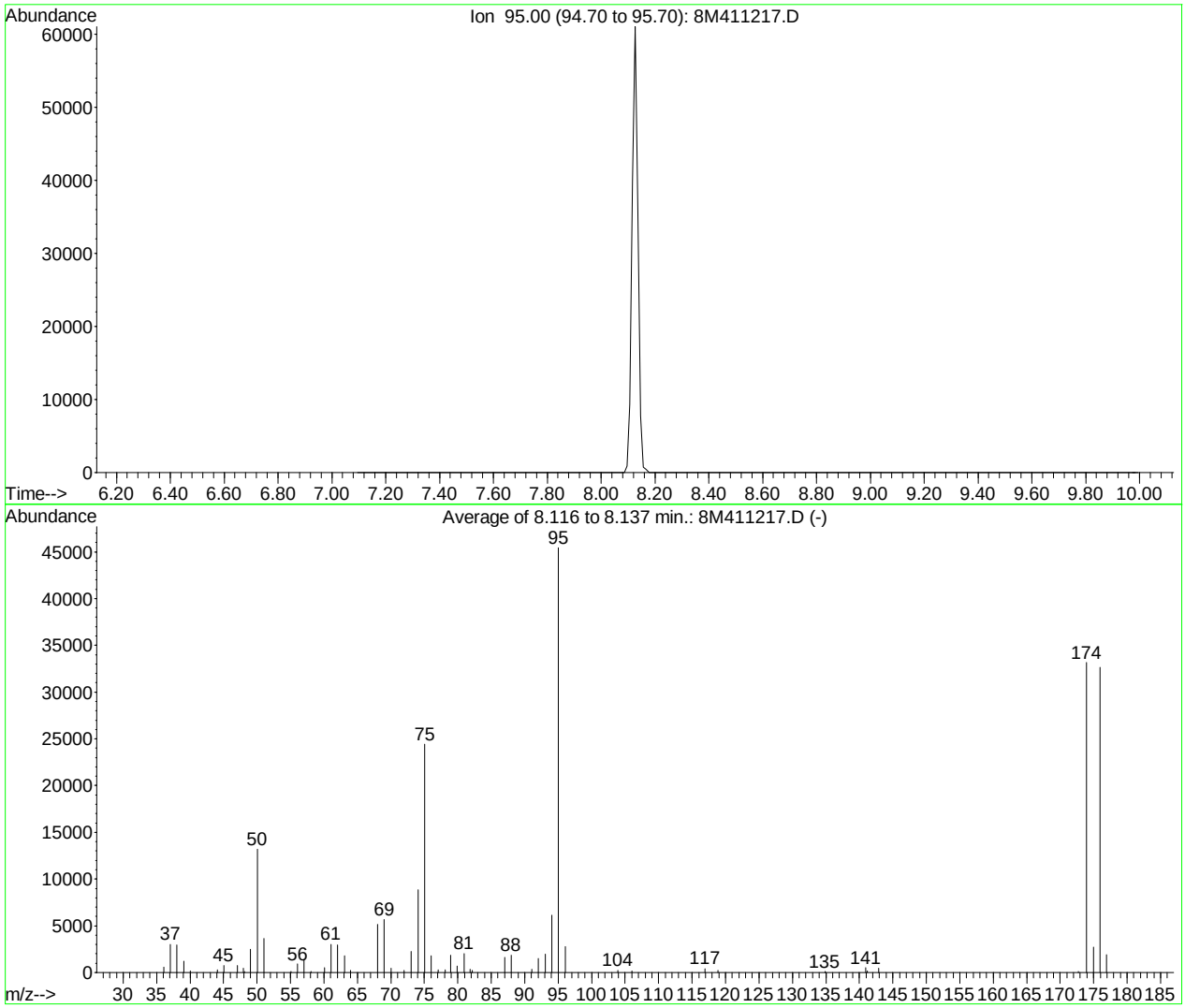
AutoFind: Scans 101, 102, 103; Background Corrected with Scan 96

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.3	10897	PASS
75	95	30	60	52.3	21632	PASS
95	95	100	100	100.0	41381	PASS
96	95	5	9	6.4	2628	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	69.5	28751	PASS
175	174	5	9	7.3	2112	PASS
176	174	95	101	95.5	27459	PASS
177	176	5	9	6.7	1846	PASS

8M410192.D BFB.M Wed Feb 17 15:20:19 2016

BFB

Data File : C:\MSDCHEM\2\DATA\040516\8M411217.D Vial: 1
Acq On : 5 Apr 2016 9:48 Operator: TMB
Sample : WG563534-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



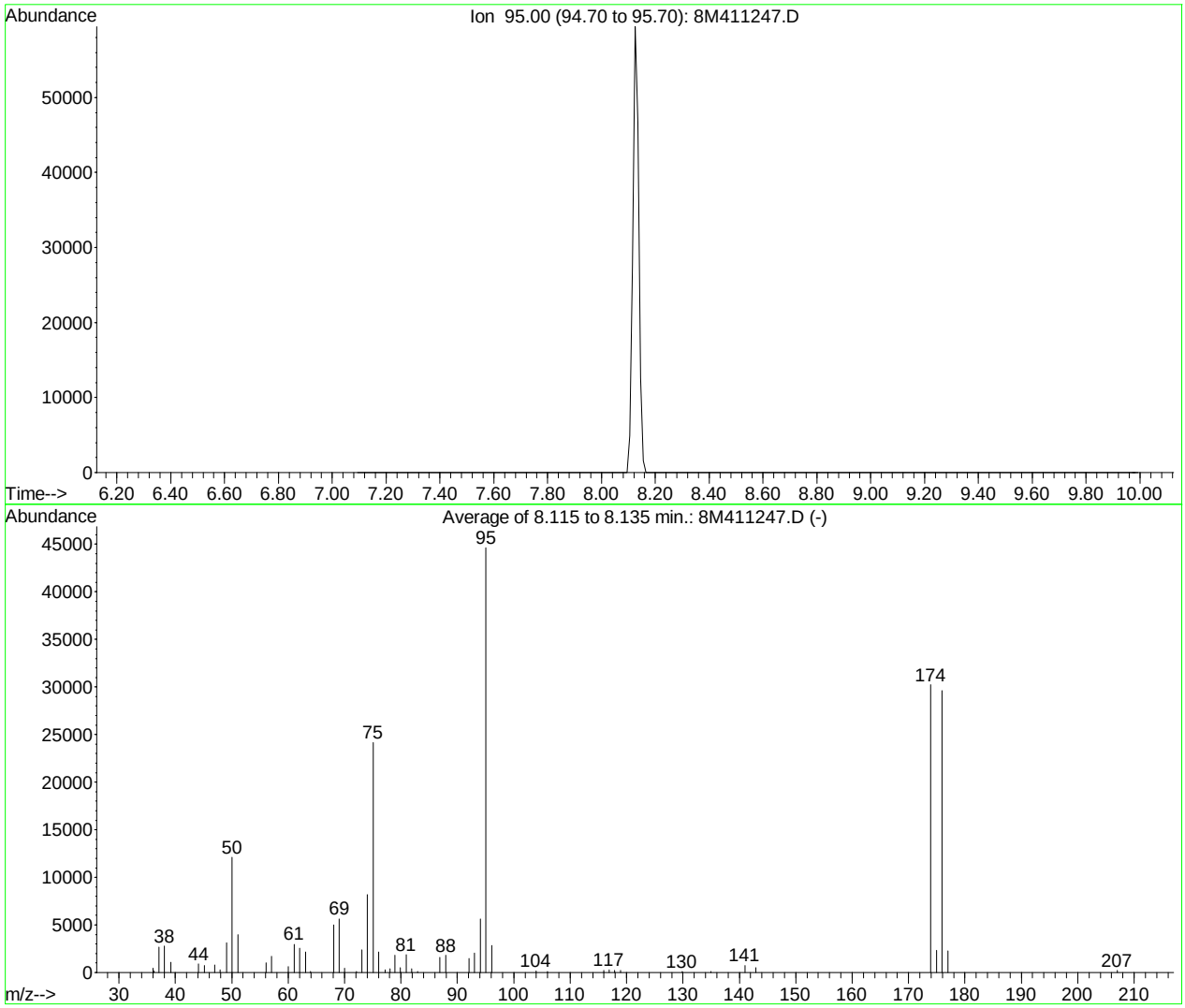
AutoFind: Scans 101, 102, 103; Background Corrected with Scan 96

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.1	13211	PASS
75	95	30	60	53.8	24445	PASS
95	95	100	100	100.0	45421	PASS
96	95	5	9	6.1	2785	PASS
173	174	0.00	2	0.3	101	PASS
174	95	50	100	73.0	33149	PASS
175	174	5	9	8.2	2721	PASS
176	174	95	101	98.4	32632	PASS
177	176	5	9	5.9	1934	PASS

8M411217.D BFB.M Tue Apr 05 09:58:55 2016

BFB

Data File : C:\MSDCHEM\2\DATA\040616\8M411247.D Vial: 2
Acq On : 6 Apr 2016 12:41 Operator: TMB
Sample : WG563756-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



AutoFind: Scans 101, 102, 103; Background Corrected with Scan 97

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.1	12100	PASS
75	95	30	60	54.1	24136	PASS
95	95	100	100	100.0	44610	PASS
96	95	5	9	6.4	2855	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	67.8	30224	PASS
175	174	5	9	7.7	2331	PASS
176	174	95	101	97.9	29596	PASS
177	176	5	9	7.8	2298	PASS

8M411247.D BFB.M Wed Apr 06 12:53:19 2016

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040516\8M411220.D Vial: 4
Acq On : 5 Apr 2016 11:09 Operator: TMB
Sample : WG563535-01 VBLK0405 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 16:36:55 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

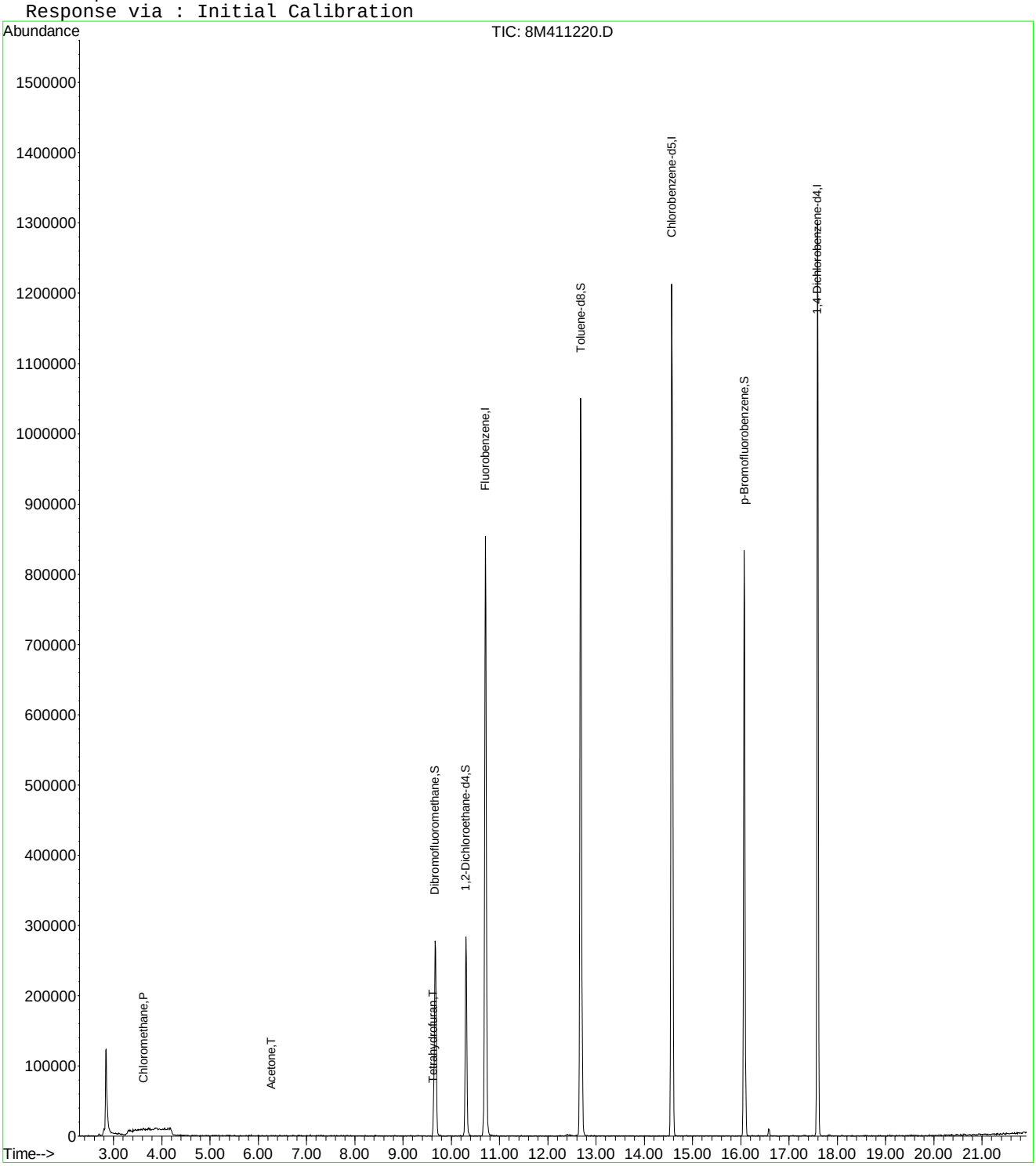
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	970096	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	768869	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	376022	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.66	111	238776	23.9783 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.92%		
43) 1,2-Dichloroethane-d4	10.30	65	247666	23.2280 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 92.92%		
58) Toluene-d8	12.68	98	882242	23.2386 ug/L	-0.01
Spiked Amount 25.000	Range 88 - 110		Recovery = 92.96%		
80) p-Bromofluorobenzene	16.07	95	350120	23.9692 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.88%		
Target Compounds					Qvalue
3) Chloromethane	3.63	50	4033	0.1725 ug/L #	43
5) 1,3-Butadiene	3.91	54	204	Below Cal #	1
13) Acetone	6.27	43	235	0.1481 ug/L #	48
36) Tetrahydrofuran	9.62	42	3489	2.0877 ug/L #	66

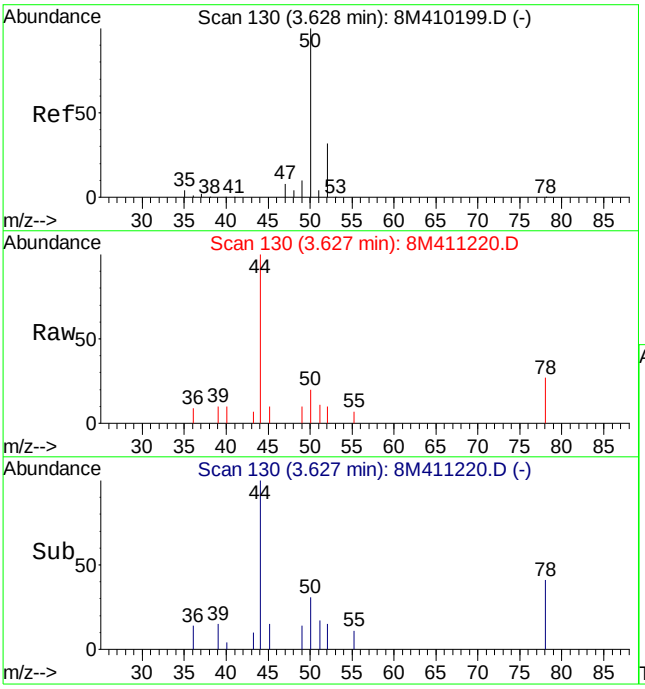
(#) = qualifier out of range (m) = manual integration
8M411220.D 8260WTR.M Tue Apr 05 16:36:55 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040516\8M411220.D Vial: 4
Acq On : 5 Apr 2016 11:09 Operator: TMB
Sample : WG563535-01 VBLK0405 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 16:36 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration

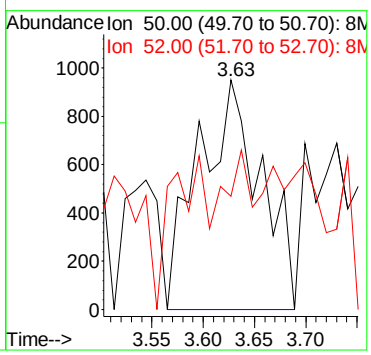


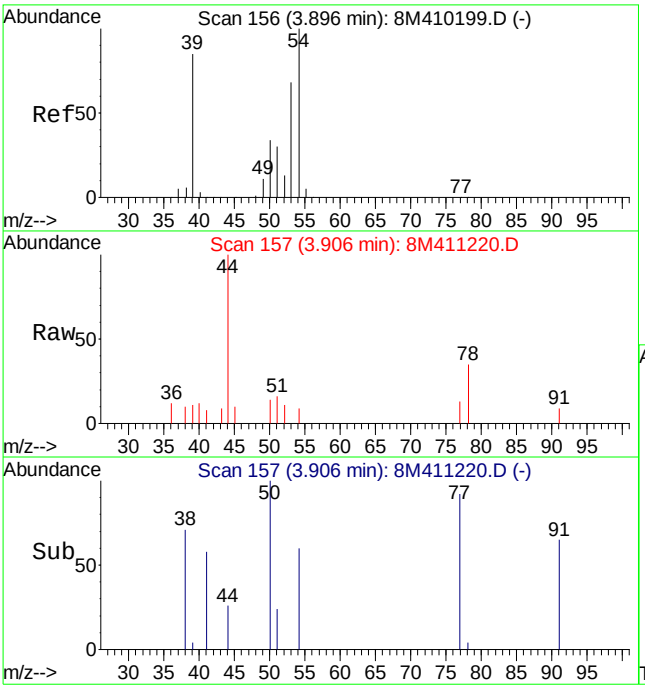


#3
Chloromethane
Concen: 0.17 ug/L
RT: 3.63 min Scan# 130
Delta R.T. 0.01 min
Lab File: 8M411220.D
Acq: 5 Apr 2016 11:09

Tgt Ion: 50 Resp: 4033

Ion	Ratio	Lower	Upper
50	100		
52	0.0	19.3	44.9#

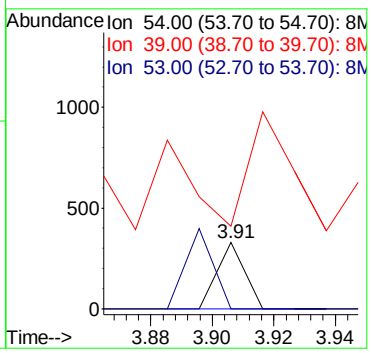


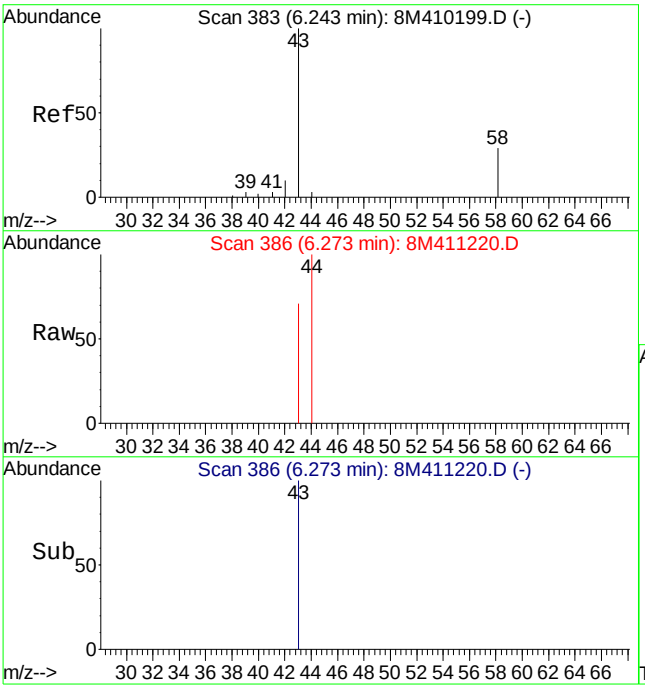


#5
1,3-Butadiene
Concen: Below Cal
RT: 3.91 min Scan# 157
Delta R.T. 0.02 min
Lab File: 8M411220.D
Acq: 5 Apr 2016 11:09

Tgt Ion: 54 Resp: 204

Ion	Ratio	Lower	Upper
54	100		
39	270.6	60.0	140.0#
53	121.1	42.5	99.1#

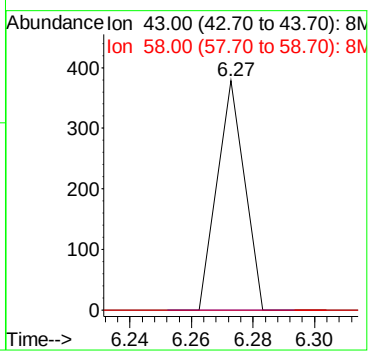


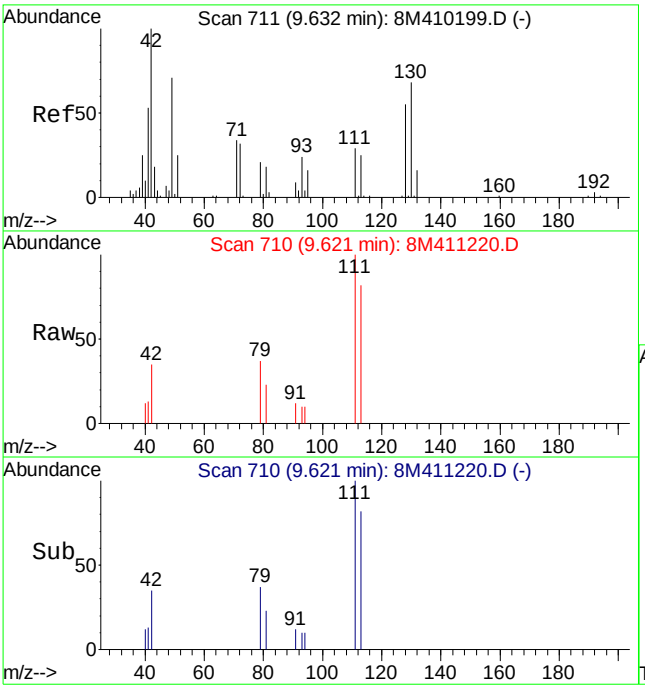


#13
Acetone
Concen: 0.15 ug/L
RT: 6.27 min Scan# 386
Delta R.T. 0.02 min
Lab File: 8M411220.D
Acq: 5 Apr 2016 11:09

Tgt Ion: 43 Resp: 235

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

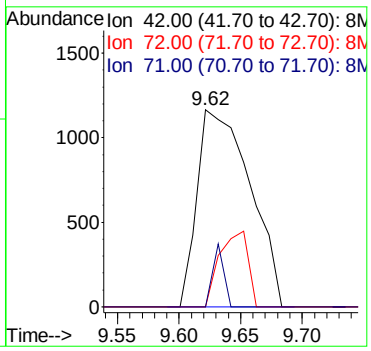




#36
Tetrahydrofuran
Concen: 2.09 ug/L
RT: 9.62 min Scan# 710
Delta R.T. -0.01 min
Lab File: 8M411220.D
Acq: 5 Apr 2016 11:09

Tgt Ion: 42 Resp: 3489

Ion	Ratio	Lower	Upper
42	100		
72	20.5	20.8	48.6#
71	6.6	19.0	44.4#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040616\8M411250.D Vial: 4
Acq On : 6 Apr 2016 14:05 Operator: TMB
Sample : WG563757-01 VBLK0406 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 07 08:25:39 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

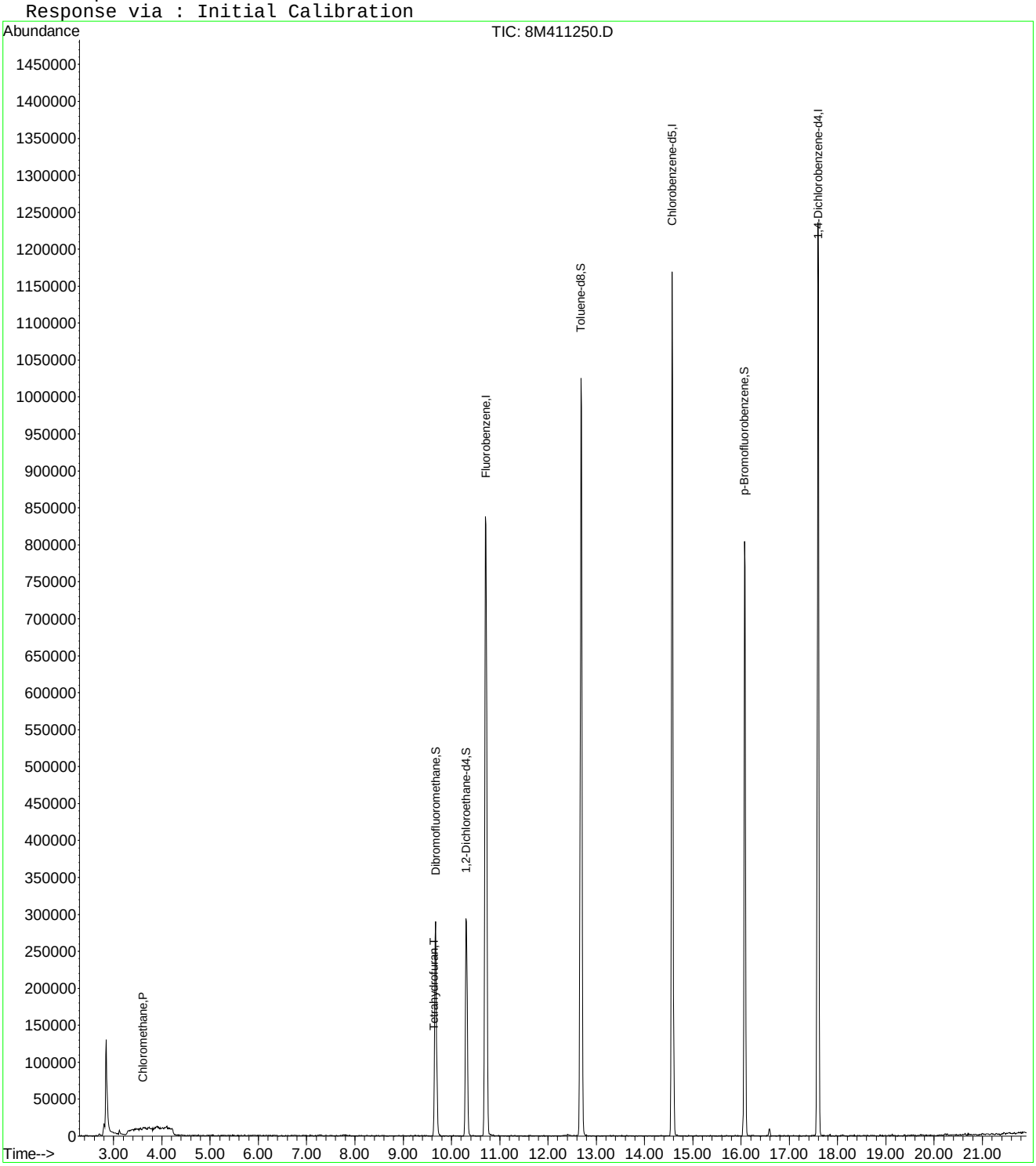
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.72	96	980447	25.00 ug/L	0.01
57) Chlorobenzene-d5	14.57	117	747152	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	369696	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	242443	24.0895 ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.36%		
43) 1,2-Dichloroethane-d4	10.30	65	262420	24.3519 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.40%		
58) Toluene-d8	12.68	98	877399	23.7828 ug/L	-0.01
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.12%		
80) p-Bromofluorobenzene	16.07	95	345453	24.0543 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.20%		
Target Compounds					Qvalue
3) Chloromethane	3.62	50	4586	0.1941 ug/L #	45
36) Tetrahydrofuran	9.64	42	4350	2.5755 ug/L	90

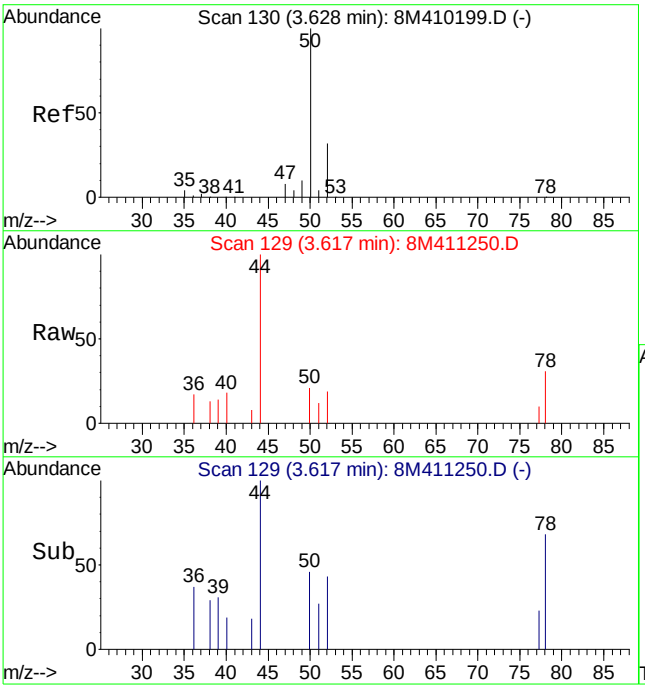
(#) = qualifier out of range (m) = manual integration
8M411250.D 8260WTR.M Thu Apr 07 08:25:40 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040616\8M411250.D Vial: 4
Acq On : 6 Apr 2016 14:05 Operator: TMB
Sample : WG563757-01 VBLK0406 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 7 8:25 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration

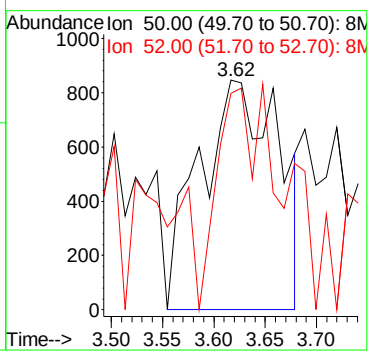


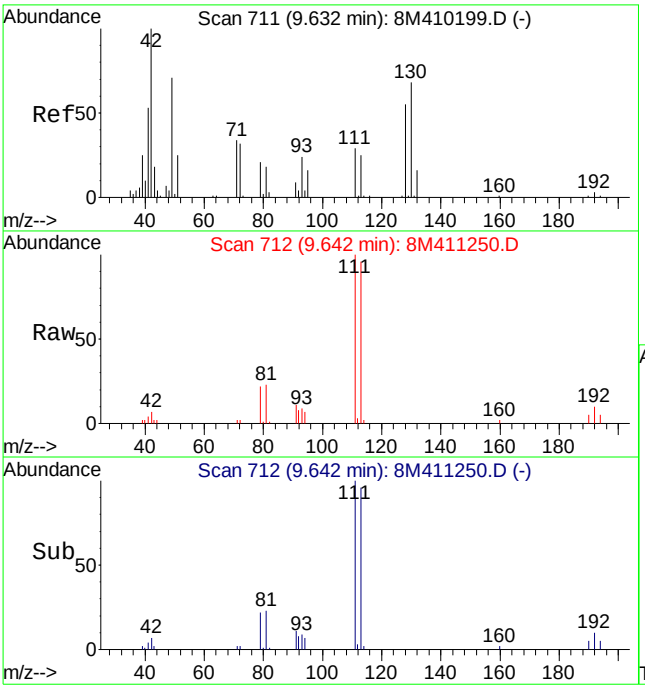


#3
Chloromethane
Concen: 0.19 ug/L
RT: 3.62 min Scan# 129
Delta R.T. 0.00 min
Lab File: 8M411250.D
Acq: 6 Apr 2016 14:05

Tgt Ion: 50 Resp: 4586

Ion	Ratio	Lower	Upper
50	100		
52	62.8	19.3	44.9#

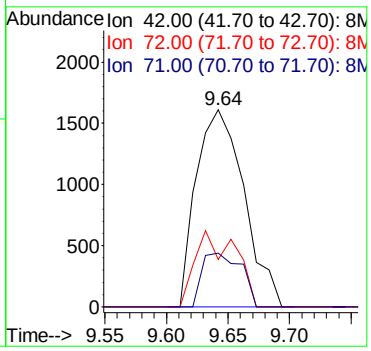




#36
Tetrahydrofuran
Concen: 2.58 ug/L
RT: 9.64 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411250.D
Acq: 6 Apr 2016 14:05

Tgt Ion: 42 Resp: 4350

Ion	Ratio	Lower	Upper
42	100		
72	32.6	20.8	48.6
71	22.2	19.0	44.4



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\040616\8M411273.D Vial: 27
Acq On : 7 Apr 2016 1:19 Operator: TMB
Sample : WG563757-06 VBLK0406 BLANK STD 624 Inst : HPMS8
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 07 08:26:25 2016 Quant Results File: 8260WTR.RES

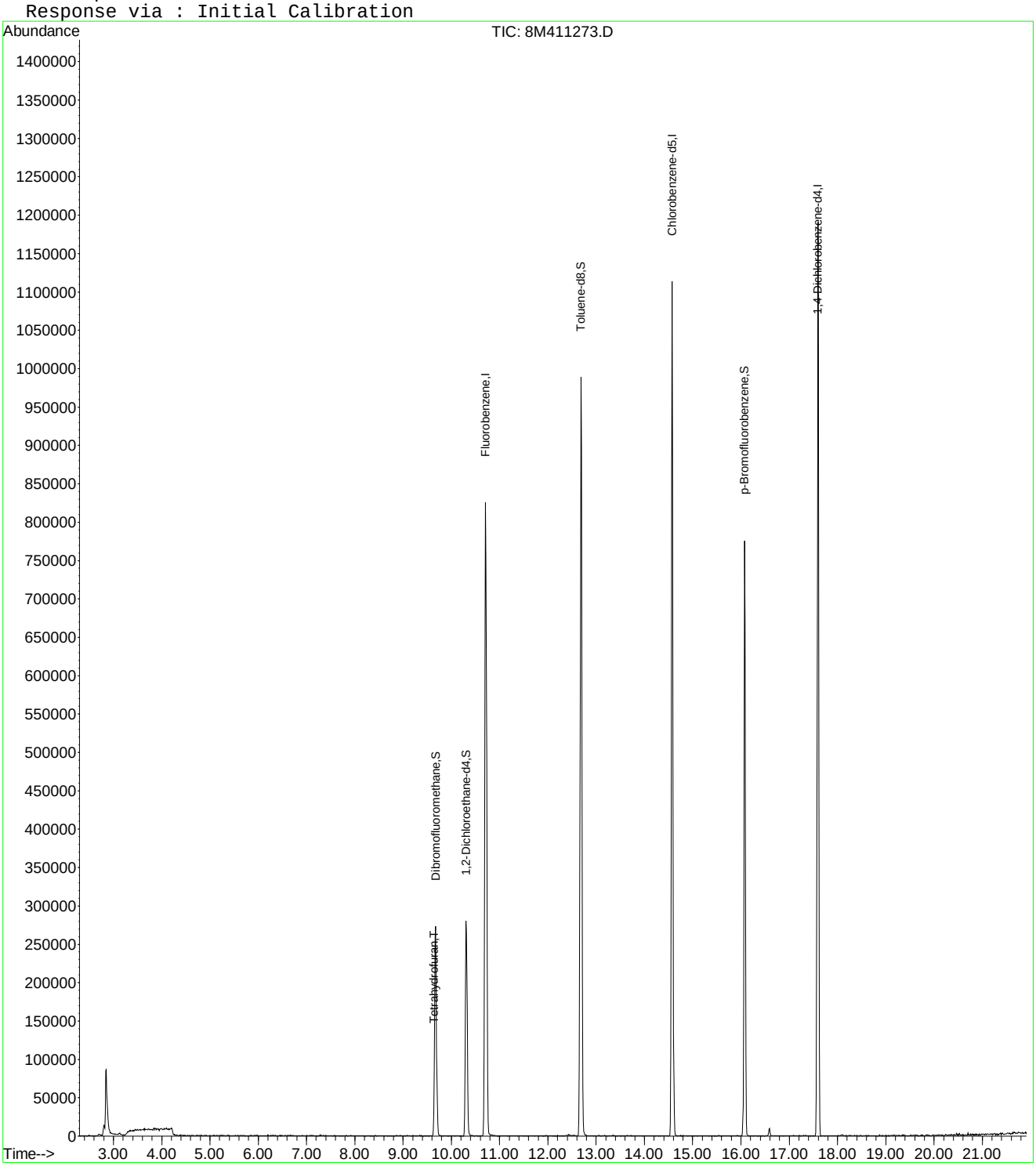
Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

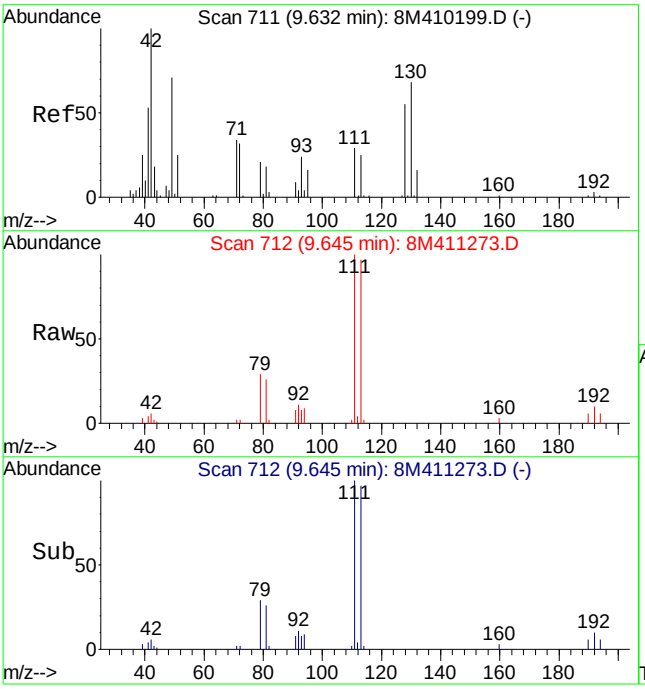
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	918594	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	688207	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	338155	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.68	111	232863	24.6956	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.80%			
43) 1,2-Dichloroethane-d4	10.31	65	243693	24.1368	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.56%			
58) Toluene-d8	12.68	98	820613	24.1487	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.60%			
80) p-Bromofluorobenzene	16.07	95	320593	24.4055	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.64%			
Target Compounds						Qvalue
36) Tetrahydrofuran	9.64	42	4396	2.7779	ug/L #	64

(#) = qualifier out of range (m) = manual integration
8M411273.D 8260WTR.M Thu Apr 07 08:26:26 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\040616\8M411273.D Vial: 27
Acq On : 7 Apr 2016 1:19 Operator: TMB
Sample : WG563757-06 VBLK0406 BLANK STD 624 Inst : HPMS8
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 7 8:26 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration

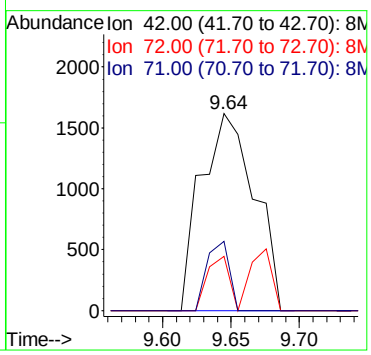




#36
Tetrahydrofuran
Concen: 2.78 ug/L
RT: 9.64 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411273.D
Acq: 7 Apr 2016 1:19

Tgt Ion: 42 Resp: 4396

Ion	Ratio	Lower	Upper
42	100		
72	11.4	20.8	48.6#
71	14.7	19.0	44.4#



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\040516\8M411222.D Vial: 6
Acq On : 5 Apr 2016 12:08 Operator: TMB
Sample : WG563535-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75403 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 12:29:58 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	993969	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	789603	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	449855	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	249645	24.4677	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.88%			
43) 1,2-Dichloroethane-d4	10.30	65	255208	23.3605	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 93.44%			
58) Toluene-d8	12.68	98	904761	23.2059	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 92.84%			
80) p-Bromofluorobenzene	16.07	95	390138	22.3252	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 89.32%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	408794	26.0912	ug/L	99
3) Chloromethane	3.63	50	614396	25.6442	ug/L	99
4) Vinyl Chloride	3.84	62	406841	24.3935	ug/L	99
5) 1,3-Butadiene	3.89	54	48793	2.0179	ug/L	94
6) Bromomethane	4.74	94	100249	12.6512	ug/L	99
7) Chloroethane	4.90	64	192534	25.5539	ug/L	98
8) Trichlorofluoromethane	5.38	101	390996	21.8738	ug/L	99
9) Diethyl ether	5.91	59	786425	120.1371	ug/L	95
10) Isoprene	5.95	67	310902	25.6665	ug/L	90
11) Acrolein	6.15	56	94876	93.3308	ug/L	94
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	227151	23.2777	ug/L	88
13) Acetone	6.24	43	41806	25.7166	ug/L	99
14) 1,1-Dichloroethene	6.47	61	399824	22.2627	ug/L	92
15) Tert-Butyl Alcohol	6.59	59	98080	237.5609	ug/L	97
16) Dimethyl Sulfide	6.74	62	247151	31.4192	ug/L	91
17) Iodomethane	7.00	142	52051	9.3823	ug/L	97
18) Methyl acetate	7.01	43	123828	27.2792	ug/L	97
19) Methylene Chloride	7.26	84	220236	22.3967	ug/L	81
20) Carbon Disulfide	7.30	76	624673	20.2371	ug/L	99
21) Acrylonitrile	7.44	53	57301	25.0001	ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	428722	21.4662	ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	389484	23.1991	ug/L	91
24) n-Hexane	7.78	57	319904	22.3496	ug/L	100
25) Diisopropyl ether	8.13	45	4666711	125.1081	ug/L	98
26) Vinyl Acetate	8.30	43	343807	20.0525	ug/L	97
27) 1,1-Dichloroethane	8.33	63	471041	22.4855	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	3270426	109.3168	ug/L	97
29) 2-Butanone	8.89	43	64263	25.1410	ug/L	97
30) Propionitrile	8.99	54	92894	126.5129	ug/L	98
31) 2,2-Dichloropropane	9.11	77	385779	23.4167	ug/L	98
32) cis-1,2-Dichloroethene	9.17	96	255150	23.5955	ug/L	87
33) Chloroform	9.37	83	426805	22.9644	ug/L	100
34) 1-Bromopropane	9.52	122	51257	32.2314	ug/L	100
35) Bromochloromethane	9.61	130	121476	22.4508	ug/L	82
36) Tetrahydrofuran	9.63	42	207754	121.3296	ug/L	94
38) 1,1,1-Trichloroethane	9.91	97	375770	22.1575	ug/L	98
39) Cyclohexane	9.94	56	453942	23.0000	ug/L	93
40) 1,1-Dichloropropene	10.11	75	316286	21.4345	ug/L	95
41) Tert-Amyl-Methyl ether	10.21	73	2362150	112.3392	ug/L	94
42) Carbon Tetrachloride	10.25	117	335917	21.7645	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411222.D 8260WTR.M Tue Apr 05 12:29:59 2016 Page 1

Data File : C:\MSDchem\2\data\040516\8M411222.D Vial: 6
Acq On : 5 Apr 2016 12:08 Operator: TMB
Sample : WG563535-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75403 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 05 12:29:58 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

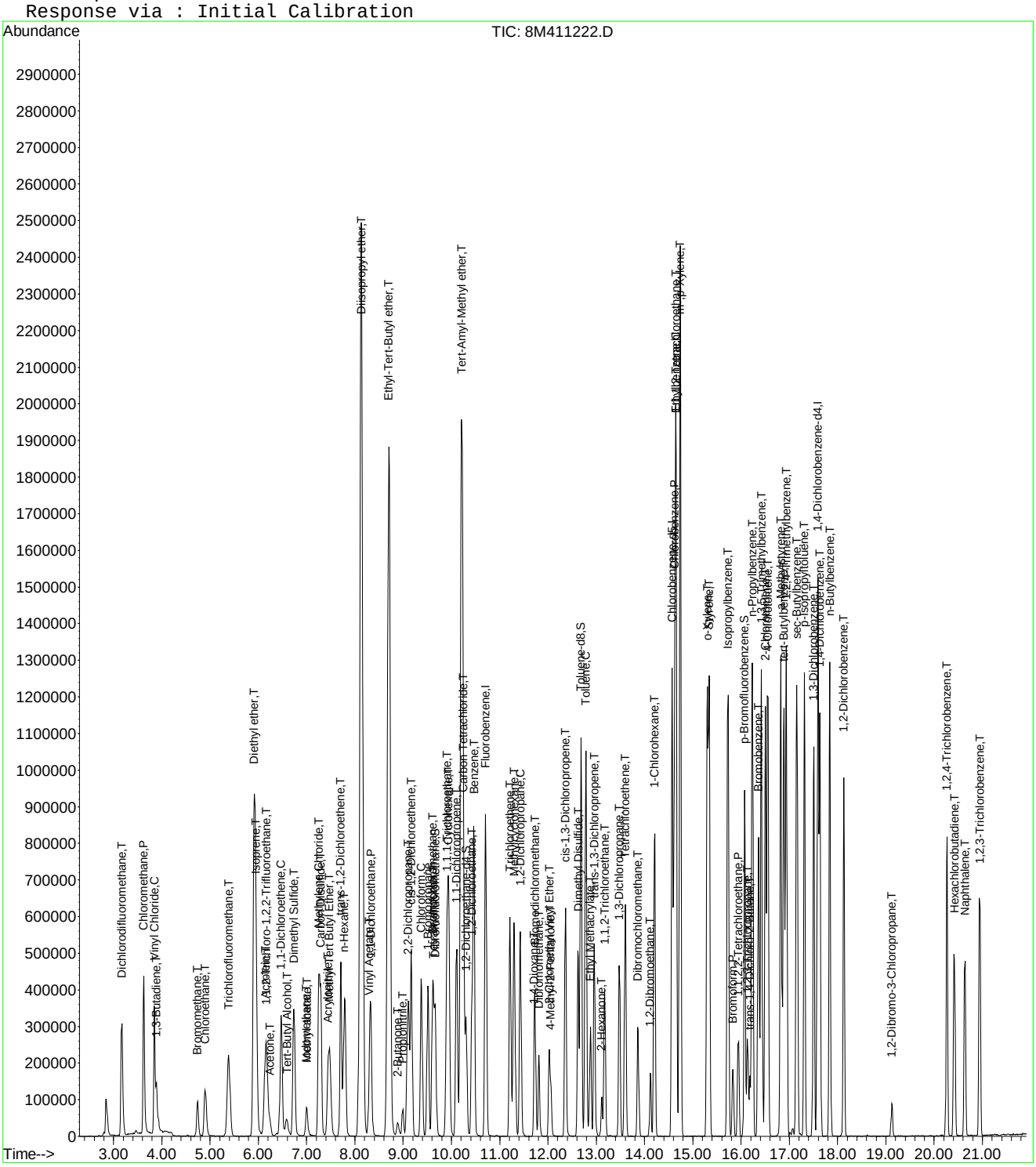
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	331443	23.4735	ug/L		98
46)	Benzene	10.47	78	915888	23.8226	ug/L		94
47)	Trichloroethene	11.21	130	230666	22.2761	ug/L		96
48)	Methylcyclohexane	11.30	83	323510	21.6962	ug/L		90
49)	1,2-Dichloropropane	11.43	63	274317	25.3781	ug/L		93
50)	Bromodichloromethane	11.73	83	313833	22.8712	ug/L		99
51)	1,4-Dioxane	11.71	88	10741	246.3615	ug/L		91
52)	Dibromomethane	11.81	93	107218	21.8559	ug/L		93
53)	2-Chloroethyl Vinyl Ether	12.03	63	106858	22.7277	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	49009	22.3832	ug/L		94
55)	cis-1,3-Dichloropropene	12.36	75	386288	25.8645	ug/L		98
56)	Dimethyl Disulfide	12.63	79	175951	22.3496	ug/L		94
59)	Toluene	12.78	91	949959	21.5899	ug/L		99
60)	Ethyl Methacrylate	12.88	69	194183	22.8497	ug/L		96
62)	trans-1,3-Dichloropropene	12.96	75	307342	20.8984	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	149932	21.4319	ug/L		98
64)	2-Hexanone	13.12	58	46762	21.4814	ug/L	#	97
65)	1,3-Dichloropropane	13.48	76	286999	22.3791	ug/L		88
66)	Tetrachloroethene	13.60	164	170517	19.2927	ug/L		89
67)	Dibromochloromethane	13.86	129	200649	20.9214	ug/L		96
68)	1,2-Dibromoethane	14.12	107	146716	20.7208	ug/L		100
69)	1-Chlorohexane	14.21	91	308180	20.6566	ug/L		86
70)	Chlorobenzene	14.62	112	643981	21.3885	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.66	131	220781	20.4406	ug/L		96
72)	Ethylbenzene	14.66	106	347111	20.1496	ug/L		97
73)	m-,p-Xylene	14.74	106	840958	42.7084	ug/L		96
74)	o-Xylene	15.31	106	423812	20.7511	ug/L		99
75)	Styrene	15.34	104	696508	22.3668	ug/L		100
76)	Bromoform	15.83	173	105809	19.1443	ug/L		99
77)	Isopropylbenzene	15.73	105	1080130	22.1789	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	177695	19.7654	ug/L		97
81)	1,2,3-Trichloropropane	16.13	110	47157	18.7447	ug/L	#	1
82)	trans-1,4-Dichloro-2-Buten	16.18	53	49744	14.8594	ug/L	#	1
83)	n-Propylbenzene	16.24	91	1363603	20.5133	ug/L		98
84)	Bromobenzene	16.36	156	240848	18.2033	ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	932096	20.0891	ug/L		98
86)	2-Chlorotoluene	16.51	91	830502	19.1265	ug/L		99
87)	4-Chlorotoluene	16.56	91	869566	20.4189	ug/L		98
88)	a-Methylstyrene	16.83	118	488712	20.1153	ug/L		97
89)	tert-Butylbenzene	16.89	134	187292	18.7333	ug/L		90
90)	1,2,4-Trimethylbenzene	16.94	105	958842	20.0251	ug/L		100
91)	sec-Butylbenzene	17.16	105	1176229	20.3952	ug/L		97
92)	p-Isopropyltoluene	17.31	119	940622	19.6884	ug/L		95
93)	1,3-Dichlorobenzene	17.51	146	516179	19.6235	ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	519032	19.6472	ug/L		94
95)	n-Butylbenzene	17.84	91	951780	19.8027	ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	454998	19.8929	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	31254	18.5573	ug/L		82
98)	1,2,4-Trichlorobenzene	20.27	180	298939	17.9513	ug/L		99
99)	Hexachlorobutadiene	20.42	225	125512	18.4300	ug/L		97
100)	Naphthalene	20.64	128	454672	16.6865	ug/L		99
101)	1,2,3-Trichlorobenzene	20.95	180	247355	17.8522	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411222.D 8260WTR.M Tue Apr 05 12:29:59 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\040516\8M411222.D Vial: 6
Acq On : 5 Apr 2016 12:08 Operator: TMB
Sample : WG563535-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75403 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:29 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration



Data File : C:\MSDchem\2\data\040616\8M411254.D Vial: 8
Acq On : 6 Apr 2016 16:02 Operator: TMB
Sample : WG563757-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 06 16:24:28 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	1018921	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	776291	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	432983	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	251319	24.0285	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.12%			
43) 1,2-Dichloroethane-d4	10.30	65	275267	24.5796	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.32%			
58) Toluene-d8	12.68	98	908654	23.7055	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.84%			
80) p-Bromofluorobenzene	16.07	95	380201	22.6043	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 90.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	80296	4.9994	ug/L	96
3) Chloromethane	3.63	50	294801	12.0033	ug/L	98
4) Vinyl Chloride	3.86	62	242108	14.1609	ug/L	96
5) 1,3-Butadiene	3.89	54	285655	20.6704	ug/L	94
6) Bromomethane	4.74	94	87338	10.7520	ug/L	98
7) Chloroethane	4.90	64	140427	18.1816	ug/L	96
8) Trichlorofluoromethane	5.39	101	314905	17.1856	ug/L	99
9) Diethyl ether	5.91	59	829657	123.6376	ug/L	94
10) Isoprene	5.95	67	325628	26.2239	ug/L	91
11) Acrolein	6.15	56	90199	86.5571	ug/L	94
12) 1,1,2-Trichloro-1,2,2-Trif	6.18	101	193915	19.3852	ug/L	92
13) Acetone	6.26	43	41870	25.1252	ug/L	98
14) 1,1-Dichloroethene	6.48	61	347001	18.8483	ug/L	93
15) Tert-Butyl Alcohol	6.58	59	108232	255.7305	ug/L	99
16) Dimethyl Sulfide	6.74	62	250222	31.0306	ug/L	90
17) Iodomethane	7.00	142	67143	11.5000	ug/L	92
18) Methyl acetate	7.01	43	118716	25.5126	ug/L	97
19) Methylene Chloride	7.27	84	209585	20.7916	ug/L	78
20) Carbon Disulfide	7.30	76	637374	20.1429	ug/L	99
21) Acrylonitrile	7.44	53	59648	25.3868	ug/L	97
22) Methyl Tert Butyl Ether	7.47	73	451505	22.0533	ug/L	95
23) trans-1,2-Dichloroethene	7.71	61	360879	20.9689	ug/L	91
24) n-Hexane	7.79	57	318303	21.6932	ug/L	100
25) Diisopropyl ether	8.13	45	4819688	126.0450	ug/L	98
26) Vinyl Acetate	8.30	43	407250	23.1711	ug/L	98
27) 1,1-Dichloroethane	8.33	63	447441	20.8359	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	3435982	112.0381	ug/L	97
29) 2-Butanone	8.89	43	69252	26.4294	ug/L	96
30) Propionitrile	8.99	54	99577	132.2935	ug/L	99
31) 2,2-Dichloropropane	9.11	77	342841	20.3008	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	242056	21.8365	ug/L	87
33) Chloroform	9.39	83	408979	21.4664	ug/L	99
34) 1-Bromopropane	9.52	122	48544	29.8122	ug/L	100
35) Bromochloromethane	9.61	130	118987	21.4522	ug/L	80
36) Tetrahydrofuran	9.63	42	234409	133.5438	ug/L	92
38) 1,1,1-Trichloroethane	9.91	97	356531	20.5082	ug/L	98
39) Cyclohexane	9.94	56	460608	22.7663	ug/L	92
40) 1,1-Dichloropropene	10.11	75	295354	19.5258	ug/L	95
41) Tert-Amyl-Methyl ether	10.21	73	2482529	115.1730	ug/L	93
42) Carbon Tetrachloride	10.25	117	322554	20.3869	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M411254.D 8260WTR.M Wed Apr 06 16:24:29 2016 Page 1

Data File : C:\MSDchem\2\data\040616\8M411254.D Vial: 8
Acq On : 6 Apr 2016 16:02 Operator: TMB
Sample : WG563757-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 06 16:24:28 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

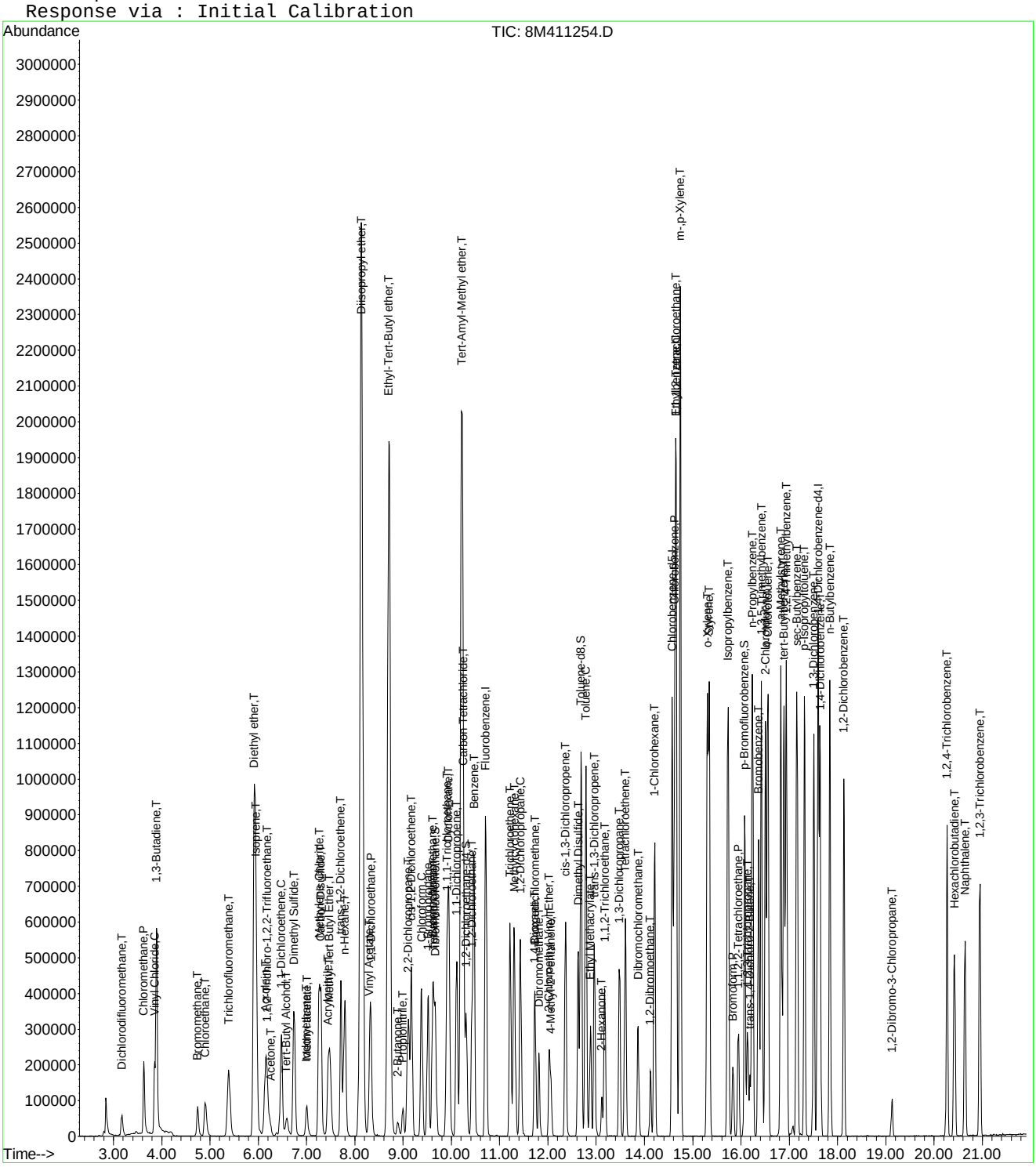
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	330954	22.8649	ug/L		98
46)	Benzene	10.47	78	873609	22.1664	ug/L		95
47)	Trichloroethene	11.21	130	227354	21.4186	ug/L		97
48)	Methylcyclohexane	11.31	83	324071	21.2016	ug/L		90
49)	1,2-Dichloropropane	11.43	63	262412	23.6822	ug/L		93
50)	Bromodichloromethane	11.73	83	316122	22.4738	ug/L		99
51)	1,4-Dioxane	11.72	88	11289	252.5899	ug/L		95
52)	Dibromomethane	11.81	93	113992	22.6677	ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	111294	23.0915	ug/L		93
54)	4-Methyl-2-Pentanone	12.06	58	55306	24.6405	ug/L		94
55)	cis-1,3-Dichloropropene	12.36	75	373935	24.4243	ug/L		99
56)	Dimethyl Disulfide	12.63	79	183003	22.6761	ug/L		96
59)	Toluene	12.79	91	930853	21.5184	ug/L		98
60)	Ethyl Methacrylate	12.88	69	197847	23.6801	ug/L		89
62)	trans-1,3-Dichloropropene	12.96	75	313972	21.7153	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	151878	22.0823	ug/L		96
64)	2-Hexanone	13.12	58	49950	23.3394	ug/L	#	98
65)	1,3-Dichloropropane	13.48	76	295360	23.4260	ug/L		89
66)	Tetrachloroethene	13.60	164	162980	18.7561	ug/L		89
67)	Dibromochloromethane	13.87	129	202126	21.4369	ug/L		100
68)	1,2-Dibromoethane	14.12	107	154963	22.2609	ug/L		100
69)	1-Chlorohexane	14.21	91	301686	20.5681	ug/L		86
70)	Chlorobenzene	14.63	112	629938	21.2809	ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.66	131	216726	20.4092	ug/L		100
72)	Ethylbenzene	14.66	106	335840	19.8296	ug/L		96
73)	m-,p-Xylene	14.74	106	837689	43.2719	ug/L		97
74)	o-Xylene	15.31	106	413809	20.6088	ug/L		97
75)	Styrene	15.34	104	685519	22.3914	ug/L		98
76)	Bromoform	15.83	173	113610	20.9083	ug/L		99
77)	Isopropylbenzene	15.73	105	1065754	22.2590	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	189296	21.8763	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	51646	21.3291	ug/L	#	1
82)	trans-1,4-Dichloro-2-Buten	16.19	53	58504	18.1572	ug/L	#	1
83)	n-Propylbenzene	16.24	91	1345084	21.0232	ug/L		99
84)	Bromobenzene	16.36	156	244248	19.1796	ug/L		87
85)	1,3,5-Trimethylbenzene	16.42	105	921632	20.6376	ug/L		100
86)	2-Chlorotoluene	16.51	91	797547	19.0833	ug/L		99
87)	4-Chlorotoluene	16.56	91	876333	21.3796	ug/L		98
88)	a-Methylstyrene	16.83	118	490311	20.9675	ug/L		98
89)	tert-Butylbenzene	16.89	134	189198	19.6613	ug/L		90
90)	1,2,4-Trimethylbenzene	16.94	105	952884	20.6761	ug/L		100
91)	sec-Butylbenzene	17.16	105	1171728	21.1088	ug/L		97
92)	p-Isopropyltoluene	17.31	119	932896	20.2875	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	516132	20.3863	ug/L		92
94)	1,4-Dichlorobenzene	17.64	146	525091	20.6510	ug/L		93
95)	n-Butylbenzene	17.84	91	941755	20.3576	ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	470614	21.3774	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.13	75	33983	20.8993	ug/L		84
98)	1,2,4-Trichlorobenzene	20.27	180	309433	19.3055	ug/L		100
99)	Hexachlorobutadiene	20.42	225	123942	18.9087	ug/L		96
100)	Naphthalene	20.64	128	504016	19.2182	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	264517	19.8347	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411254.D 8260WTR.M Wed Apr 06 16:24:29 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\040616\8M411254.D Vial: 8
Acq On : 6 Apr 2016 16:02 Operator: TMB
Sample : WG563757-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 16:24 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\2\METHODS\8260WTR.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 02-17-16 HPMS 8
Last Update : Thu Feb 18 08:47:33 2016
Response via : Initial Calibration



3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 12, 2016

---

001 – BIO-CHEM TESTING WVDEP 220	002 – REIC Consultants, Inc. WVDEP 060
003 – Sturm Environmental	004 – MICROBAC PITTSBURGH
005 – ES LABORATORIES	006 – ALCOSAN LABORATORIES
007 – ALS LABORATORIES	008 – BENCHMARK LABORATORIES
010 – MICROBAC CHICAGOLAND	AC – AMBER R. CARMICHAEL
ADC – ANTHONY D. CANTER	ADG – APRIL D. GREENE
AED – ALLEN E. DAVIS	ALS – ADRIANE L. STEED
AWE – ANDREW W. ESSIG	AZH – AFTER HOURS
BJO – BRIAN J. OGDEN	BKT – BRENDAN TORRENCE
BLG – BRENDA L. GREENWALT	BRG – BRENDA R. GREGORY
CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS
CEB – CHAD E. BARNES	CJR – COURTNEY J. REXROAD
CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER
CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS
CSH – CHRIS S. HILL	DAK – DEAN A. KETELSEN
DCM – DAVID C. MERCKLE	DEV – DAVID E. VANDENBERG
DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER
DLP – DOROTHY L. PAYNE	DLW – DIANA L. WRIGHT
DSM – DAVID S. MOSSOR	ECL – ERIC C. LAWSON
ENY – EMILY N. YOAK	ERP – ERIN R. PORTER
FJB – FRANCES J. BOLDEN	JBK – JEREMY B. KINNEY
JDH – JUSTIN D. HESSON	JDS – JARED D. SMITH
JJS – JOHN J. STE MARIE	JKP – JACQUELINE K. PARSONS
JLD – JESSICA L. DELONG	JLL – JOHN L. LENT
JMW – JEANA M. WHITE	JTP – JOSHUA T. PEMBERTON
JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES
JYH – JI Y. HU	KAJ – KELLIE A. JOHNSON
KAT – KATHY A. TUCKER	KDW – KATHRYN D. WELCH
KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KKB – KERRI K. BUCK	KRA – KATHY R. ALBERTSON
KRB – KAELY R. BECKER	KRP – KATHY R. PARSONS
LEC – LAURA E. CARPENTER	LKN – LINDA K. NEDEFF
LLS – LARRY L. STEPHENS	LSB – LESLIE S. BUCINA
MAP – MARLA A. PORTER	MBK – MORGAN B. KNOWLTON
MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN
MES – MARY E. SCHILLING	MLB – MEGAN L. BACHE
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR
MSW – MATT S. WILSON	PDM – PIERCE D. MORRIS
PIT – MICROBAC WARRENDALE	PRL – PAIGE R. LAMB
PSW – PEGGY S. WEBB	QX – QIN XU
RAH – ROY A. HALSTEAD	REK – BOB E. KYER
RLB – BOB BUCHANAN	RM – RAYMOND MALEKE
RNP – RICK N. PETTY	RST – ROBIN S. TURNER
SAV – SARAH A. VANDENBERG	SCB – SARAH C. BOGOLIN
SDC – SHALYN D. CONLEY	SLM – STEPHANIE L. MOSSBURG
SLP – SHERI L. PFALZGRAF	TB – TODD BOYLE
TGF – TIM G. FELTON	TMB – TIFFANY M. BAILEY
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER
WJB – WILL J. BEASLEY	WRR – WESLEY R. RICHARDS
WTD – WADE T. DELONG	XXX – UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
April 12, 2016

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.
B,H1	Analyte present in method blank. Sample analysis performed past holding time.
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
CT1	Cooler temperature at sample reciept exceeded regulatory limit.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
E,CT1	Estimated results. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
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)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
FP1	Did not ignite.
H1	Sample analysis performed past holding time.
H1,CT1	Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guidelines for reque
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,CT1	Estimated value ; the analyte concentration was less than the LOQ. Cooler temperature at sample reciept exceeded regu
J,H1	Estimated value ; the analyte concentration was less than the LOQ. Sample analysis performed past holding time.
J,H1	The reported result is an estimated value. Sample was analyzed past holding time.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
JB	The reported result is an estimated value. The reported result is also associated with a contaminated method blank.
JQ	The reported result is an estimated value and one or more quality control criteria failed. See narrative.
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, B	Not detected at or above the reporting limit (RL). Analyte present in method blank.
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
ND,H1	Not detected; Sample analysis performed past holding time.
ND,H1,CT1	Not detected; Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guide
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.
Q,H1	One or more quality control criteria failed. Sample analyzed past holding time. 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
T5	Laboratory not licensed for this parameter
TIC	Library Search Compound
TNTC	Too numerous to count

Microbac Laboratories Inc.
List of Valid Qualifiers
April 12, 2016

Qualkey: DOD

TNTC, B	Too numerous to count. Analyte present in method blank.
TNTC,CT1	Too numerous to count. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
TNTC,H1	Too numerous to count. Sample analysis performed past holding time.
U	Analyte was not detected. The concentration is below the reported LOD.
U,CT1	Analyte was not detected. The concentration is below the reported LOD. Cooler temperature at sample reciept exceeded
U,H1	Not detected; Sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
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

L16031613 / Revision: 0 / 231 total pages

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	Scott Beesinger
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	Standard	pH:	
Project Name/Location:	Longhorn		
Project Number:	60256135.0002HA		

Mail to: Linda Raabe, 112 East Pecan STE. 400, San Antonio, TX 78205, 210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp*	Grab	Matrix	Number of Containers	VOC	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
SITE 58	LHSMW04-032916			3/29/16	0840		✓	W	3	✓					
	TRIP BLANK			3/29/16			✓	W	2	✓					

Comments: STANDARD TAT

Microbac OVD
Received: 03/30/2016 10:09
By: CARA STRICKLER 221000083887

Relinquished by: (Signature)	Scott Beesinger	Date 3/29/16	Time 1230	Receive	Time	Relinquished by: (Signature)
Relinquished by: (Signature)		Date	Time	Receive (Signatu)	Time	Remarks:

Cara Strickler

*Homogenize all composite samples prior to analysis

Distribution: White to Laboratory, Canary to Project Manager, Pink QA/QC Manager

Generated: 04/12/2016 09:51

00865243

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L16031613
Account: 2551
Project: 2551.096
Samples: 2
Due Date: 08-APR-2016

Samplenum	Container ID	Products
L16031613-01	721689	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	30-MAR-2016 12:39	BRG		
2	ANALYZ	V1	ORG4	31-MAR-2016 07:34	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	30-MAR-2016 12:39	BRG		
2	ANALYZ	V1	ORG4	31-MAR-2016 07:34	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	30-MAR-2016 12:39	BRG		
2	ANALYZ	V1	ORG4	31-MAR-2016 07:34	AWE	CLS	

Samplenum	Container ID	Products
L16031613-02	721690	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	30-MAR-2016 12:39	BRG		
2	ANALYZ	V1	ORG4	31-MAR-2016 07:34	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	30-MAR-2016 12:39	BRG		
2	ANALYZ	V1	ORG4	31-MAR-2016 07:34	AWE	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 - January 4, 2016

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVD NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
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)
Propionaldehyde (HPLC-UV)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1
ASTM D3987-06

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVD HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVD 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

OVD MSV01/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)

OVD HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

OVD HPLC12/HPLC/UV

Acetate
Formate

OVD RSK01/GC-FID

Acetylene
Propane

OVD K9305/ISE

Fluoroborate

SOLID AND HAZARDOUS CHEMICALS

OVD MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVD MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L16040858

Kayla Teague
AECOM Technical Services, Inc.
16000 Dallas Parkway
Dallas, TX 75248

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:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@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 April 26 2016

David L. Vandenberg

David Vandenberg – Managing Director

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00112144	H	0.0		J2317165750	X

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	All samples were checked for pH and met the standard. Exceptions are noted above under discrepancy. (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35AWW17-041116	L16040858-01	04/11/2016 08:35	04/15/2016 09:49
35AWW18-041116	L16040858-02	04/11/2016 09:30	04/15/2016 09:49
35AWW18FD-041116	L16040858-03	04/11/2016 09:30	04/15/2016 09:49
35AWW06-041116	L16040858-04	04/11/2016 10:25	04/15/2016 09:49
35AWW12-041216	L16040858-05	04/12/2016 08:15	04/15/2016 09:49
35AWW09-041216	L16040858-06	04/12/2016 09:15	04/15/2016 09:49
35AWW01-041216	L16040858-07	04/12/2016 10:20	04/15/2016 09:49
35AWW01FD-041216	L16040858-08	04/12/2016 10:20	04/15/2016 09:49
35AWW11-041216	L16040858-09	04/12/2016 11:25	04/15/2016 09:49
35AWW16-041216	L16040858-10	04/12/2016 15:15	04/15/2016 09:49
35AWW16MS-041216	L16040858-11	04/12/2016 15:15	04/15/2016 09:49
35AWW16MSD-041216	L16040858-12	04/12/2016 15:15	04/15/2016 09:49
35AWW19-041216	L16040858-13	04/13/2016 07:35	04/15/2016 09:49
LHSMW06-041316	L16040858-14	04/13/2016 07:55	04/15/2016 09:49
35AWW14-041316	L16040858-15	04/13/2016 08:05	04/15/2016 09:49
35AWW08-041316	L16040858-16	04/13/2016 08:20	04/15/2016 09:49
03WW01-041316	L16040858-17	04/13/2016 08:35	04/15/2016 09:49
LHSMW04-041316	L16040858-18	04/13/2016 08:50	04/15/2016 09:49
35AWW22-041316	L16040858-19	04/13/2016 09:05	04/15/2016 09:49
35AWW21-041316	L16040858-20	04/13/2016 10:15	04/15/2016 09:49
35AWW21FD-041316	L16040858-21	04/13/2016 10:15	04/15/2016 09:49
35AWW13-041316	L16040858-22	04/13/2016 11:15	04/15/2016 09:49
35ASW03-041316	L16040858-23	04/13/2016 12:40	04/15/2016 09:49
35AWW10-041316	L16040858-24	04/13/2016 13:45	04/15/2016 09:49
35AWW10MS-041316	L16040858-25	04/13/2016 13:45	04/15/2016 09:49
35AWW10MSD-041316	L16040858-26	04/13/2016 13:45	04/15/2016 09:49
35AWW20-041316	L16040858-27	04/13/2016 14:55	04/15/2016 09:49
35AWW15-041416	L16040858-28	04/14/2016 08:30	04/15/2016 09:49
35AWW05-041416	L16040858-29	04/14/2016 09:35	04/15/2016 09:49
LHSMW07-041416	L16040858-30	04/14/2016 10:30	04/15/2016 09:49
TRIP BLANK	L16040858-31	04/14/2016 00:01	04/15/2016 09:49

Microbac REPORT L16040858
PREPARED FOR AECOM Technical Services, Inc.
WORK ID:

1.0 Summary Data 5
1.1 Narratives 6
1.2 Certificate of Analysis 13
2.0 Full Sample Data Package 99
2.1 Volatiles Data 100
2.1.1 Volatiles GCMS Data (8260) 101
2.1.1.1 Summary Data 102
2.1.1.2 QC Summary Data 192
2.1.1.3 Sample Data 300
2.1.1.4 Standards Data 449
2.1.1.5 Raw QC Data 724
3.0 Attachments 797

1.0 Summary Data

1.1 Narratives

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16040858
Project Name:		**Method:**	8260
Prep Batch Number(s):	565328, 565673, 565386, 565517, 565880	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-25 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
Franci Bolden		Analyst I	2016-04-25 21:07:31

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16040858
Project Name:		**Method:**	8260
Prep Batch Number(s):	565328, 565673, 565386, 565517, 565880	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-25 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16040858
Project Name:		**Method:**	8260
Prep Batch Number(s):	565328, 565673, 565386, 565517, 565880	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-25 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			2
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			1
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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16040858
Project Name:		**Method:**	8260
Prep Batch Number(s):	565328, 565673, 565386, 565517, 565880	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-25 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			3
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		

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16040858
Project Name:		**Method:**	8260
Prep Batch Number(s):	565328, 565673, 565386, 565517, 565880	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-25 00:00:00		

Method detection limit (MDL) studies					
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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16040858
Project Name:		**Method:**	8260
Prep Batch Number(s):	565328, 565673, 565386, 565517, 565880	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-04-25 00:00:00		

data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with 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) Sample 16 reporting limits elevated due to brown, foamy sample matrix.

2) Chloromethane exceeded the UCL in the LCS/LCS2 analyzed 04/18/16 on HPMS6.

3) 1,2-Dibromo-3-Chloropropane was below the LCL in the CCV analyzed 4/18/16 on HPMS6. Bromomethane exceeded the UCL in the CCV analyzed 4/19/16 on HPMS8. Chloromethane was below the LCL in the CCV analyzed 4/21/16 on HPMS8.

1.2 Certificate of Analysis

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW17-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:01
Collect Date:	04/11/2016 08:35	**Dilution:**	1	**File ID:**	6M138598
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	106	85	115	
1,2-Dichloroethane-d4	107	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	107	75	120	

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW18-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:32
Collect Date:	04/11/2016 09:30	**Dilution:**	1	**File ID:**	6M138599
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	Q	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	1.05		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	2.13		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	105	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	107	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW18FD-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 19:04
Collect Date:	04/11/2016 09:30	**Dilution:**	1	**File ID:**	6M138600
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	Q	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	1.10		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	2.09		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	108	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	106	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-04	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW06-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 19:37
Collect Date:	04/11/2016 10:25	**Dilution:**	1	**File ID:**	6M138601
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	Q	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	2.28		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	13.0		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	107	85	115	
1,2-Dichloroethane-d4	106	70	120	
Toluene-d8	103	85	120	
4-Bromofluorobenzene	106	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW12-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 20:09
Collect Date:	04/12/2016 08:15	**Dilution:**	1	**File ID:**	6M138602
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	107	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	107	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW09-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 03:14
Collect Date:	04/12/2016 09:15	**Dilution:**	1	**File ID:**	8M411534
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	0.626	J	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	0.515	J	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	172		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	55.7		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	96.5	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	97.0	85	120	
4-Bromofluorobenzene	97.5	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW01-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 21:53
Collect Date:	04/12/2016 10:20	**Dilution:**	1	**File ID:**	8M411523
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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	94.2	85	115	
1,2-Dichloroethane-d4	97.7	70	120	
Toluene-d8	97.3	85	120	
4-Bromofluorobenzene	97.2	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW01FD-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 22:23
Collect Date:	04/12/2016 10:20	**Dilution:**	1	**File ID:**	8M411524
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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.2	85	115	
1,2-Dichloroethane-d4	99.0	70	120	
Toluene-d8	97.7	85	120	
4-Bromofluorobenzene	98.3	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW11-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 22:52
Collect Date:	04/12/2016 11:25	**Dilution:**	1	**File ID:**	8M411525
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	0.643	J	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	21.3		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.532	J	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	96.3	85	115	
1,2-Dichloroethane-d4	100	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	95.6	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-10	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW16-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 23:21
Collect Date:	04/12/2016 15:15	**Dilution:**	1	**File ID:**	8M411526
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	3.51	J	10.0	5.00	2.50
Benzene	71-43-2	0.307	J	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	96.0	85	115	
1,2-Dichloroethane-d4	100	70	120	
Toluene-d8	95.6	85	120	
4-Bromofluorobenzene	97.1	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-11	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW16MS-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:29
Collect Date:	04/12/2016 15:15	**Dilution:**	1	**File ID:**	8M411516
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	25.8		10.0	5.00	2.50
Benzene	71-43-2	20.7		1.00	0.250	0.125
Bromobenzene	108-86-1	19.1		1.00	0.250	0.125
Bromochloromethane	74-97-5	20.0		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.3		1.00	0.500	0.250
Bromoform	75-25-2	18.6		2.00	1.00	0.500
Bromomethane	74-83-9	22.1		2.00	1.00	0.500
2-Butanone	78-93-3	21.0		10.0	5.00	2.50
n-Butylbenzene	104-51-8	19.7		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	20.2		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	19.7		1.00	0.500	0.250
Carbon disulfide	75-15-0	18.1		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	19.2		1.00	0.500	0.250
Chlorobenzene	108-90-7	20.4		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.7		1.00	0.500	0.250
Chloroethane	75-00-3	21.2		2.00	1.00	0.500
Chloroform	67-66-3	20.3		1.00	0.250	0.125
Chloromethane	74-87-3	21.9		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	21.1		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	18.9		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.7		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.5		1.00	0.500	0.250
Dibromomethane	74-95-3	20.0		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	20.0		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	19.6		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.8		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	20.3		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.2		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.9		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	20.5		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	20.1		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	20.8		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.7		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	20.2		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	20.2		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.1		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.3		1.00	0.500	0.250
2-Hexanone	591-78-6	20.6		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	19.1		1.00	0.500	0.250
Isopropylbenzene	98-82-8	21.3		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	19.9		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	20.1		10.0	5.00	2.50
Methylene chloride	75-09-2	19.7		1.00	0.500	0.250
Naphthalene	91-20-3	18.1		1.00	0.400	0.200
n-Propylbenzene	103-65-1	20.9		1.00	0.250	0.125
Styrene	100-42-5	21.3		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.4		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	19.7		1.00	0.400	0.200
Tetrachloroethene	127-18-4	19.2		1.00	0.500	0.250
Toluene	108-88-3	20.3		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.7		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.7		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	19.7		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	21.0		1.00	0.500	0.250
Trichloroethene	79-01-6	20.6		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	18.4		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	19.6		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.1		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	20.1		1.00	0.500	0.250
Vinyl chloride	75-01-4	21.7		1.00	0.500	0.250
o-Xylene	95-47-6	20.5		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	41.6		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.4	85	115	
1,2-Dichloroethane-d4	96.7	70	120	
Toluene-d8	96.9	85	120	
4-Bromofluorobenzene	92.0	75	120	

Certificate of Analysis

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Sample #:	L16040858-12	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW16MSD-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:59
Collect Date:	04/12/2016 15:15	**Dilution:**	1	**File ID:**	8M411517
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	27.5		10.0	5.00	2.50
Benzene	71-43-2	20.6		1.00	0.250	0.125
Bromobenzene	108-86-1	18.9		1.00	0.250	0.125
Bromochloromethane	74-97-5	19.7		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.5		1.00	0.500	0.250
Bromoform	75-25-2	18.0		2.00	1.00	0.500
Bromomethane	74-83-9	22.7		2.00	1.00	0.500
2-Butanone	78-93-3	20.9		10.0	5.00	2.50
n-Butylbenzene	104-51-8	19.7		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	20.2		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	19.8		1.00	0.500	0.250
Carbon disulfide	75-15-0	17.9		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	19.3		1.00	0.500	0.250
Chlorobenzene	108-90-7	20.1		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.4		1.00	0.500	0.250
Chloroethane	75-00-3	20.6		2.00	1.00	0.500
Chloroform	67-66-3	20.4		1.00	0.250	0.125
Chloromethane	74-87-3	21.9		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	20.9		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	19.2		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.6		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.1		1.00	0.500	0.250
Dibromomethane	74-95-3	20.1		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	19.9		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	19.9		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	20.1		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	19.1		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.1		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.9		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	18.2		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.8		1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	20.0		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	20.4		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.2		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	19.7		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.4		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.1		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	18.6		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.4		1.00	0.500	0.250
2-Hexanone	591-78-6	20.5		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	18.6		1.00	0.500	0.250
Isopropylbenzene	98-82-8	21.2		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	19.8		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	18.9		10.0	5.00	2.50
Methylene chloride	75-09-2	19.9		1.00	0.500	0.250
Naphthalene	91-20-3	17.9		1.00	0.400	0.200
n-Propylbenzene	103-65-1	21.1		1.00	0.250	0.125
Styrene	100-42-5	21.1		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	19.9		1.00	0.400	0.200
Tetrachloroethene	127-18-4	18.4		1.00	0.500	0.250
Toluene	108-88-3	20.1		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.4		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	19.6		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	20.8		1.00	0.500	0.250
Trichloroethene	79-01-6	20.4		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	18.3		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	18.8		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.8		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	20.0		1.00	0.500	0.250
Vinyl chloride	75-01-4	20.4		1.00	0.500	0.250
o-Xylene	95-47-6	20.0		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	41.3		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.9	85	115	
1,2-Dichloroethane-d4	96.5	70	120	
Toluene-d8	95.6	85	120	
4-Bromofluorobenzene	90.8	75	120	

Certificate of Analysis

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Sample #:	L16040858-13	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW19-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 23:49
Collect Date:	04/13/2016 07:35	**Dilution:**	1	**File ID:**	8M411527
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	2.59		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	2.96		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	13.5		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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.899	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	95.8	85	115	
1,2-Dichloroethane-d4	98.7	70	120	
Toluene-d8	96.2	85	120	
4-Bromofluorobenzene	95.4	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-14	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW06-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 00:18
Collect Date:	04/13/2016 07:55	**Dilution:**	1	**File ID:**	8M411528
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	4.87		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	13.7		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	11.9		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.563	J	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	6.50		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	2.38		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	95.2	85	115	
1,2-Dichloroethane-d4	100	70	120	
Toluene-d8	96.2	85	120	
4-Bromofluorobenzene	97.3	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-15	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW14-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 00:48
Collect Date:	04/13/2016 08:05	**Dilution:**	1	**File ID:**	8M411529
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	6.57		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	3.25		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	1.78		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	1.79		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	97.3	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	96.9	85	120	
4-Bromofluorobenzene	96.5	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-16	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW08-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 01:46
Collect Date:	04/13/2016 08:20	**Dilution:**	25	**File ID:**	8M411531
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	122	J	250	125	62.5
Benzene	71-43-2	6.26	U	25.0	6.26	3.13
Bromobenzene	108-86-1	6.26	U	25.0	6.26	3.13
Bromochloromethane	74-97-5	10.0	U	25.0	10.0	5.00
Bromodichloromethane	75-27-4	12.5	U	25.0	12.5	6.25
Bromoform	75-25-2	25.0	U	50.0	25.0	12.5
Bromomethane	74-83-9	25.0	U	50.0	25.0	12.5
2-Butanone	78-93-3	125	U	250	125	62.5
n-Butylbenzene	104-51-8	12.5	U	25.0	12.5	6.25
sec-Butylbenzene	135-98-8	12.5	U	25.0	12.5	6.25
tert-Butylbenzene	98-06-6	12.5	U	25.0	12.5	6.25
Carbon disulfide	75-15-0	25.0	U	50.0	25.0	12.5
Carbon tetrachloride	56-23-5	12.5	U	25.0	12.5	6.25
Chlorobenzene	108-90-7	6.26	U	25.0	6.26	3.13
Chlorodibromomethane	124-48-1	12.5	U	25.0	12.5	6.25
Chloroethane	75-00-3	25.0	U	50.0	25.0	12.5
Chloroform	67-66-3	6.26	U	25.0	6.26	3.13
Chloromethane	74-87-3	25.0	U	50.0	25.0	12.5
2-Chlorotoluene	95-49-8	6.26	U	25.0	6.26	3.13
4-Chlorotoluene	106-43-4	12.5	U	25.0	12.5	6.25
1,2-Dibromo-3-chloropropane	96-12-8	50.0	U	125	50.0	25.0
1,2-Dibromoethane	106-93-4	12.5	U	25.0	12.5	6.25
Dibromomethane	74-95-3	12.5	U	25.0	12.5	6.25
1,2-Dichlorobenzene	95-50-1	6.26	U	25.0	6.26	3.13
1,3-Dichlorobenzene	541-73-1	12.5	U	25.0	12.5	6.25
1,4-Dichlorobenzene	106-46-7	6.26	U	25.0	6.26	3.13
Dichlorodifluoromethane	75-71-8	12.5	U	25.0	12.5	6.25
1,1-Dichloroethane	75-34-3	6.26	U	25.0	6.26	3.13
1,2-Dichloroethane	107-06-2	12.5	U	25.0	12.5	6.25
1,1-Dichloroethene	75-35-4	25.0	U	50.0	25.0	12.5
cis-1,2-Dichloroethene	156-59-2	60.9		25.0	12.5	6.25

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	12.5	U	25.0	12.5	6.25
1,2-Dichloropropane	78-87-5	10.0	U	25.0	10.0	5.00
1,3-Dichloropropane	142-28-9	10.0	U	25.0	10.0	5.00
2,2-Dichloropropane	594-20-7	12.5	U	25.0	12.5	6.25
cis-1,3-Dichloropropene	10061-01-5	12.5	U	25.0	12.5	6.25
trans-1,3-Dichloropropene	10061-02-6	25.0	U	50.0	25.0	12.5
1,1-Dichloropropene	563-58-6	12.5	U	25.0	12.5	6.25
Ethylbenzene	100-41-4	12.5	U	25.0	12.5	6.25
2-Hexanone	591-78-6	125	U	250	125	62.5
Hexachlorobutadiene	87-68-3	12.5	U	25.0	12.5	6.25
Isopropylbenzene	98-82-8	12.5	U	25.0	12.5	6.25
p-Isopropyltoluene	99-87-6	12.5	U	25.0	12.5	6.25
4-Methyl-2-pentanone	108-10-1	125	U	250	125	62.5
Methylene chloride	75-09-2	12.5	U	25.0	12.5	6.25
Naphthalene	91-20-3	10.0	U	25.0	10.0	5.00
n-Propylbenzene	103-65-1	6.26	U	25.0	6.26	3.13
Styrene	100-42-5	6.26	U	25.0	6.26	3.13
1,1,1,2-Tetrachloroethane	630-20-6	12.5	U	25.0	12.5	6.25
1,1,2,2-Tetrachloroethane	79-34-5	10.0	U	25.0	10.0	5.00
Tetrachloroethene	127-18-4	80.1		25.0	12.5	6.25
Toluene	108-88-3	12.5	U	25.0	12.5	6.25
1,2,3-Trichlorobenzene	87-61-6	7.50	U	25.0	7.50	3.75
1,2,4-Trichlorobenzene	120-82-1	10.0	U	25.0	10.0	5.00
1,1,1-Trichloroethane	71-55-6	12.5	U	25.0	12.5	6.25
1,1,2-Trichloroethane	79-00-5	12.5	U	25.0	12.5	6.25
Trichloroethene	79-01-6	234		25.0	12.5	6.25
Trichlorofluoromethane	75-69-4	12.5	U	25.0	12.5	6.25
1,2,3-Trichloropropane	96-18-4	25.0	U	50.0	25.0	12.5
1,2,4-Trimethylbenzene	95-63-6	12.5	U	25.0	12.5	6.25
1,3,5-Trimethylbenzene	108-67-8	12.5	U	25.0	12.5	6.25
Vinyl chloride	75-01-4	14.2	J	25.0	12.5	6.25
o-Xylene	95-47-6	12.5	U	25.0	12.5	6.25
m-,p-Xylene	179601-23-1	25.0	U	50.0	25.0	12.5

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	91.7	85	115	
1,2-Dichloroethane-d4	98.1	70	120	
Toluene-d8	98.3	85	120	
4-Bromofluorobenzene	94.5	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.

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-17	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	03WW01-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 22:09
Collect Date:	04/13/2016 08:35	**Dilution:**	25	**File ID:**	8M411561
Sample Tag:	DL02	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	4180		250	125	62.5
Benzene	71-43-2	6.26	U	25.0	6.26	3.13
Bromobenzene	108-86-1	6.26	U	25.0	6.26	3.13
Bromochloromethane	74-97-5	10.0	U	25.0	10.0	5.00
Bromodichloromethane	75-27-4	12.5	U	25.0	12.5	6.25
Bromoform	75-25-2	25.0	U	50.0	25.0	12.5
Bromomethane	74-83-9	25.0	Q	50.0	25.0	12.5
2-Butanone	78-93-3	3610		250	125	62.5
n-Butylbenzene	104-51-8	12.5	U	25.0	12.5	6.25
sec-Butylbenzene	135-98-8	12.5	U	25.0	12.5	6.25
tert-Butylbenzene	98-06-6	12.5	U	25.0	12.5	6.25
Carbon disulfide	75-15-0	25.0	U	50.0	25.0	12.5
Carbon tetrachloride	56-23-5	12.5	U	25.0	12.5	6.25
Chlorobenzene	108-90-7	6.26	U	25.0	6.26	3.13
Chlorodibromomethane	124-48-1	12.5	U	25.0	12.5	6.25
Chloroethane	75-00-3	25.0	U	50.0	25.0	12.5
Chloroform	67-66-3	6.26	U	25.0	6.26	3.13
Chloromethane	74-87-3	25.0	U	50.0	25.0	12.5
2-Chlorotoluene	95-49-8	6.26	U	25.0	6.26	3.13
4-Chlorotoluene	106-43-4	12.5	U	25.0	12.5	6.25
1,2-Dibromo-3-chloropropane	96-12-8	50.0	U	125	50.0	25.0
1,2-Dibromoethane	106-93-4	12.5	U	25.0	12.5	6.25
Dibromomethane	74-95-3	12.5	U	25.0	12.5	6.25
1,2-Dichlorobenzene	95-50-1	6.26	U	25.0	6.26	3.13
1,3-Dichlorobenzene	541-73-1	12.5	U	25.0	12.5	6.25
1,4-Dichlorobenzene	106-46-7	6.26	U	25.0	6.26	3.13
Dichlorodifluoromethane	75-71-8	12.5	U	25.0	12.5	6.25
1,1-Dichloroethane	75-34-3	6.26	U	25.0	6.26	3.13
1,2-Dichloroethane	107-06-2	12.5	U	25.0	12.5	6.25
1,1-Dichloroethene	75-35-4	25.0	U	50.0	25.0	12.5
cis-1,2-Dichloroethene	156-59-2	117		25.0	12.5	6.25

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	12.5	U	25.0	12.5	6.25
1,2-Dichloropropane	78-87-5	10.0	U	25.0	10.0	5.00
1,3-Dichloropropane	142-28-9	10.0	U	25.0	10.0	5.00
2,2-Dichloropropane	594-20-7	12.5	U	25.0	12.5	6.25
cis-1,3-Dichloropropene	10061-01-5	12.5	U	25.0	12.5	6.25
trans-1,3-Dichloropropene	10061-02-6	25.0	U	50.0	25.0	12.5
1,1-Dichloropropene	563-58-6	12.5	U	25.0	12.5	6.25
Ethylbenzene	100-41-4	12.5	U	25.0	12.5	6.25
2-Hexanone	591-78-6	125	U	250	125	62.5
Hexachlorobutadiene	87-68-3	12.5	U	25.0	12.5	6.25
Isopropylbenzene	98-82-8	12.5	U	25.0	12.5	6.25
p-Isopropyltoluene	99-87-6	12.5	U	25.0	12.5	6.25
4-Methyl-2-pentanone	108-10-1	125	U	250	125	62.5
Methylene chloride	75-09-2	12.5	U	25.0	12.5	6.25
Naphthalene	91-20-3	10.0	U	25.0	10.0	5.00
n-Propylbenzene	103-65-1	6.26	U	25.0	6.26	3.13
Styrene	100-42-5	6.26	U	25.0	6.26	3.13
1,1,1,2-Tetrachloroethane	630-20-6	12.5	U	25.0	12.5	6.25
1,1,2,2-Tetrachloroethane	79-34-5	10.0	U	25.0	10.0	5.00
Tetrachloroethene	127-18-4	6.49	J	25.0	12.5	6.25
Toluene	108-88-3	12.5	U	25.0	12.5	6.25
1,2,3-Trichlorobenzene	87-61-6	7.50	U	25.0	7.50	3.75
1,2,4-Trichlorobenzene	120-82-1	10.0	U	25.0	10.0	5.00
1,1,1-Trichloroethane	71-55-6	12.5	U	25.0	12.5	6.25
1,1,2-Trichloroethane	79-00-5	12.5	U	25.0	12.5	6.25
Trichloroethene	79-01-6	12.5	U	25.0	12.5	6.25
Trichlorofluoromethane	75-69-4	12.5	U	25.0	12.5	6.25
1,2,3-Trichloropropane	96-18-4	25.0	U	50.0	25.0	12.5
1,2,4-Trimethylbenzene	95-63-6	12.5	U	25.0	12.5	6.25
1,3,5-Trimethylbenzene	108-67-8	12.5	U	25.0	12.5	6.25
Vinyl chloride	75-01-4	12.5	U	25.0	12.5	6.25
o-Xylene	95-47-6	12.5	U	25.0	12.5	6.25
m-,p-Xylene	179601-23-1	25.0	U	50.0	25.0	12.5

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.4	85	115	
1,2-Dichloroethane-d4	97.6	70	120	
Toluene-d8	98.2	85	120	
4-Bromofluorobenzene	94.3	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-18	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW04-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 23:08
Collect Date:	04/13/2016 08:50	**Dilution:**	2.5	**File ID:**	8M411563
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	12.5	U	25.0	12.5	6.25
Benzene	71-43-2	0.626	U	2.50	0.626	0.313
Bromobenzene	108-86-1	0.626	U	2.50	0.626	0.313
Bromochloromethane	74-97-5	1.00	U	2.50	1.00	0.500
Bromodichloromethane	75-27-4	1.25	U	2.50	1.25	0.625
Bromoform	75-25-2	2.50	U	5.00	2.50	1.25
Bromomethane	74-83-9	2.50	Q	5.00	2.50	1.25
2-Butanone	78-93-3	12.5	U	25.0	12.5	6.25
n-Butylbenzene	104-51-8	1.25	U	2.50	1.25	0.625
sec-Butylbenzene	135-98-8	1.25	U	2.50	1.25	0.625
tert-Butylbenzene	98-06-6	1.25	U	2.50	1.25	0.625
Carbon disulfide	75-15-0	2.50	U	5.00	2.50	1.25
Carbon tetrachloride	56-23-5	1.25	U	2.50	1.25	0.625
Chlorobenzene	108-90-7	0.626	U	2.50	0.626	0.313
Chlorodibromomethane	124-48-1	1.25	U	2.50	1.25	0.625
Chloroethane	75-00-3	2.50	U	5.00	2.50	1.25
Chloroform	67-66-3	0.626	U	2.50	0.626	0.313
Chloromethane	74-87-3	2.50	U	5.00	2.50	1.25
2-Chlorotoluene	95-49-8	0.626	U	2.50	0.626	0.313
4-Chlorotoluene	106-43-4	1.25	U	2.50	1.25	0.625
1,2-Dibromo-3-chloropropane	96-12-8	5.00	U	12.5	5.00	2.50
1,2-Dibromoethane	106-93-4	1.25	U	2.50	1.25	0.625
Dibromomethane	74-95-3	1.25	U	2.50	1.25	0.625
1,2-Dichlorobenzene	95-50-1	0.626	U	2.50	0.626	0.313
1,3-Dichlorobenzene	541-73-1	1.25	U	2.50	1.25	0.625
1,4-Dichlorobenzene	106-46-7	0.626	U	2.50	0.626	0.313
Dichlorodifluoromethane	75-71-8	1.25	U	2.50	1.25	0.625
1,1-Dichloroethane	75-34-3	0.543	J	2.50	0.626	0.313
1,2-Dichloroethane	107-06-2	1.25	U	2.50	1.25	0.625
1,1-Dichloroethene	75-35-4	2.50	U	5.00	2.50	1.25
cis-1,2-Dichloroethene	156-59-2	0.851	J	2.50	1.25	0.625

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	1.25	U	2.50	1.25	0.625
1,2-Dichloropropane	78-87-5	1.00	U	2.50	1.00	0.500
1,3-Dichloropropane	142-28-9	1.00	U	2.50	1.00	0.500
2,2-Dichloropropane	594-20-7	1.25	U	2.50	1.25	0.625
cis-1,3-Dichloropropene	10061-01-5	1.25	U	2.50	1.25	0.625
trans-1,3-Dichloropropene	10061-02-6	2.50	U	5.00	2.50	1.25
1,1-Dichloropropene	563-58-6	1.25	U	2.50	1.25	0.625
Ethylbenzene	100-41-4	1.25	U	2.50	1.25	0.625
2-Hexanone	591-78-6	12.5	U	25.0	12.5	6.25
Hexachlorobutadiene	87-68-3	1.25	U	2.50	1.25	0.625
Isopropylbenzene	98-82-8	1.25	U	2.50	1.25	0.625
p-Isopropyltoluene	99-87-6	1.25	U	2.50	1.25	0.625
4-Methyl-2-pentanone	108-10-1	12.5	U	25.0	12.5	6.25
Methylene chloride	75-09-2	1.25	U	2.50	1.25	0.625
Naphthalene	91-20-3	1.00	U	2.50	1.00	0.500
n-Propylbenzene	103-65-1	0.626	U	2.50	0.626	0.313
Styrene	100-42-5	0.626	U	2.50	0.626	0.313
1,1,1,2-Tetrachloroethane	630-20-6	1.25	U	2.50	1.25	0.625
1,1,2,2-Tetrachloroethane	79-34-5	1.00	U	2.50	1.00	0.500
Tetrachloroethene	127-18-4	397		2.50	1.25	0.625
Toluene	108-88-3	1.25	U	2.50	1.25	0.625
1,2,3-Trichlorobenzene	87-61-6	0.750	U	2.50	0.750	0.375
1,2,4-Trichlorobenzene	120-82-1	1.00	U	2.50	1.00	0.500
1,1,1-Trichloroethane	71-55-6	1.25	U	2.50	1.25	0.625
1,1,2-Trichloroethane	79-00-5	1.25	U	2.50	1.25	0.625
Trichloroethene	79-01-6	86.1		2.50	1.25	0.625
Trichlorofluoromethane	75-69-4	1.25	U	2.50	1.25	0.625
1,2,3-Trichloropropane	96-18-4	2.50	U	5.00	2.50	1.25
1,2,4-Trimethylbenzene	95-63-6	1.25	U	2.50	1.25	0.625
1,3,5-Trimethylbenzene	108-67-8	1.25	U	2.50	1.25	0.625
Vinyl chloride	75-01-4	1.25	U	2.50	1.25	0.625
o-Xylene	95-47-6	1.25	U	2.50	1.25	0.625
m-,p-Xylene	179601-23-1	2.50	U	5.00	2.50	1.25

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	85	115	
1,2-Dichloroethane-d4	95.6	70	120	
Toluene-d8	97.5	85	120	
4-Bromofluorobenzene	97.2	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-19	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW22-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 01:17
Collect Date:	04/13/2016 09:05	**Dilution:**	1	**File ID:**	8M411530
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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.6	85	115	
1,2-Dichloroethane-d4	98.9	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	95.3	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-20	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW21-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 19:14
Collect Date:	04/13/2016 10:15	**Dilution:**	1	**File ID:**	8M411554
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	91.8	85	115	
1,2-Dichloroethane-d4	93.7	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	96.3	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-21	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW21FD-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 19:44
Collect Date:	04/13/2016 10:15	**Dilution:**	1	**File ID:**	8M411555
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	94.0	85	115	
1,2-Dichloroethane-d4	96.9	70	120	
Toluene-d8	97.4	85	120	
4-Bromofluorobenzene	96.4	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-22	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW13-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 20:13
Collect Date:	04/13/2016 11:15	**Dilution:**	1	**File ID:**	8M411556
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	0.303	J	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	Q	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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	96.4	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	97.9	85	120	
4-Bromofluorobenzene	96.8	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35ASW03-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 20:42
Collect Date:	04/13/2016 12:40	**Dilution:**	1	**File ID:**	8M411557
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.5	85	115	
1,2-Dichloroethane-d4	96.3	70	120	
Toluene-d8	96.8	85	120	
4-Bromofluorobenzene	97.5	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW10-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 18:45
Collect Date:	04/13/2016 13:45	**Dilution:**	1	**File ID:**	8M411553
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	94.3	85	115	
1,2-Dichloroethane-d4	91.6	70	120	
Toluene-d8	95.3	85	120	
4-Bromofluorobenzene	96.8	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-25	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW10MS-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 16:48
Collect Date:	04/13/2016 13:45	**Dilution:**	1	**File ID:**	8M411549
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	21.5		10.0	5.00	2.50
Benzene	71-43-2	21.2		1.00	0.250	0.125
Bromobenzene	108-86-1	20.3		1.00	0.250	0.125
Bromochloromethane	74-97-5	19.4		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.5		1.00	0.500	0.250
Bromoform	75-25-2	17.9		2.00	1.00	0.500
Bromomethane	74-83-9	23.3	Q	2.00	1.00	0.500
2-Butanone	78-93-3	18.6		10.0	5.00	2.50
n-Butylbenzene	104-51-8	22.7		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	22.9		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	22.3		1.00	0.500	0.250
Carbon disulfide	75-15-0	19.5		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	20.8		1.00	0.500	0.250
Chlorobenzene	108-90-7	21.2		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.1		1.00	0.500	0.250
Chloroethane	75-00-3	22.6		2.00	1.00	0.500
Chloroform	67-66-3	21.2		1.00	0.250	0.125
Chloromethane	74-87-3	22.2		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	22.1		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	21.7		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	17.6		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	19.7		1.00	0.500	0.250
Dibromomethane	74-95-3	20.4		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	20.7		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	20.9		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	21.0		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	21.9		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.9		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.9		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	20.0		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	21.4		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	21.4		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.1		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	21.7		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.9		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.1		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	20.3		1.00	0.500	0.250
Ethylbenzene	100-41-4	20.6		1.00	0.500	0.250
2-Hexanone	591-78-6	19.0		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	23.4		1.00	0.500	0.250
Isopropylbenzene	98-82-8	22.5		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	22.2		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	20.3		1.00	0.500	0.250
Naphthalene	91-20-3	16.2		1.00	0.400	0.200
n-Propylbenzene	103-65-1	23.4		1.00	0.250	0.125
Styrene	100-42-5	21.7		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.8		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	19.6		1.00	0.400	0.200
Tetrachloroethene	127-18-4	20.1		1.00	0.500	0.250
Toluene	108-88-3	21.6		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	17.5		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.8		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	20.7		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	20.2		1.00	0.500	0.250
Trichloroethene	79-01-6	21.9		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	20.0		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	21.6		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	22.4		1.00	0.500	0.250
Vinyl chloride	75-01-4	20.9		1.00	0.500	0.250
o-Xylene	95-47-6	21.1		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	43.4		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.5	85	115	
1,2-Dichloroethane-d4	92.5	70	120	
Toluene-d8	96.5	85	120	
4-Bromofluorobenzene	94.0	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-26	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW10MSD-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 17:17
Collect Date:	04/13/2016 13:45	**Dilution:**	1	**File ID:**	8M411550
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	21.8		10.0	5.00	2.50
Benzene	71-43-2	20.8		1.00	0.250	0.125
Bromobenzene	108-86-1	19.2		1.00	0.250	0.125
Bromochloromethane	74-97-5	19.8		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.5		1.00	0.500	0.250
Bromoform	75-25-2	17.8		2.00	1.00	0.500
Bromomethane	74-83-9	23.1	Q	2.00	1.00	0.500
2-Butanone	78-93-3	19.9		10.0	5.00	2.50
n-Butylbenzene	104-51-8	20.8		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	20.8		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	20.4		1.00	0.500	0.250
Carbon disulfide	75-15-0	18.7		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	19.9		1.00	0.500	0.250
Chlorobenzene	108-90-7	20.6		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.5		1.00	0.500	0.250
Chloroethane	75-00-3	21.5		2.00	1.00	0.500
Chloroform	67-66-3	20.3		1.00	0.250	0.125
Chloromethane	74-87-3	21.9		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	20.9		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	19.8		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.1		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.2		1.00	0.500	0.250
Dibromomethane	74-95-3	20.4		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	19.8		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	19.6		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.9		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	20.5		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.3		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.7		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	19.5		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.6		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	20.5		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	21.0		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.6		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	20.3		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.8		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.2		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.7		1.00	0.500	0.250
Ethylbenzene	100-41-4	20.1		1.00	0.500	0.250
2-Hexanone	591-78-6	20.2		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	21.4		1.00	0.500	0.250
Isopropylbenzene	98-82-8	21.7		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	20.5		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	19.8		10.0	5.00	2.50
Methylene chloride	75-09-2	19.9		1.00	0.500	0.250
Naphthalene	91-20-3	16.5		1.00	0.400	0.200
n-Propylbenzene	103-65-1	21.8		1.00	0.250	0.125
Styrene	100-42-5	21.2		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	19.6		1.00	0.400	0.200
Tetrachloroethene	127-18-4	19.3		1.00	0.500	0.250
Toluene	108-88-3	20.7		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	17.3		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.1		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	20.4		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	20.6		1.00	0.500	0.250
Trichloroethene	79-01-6	20.8		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	19.4		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	18.4		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.1		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	20.8		1.00	0.500	0.250
Vinyl chloride	75-01-4	21.9		1.00	0.500	0.250
o-Xylene	95-47-6	20.4		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	41.4		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.5	85	115	
1,2-Dichloroethane-d4	94.4	70	120	
Toluene-d8	97.1	85	120	
4-Bromofluorobenzene	92.0	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW20-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/20/2016 02:02
Collect Date:	04/13/2016 14:55	**Dilution:**	10	**File ID:**	8M411569
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	50.0	U	100	50.0	25.0
Benzene	71-43-2	7.09	J	10.0	2.50	1.25
Bromobenzene	108-86-1	2.50	U	10.0	2.50	1.25
Bromochloromethane	74-97-5	4.00	U	10.0	4.00	2.00
Bromodichloromethane	75-27-4	5.00	U	10.0	5.00	2.50
Bromoform	75-25-2	10.0	U	20.0	10.0	5.00
Bromomethane	74-83-9	10.0	Q	20.0	10.0	5.00
2-Butanone	78-93-3	50.0	U	100	50.0	25.0
n-Butylbenzene	104-51-8	5.00	U	10.0	5.00	2.50
sec-Butylbenzene	135-98-8	5.00	U	10.0	5.00	2.50
tert-Butylbenzene	98-06-6	5.00	U	10.0	5.00	2.50
Carbon disulfide	75-15-0	10.0	U	20.0	10.0	5.00
Carbon tetrachloride	56-23-5	5.00	U	10.0	5.00	2.50
Chlorobenzene	108-90-7	2.50	U	10.0	2.50	1.25
Chlorodibromomethane	124-48-1	5.00	U	10.0	5.00	2.50
Chloroethane	75-00-3	10.0	U	20.0	10.0	5.00
Chloroform	67-66-3	2.50	U	10.0	2.50	1.25
Chloromethane	74-87-3	10.0	U	20.0	10.0	5.00
2-Chlorotoluene	95-49-8	2.50	U	10.0	2.50	1.25
4-Chlorotoluene	106-43-4	5.00	U	10.0	5.00	2.50
1,2-Dibromo-3-chloropropane	96-12-8	20.0	U	50.0	20.0	10.0
1,2-Dibromoethane	106-93-4	5.00	U	10.0	5.00	2.50
Dibromomethane	74-95-3	5.00	U	10.0	5.00	2.50
1,2-Dichlorobenzene	95-50-1	7.29	J	10.0	2.50	1.25
1,3-Dichlorobenzene	541-73-1	5.00	U	10.0	5.00	2.50
1,4-Dichlorobenzene	106-46-7	2.50	U	10.0	2.50	1.25
Dichlorodifluoromethane	75-71-8	5.00	U	10.0	5.00	2.50
1,1-Dichloroethane	75-34-3	522		10.0	2.50	1.25
1,2-Dichloroethane	107-06-2	17.7		10.0	5.00	2.50
cis-1,2-Dichloroethene	156-59-2	126		10.0	5.00	2.50
trans-1,2-Dichloroethene	156-60-5	5.16	J	10.0	5.00	2.50

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	4.00	U	10.0	4.00	2.00
1,3-Dichloropropane	142-28-9	4.00	U	10.0	4.00	2.00
2,2-Dichloropropane	594-20-7	5.00	U	10.0	5.00	2.50
cis-1,3-Dichloropropene	10061-01-5	5.00	U	10.0	5.00	2.50
trans-1,3-Dichloropropene	10061-02-6	10.0	U	20.0	10.0	5.00
1,1-Dichloropropene	563-58-6	5.00	U	10.0	5.00	2.50
Ethylbenzene	100-41-4	5.00	U	10.0	5.00	2.50
2-Hexanone	591-78-6	50.0	U	100	50.0	25.0
Hexachlorobutadiene	87-68-3	5.00	U	10.0	5.00	2.50
Isopropylbenzene	98-82-8	5.00	U	10.0	5.00	2.50
p-Isopropyltoluene	99-87-6	5.00	U	10.0	5.00	2.50
4-Methyl-2-pentanone	108-10-1	50.0	U	100	50.0	25.0
Methylene chloride	75-09-2	5.00	U	10.0	5.00	2.50
Naphthalene	91-20-3	4.00	U	10.0	4.00	2.00
n-Propylbenzene	103-65-1	2.50	U	10.0	2.50	1.25
Styrene	100-42-5	2.50	U	10.0	2.50	1.25
1,1,1,2-Tetrachloroethane	630-20-6	5.00	U	10.0	5.00	2.50
1,1,2,2-Tetrachloroethane	79-34-5	4.00	U	10.0	4.00	2.00
Tetrachloroethene	127-18-4	5.00	U	10.0	5.00	2.50
Toluene	108-88-3	5.00	U	10.0	5.00	2.50
1,2,3-Trichlorobenzene	87-61-6	3.00	U	10.0	3.00	1.50
1,2,4-Trichlorobenzene	120-82-1	4.00	U	10.0	4.00	2.00
1,1,1-Trichloroethane	71-55-6	5.00	U	10.0	5.00	2.50
1,1,2-Trichloroethane	79-00-5	67.0		10.0	5.00	2.50
Trichloroethene	79-01-6	707		10.0	5.00	2.50
Trichlorofluoromethane	75-69-4	5.00	U	10.0	5.00	2.50
1,2,3-Trichloropropane	96-18-4	10.0	U	20.0	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6	5.00	U	10.0	5.00	2.50
1,3,5-Trimethylbenzene	108-67-8	5.00	U	10.0	5.00	2.50
Vinyl chloride	75-01-4	216		10.0	5.00	2.50
o-Xylene	95-47-6	5.00	U	10.0	5.00	2.50
m-,p-Xylene	179601-23-1	10.0	U	20.0	10.0	5.00

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.0	85	115	
1,2-Dichloroethane-d4	97.8	70	120	
Toluene-d8	98.0	85	120	
4-Bromofluorobenzene	96.5	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW20-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565880	**Analyst:**	TMB	**Run Date:**	04/21/2016 16:57
Collect Date:	04/13/2016 14:55	**Dilution:**	20	**File ID:**	8M411617
Sample Tag:	DL02	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,1-Dichloroethene	75-35-4	5460		40.0	20.0	10.0

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	112	70	120	
Toluene-d8	92.7	85	120	
4-Bromofluorobenzene	93.8	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-28	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW15-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 21:11
Collect Date:	04/14/2016 08:30	**Dilution:**	1	**File ID:**	8M411558
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	96.3	85	115	
1,2-Dichloroethane-d4	98.8	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	96.2	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-29	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW05-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 21:40
Collect Date:	04/14/2016 09:35	**Dilution:**	1	**File ID:**	8M411559
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.4	85	115	
1,2-Dichloroethane-d4	96.8	70	120	
Toluene-d8	96.2	85	120	
4-Bromofluorobenzene	98.2	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW07-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/20/2016 01:32
Collect Date:	04/14/2016 10:30	**Dilution:**	1	**File ID:**	8M411568
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	1.09		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	Q	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	0.404	J	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	0.142	J	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	106		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	2.23		1.00	0.500	0.250
cis-1,2-Dichloroethene	156-59-2	19.6		1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.681	J	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.397	J	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	4.96		1.00	0.500	0.250
Trichloroethene	79-01-6	67.5		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	10.8		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	95.1	85	115	
1,2-Dichloroethane-d4	94.1	70	120	
Toluene-d8	94.9	85	120	
4-Bromofluorobenzene	95.4	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW07-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565880	**Analyst:**	TMB	**Run Date:**	04/21/2016 17:25
Collect Date:	04/14/2016 10:30	**Dilution:**	100	**File ID:**	8M411618
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,1-Dichloroethene	75-35-4	1250		200	100	50.0

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	85	115	
1,2-Dichloroethane-d4	111	70	120	
Toluene-d8	93.2	85	120	
4-Bromofluorobenzene	94.5	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	TRIP BLANK	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565673	**Analyst:**	TMB	**Run Date:**	04/20/2016 18:50
Collect Date:	04/14/2016 00:01	**Dilution:**	1	**File ID:**	6M138669
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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	110	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	107	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW17-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:01
Collect Date:	04/11/2016 08:35	**Dilution:**	1	**File ID:**	6M138598
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	106	85	115	
1,2-Dichloroethane-d4	107	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	107	75	120	

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW18-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:32
Collect Date:	04/11/2016 09:30	**Dilution:**	1	**File ID:**	6M138599
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	Q	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	1.05		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	2.13		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	105	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	107	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW18FD-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 19:04
Collect Date:	04/11/2016 09:30	**Dilution:**	1	**File ID:**	6M138600
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	Q	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	1.10		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	2.09		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	108	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	106	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-04	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW06-041116	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 19:37
Collect Date:	04/11/2016 10:25	**Dilution:**	1	**File ID:**	6M138601
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	Q	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	2.28		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	13.0		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	107	85	115	
1,2-Dichloroethane-d4	106	70	120	
Toluene-d8	103	85	120	
4-Bromofluorobenzene	106	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW12-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565328	**Analyst:**	TMB	**Run Date:**	04/18/2016 20:09
Collect Date:	04/12/2016 08:15	**Dilution:**	1	**File ID:**	6M138602
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	107	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	107	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW09-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 03:14
Collect Date:	04/12/2016 09:15	**Dilution:**	1	**File ID:**	8M411534
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	0.626	J	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	0.515	J	1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	172		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	55.7		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	96.5	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	97.0	85	120	
4-Bromofluorobenzene	97.5	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW01-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 21:53
Collect Date:	04/12/2016 10:20	**Dilution:**	1	**File ID:**	8M411523
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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	94.2	85	115	
1,2-Dichloroethane-d4	97.7	70	120	
Toluene-d8	97.3	85	120	
4-Bromofluorobenzene	97.2	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW01FD-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 22:23
Collect Date:	04/12/2016 10:20	**Dilution:**	1	**File ID:**	8M411524
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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.2	85	115	
1,2-Dichloroethane-d4	99.0	70	120	
Toluene-d8	97.7	85	120	
4-Bromofluorobenzene	98.3	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW11-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 22:52
Collect Date:	04/12/2016 11:25	**Dilution:**	1	**File ID:**	8M411525
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	0.643	J	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	21.3		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.532	J	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	96.3	85	115	
1,2-Dichloroethane-d4	100	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	95.6	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-10	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW16-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 23:21
Collect Date:	04/12/2016 15:15	**Dilution:**	1	**File ID:**	8M411526
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	3.51	J	10.0	5.00	2.50
Benzene	71-43-2	0.307	J	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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	96.0	85	115	
1,2-Dichloroethane-d4	100	70	120	
Toluene-d8	95.6	85	120	
4-Bromofluorobenzene	97.1	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-11	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW16MS-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:29
Collect Date:	04/12/2016 15:15	**Dilution:**	1	**File ID:**	8M411516
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	25.8		10.0	5.00	2.50
Benzene	71-43-2	20.7		1.00	0.250	0.125
Bromobenzene	108-86-1	19.1		1.00	0.250	0.125
Bromochloromethane	74-97-5	20.0		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.3		1.00	0.500	0.250
Bromoform	75-25-2	18.6		2.00	1.00	0.500
Bromomethane	74-83-9	22.1		2.00	1.00	0.500
2-Butanone	78-93-3	21.0		10.0	5.00	2.50
n-Butylbenzene	104-51-8	19.7		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	20.2		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	19.7		1.00	0.500	0.250
Carbon disulfide	75-15-0	18.1		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	19.2		1.00	0.500	0.250
Chlorobenzene	108-90-7	20.4		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.7		1.00	0.500	0.250
Chloroethane	75-00-3	21.2		2.00	1.00	0.500
Chloroform	67-66-3	20.3		1.00	0.250	0.125
Chloromethane	74-87-3	21.9		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	21.1		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	18.9		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.7		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.5		1.00	0.500	0.250
Dibromomethane	74-95-3	20.0		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	20.0		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	19.6		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.8		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	20.3		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.2		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.9		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	20.5		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	20.1		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	20.8		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.7		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	20.2		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	20.2		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.1		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.3		1.00	0.500	0.250
2-Hexanone	591-78-6	20.6		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	19.1		1.00	0.500	0.250
Isopropylbenzene	98-82-8	21.3		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	19.9		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	20.1		10.0	5.00	2.50
Methylene chloride	75-09-2	19.7		1.00	0.500	0.250
Naphthalene	91-20-3	18.1		1.00	0.400	0.200
n-Propylbenzene	103-65-1	20.9		1.00	0.250	0.125
Styrene	100-42-5	21.3		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.4		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	19.7		1.00	0.400	0.200
Tetrachloroethene	127-18-4	19.2		1.00	0.500	0.250
Toluene	108-88-3	20.3		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.7		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.7		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	19.7		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	21.0		1.00	0.500	0.250
Trichloroethene	79-01-6	20.6		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	18.4		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	19.6		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.1		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	20.1		1.00	0.500	0.250
Vinyl chloride	75-01-4	21.7		1.00	0.500	0.250
o-Xylene	95-47-6	20.5		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	41.6		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.4	85	115	
1,2-Dichloroethane-d4	96.7	70	120	
Toluene-d8	96.9	85	120	
4-Bromofluorobenzene	92.0	75	120	

Certificate of Analysis

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Sample #:	L16040858-12	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW16MSD-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 18:59
Collect Date:	04/12/2016 15:15	**Dilution:**	1	**File ID:**	8M411517
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	27.5		10.0	5.00	2.50
Benzene	71-43-2	20.6		1.00	0.250	0.125
Bromobenzene	108-86-1	18.9		1.00	0.250	0.125
Bromochloromethane	74-97-5	19.7		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.5		1.00	0.500	0.250
Bromoform	75-25-2	18.0		2.00	1.00	0.500
Bromomethane	74-83-9	22.7		2.00	1.00	0.500
2-Butanone	78-93-3	20.9		10.0	5.00	2.50
n-Butylbenzene	104-51-8	19.7		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	20.2		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	19.8		1.00	0.500	0.250
Carbon disulfide	75-15-0	17.9		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	19.3		1.00	0.500	0.250
Chlorobenzene	108-90-7	20.1		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.4		1.00	0.500	0.250
Chloroethane	75-00-3	20.6		2.00	1.00	0.500
Chloroform	67-66-3	20.4		1.00	0.250	0.125
Chloromethane	74-87-3	21.9		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	20.9		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	19.2		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.6		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.1		1.00	0.500	0.250
Dibromomethane	74-95-3	20.1		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	19.9		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	19.9		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	20.1		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	19.1		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.1		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.9		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	18.2		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.8		1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	20.0		1.00	0.500	0.250

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
1,2-Dichloropropane	78-87-5	20.4		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.2		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	19.7		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.4		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.1		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	18.6		1.00	0.500	0.250
Ethylbenzene	100-41-4	19.4		1.00	0.500	0.250
2-Hexanone	591-78-6	20.5		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	18.6		1.00	0.500	0.250
Isopropylbenzene	98-82-8	21.2		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	19.8		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	18.9		10.0	5.00	2.50
Methylene chloride	75-09-2	19.9		1.00	0.500	0.250
Naphthalene	91-20-3	17.9		1.00	0.400	0.200
n-Propylbenzene	103-65-1	21.1		1.00	0.250	0.125
Styrene	100-42-5	21.1		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	19.9		1.00	0.400	0.200
Tetrachloroethene	127-18-4	18.4		1.00	0.500	0.250
Toluene	108-88-3	20.1		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	18.4		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	19.6		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	20.8		1.00	0.500	0.250
Trichloroethene	79-01-6	20.4		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	18.3		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	18.8		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.8		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	20.0		1.00	0.500	0.250
Vinyl chloride	75-01-4	20.4		1.00	0.500	0.250
o-Xylene	95-47-6	20.0		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	41.3		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.9	85	115	
1,2-Dichloroethane-d4	96.5	70	120	
Toluene-d8	95.6	85	120	
4-Bromofluorobenzene	90.8	75	120	

Certificate of Analysis

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Sample #:	L16040858-13	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW19-041216	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/18/2016 23:49
Collect Date:	04/13/2016 07:35	**Dilution:**	1	**File ID:**	8M411527
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	2.59		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	2.96		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	13.5		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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.899	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	95.8	85	115	
1,2-Dichloroethane-d4	98.7	70	120	
Toluene-d8	96.2	85	120	
4-Bromofluorobenzene	95.4	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-14	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW06-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 00:18
Collect Date:	04/13/2016 07:55	**Dilution:**	1	**File ID:**	8M411528
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	4.87		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	13.7		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	11.9		1.00	0.500	0.250

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	0.563	J	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	6.50		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	2.38		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	95.2	85	115	
1,2-Dichloroethane-d4	100	70	120	
Toluene-d8	96.2	85	120	
4-Bromofluorobenzene	97.3	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.

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-15	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW14-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 00:48
Collect Date:	04/13/2016 08:05	**Dilution:**	1	**File ID:**	8M411529
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	6.57		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	3.25		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	1.78		1.00	0.500	0.250

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	1.79		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	97.3	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	96.9	85	120	
4-Bromofluorobenzene	96.5	75	120	

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

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Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-16	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW08-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 01:46
Collect Date:	04/13/2016 08:20	**Dilution:**	25	**File ID:**	8M411531
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	122	J	250	125	62.5
Benzene	71-43-2	6.26	U	25.0	6.26	3.13
Bromobenzene	108-86-1	6.26	U	25.0	6.26	3.13
Bromochloromethane	74-97-5	10.0	U	25.0	10.0	5.00
Bromodichloromethane	75-27-4	12.5	U	25.0	12.5	6.25
Bromoform	75-25-2	25.0	U	50.0	25.0	12.5
Bromomethane	74-83-9	25.0	U	50.0	25.0	12.5
2-Butanone	78-93-3	125	U	250	125	62.5
n-Butylbenzene	104-51-8	12.5	U	25.0	12.5	6.25
sec-Butylbenzene	135-98-8	12.5	U	25.0	12.5	6.25
tert-Butylbenzene	98-06-6	12.5	U	25.0	12.5	6.25
Carbon disulfide	75-15-0	25.0	U	50.0	25.0	12.5
Carbon tetrachloride	56-23-5	12.5	U	25.0	12.5	6.25
Chlorobenzene	108-90-7	6.26	U	25.0	6.26	3.13
Chlorodibromomethane	124-48-1	12.5	U	25.0	12.5	6.25
Chloroethane	75-00-3	25.0	U	50.0	25.0	12.5
Chloroform	67-66-3	6.26	U	25.0	6.26	3.13
Chloromethane	74-87-3	25.0	U	50.0	25.0	12.5
2-Chlorotoluene	95-49-8	6.26	U	25.0	6.26	3.13
4-Chlorotoluene	106-43-4	12.5	U	25.0	12.5	6.25
1,2-Dibromo-3-chloropropane	96-12-8	50.0	U	125	50.0	25.0
1,2-Dibromoethane	106-93-4	12.5	U	25.0	12.5	6.25
Dibromomethane	74-95-3	12.5	U	25.0	12.5	6.25
1,2-Dichlorobenzene	95-50-1	6.26	U	25.0	6.26	3.13
1,3-Dichlorobenzene	541-73-1	12.5	U	25.0	12.5	6.25
1,4-Dichlorobenzene	106-46-7	6.26	U	25.0	6.26	3.13
Dichlorodifluoromethane	75-71-8	12.5	U	25.0	12.5	6.25
1,1-Dichloroethane	75-34-3	6.26	U	25.0	6.26	3.13
1,2-Dichloroethane	107-06-2	12.5	U	25.0	12.5	6.25
1,1-Dichloroethene	75-35-4	25.0	U	50.0	25.0	12.5
cis-1,2-Dichloroethene	156-59-2	60.9		25.0	12.5	6.25

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	12.5	U	25.0	12.5	6.25
1,2-Dichloropropane	78-87-5	10.0	U	25.0	10.0	5.00
1,3-Dichloropropane	142-28-9	10.0	U	25.0	10.0	5.00
2,2-Dichloropropane	594-20-7	12.5	U	25.0	12.5	6.25
cis-1,3-Dichloropropene	10061-01-5	12.5	U	25.0	12.5	6.25
trans-1,3-Dichloropropene	10061-02-6	25.0	U	50.0	25.0	12.5
1,1-Dichloropropene	563-58-6	12.5	U	25.0	12.5	6.25
Ethylbenzene	100-41-4	12.5	U	25.0	12.5	6.25
2-Hexanone	591-78-6	125	U	250	125	62.5
Hexachlorobutadiene	87-68-3	12.5	U	25.0	12.5	6.25
Isopropylbenzene	98-82-8	12.5	U	25.0	12.5	6.25
p-Isopropyltoluene	99-87-6	12.5	U	25.0	12.5	6.25
4-Methyl-2-pentanone	108-10-1	125	U	250	125	62.5
Methylene chloride	75-09-2	12.5	U	25.0	12.5	6.25
Naphthalene	91-20-3	10.0	U	25.0	10.0	5.00
n-Propylbenzene	103-65-1	6.26	U	25.0	6.26	3.13
Styrene	100-42-5	6.26	U	25.0	6.26	3.13
1,1,1,2-Tetrachloroethane	630-20-6	12.5	U	25.0	12.5	6.25
1,1,2,2-Tetrachloroethane	79-34-5	10.0	U	25.0	10.0	5.00
Tetrachloroethene	127-18-4	80.1		25.0	12.5	6.25
Toluene	108-88-3	12.5	U	25.0	12.5	6.25
1,2,3-Trichlorobenzene	87-61-6	7.50	U	25.0	7.50	3.75
1,2,4-Trichlorobenzene	120-82-1	10.0	U	25.0	10.0	5.00
1,1,1-Trichloroethane	71-55-6	12.5	U	25.0	12.5	6.25
1,1,2-Trichloroethane	79-00-5	12.5	U	25.0	12.5	6.25
Trichloroethene	79-01-6	234		25.0	12.5	6.25
Trichlorofluoromethane	75-69-4	12.5	U	25.0	12.5	6.25
1,2,3-Trichloropropane	96-18-4	25.0	U	50.0	25.0	12.5
1,2,4-Trimethylbenzene	95-63-6	12.5	U	25.0	12.5	6.25
1,3,5-Trimethylbenzene	108-67-8	12.5	U	25.0	12.5	6.25
Vinyl chloride	75-01-4	14.2	J	25.0	12.5	6.25
o-Xylene	95-47-6	12.5	U	25.0	12.5	6.25
m-,p-Xylene	179601-23-1	25.0	U	50.0	25.0	12.5

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	91.7	85	115	
1,2-Dichloroethane-d4	98.1	70	120	
Toluene-d8	98.3	85	120	
4-Bromofluorobenzene	94.5	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.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-17	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	03WW01-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 22:09
Collect Date:	04/13/2016 08:35	**Dilution:**	25	**File ID:**	8M411561
Sample Tag:	DL02	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	4180		250	125	62.5
Benzene	71-43-2	6.26	U	25.0	6.26	3.13
Bromobenzene	108-86-1	6.26	U	25.0	6.26	3.13
Bromochloromethane	74-97-5	10.0	U	25.0	10.0	5.00
Bromodichloromethane	75-27-4	12.5	U	25.0	12.5	6.25
Bromoform	75-25-2	25.0	U	50.0	25.0	12.5
Bromomethane	74-83-9	25.0	Q	50.0	25.0	12.5
2-Butanone	78-93-3	3610		250	125	62.5
n-Butylbenzene	104-51-8	12.5	U	25.0	12.5	6.25
sec-Butylbenzene	135-98-8	12.5	U	25.0	12.5	6.25
tert-Butylbenzene	98-06-6	12.5	U	25.0	12.5	6.25
Carbon disulfide	75-15-0	25.0	U	50.0	25.0	12.5
Carbon tetrachloride	56-23-5	12.5	U	25.0	12.5	6.25
Chlorobenzene	108-90-7	6.26	U	25.0	6.26	3.13
Chlorodibromomethane	124-48-1	12.5	U	25.0	12.5	6.25
Chloroethane	75-00-3	25.0	U	50.0	25.0	12.5
Chloroform	67-66-3	6.26	U	25.0	6.26	3.13
Chloromethane	74-87-3	25.0	U	50.0	25.0	12.5
2-Chlorotoluene	95-49-8	6.26	U	25.0	6.26	3.13
4-Chlorotoluene	106-43-4	12.5	U	25.0	12.5	6.25
1,2-Dibromo-3-chloropropane	96-12-8	50.0	U	125	50.0	25.0
1,2-Dibromoethane	106-93-4	12.5	U	25.0	12.5	6.25
Dibromomethane	74-95-3	12.5	U	25.0	12.5	6.25
1,2-Dichlorobenzene	95-50-1	6.26	U	25.0	6.26	3.13
1,3-Dichlorobenzene	541-73-1	12.5	U	25.0	12.5	6.25
1,4-Dichlorobenzene	106-46-7	6.26	U	25.0	6.26	3.13
Dichlorodifluoromethane	75-71-8	12.5	U	25.0	12.5	6.25
1,1-Dichloroethane	75-34-3	6.26	U	25.0	6.26	3.13
1,2-Dichloroethane	107-06-2	12.5	U	25.0	12.5	6.25
1,1-Dichloroethene	75-35-4	25.0	U	50.0	25.0	12.5
cis-1,2-Dichloroethene	156-59-2	117		25.0	12.5	6.25

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	12.5	U	25.0	12.5	6.25
1,2-Dichloropropane	78-87-5	10.0	U	25.0	10.0	5.00
1,3-Dichloropropane	142-28-9	10.0	U	25.0	10.0	5.00
2,2-Dichloropropane	594-20-7	12.5	U	25.0	12.5	6.25
cis-1,3-Dichloropropene	10061-01-5	12.5	U	25.0	12.5	6.25
trans-1,3-Dichloropropene	10061-02-6	25.0	U	50.0	25.0	12.5
1,1-Dichloropropene	563-58-6	12.5	U	25.0	12.5	6.25
Ethylbenzene	100-41-4	12.5	U	25.0	12.5	6.25
2-Hexanone	591-78-6	125	U	250	125	62.5
Hexachlorobutadiene	87-68-3	12.5	U	25.0	12.5	6.25
Isopropylbenzene	98-82-8	12.5	U	25.0	12.5	6.25
p-Isopropyltoluene	99-87-6	12.5	U	25.0	12.5	6.25
4-Methyl-2-pentanone	108-10-1	125	U	250	125	62.5
Methylene chloride	75-09-2	12.5	U	25.0	12.5	6.25
Naphthalene	91-20-3	10.0	U	25.0	10.0	5.00
n-Propylbenzene	103-65-1	6.26	U	25.0	6.26	3.13
Styrene	100-42-5	6.26	U	25.0	6.26	3.13
1,1,1,2-Tetrachloroethane	630-20-6	12.5	U	25.0	12.5	6.25
1,1,2,2-Tetrachloroethane	79-34-5	10.0	U	25.0	10.0	5.00
Tetrachloroethene	127-18-4	6.49	J	25.0	12.5	6.25
Toluene	108-88-3	12.5	U	25.0	12.5	6.25
1,2,3-Trichlorobenzene	87-61-6	7.50	U	25.0	7.50	3.75
1,2,4-Trichlorobenzene	120-82-1	10.0	U	25.0	10.0	5.00
1,1,1-Trichloroethane	71-55-6	12.5	U	25.0	12.5	6.25
1,1,2-Trichloroethane	79-00-5	12.5	U	25.0	12.5	6.25
Trichloroethene	79-01-6	12.5	U	25.0	12.5	6.25
Trichlorofluoromethane	75-69-4	12.5	U	25.0	12.5	6.25
1,2,3-Trichloropropane	96-18-4	25.0	U	50.0	25.0	12.5
1,2,4-Trimethylbenzene	95-63-6	12.5	U	25.0	12.5	6.25
1,3,5-Trimethylbenzene	108-67-8	12.5	U	25.0	12.5	6.25
Vinyl chloride	75-01-4	12.5	U	25.0	12.5	6.25
o-Xylene	95-47-6	12.5	U	25.0	12.5	6.25
m-,p-Xylene	179601-23-1	25.0	U	50.0	25.0	12.5

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.4	85	115	
1,2-Dichloroethane-d4	97.6	70	120	
Toluene-d8	98.2	85	120	
4-Bromofluorobenzene	94.3	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-18	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW04-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 23:08
Collect Date:	04/13/2016 08:50	**Dilution:**	2.5	**File ID:**	8M411563
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	12.5	U	25.0	12.5	6.25
Benzene	71-43-2	0.626	U	2.50	0.626	0.313
Bromobenzene	108-86-1	0.626	U	2.50	0.626	0.313
Bromochloromethane	74-97-5	1.00	U	2.50	1.00	0.500
Bromodichloromethane	75-27-4	1.25	U	2.50	1.25	0.625
Bromoform	75-25-2	2.50	U	5.00	2.50	1.25
Bromomethane	74-83-9	2.50	Q	5.00	2.50	1.25
2-Butanone	78-93-3	12.5	U	25.0	12.5	6.25
n-Butylbenzene	104-51-8	1.25	U	2.50	1.25	0.625
sec-Butylbenzene	135-98-8	1.25	U	2.50	1.25	0.625
tert-Butylbenzene	98-06-6	1.25	U	2.50	1.25	0.625
Carbon disulfide	75-15-0	2.50	U	5.00	2.50	1.25
Carbon tetrachloride	56-23-5	1.25	U	2.50	1.25	0.625
Chlorobenzene	108-90-7	0.626	U	2.50	0.626	0.313
Chlorodibromomethane	124-48-1	1.25	U	2.50	1.25	0.625
Chloroethane	75-00-3	2.50	U	5.00	2.50	1.25
Chloroform	67-66-3	0.626	U	2.50	0.626	0.313
Chloromethane	74-87-3	2.50	U	5.00	2.50	1.25
2-Chlorotoluene	95-49-8	0.626	U	2.50	0.626	0.313
4-Chlorotoluene	106-43-4	1.25	U	2.50	1.25	0.625
1,2-Dibromo-3-chloropropane	96-12-8	5.00	U	12.5	5.00	2.50
1,2-Dibromoethane	106-93-4	1.25	U	2.50	1.25	0.625
Dibromomethane	74-95-3	1.25	U	2.50	1.25	0.625
1,2-Dichlorobenzene	95-50-1	0.626	U	2.50	0.626	0.313
1,3-Dichlorobenzene	541-73-1	1.25	U	2.50	1.25	0.625
1,4-Dichlorobenzene	106-46-7	0.626	U	2.50	0.626	0.313
Dichlorodifluoromethane	75-71-8	1.25	U	2.50	1.25	0.625
1,1-Dichloroethane	75-34-3	0.543	J	2.50	0.626	0.313
1,2-Dichloroethane	107-06-2	1.25	U	2.50	1.25	0.625
1,1-Dichloroethene	75-35-4	2.50	U	5.00	2.50	1.25
cis-1,2-Dichloroethene	156-59-2	0.851	J	2.50	1.25	0.625

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	1.25	U	2.50	1.25	0.625
1,2-Dichloropropane	78-87-5	1.00	U	2.50	1.00	0.500
1,3-Dichloropropane	142-28-9	1.00	U	2.50	1.00	0.500
2,2-Dichloropropane	594-20-7	1.25	U	2.50	1.25	0.625
cis-1,3-Dichloropropene	10061-01-5	1.25	U	2.50	1.25	0.625
trans-1,3-Dichloropropene	10061-02-6	2.50	U	5.00	2.50	1.25
1,1-Dichloropropene	563-58-6	1.25	U	2.50	1.25	0.625
Ethylbenzene	100-41-4	1.25	U	2.50	1.25	0.625
2-Hexanone	591-78-6	12.5	U	25.0	12.5	6.25
Hexachlorobutadiene	87-68-3	1.25	U	2.50	1.25	0.625
Isopropylbenzene	98-82-8	1.25	U	2.50	1.25	0.625
p-Isopropyltoluene	99-87-6	1.25	U	2.50	1.25	0.625
4-Methyl-2-pentanone	108-10-1	12.5	U	25.0	12.5	6.25
Methylene chloride	75-09-2	1.25	U	2.50	1.25	0.625
Naphthalene	91-20-3	1.00	U	2.50	1.00	0.500
n-Propylbenzene	103-65-1	0.626	U	2.50	0.626	0.313
Styrene	100-42-5	0.626	U	2.50	0.626	0.313
1,1,1,2-Tetrachloroethane	630-20-6	1.25	U	2.50	1.25	0.625
1,1,2,2-Tetrachloroethane	79-34-5	1.00	U	2.50	1.00	0.500
Tetrachloroethene	127-18-4	397		2.50	1.25	0.625
Toluene	108-88-3	1.25	U	2.50	1.25	0.625
1,2,3-Trichlorobenzene	87-61-6	0.750	U	2.50	0.750	0.375
1,2,4-Trichlorobenzene	120-82-1	1.00	U	2.50	1.00	0.500
1,1,1-Trichloroethane	71-55-6	1.25	U	2.50	1.25	0.625
1,1,2-Trichloroethane	79-00-5	1.25	U	2.50	1.25	0.625
Trichloroethene	79-01-6	86.1		2.50	1.25	0.625
Trichlorofluoromethane	75-69-4	1.25	U	2.50	1.25	0.625
1,2,3-Trichloropropane	96-18-4	2.50	U	5.00	2.50	1.25
1,2,4-Trimethylbenzene	95-63-6	1.25	U	2.50	1.25	0.625
1,3,5-Trimethylbenzene	108-67-8	1.25	U	2.50	1.25	0.625
Vinyl chloride	75-01-4	1.25	U	2.50	1.25	0.625
o-Xylene	95-47-6	1.25	U	2.50	1.25	0.625
m-,p-Xylene	179601-23-1	2.50	U	5.00	2.50	1.25

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	85	115	
1,2-Dichloroethane-d4	95.6	70	120	
Toluene-d8	97.5	85	120	
4-Bromofluorobenzene	97.2	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-19	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW22-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565386	**Analyst:**	TMB	**Run Date:**	04/19/2016 01:17
Collect Date:	04/13/2016 09:05	**Dilution:**	1	**File ID:**	8M411530
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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.6	85	115	
1,2-Dichloroethane-d4	98.9	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	95.3	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-20	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW21-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 19:14
Collect Date:	04/13/2016 10:15	**Dilution:**	1	**File ID:**	8M411554
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	91.8	85	115	
1,2-Dichloroethane-d4	93.7	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	96.3	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-21	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW21FD-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 19:44
Collect Date:	04/13/2016 10:15	**Dilution:**	1	**File ID:**	8M411555
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	94.0	85	115	
1,2-Dichloroethane-d4	96.9	70	120	
Toluene-d8	97.4	85	120	
4-Bromofluorobenzene	96.4	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-22	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW13-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 20:13
Collect Date:	04/13/2016 11:15	**Dilution:**	1	**File ID:**	8M411556
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	0.303	J	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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	96.4	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	97.9	85	120	
4-Bromofluorobenzene	96.8	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35ASW03-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 20:42
Collect Date:	04/13/2016 12:40	**Dilution:**	1	**File ID:**	8M411557
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.5	85	115	
1,2-Dichloroethane-d4	96.3	70	120	
Toluene-d8	96.8	85	120	
4-Bromofluorobenzene	97.5	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW10-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 18:45
Collect Date:	04/13/2016 13:45	**Dilution:**	1	**File ID:**	8M411553
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	94.3	85	115	
1,2-Dichloroethane-d4	91.6	70	120	
Toluene-d8	95.3	85	120	
4-Bromofluorobenzene	96.8	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-25	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW10MS-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 16:48
Collect Date:	04/13/2016 13:45	**Dilution:**	1	**File ID:**	8M411549
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	21.5		10.0	5.00	2.50
Benzene	71-43-2	21.2		1.00	0.250	0.125
Bromobenzene	108-86-1	20.3		1.00	0.250	0.125
Bromochloromethane	74-97-5	19.4		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.5		1.00	0.500	0.250
Bromoform	75-25-2	17.9		2.00	1.00	0.500
Bromomethane	74-83-9	23.3	Q	2.00	1.00	0.500
2-Butanone	78-93-3	18.6		10.0	5.00	2.50
n-Butylbenzene	104-51-8	22.7		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	22.9		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	22.3		1.00	0.500	0.250
Carbon disulfide	75-15-0	19.5		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	20.8		1.00	0.500	0.250
Chlorobenzene	108-90-7	21.2		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.1		1.00	0.500	0.250
Chloroethane	75-00-3	22.6		2.00	1.00	0.500
Chloroform	67-66-3	21.2		1.00	0.250	0.125
Chloromethane	74-87-3	22.2		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	22.1		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	21.7		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	17.6		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	19.7		1.00	0.500	0.250
Dibromomethane	74-95-3	20.4		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	20.7		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	20.9		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	21.0		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	21.9		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.9		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.9		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	20.0		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	21.4		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	21.4		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.1		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	21.7		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.9		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.1		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	20.3		1.00	0.500	0.250
Ethylbenzene	100-41-4	20.6		1.00	0.500	0.250
2-Hexanone	591-78-6	19.0		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	23.4		1.00	0.500	0.250
Isopropylbenzene	98-82-8	22.5		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	22.2		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	20.3		1.00	0.500	0.250
Naphthalene	91-20-3	16.2		1.00	0.400	0.200
n-Propylbenzene	103-65-1	23.4		1.00	0.250	0.125
Styrene	100-42-5	21.7		1.00	0.250	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.8		1.00	0.500	0.250
1,1,2,2-Tetrachloroethane	79-34-5	19.6		1.00	0.400	0.200
Tetrachloroethene	127-18-4	20.1		1.00	0.500	0.250
Toluene	108-88-3	21.6		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	17.5		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.8		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	20.7		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	20.2		1.00	0.500	0.250
Trichloroethene	79-01-6	21.9		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	20.0		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	21.6		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	22.4		1.00	0.500	0.250
Vinyl chloride	75-01-4	20.9		1.00	0.500	0.250
o-Xylene	95-47-6	21.1		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	43.4		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.5	85	115	
1,2-Dichloroethane-d4	92.5	70	120	
Toluene-d8	96.5	85	120	
4-Bromofluorobenzene	94.0	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-26	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW10MSD-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 17:17
Collect Date:	04/13/2016 13:45	**Dilution:**	1	**File ID:**	8M411550
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	21.8		10.0	5.00	2.50
Benzene	71-43-2	20.8		1.00	0.250	0.125
Bromobenzene	108-86-1	19.2		1.00	0.250	0.125
Bromochloromethane	74-97-5	19.8		1.00	0.400	0.200
Bromodichloromethane	75-27-4	20.5		1.00	0.500	0.250
Bromoform	75-25-2	17.8		2.00	1.00	0.500
Bromomethane	74-83-9	23.1	Q	2.00	1.00	0.500
2-Butanone	78-93-3	19.9		10.0	5.00	2.50
n-Butylbenzene	104-51-8	20.8		1.00	0.500	0.250
sec-Butylbenzene	135-98-8	20.8		1.00	0.500	0.250
tert-Butylbenzene	98-06-6	20.4		1.00	0.500	0.250
Carbon disulfide	75-15-0	18.7		2.00	1.00	0.500
Carbon tetrachloride	56-23-5	19.9		1.00	0.500	0.250
Chlorobenzene	108-90-7	20.6		1.00	0.250	0.125
Chlorodibromomethane	124-48-1	20.5		1.00	0.500	0.250
Chloroethane	75-00-3	21.5		2.00	1.00	0.500
Chloroform	67-66-3	20.3		1.00	0.250	0.125
Chloromethane	74-87-3	21.9		2.00	1.00	0.500
2-Chlorotoluene	95-49-8	20.9		1.00	0.250	0.125
4-Chlorotoluene	106-43-4	19.8		1.00	0.500	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.1		5.00	2.00	1.00
1,2-Dibromoethane	106-93-4	20.2		1.00	0.500	0.250
Dibromomethane	74-95-3	20.4		1.00	0.500	0.250
1,2-Dichlorobenzene	95-50-1	19.8		1.00	0.250	0.125
1,3-Dichlorobenzene	541-73-1	19.6		1.00	0.500	0.250
1,4-Dichlorobenzene	106-46-7	19.9		1.00	0.250	0.125
Dichlorodifluoromethane	75-71-8	20.5		1.00	0.500	0.250
1,1-Dichloroethane	75-34-3	19.3		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	20.7		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	19.5		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.6		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	20.5		1.00	0.500	0.250
1,2-Dichloropropane	78-87-5	21.0		1.00	0.400	0.200
1,3-Dichloropropane	142-28-9	21.6		1.00	0.400	0.200
2,2-Dichloropropane	594-20-7	20.3		1.00	0.500	0.250
cis-1,3-Dichloropropene	10061-01-5	22.8		1.00	0.500	0.250
trans-1,3-Dichloropropene	10061-02-6	20.2		2.00	1.00	0.500
1,1-Dichloropropene	563-58-6	19.7		1.00	0.500	0.250
Ethylbenzene	100-41-4	20.1		1.00	0.500	0.250
2-Hexanone	591-78-6	20.2		10.0	5.00	2.50
Hexachlorobutadiene	87-68-3	21.4		1.00	0.500	0.250
Isopropylbenzene	98-82-8	21.7		1.00	0.500	0.250
p-Isopropyltoluene	99-87-6	20.5		1.00	0.500	0.250
4-Methyl-2-pentanone	108-10-1	19.8		10.0	5.00	2.50
Methylene chloride	75-09-2	19.9		1.00	0.500	0.250
Naphthalene	91-20-3	16.5		1.00	0.400	0.200
n-Propylbenzene	103-65-1	21.8		1.00	0.250	0.125
Styrene	100-42-5	21.2		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	19.6		1.00	0.400	0.200
Tetrachloroethene	127-18-4	19.3		1.00	0.500	0.250
Toluene	108-88-3	20.7		1.00	0.500	0.250
1,2,3-Trichlorobenzene	87-61-6	17.3		1.00	0.300	0.150
1,2,4-Trichlorobenzene	120-82-1	18.1		1.00	0.400	0.200
1,1,1-Trichloroethane	71-55-6	20.4		1.00	0.500	0.250
1,1,2-Trichloroethane	79-00-5	20.6		1.00	0.500	0.250
Trichloroethene	79-01-6	20.8		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	19.4		1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	18.4		2.00	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.1		1.00	0.500	0.250
1,3,5-Trimethylbenzene	108-67-8	20.8		1.00	0.500	0.250
Vinyl chloride	75-01-4	21.9		1.00	0.500	0.250
o-Xylene	95-47-6	20.4		1.00	0.500	0.250
m-,p-Xylene	179601-23-1	41.4		2.00	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.5	85	115	
1,2-Dichloroethane-d4	94.4	70	120	
Toluene-d8	97.1	85	120	
4-Bromofluorobenzene	92.0	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW20-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/20/2016 02:02
Collect Date:	04/13/2016 14:55	**Dilution:**	10	**File ID:**	8M411569
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	50.0	U	100	50.0	25.0
Benzene	71-43-2	7.09	J	10.0	2.50	1.25
Bromobenzene	108-86-1	2.50	U	10.0	2.50	1.25
Bromochloromethane	74-97-5	4.00	U	10.0	4.00	2.00
Bromodichloromethane	75-27-4	5.00	U	10.0	5.00	2.50
Bromoform	75-25-2	10.0	U	20.0	10.0	5.00
Bromomethane	74-83-9	10.0	Q	20.0	10.0	5.00
2-Butanone	78-93-3	50.0	U	100	50.0	25.0
n-Butylbenzene	104-51-8	5.00	U	10.0	5.00	2.50
sec-Butylbenzene	135-98-8	5.00	U	10.0	5.00	2.50
tert-Butylbenzene	98-06-6	5.00	U	10.0	5.00	2.50
Carbon disulfide	75-15-0	10.0	U	20.0	10.0	5.00
Carbon tetrachloride	56-23-5	5.00	U	10.0	5.00	2.50
Chlorobenzene	108-90-7	2.50	U	10.0	2.50	1.25
Chlorodibromomethane	124-48-1	5.00	U	10.0	5.00	2.50
Chloroethane	75-00-3	10.0	U	20.0	10.0	5.00
Chloroform	67-66-3	2.50	U	10.0	2.50	1.25
Chloromethane	74-87-3	10.0	U	20.0	10.0	5.00
2-Chlorotoluene	95-49-8	2.50	U	10.0	2.50	1.25
4-Chlorotoluene	106-43-4	5.00	U	10.0	5.00	2.50
1,2-Dibromo-3-chloropropane	96-12-8	20.0	U	50.0	20.0	10.0
1,2-Dibromoethane	106-93-4	5.00	U	10.0	5.00	2.50
Dibromomethane	74-95-3	5.00	U	10.0	5.00	2.50
1,2-Dichlorobenzene	95-50-1	7.29	J	10.0	2.50	1.25
1,3-Dichlorobenzene	541-73-1	5.00	U	10.0	5.00	2.50
1,4-Dichlorobenzene	106-46-7	2.50	U	10.0	2.50	1.25
Dichlorodifluoromethane	75-71-8	5.00	U	10.0	5.00	2.50
1,1-Dichloroethane	75-34-3	522		10.0	2.50	1.25
1,2-Dichloroethane	107-06-2	17.7		10.0	5.00	2.50
1,1-Dichloroethene	75-35-4	5410	J	20.0	10.0	5.00
cis-1,2-Dichloroethene	156-59-2	126		10.0	5.00	2.50

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	5.16	J	10.0	5.00	2.50
1,2-Dichloropropane	78-87-5	4.00	U	10.0	4.00	2.00
1,3-Dichloropropane	142-28-9	4.00	U	10.0	4.00	2.00
2,2-Dichloropropane	594-20-7	5.00	U	10.0	5.00	2.50
cis-1,3-Dichloropropene	10061-01-5	5.00	U	10.0	5.00	2.50
trans-1,3-Dichloropropene	10061-02-6	10.0	U	20.0	10.0	5.00
1,1-Dichloropropene	563-58-6	5.00	U	10.0	5.00	2.50
Ethylbenzene	100-41-4	5.00	U	10.0	5.00	2.50
2-Hexanone	591-78-6	50.0	U	100	50.0	25.0
Hexachlorobutadiene	87-68-3	5.00	U	10.0	5.00	2.50
Isopropylbenzene	98-82-8	5.00	U	10.0	5.00	2.50
p-Isopropyltoluene	99-87-6	5.00	U	10.0	5.00	2.50
4-Methyl-2-pentanone	108-10-1	50.0	U	100	50.0	25.0
Methylene chloride	75-09-2	5.00	U	10.0	5.00	2.50
Naphthalene	91-20-3	4.00	U	10.0	4.00	2.00
n-Propylbenzene	103-65-1	2.50	U	10.0	2.50	1.25
Styrene	100-42-5	2.50	U	10.0	2.50	1.25
1,1,1,2-Tetrachloroethane	630-20-6	5.00	U	10.0	5.00	2.50
1,1,2,2-Tetrachloroethane	79-34-5	4.00	U	10.0	4.00	2.00
Tetrachloroethene	127-18-4	5.00	U	10.0	5.00	2.50
Toluene	108-88-3	5.00	U	10.0	5.00	2.50
1,2,3-Trichlorobenzene	87-61-6	3.00	U	10.0	3.00	1.50
1,2,4-Trichlorobenzene	120-82-1	4.00	U	10.0	4.00	2.00
1,1,1-Trichloroethane	71-55-6	5.00	U	10.0	5.00	2.50
1,1,2-Trichloroethane	79-00-5	67.0		10.0	5.00	2.50
Trichloroethene	79-01-6	707		10.0	5.00	2.50
Trichlorofluoromethane	75-69-4	5.00	U	10.0	5.00	2.50
1,2,3-Trichloropropane	96-18-4	10.0	U	20.0	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6	5.00	U	10.0	5.00	2.50
1,3,5-Trimethylbenzene	108-67-8	5.00	U	10.0	5.00	2.50
Vinyl chloride	75-01-4	216		10.0	5.00	2.50
o-Xylene	95-47-6	5.00	U	10.0	5.00	2.50
m-,p-Xylene	179601-23-1	10.0	U	20.0	10.0	5.00

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.0	85	115	
1,2-Dichloroethane-d4	97.8	70	120	
Toluene-d8	98.0	85	120	
4-Bromofluorobenzene	96.5	75	120	

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

J	Estimated value ; the analyte concentration was greater than the highest standard
Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW20-041316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565880	**Analyst:**	TMB	**Run Date:**	04/21/2016 16:57
Collect Date:	04/13/2016 14:55	**Dilution:**	20	**File ID:**	8M411617
Sample Tag:	DL02	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	100	U	200	100	50.0
Benzene	71-43-2	7.47	J	20.0	5.00	2.50
Bromobenzene	108-86-1	5.00	U	20.0	5.00	2.50
Bromochloromethane	74-97-5	8.00	U	20.0	8.00	4.00
Bromodichloromethane	75-27-4	10.0	U	20.0	10.0	5.00
Bromoform	75-25-2	20.0	U	40.0	20.0	10.0
Bromomethane	74-83-9	20.0	Q	40.0	20.0	10.0
2-Butanone	78-93-3	100	U	200	100	50.0
n-Butylbenzene	104-51-8	10.0	U	20.0	10.0	5.00
sec-Butylbenzene	135-98-8	10.0	U	20.0	10.0	5.00
tert-Butylbenzene	98-06-6	10.0	U	20.0	10.0	5.00
Carbon disulfide	75-15-0	20.0	U	40.0	20.0	10.0
Carbon tetrachloride	56-23-5	10.0	Q	20.0	10.0	5.00
Chlorobenzene	108-90-7	5.00	U	20.0	5.00	2.50
Chlorodibromomethane	124-48-1	10.0	U	20.0	10.0	5.00
Chloroethane	75-00-3	20.0	U	40.0	20.0	10.0
Chloroform	67-66-3	5.00	U	20.0	5.00	2.50
Chloromethane	74-87-3	20.0	Q	40.0	20.0	10.0
2-Chlorotoluene	95-49-8	5.00	U	20.0	5.00	2.50
4-Chlorotoluene	106-43-4	10.0	U	20.0	10.0	5.00
1,2-Dibromo-3-chloropropane	96-12-8	40.0	U	100	40.0	20.0
1,2-Dibromoethane	106-93-4	10.0	U	20.0	10.0	5.00
Dibromomethane	74-95-3	10.0	U	20.0	10.0	5.00
1,2-Dichlorobenzene	95-50-1	9.40	J	20.0	5.00	2.50
1,3-Dichlorobenzene	541-73-1	10.0	U	20.0	10.0	5.00
1,4-Dichlorobenzene	106-46-7	5.00	U	20.0	5.00	2.50
Dichlorodifluoromethane	75-71-8	10.0	U	20.0	10.0	5.00
1,1-Dichloroethane	75-34-3	539		20.0	5.00	2.50
1,2-Dichloroethane	107-06-2	18.7	Q	20.0	10.0	5.00
1,1-Dichloroethene	75-35-4	5460		40.0	20.0	10.0
cis-1,2-Dichloroethene	156-59-2	130		20.0	10.0	5.00

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	5.58	J	20.0	10.0	5.00
1,2-Dichloropropane	78-87-5	8.00	U	20.0	8.00	4.00
1,3-Dichloropropane	142-28-9	8.00	U	20.0	8.00	4.00
2,2-Dichloropropane	594-20-7	10.0	Q	20.0	10.0	5.00
cis-1,3-Dichloropropene	10061-01-5	10.0	U	20.0	10.0	5.00
trans-1,3-Dichloropropene	10061-02-6	20.0	U	40.0	20.0	10.0
1,1-Dichloropropene	563-58-6	10.0	U	20.0	10.0	5.00
Ethylbenzene	100-41-4	10.0	U	20.0	10.0	5.00
2-Hexanone	591-78-6	100	U	200	100	50.0
Hexachlorobutadiene	87-68-3	10.0	Q	20.0	10.0	5.00
Isopropylbenzene	98-82-8	10.0	U	20.0	10.0	5.00
p-Isopropyltoluene	99-87-6	10.0	U	20.0	10.0	5.00
4-Methyl-2-pentanone	108-10-1	100	U	200	100	50.0
Methylene chloride	75-09-2	10.0	U	20.0	10.0	5.00
Naphthalene	91-20-3	8.00	U	20.0	8.00	4.00
n-Propylbenzene	103-65-1	5.00	U	20.0	5.00	2.50
Styrene	100-42-5	5.00	U	20.0	5.00	2.50
1,1,1,2-Tetrachloroethane	630-20-6	10.0	U	20.0	10.0	5.00
1,1,2,2-Tetrachloroethane	79-34-5	8.00	U	20.0	8.00	4.00
Tetrachloroethene	127-18-4	10.0	U	20.0	10.0	5.00
Toluene	108-88-3	10.0	U	20.0	10.0	5.00
1,2,3-Trichlorobenzene	87-61-6	6.00	U	20.0	6.00	3.00
1,2,4-Trichlorobenzene	120-82-1	8.00	U	20.0	8.00	4.00
1,1,1-Trichloroethane	71-55-6	10.0	Q	20.0	10.0	5.00
1,1,2-Trichloroethane	79-00-5	67.0		20.0	10.0	5.00
Trichloroethene	79-01-6	760		20.0	10.0	5.00
Trichlorofluoromethane	75-69-4	10.0	Q	20.0	10.0	5.00
1,2,3-Trichloropropane	96-18-4	20.0	U	40.0	20.0	10.0
1,2,4-Trimethylbenzene	95-63-6	10.0	U	20.0	10.0	5.00
1,3,5-Trimethylbenzene	108-67-8	10.0	U	20.0	10.0	5.00
Vinyl chloride	75-01-4	136		20.0	10.0	5.00
o-Xylene	95-47-6	10.0	U	20.0	10.0	5.00
m-,p-Xylene	179601-23-1	20.0	U	40.0	20.0	10.0

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	85	115	
1,2-Dichloroethane-d4	112	70	120	
Toluene-d8	92.7	85	120	
4-Bromofluorobenzene	93.8	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-28	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW15-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 21:11
Collect Date:	04/14/2016 08:30	**Dilution:**	1	**File ID:**	8M411558
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	96.3	85	115	
1,2-Dichloroethane-d4	98.8	70	120	
Toluene-d8	96.6	85	120	
4-Bromofluorobenzene	96.2	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-29	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35AWW05-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/19/2016 21:40
Collect Date:	04/14/2016 09:35	**Dilution:**	1	**File ID:**	8M411559
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	Q	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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	95.4	85	115	
1,2-Dichloroethane-d4	96.8	70	120	
Toluene-d8	96.2	85	120	
4-Bromofluorobenzene	98.2	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW07-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565517	**Analyst:**	TMB	**Run Date:**	04/20/2016 01:32
Collect Date:	04/14/2016 10:30	**Dilution:**	1	**File ID:**	8M411568
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	1.09		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	Q	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	0.404	J	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	0.142	J	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	106		1.00	0.250	0.125
1,2-Dichloroethane	107-06-2	2.23		1.00	0.500	0.250
1,1-Dichloroethene	75-35-4	935	J	2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.6		1.00	0.500	0.250

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	0.681	J	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	0.397	J	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	4.96		1.00	0.500	0.250
Trichloroethene	79-01-6	67.5		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	10.8		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	95.1	85	115	
1,2-Dichloroethane-d4	94.1	70	120	
Toluene-d8	94.9	85	120	
4-Bromofluorobenzene	95.4	75	120	

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

J	Estimated value ; the analyte concentration was greater than the highest standard
Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	LHSMW07-041416	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/13/2016 17:09
Workgroup #:	WG565880	**Analyst:**	TMB	**Run Date:**	04/21/2016 17:25
Collect Date:	04/14/2016 10:30	**Dilution:**	100	**File ID:**	8M411618
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	500	U	1000	500	250
Benzene	71-43-2	25.0	U	100	25.0	12.5
Bromobenzene	108-86-1	25.0	U	100	25.0	12.5
Bromochloromethane	74-97-5	40.0	U	100	40.0	20.0
Bromodichloromethane	75-27-4	50.0	U	100	50.0	25.0
Bromoform	75-25-2	100	U	200	100	50.0
Bromomethane	74-83-9	100	Q	200	100	50.0
2-Butanone	78-93-3	500	U	1000	500	250
n-Butylbenzene	104-51-8	50.0	U	100	50.0	25.0
sec-Butylbenzene	135-98-8	50.0	U	100	50.0	25.0
tert-Butylbenzene	98-06-6	50.0	U	100	50.0	25.0
Carbon disulfide	75-15-0	100	U	200	100	50.0
Carbon tetrachloride	56-23-5	50.0	Q	100	50.0	25.0
Chlorobenzene	108-90-7	25.0	U	100	25.0	12.5
Chlorodibromomethane	124-48-1	50.0	U	100	50.0	25.0
Chloroethane	75-00-3	100	U	200	100	50.0
Chloroform	67-66-3	25.0	U	100	25.0	12.5
Chloromethane	74-87-3	100	Q	200	100	50.0
2-Chlorotoluene	95-49-8	25.0	U	100	25.0	12.5
4-Chlorotoluene	106-43-4	50.0	U	100	50.0	25.0
1,2-Dibromo-3-chloropropane	96-12-8	200	U	500	200	100
1,2-Dibromoethane	106-93-4	50.0	U	100	50.0	25.0
Dibromomethane	74-95-3	50.0	U	100	50.0	25.0
1,2-Dichlorobenzene	95-50-1	25.0	U	100	25.0	12.5
1,3-Dichlorobenzene	541-73-1	50.0	U	100	50.0	25.0
1,4-Dichlorobenzene	106-46-7	25.0	U	100	25.0	12.5
Dichlorodifluoromethane	75-71-8	50.0	U	100	50.0	25.0
1,1-Dichloroethane	75-34-3	112		100	25.0	12.5
1,2-Dichloroethane	107-06-2	50.0	Q	100	50.0	25.0
1,1-Dichloroethene	75-35-4	1250		200	100	50.0
cis-1,2-Dichloroethene	156-59-2	50.0	U	100	50.0	25.0

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
trans-1,2-Dichloroethene	156-60-5	50.0	U	100	50.0	25.0
1,2-Dichloropropane	78-87-5	40.0	U	100	40.0	20.0
1,3-Dichloropropane	142-28-9	40.0	U	100	40.0	20.0
2,2-Dichloropropane	594-20-7	50.0	Q	100	50.0	25.0
cis-1,3-Dichloropropene	10061-01-5	50.0	U	100	50.0	25.0
trans-1,3-Dichloropropene	10061-02-6	100	U	200	100	50.0
1,1-Dichloropropene	563-58-6	50.0	U	100	50.0	25.0
Ethylbenzene	100-41-4	50.0	U	100	50.0	25.0
2-Hexanone	591-78-6	500	U	1000	500	250
Hexachlorobutadiene	87-68-3	50.0	Q	100	50.0	25.0
Isopropylbenzene	98-82-8	50.0	U	100	50.0	25.0
p-Isopropyltoluene	99-87-6	50.0	U	100	50.0	25.0
4-Methyl-2-pentanone	108-10-1	500	U	1000	500	250
Methylene chloride	75-09-2	50.0	U	100	50.0	25.0
Naphthalene	91-20-3	40.0	U	100	40.0	20.0
n-Propylbenzene	103-65-1	25.0	U	100	25.0	12.5
Styrene	100-42-5	25.0	U	100	25.0	12.5
1,1,1,2-Tetrachloroethane	630-20-6	50.0	U	100	50.0	25.0
1,1,2,2-Tetrachloroethane	79-34-5	40.0	U	100	40.0	20.0
Tetrachloroethene	127-18-4	50.0	U	100	50.0	25.0
Toluene	108-88-3	50.0	U	100	50.0	25.0
1,2,3-Trichlorobenzene	87-61-6	30.0	U	100	30.0	15.0
1,2,4-Trichlorobenzene	120-82-1	40.0	U	100	40.0	20.0
1,1,1-Trichloroethane	71-55-6	50.0	Q	100	50.0	25.0
1,1,2-Trichloroethane	79-00-5	50.0	U	100	50.0	25.0
Trichloroethene	79-01-6	69.9	J	100	50.0	25.0
Trichlorofluoromethane	75-69-4	50.0	Q	100	50.0	25.0
1,2,3-Trichloropropane	96-18-4	100	U	200	100	50.0
1,2,4-Trimethylbenzene	95-63-6	50.0	U	100	50.0	25.0
1,3,5-Trimethylbenzene	108-67-8	50.0	U	100	50.0	25.0
Vinyl chloride	75-01-4	50.0	U	100	50.0	25.0
o-Xylene	95-47-6	50.0	U	100	50.0	25.0
m-,p-Xylene	179601-23-1	100	U	200	100	50.0

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	85	115	
1,2-Dichloroethane-d4	111	70	120	
Toluene-d8	93.2	85	120	
4-Bromofluorobenzene	94.5	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16040858-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	TRIP BLANK	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/11/2016 20:21
Workgroup #:	WG565673	**Analyst:**	TMB	**Run Date:**	04/20/2016 18:50
Collect Date:	04/14/2016 00:01	**Dilution:**	1	**File ID:**	6M138669
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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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	108	85	115	
1,2-Dichloroethane-d4	110	70	120	
Toluene-d8	104	85	120	
4-Bromofluorobenzene	107	75	120	

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

Microbac

Lab Report #: L16040858
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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)]

	Example
where:	
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)]

	Example
where:	
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)]

	Example
where:	
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

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Instrument Run Log

Instrument: HPMS8 Dataset: 100515
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 22
Method: 624 SOP: MSV10 Rev: 13
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53462

Internal Standard: STD72767 Surrogate Standard: STD72767
CCV: STD72810 LCS: STD72811 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG540826

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M407827	WG540826-01 50ng BFB STD 8260	NA	1	1	STD72715	10/05/15 11:26
8M407828	WG540826-02 5ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 11:49
8M407829	WG540826-03 20ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 12:17
8M407830	WG540826-04 50ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 12:51
8M407831	WG540826-05 100ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 13:20
8M407832	WG540826-06 200ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 13:49
8M407833	WG540826-07 300ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 14:17
8M407834	WG540826-08 400ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 14:47
8M407835	WG540826-09 500ug/L STD A9FOO	NA	1	1	STD72810	10/05/15 15:15
8M407836	RINSE	NA	1	1		10/05/15 15:50
8M407837	RINSE	NA	1	1		10/05/15 16:19
8M407838	WG540826-10 100ug/L ALT SRC STD A9/F	NA	1	1	STD72811	10/05/15 16:48

Approved: October 09, 2015



Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 100615
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 22
Method: 624 SOP: MSV10 Rev: 13
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53466

Internal Standard: STD72464 Surrogate Standard: STD72464
CCV: STD72810 LCS: STD72811 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG541654; WG541773

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M134942	WG541654-01 50ng BFB STD A9/FOO	NA	1	1	STD72715	10/06/15 10:16
6M134943	RINSE	NA	1	1		10/06/15 10:43
6M134944	WG541654-02 5ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 11:14
6M134945	WG541654-03 20ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 11:46
6M134946	WG541654-04 50ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 12:18
6M134947	WG541654-05 100ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 12:50
6M134948	WG541654-06 200ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 13:22
6M134949	WG541654-07 300ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 13:55
6M134950	WG541654-08 400ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 14:27
6M134951	WG541654-09 500ug/L STD A9/FOO	NA	1	1	STD72810	10/06/15 14:59
6M134952	RINSE	NA	1	1		10/06/15 15:31
6M134953	RINSE	NA	1	1		10/06/15 16:04
6M134954	WG541654-10 100ug/L ALT SRC A9/FOO	NA	1	1	STD72811	10/06/15 16:36
6M134955	RINSE	NA	1	1		10/06/15 17:08
6M134956	WG541773-01 VBLK1006 BLANK STD A9/F	NA	1	1		10/06/15 17:40
6M134957	L15100027-01 LOD A9/FOO 826-SPE	NA	1	1	STD72810	10/06/15 18:12
6M134958	L15100029-01 LOQ A9/FOO 826-SPE	NA	1	1	STD72810	10/06/15 18:44
6M134959	L15100029-09 LOQ A9/FOO 826-SPE	NA	1	1	STD72810	10/06/15 19:17
6M134960	L15100027-01 LOD A9/FOO 826-SPE	NA	1	1	STD72810	10/06/15 19:49
6M134961	L15100029-01 LOQ A9/FOO 826-SPE	NA	1	1	STD72810	10/06/15 20:21
6M134962	L15100029-09 LOQ A9/FOO 826-SPE	NA	1	1	STD72810	10/06/15 20:53
6M134963	RINSE	NA	1	1		10/06/15 21:25

Approved: October 18, 2015

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 041116
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75498 Surrogate Standard: STD75498
CCV: STD75575 LCS: STD75503 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG564297

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M138391	WG564297-01 50ng BFB STD 8260	NA	1	1	STD75485	04/11/16 09:58
6M138392	WG564297-02 50ug/L CCV STD 8260	NA	1	1	STD75575	04/11/16 10:23
6M138393	RINSE	NA	1	1		04/11/16 12:41
6M138394	RINSE	NA	1	1		04/11/16 14:35
6M138395	WG564297-01 50ng BFB STD 8260	NA	1	1	STD75485	04/11/16 15:06
6M138396	WG564297-02 0.3ug/L CCV STD 8260	NA	1	1	STD75586	04/11/16 15:32
6M138397	WG564297-03 0.4ug/L STD 8260	NA	1	1	STD75586	04/11/16 16:04
6M138398	WG564297-04 1ug/L STD 8260	NA	1	1	STD75586	04/11/16 16:37
6M138399	WG564297-05 2ug/L STD 8260	NA	1	1	STD75586	04/11/16 17:09
6M138400	WG564297-06 5ug/L STD 8260	NA	1	1	STD75586	04/11/16 17:43
6M138401	WG564297-07 20ug/L STD 8260	NA	1	1	STD75586	04/11/16 18:15
6M138402	WG564297-08 50ug/L STD 8260	NA	1	1	STD75586	04/11/16 18:45
6M138403	WG564297-09 100ug/L STD 8260	NA	1	1	STD75586	04/11/16 19:17
6M138404	WG564297-10 200ug/L STD 8260	NA	1	1	STD75586	04/11/16 19:49
6M138405	WG564297-11 300ug/L STD 8260	NA	1	1	STD75586	04/11/16 20:21
6M138406	RINSE	NA	1	1		04/11/16 20:54
6M138407	RINSE	NA	1	1		04/11/16 21:26
6M138408	WG564297-12 50ug/L ALT SRC STD 8260	NA	1	1	STD75503	04/11/16 21:58
6M138409	RINSE	NA	1	1		04/11/16 22:30
6M138410	BLANK	NA	1	1		04/11/16 23:02
6M138411	L16040007-01 DOC 826-SPE	NA	1	1	STD75503	04/11/16 23:34
6M138412	L16040007-02 DOC 826-SPE	NA	1	1	STD75503	04/12/16 00:07
6M138413	L16040007-03 DOC 826-SPE	NA	1	1	STD75503	04/12/16 00:39
6M138414	L16040007-04 DOC 826-SPE	NA	1	1	STD75503	04/12/16 01:11
6M138415	L16040001-01 LOD 826-SPE	NA	1	1	STD75504	04/12/16 01:43
6M138416	L16040003-01 LOQ 826-SPE	NA	1	1	STD75504	04/12/16 02:15
6M138417	L16040003-09 826-SPE	NA	1	1	STD75504	04/12/16 02:47

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
File ID: 6M138392				
Vc was low, run a curve. DNR.				

Approved: April 13, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041316
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 530B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53705

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75617 LCS: STD75503 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG564484

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411387	WG564484-01 50ng BFB STD 8260	NA	1	1	STD75485	04/13/16 09:50
8M411388	RINSE	NA	1	1		04/13/16 10:13
8M411389	WG564484-02 0.3ug/L STD 8260	NA	1	1	STD75617	04/13/16 10:46
8M411390	WG564484-03 0.4ug/L STD 8260	NA	1	1	STD75617	04/13/16 11:15
8M411391	WG564484-01 50ng BFB STD 8260	NA	1	1	STD75485	04/13/16 11:48
8M411392	WG564484-02 0.3ug/L STD 8260	NA	1	1	STD75617	04/13/16 12:11
8M411393	WG564484-03 0.4ug/L STD 8260	NA	1	1	STD75617	04/13/16 12:44
8M411394	WG564484-04 1ug/L STD 8260	NA	1	1	STD75617	04/13/16 13:13
8M411395	WG564484-03 0.4ug/L STD 8260	NA	1	1	STD75617	04/13/16 13:43
8M411396	WG564484-05 2ug/L STD 8260	NA	1	1	STD75617	04/13/16 14:13
8M411397	WG564484-06 5ug/L STD 8260	NA	1	1	STD75617	04/13/16 14:42
8M411398	WG564484-07 20ug/L STD 8260	NA	1	1	STD75617	04/13/16 15:12
8M411399	WG564484-08 50ug/L STD 8260	NA	1	1	STD75617	04/13/16 15:41
8M411400	WG564484-09 100ug/L STD 8260	NA	1	1	STD75617	04/13/16 16:10
8M411401	WG564484-10 200ug/L STD 8260	NA	1	1	STD75617	04/13/16 16:40
8M411402	WG564484-11 300ug/L STD 8260	NA	1	1	STD75617	04/13/16 17:09
8M411403	RINSE	NA	1	1		04/13/16 17:39
8M411404	RINSE	NA	1	1		04/13/16 18:09
8M411405	WG564484-12 50ug/L ALT SRC STD 8260	NA	1	1	STD75503	04/13/16 18:38
8M411406	RINSE	NA	1	1		04/13/16 19:07

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X			
File ID: 8M411389				
			Internals were low. DNR.	
4	X			
File ID: 8M411390				
			Internals were low. DNR. Increased the voltage by 20.	
7	X			
File ID: 8M411393				
			Spiking error, nothing showed up in the anaylsis. DNR.	
19	X			
File ID: 8M411405				

Approved: April 15, 2016

Microbac Laboratories Inc.

Instrument Run Log

Instrument:	HPMS8	Dataset:	041316		
Analyst1:	TMB	Analyst2:	NA		
Method:	8260B	SOP:	MSV01	Rev:	23
Method:	624	SOP:	MSV10	Rev:	14
Method:	530B/5030C/5035A	SOP:	PAT01	Rev:	18
Maintenance Log ID:	53705				

Internal Standard:	STD75545	Surrogate Standard:	STD75545		
CCV:	STD75617	LCS:	STD75503	MS/MSD:	NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG564484

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Vc was low, DNR.

Approved: April 15, 2016

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041416
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75617 LCS: STD75664 MS/MSD: STD75664

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG564863

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411407	WG564862-01 50ng BFB STD 8260	NA	1	1	STD75485	04/14/16 09:56
8M411408	WG564862-01 50ng BFB STD 8260	NA	1	1	STD75485	04/14/16 10:12
8M411409	WG564862-02 50ug/L CCV STD 8260	NA	1	1	STD75617	04/14/16 10:37
8M411410	WG564862-02 50ug/L CCV STD 8260	NA	1	1	STD75617	04/14/16 11:18
8M411411	WG000000-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/14/16 11:47
8M411412	WG564863-01 VBLK0414 BLANK STD 826	NA	1	1		04/14/16 12:17
8M411413	WG564484-12 50ug/L ALT SRC STD 8260	NA	1	1	STD75664	04/14/16 12:46
8M411414	WG564863-02 20ug/L LCS STD 8260	NA	1	1	STD75664	04/14/16 13:15
8M411415	L16040531-11 A MS 826-SPE	<2	1	1	STD75664	04/14/16 13:44
8M411416	L16040531-12 A MSD 826-SPE	<2	1	1	STD75664	04/14/16 14:13
8M411417	L16031742-20 B 10X 826-SPE D1	<2	1	10		04/14/16 14:42
8M411418	L16040531-15 A TB 826-SPE	<2	1	1		04/14/16 15:11
8M411419	L16040531-17 A 826-SPE	<2	1	1		04/14/16 15:39
8M411420	L16040531-10 A REF 826-SPE	<2	1	1		04/14/16 16:09
8M411421	L16040531-13 A 826-SPE	<2	1	1		04/14/16 16:38
8M411422	L16040531-14 A 826-SPE	<2	1	1		04/14/16 17:07
8M411423	L16040531-16 A 826-SPE	<2	1	1		04/14/16 17:36
8M411424	L16040531-09 A 826-SPE	<2	1	1		04/14/16 18:05
8M411425	L16040531-08 A 826-SPE	<2	1	1		04/14/16 18:34
8M411426	L16040531-07 A 826-SPE	<2	1	1		04/14/16 19:04
8M411427	L16040531-06 A 826-SPE	<2	1	1		04/14/16 19:33
8M411428	L16040531-05 A 826-SPE	<2	1	1		04/14/16 20:02
8M411429	L16040531-04 A 826-SPE	<2	1	1		04/14/16 20:32
8M411430	L16040531-03 A 826-SPE	<2	1	1		04/14/16 21:02
8M411431	L16040531-02 A 826-SPE	<2	1	1		04/14/16 21:30
8M411432	L16040531-01 A 826-SPE	<2	1	1		04/14/16 22:00
8M411433	RINSE	NA	1	1		04/14/16 22:29
8M411434	WG564863-06 VBLK0414 BLANK STD 624	NA	2	1		04/14/16 22:57
8M411435	L16040666-01 A 624-SPE	<2	2	1		04/14/16 23:26
8M411436	CCV	NA	1	1		04/14/16 23:55
8M411437	RINSE	NA	1	1		04/15/16 00:25

Comments

Approved: April 15, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041416
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75617 LCS: STD75664 MS/MSD: STD75664

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG564863

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1	X			
File ID: 8M411407				
			Tune failed, DNR.	
3				
File ID: 8M411409				
			Vc was low, DNR.	
5				
File ID: 8M411411				
			Not needed. DNR.	
11				
File ID: 8M411417				
			Ran out of hold.	

Approved: April 15, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 041816
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75498 Surrogate Standard: STD75498
CCV: STD75586; STD75328 LCS: STD75664 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565328

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M138582	RINSE	NA	1	1		04/18/16 08:44
6M138583	RINSE W/MEOH	NA	1	1		04/18/16 09:22
6M138584	RINSE	NA	1	1		04/18/16 09:55
6M138585	RINSE	NA	1	1		04/18/16 10:27
6M138586	RINSE	NA	1	1		04/18/16 11:34
6M138587	RINSE	NA	1	1		04/18/16 12:16
6M138588	WG565327-01 50ng BFB STD 8260	NA	1	1	STD75485	04/18/16 12:45
6M138589	WG565327-02 50ug/L CCV STD 8260	NA	1	1	STD75586	04/18/16 13:10
6M138590	WG565369-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/18/16 13:43
6M138591	RINSE W/ MEOH	NA	1	1		04/18/16 14:15
6M138592	WG565328-01 VBLK0418 BLANK STD 826	NA	1	1		04/18/16 14:47
6M138593	WG565328-02 20ug/L LCS STD 8260	NA	1	1	STD75664	04/18/16 15:19
6M138594	WG565328-03 20ug/L LCS2 STD 8260	NA	1	1	STD75664	04/18/16 15:52
6M138595	L16040847-01 B 10X 826-SPE D1	<2	1	10		04/18/16 16:24
6M138596	L16040001-01 LOD 826-SPE	NA	1	1	STD75715	04/18/16 16:56
6M138597	L16040754-20 B 826-SPE	<2	1	1		04/18/16 17:29
6M138598	L16040858-01 A 826-LOW	<2	1	1		04/18/16 18:01
6M138599	L16040858-02 A 826-LOW	<2	1	1		04/18/16 18:32
6M138600	L16040858-03 A 826-LOW	<2	1	1		04/18/16 19:04
6M138601	L16040858-04 A 826-LOW	<2	1	1		04/18/16 19:37
6M138602	L16040858-05 A 826-LOW	<2	1	1		04/18/16 20:09
6M138603	L16040876-01 A 826-SPE4	<2	1	1		04/18/16 20:41
6M138604	L16040876-02 A 826-SPE4	<2	1	1		04/18/16 21:13
6M138605	L16040876-03 A 826-SPE4	<2	1	1		04/18/16 21:45
6M138606	L16040876-04 A 826-SPE4	<2	1	1		04/18/16 22:17
6M138607	L16040876-05 A 826-SPE4	<2	1	1		04/18/16 22:50
6M138608	L16040876-06 A 826-SPE4	<2	1	1		04/18/16 23:22
6M138609	L16040849-01 A 826-SPE	<2	1	1		04/18/16 23:54
6M138610	L16040849-02 A 826-SPE	<2	1	1		04/19/16 00:26
6M138611	RINSE	NA	1	1		04/19/16 00:58
6M138612	RINSE	NA	1	1		04/19/16 01:30
6M138613	WG565328-04 VBLK0418 BLANK STD 624	NA	2	1		04/19/16 02:02
6M138614	L16040841-01 B 624-SPE	7	2	1		04/19/16 02:34
6M138615	L16040862-01 B 624-SPE12	7	2	1		04/19/16 03:06

Approved: April 19, 2016
Sarah Vandenberg

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Instrument Run Log

Instrument: HPMS6 Dataset: 041816
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75498 Surrogate Standard: STD75498
CCV: STD75586; STD75328 LCS: STD75664 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565328

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M138616	L16040840-02 B 624-SPE	7	2	1		04/19/16 03:39
6M138617	L16040839-01 B 1000X 624-SPE D1	11	2	1000		04/19/16 04:11
6M138618	RINSE	NA	2	1		04/19/16 04:43
6M138619	L16040935-02 A 624	<2	2	1		04/19/16 05:15
6M138620	CCV	NA	1	1		04/19/16 05:47
6M138621	RINSE	NA	1	1		04/19/16 06:19
6M138622	ANTIFOAM BLANK	NA	1	1		04/19/16 06:51

Comments

Seq.	Rerun	Dil.	Reason	Analytes
26	X	5	Over Calibration Range	CB
File ID: 6M138607				
27	X	1	Carry-over contamination	
File ID: 6M138608				
Possible CB carry over.				
28	X	1	Carry-over contamination	
File ID: 6M138609				
Possible p-isoprop. carry over.				

Approved: April 19, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041816
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53715

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75617 LCS: STD75664 MS/MSD: STD75664

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565386

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411501	RINSE W/MEOH	NA	1	1		04/18/16 10:11
8M411502	RINSE	NA	1	1		04/18/16 10:40
8M411503	RINSE	NA	1	1		04/18/16 11:09
8M411504	RINSE	NA	1	1		04/18/16 11:52
8M411505	RINSE	NA	1	1		04/18/16 12:21
8M411506	RINSE	NA	1	1		04/18/16 12:51
8M411507	RINSE	NA	1	1		04/18/16 13:36
8M411508	RINSE	NA	1	1		04/18/16 14:05
8M411509	RINSE	NA	1	1		04/18/16 14:34
8M411510	WG565384-01 50ng BFB STD 8260	NA	1	1	STD75485	04/18/16 15:39
8M411511	WG565384-02 50ug/L CCV STD 8260	NA	1	1	STD75617	04/18/16 16:03
8M411512	WG565369-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/18/16 16:32
8M411513	RINSE W/MEOH	NA	1	1		04/18/16 17:01
8M411514	WG565386-01 VBLK0418 BLANK STD 826	NA	1	1		04/18/16 17:31
8M411515	WG565386-02 20ug/L LCS STD 8260	NA	1	1	STD75664	04/18/16 18:00
8M411516	L16040858-11 A MS 826-LOW	<2	1	1	STD75664	04/18/16 18:29
8M411517	L16040858-12 A MSD 826-LOW	<2	1	1	STD75664	04/18/16 18:59
8M411518	L16040845-03 B TB 826-SPE	<2	1	1		04/18/16 19:28
8M411519	L16040754-14 C 826-SPE A1	<2	1	1		04/18/16 19:57
8M411520	L16040845-04 B 826-SPE	<2	1	1		04/18/16 20:26
8M411521	L16040845-06 B 100X 826-SPE D1	<2	1	100		04/18/16 20:55
8M411522	L16040845-05 B 826-SPE	<2	1	1		04/18/16 21:24
8M411523	L16040858-07 A 826-SPE	<2	1	1		04/18/16 21:53
8M411524	L16040858-08 A 826-SPE	<2	1	1		04/18/16 22:23
8M411525	L16040858-09 A 826-SPE	<2	1	1		04/18/16 22:52
8M411526	L16040858-10 A REF 826-SPE	<2	1	1		04/18/16 23:21
8M411527	L16040858-13 A 826-SPE	<2	1	1		04/18/16 23:49
8M411528	L16040858-14 A 826-SPE	<2	1	1		04/19/16 00:18
8M411529	L16040858-15 A 826-SPE	<2	1	1		04/19/16 00:48
8M411530	L16040858-19 A 826-SPE	<2	1	1		04/19/16 01:17
8M411531	L16040858-16 25X A 826-SPE	7	1	25		04/19/16 01:46
8M411532	L16040858-17 100X A 826-SPE	7	1	100		04/19/16 02:15
8M411533	L16040858-18 5X A 826-SPE	<2	1	5		04/19/16 02:45
8M411534	L16040858-06 A 826-SPE	<2	1	1		04/19/16 03:14

Approved: April 19, 2016

Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041816
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53715

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75617 LCS: STD75664 MS/MSD: STD75664

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565386

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411535	RINSE	NA	1	1		04/19/16 03:43
8M411536	WG565386-06 VBLK0418 BLANK STD 624	NA	2	1		04/19/16 04:12
8M411537	L16040877-02 B 1000X 624-SPE D1	3	2	1000		04/19/16 04:42
8M411538	CCV	NA	1	1		04/19/16 05:11
8M411539	RINSE	NA	1	1		04/19/16 05:40
8M411540	ANTIFOAM BLANK	NA	1	1		04/19/16 06:09

Comments

Seq.	Rerun	Dil.	Reason	Analytes
32	X	25	Analyzed too dilute	
File ID: 8M411532				
33	X	2.5	Analyzed too dilute	
File ID: 8M411533				

Approved: April 19, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041916
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18

Maintenance Log ID:

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75740 LCS: STD75744 MS/MSD: STD75744

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565517

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411541	WG565516-01 50ng BFB STD 8260	NA	1	1	STD75485	04/19/16 12:03
8M411542	WG565516-02 50ug/L CCV STD 8260	NA	1	1	STD75617	04/19/16 12:27
8M411543	WG565516-02 50ug/L CCV STD 8260	NA	1	1	STD75740	04/19/16 12:56
8M411544	WG565516-01 50ng BFB STD 8260	NA	1	1	STD75485	04/19/16 14:19
8M411545	WG565516-02 50ug/L CCV STD 8260	NA	1	1	STD75740	04/19/16 14:43
8M411546	WG000000-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/19/16 15:12
8M411547	WG565517-01 VBLK0419 BLANK STD 826	NA	1	1		04/19/16 15:41
8M411548	WG565517-02 20ug/L LCS STD 8260	NA	1	1	STD75744	04/19/16 16:10
8M411549	L16040858-25 A MS 826-LOW	<2	1	1	STD75744	04/19/16 16:48
8M411550	L16040858-26 A MSD 826-LOW	<2	1	1	STD75744	04/19/16 17:17
8M411551	L16040858-31 A TB 826-LOW	<2	1	1		04/19/16 17:46
8M411552	L16040589-01 C TB 826-SPE	<2	1	1		04/19/16 18:16
8M411553	L16040858-24 A REF 826-LOW	<2	1	1		04/19/16 18:45
8M411554	L16040858-20 A 826-LOW	<2	1	1		04/19/16 19:14
8M411555	L16040858-21 A 826-LOW	<2	1	1		04/19/16 19:44
8M411556	L16040858-22 A 826-LOW	<2	1	1		04/19/16 20:13
8M411557	L16040858-23 A 826-LOW	<2	1	1		04/19/16 20:42
8M411558	L16040858-28 A 826-LOW	<2	1	1		04/19/16 21:11
8M411559	L16040858-29 A 826-LOW	<2	1	1		04/19/16 21:40
8M411561	L16040858-17 B 25X 826-LOW	7	1	25		04/19/16 22:09
8M411562	L16040762-23 B 2X 826-SPE 00	<2	1	2		04/19/16 22:38
8M411563	L16040858-18 B 2.5X 826-LOW 00	<2	1	2.5		04/19/16 23:08
8M411564	L16040762-10 B 5X 826-SPE 00	<2	1	5		04/19/16 23:37
8M411565	L16040762-12 B 826-SPE	<2	1	1		04/20/16 00:05
8M411566	L16040762-13 B 826-SPE	<2	1	1		04/20/16 00:34
8M411567	L16040762-24 B 826-SPE	<2	1	1		04/20/16 01:03
8M411568	L16040858-30 A 826-LOW	<2	1	1		04/20/16 01:32
8M411569	L16040858-27 A 10X 826-LOW	<2	1	10		04/20/16 02:02
8M411570	CCV	NA	1	1		04/20/16 02:31
8M411571	RINSE	NA	1	1		04/20/16 03:00
8M411572	RINSE	NA	1	1		04/20/16 03:29
8M411573	ANTIFOAM BLANK	NA	1	1		04/20/16 03:59

Approved: April 22, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 041916
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18

Maintenance Log ID:

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75740 LCS: STD75744 MS/MSD: STD75744

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565517

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Internal standard failure	
File ID: 8M411542				
	First internal was too high, DNR.			
3	X			
File ID: 8M411543				
	First internal was too high, DNR. Lowered the voltage.			
6				
File ID: 8M411546				
	Not needed, DNR.			
11	X	1	Carry-over contamination	
File ID: 8M411551				
	DNR. Naph carry over.			
23	X	25	Over Calibration Range	VC
File ID: 8M411564				
27	X	20	Over Calibration Range	11-DCE
File ID: 8M411568				
28	X	100	Over Calibration Range	11-DCE
File ID: 8M411569				

Approved: April 22, 2016
Sarah Vandenberg

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 042016
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75498 Surrogate Standard: STD75498
CCV: STD75740 LCS: STD75744 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565673

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M138655	WG565672-01 50ng BFB STD 8260	NA	1	1	STD75485	04/20/16 11:23
6M138656	WG565672-02 50ug/L CCV STD 8260	NA	1	1	STD75740	04/20/16 11:48
6M138657	WG565672-02 50ug/L CCV STD 8260	NA	1	1	STD75740	04/20/16 12:23
6M138658	WG000000-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/20/16 12:55
6M138659	WG565673-01 VBLK0420 BLANK STD 826	NA	1	1		04/20/16 13:27
6M138660	WG565673-02 20ug/L LCS STD 8260	NA	1	1	STD75744	04/20/16 14:00
6M138661	WG565673-03 20ug/L LCS2 STD 8260	NA	1	1	STD75744	04/20/16 14:32
6M138662	L16040552-01 B 10X 826-TC	NA	17	10		04/20/16 15:04
6M138663	L16040552-03 B 10X 826-TC	NA	17	10		04/20/16 15:37
6M138664	L16040552-04 B 10X 826-TC	NA	17	10		04/20/16 16:09
6M138665	L16040552-05 B 10X 826-TC	NA	17	10		04/20/16 16:42
6M138666	L16040846-01 B 10X 826-TC	NA	17	10		04/20/16 17:13
6M138667	L16041023-02 TB A 826-SPE	7	1	1		04/20/16 17:45
6M138668	L16040978-03 TB A 826-LOW	<2	1	1		04/20/16 18:18
6M138669	L16040858-31 TB B 826-LOW	<2	1	1		04/20/16 18:50
6M138670	L16040824-01 B 826-SPE	<2	1	1		04/20/16 19:22
6M138671	L16040824-02 B 826-SPE	<2	1	1		04/20/16 19:54
6M138672	L16040824-03 B 826-SPE	<2	1	1		04/20/16 20:26
6M138673	L16040824-04 B 826-SPE	<2	1	1		04/20/16 20:59
6M138674	L16041022-01 A 826-SPE	7	1	1		04/20/16 21:31
6M138675	L16041023-01 A 826-SPE	6	1	1		04/20/16 22:04
6M138676	L16040978-01 A 826-LOW	<2	1	1		04/20/16 22:36
6M138677	L16040981-02 B 10X 826-SPE D1	7	1	10		04/20/16 23:08
6M138678	RINSE	NA	1	1		04/20/16 23:40
6M138679	WG565673-04 VBLK0420 BLANK STD 624	NA	2	1		04/21/16 00:12
6M138680	L16040997-01 A 624	5	2	1		04/21/16 00:44
6M138681	L16041043-01 A 624-SPE2	<2	2	1		04/21/16 01:16
6M138682	L16041043-02 A 624-SPE1	<2	2	1		04/21/16 01:48
6M138683	CCV	NA	1	1		04/21/16 02:20
6M138684	RINSE	NA	1	1		04/21/16 02:53

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Approved: April 22, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 042016
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75498 Surrogate Standard: STD75498
CCV: STD75740 LCS: STD75744 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565673

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X			
File ID: 6M138656				
			Acetone was low. DNR.	
4				
File ID: 6M138658				
			Not needed, DNR.	
20				
File ID: 6M138674				
			Changed the lid because the vial was too full.	
21				
File ID: 6M138675				
			Changed the lid because the vial was too full.	

Approved: April 22, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 042116
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53719

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75742 LCS: STD75744 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565880

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411603	RINSE	NA	1	1		04/21/16 10:04
8M411604	RINSE	NA	1	1		04/21/16 10:42
8M411605	RINSE	NA	1	1		04/21/16 11:36
8M411606	WG565879-01 50ng BFB STD 8260	NA	1	1	STD75485	04/21/16 12:11
8M411607	WG565879-01 50ng BFB STD 8260	NA	1	1	STD75485	04/21/16 12:25
8M411608	WG565879-01 50ng BFB STD 8260	NA	1	1	STD75485	04/21/16 12:39
8M411609	WG565879-02 50ug/L CCV STD 8260	NA	1	1	STD75742	04/21/16 13:02
8M411610	WG565879-02 50ug/L CCV STD 8260	NA	1	1	STD75742	04/21/16 13:32
8M411611	WG565881-01 100ug/L A9 CCV STD 8260	NA	1	1	STD75328	04/21/16 14:02
8M411612	WG565880-01 VBLK0421 BLANK STD 826	NA	1	1		04/21/16 14:31
8M411613	WG565880-02 20ug/L LCS STD 8260	NA	1	1	STD75744	04/21/16 15:00
8M411614	WG565880-03 20ug/L LCS2 STD 8260	NA	1	1	STD75744	04/21/16 15:29
8M411615	L16041017-03 B 200X 826-SPE	<2	1	200		04/21/16 15:58
8M411616	L16041017-02 B 250X 826-SPE D1	<2	1	250		04/21/16 16:27
8M411617	L16040858-27 B 20X 826-LOW D1	<2	1	20		04/21/16 16:57
8M411618	L16040858-30 B 100X 826-LOW D1	<2	1	100		04/21/16 17:25
8M411619	L16041078-01 A TB 826-SPE	<2	1	1		04/21/16 17:55
8M411620	L16041078-09 A EB 826-SPE	<2	1	1		04/21/16 18:24
8M411621	L16040691-01 A 826-SPE1	<2	1	1		04/21/16 18:54
8M411622	L16040691-03 A 826-SPE1	<2	1	1		04/21/16 19:23
8M411623	L16040691-05 A 100X 826-SPE1	<2	1	100		04/21/16 19:52
8M411624	L16040691-07 A 200X 826-SPE1	<2	1	200		04/21/16 20:21
8M411625	L16041078-02 A 826-SPE	<2	1	1		04/21/16 20:51
8M411626	L16041078-08 A 826-SPE	<2	1	1		04/21/16 21:20
8M411627	L16041124-01 A 826-SPE	<2	1	1		04/21/16 21:49
8M411628	WG565880-04 VBLK0421 BLANK STD 624	NA	2	1		04/21/16 22:18
8M411629	L16041058-02 B 20X 624-SPE D1	<2	2	20		04/21/16 22:47
8M411630	L16041114-01 A 624-SPE	7	2	1		04/21/16 23:16
8M411631	L16041117-01 A 624-SPE	6	2	1		04/21/16 23:45
8M411632	L16041119-01 A 624-SPE	6	2	1		04/22/16 00:14
8M411633	L16041115-01 A 624-SPE	7	2	1		04/22/16 00:44
8M411634	CCV	NA	1	1		04/22/16 01:13
8M411635	RINSE	NA	1	1		04/22/16 01:42
8M411636	RINSE	NA	1	1		04/22/16 02:11

Approved: April 22, 2016

Sarah Vandenberg

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS8 Dataset: 042116
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53719

Internal Standard: STD75545 Surrogate Standard: STD75545
CCV: STD75742 LCS: STD75744 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG565880

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
8M411637	RINSE	NA	1	1		04/22/16 02:40
8M411638	RINSE	NA	1	1		04/22/16 03:10
8M411639	RINSE	NA	1	1		04/22/16 03:39
8M411640	ANTIFOAM BLANK	NA	2	1		04/22/16 04:08
8M411641	RINSE	NA	1	1		04/22/16 04:37
8M411642	RINSE	NA	1	1		04/22/16 05:07

Comments

Seq.	Rerun	Dil.	Reason	Analytes
4	X			
File ID: 8M411606				
	Tune failed, DNR.			
5	X			
File ID: 8M411607				
	Tune failed, DNR. Changed the septa.			
7	X			
File ID: 8M411609				
	VC was low, DNR.			
21	X	50	Analyzed too dilute	
File ID: 8M411623				
22	X	50	Analyzed too dilute	
File ID: 8M411624				

Approved: April 22, 2016
Sarah Vandenberg

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Microbac Laboratories Inc.

Data Checklist

Date: 05-OCT-2015
Analyst: TMB
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 70874
Analytical Workgroups: WG540826

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
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	TMB
Secondary Reviewer	FJB
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:
06-OCT-2015
Tiffany Bailey

Secondary Reviewer:
09-OCT-2015

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-09-2015 12:12:03

Microbac Laboratories Inc.

Data Checklist

Date: 06-OCT-2015
Analyst: TMB
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 70907
Analytical Workgroups: WG541654; WG541773

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
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	TMB
Secondary Reviewer	FJB
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:
07-OCT-2015
Tiffany Bailey

Secondary Reviewer:
18-OCT-2015

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-18-2015 13:30:19

Microbac Laboratories Inc.

Data Checklist

Date: 11-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 74405
Analytical Workgroups: WG564297

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
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	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	FJB
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:
12-APR-2016
Tiffany Bailey

Secondary Reviewer:
13-APR-2016

CHECKLIST1 - Modified 03/05/2008
Generated: APR-13-2016 14:18:48

Microbac Laboratories Inc.

Data Checklist

Date: 13-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 74448
Analytical Workgroups: WG564484

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	FJB
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:
14-APR-2016
Tiffany Bailey

Secondary Reviewer:
15-APR-2016

CHECKLIST1 - Modified 03/05/2008
Generated: APR-15-2016 13:48:01

Microbac Laboratories Inc.

Data Checklist

Date: 14-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 74495
Analytical Workgroups: WG564863

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	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	FJB
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:
15-APR-2016
Tiffany Bailey

Secondary Reviewer:
15-APR-2016

CHECKLIST1 - Modified 03/05/2008
Generated: APR-15-2016 14:20:26

Microbac Laboratories Inc.

Data Checklist

Date: 18-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 74550
Analytical Workgroups: WG565328

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	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	SAV
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:
19-APR-2016
Tiffany Bailey

Secondary Reviewer:
19-APR-2016
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: APR-19-2016 13:19:39

Microbac Laboratories Inc.

Data Checklist

Date: 18-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 74564
Analytical Workgroups: WG565386

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	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	SAV
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:
19-APR-2016
Tiffany Bailey

Secondary Reviewer:
19-APR-2016
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: APR-19-2016 16:22:32

Microbac Laboratories Inc.

Data Checklist

Date: 19-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 74588
Analytical Workgroups: WG565517

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	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	SAV
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:
20-APR-2016
Tiffany Bailey

Secondary Reviewer:
22-APR-2016
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: APR-22-2016 12:08:27

Microbac Laboratories Inc.

Data Checklist

Date: 20-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 74612
Analytical Workgroups: WG565673

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	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	SAV
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:
21-APR-2016
Tiffany Bailey

Secondary Reviewer:
22-APR-2016
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: APR-22-2016 10:26:27

Microbac Laboratories Inc.

Data Checklist

Date: 21-APR-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS8
Curve Workgroup: NA
Runlog ID: 74638
Analytical Workgroups: WG565880

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	SAV
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:
22-APR-2016
Tiffany Bailey

Secondary Reviewer:
22-APR-2016
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: APR-22-2016 13:07:20

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG565328

Login Number: L16040858

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
35AWW17-041116	01	04/11/16					04/18/2016	7.4	14		04/18/16	7.4	14	
35AWW18-041116	02	04/11/16					04/18/2016	7.4	14		04/18/16	7.4	14	
35AWW18FD-041116	03	04/11/16					04/18/2016	7.4	14		04/18/16	7.4	14	
35AWW06-041116	04	04/11/16					04/18/2016	7.4	14		04/18/16	7.4	14	
35AWW12-041216	05	04/12/16					04/18/2016	6.5	14		04/18/16	6.5	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4724673
Report generated 04/25/2016 16:01

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B AAB#: WG565386

Login Number: L16040858

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
35AWW09-041216	06	04/12/16					04/19/2016	6.7	14		04/19/16	6.7	14	
35AWW01-041216	07	04/12/16					04/18/2016	6.5	14		04/18/16	6.5	14	
35AWW01FD-041216	08	04/12/16					04/18/2016	6.5	14		04/18/16	6.5	14	
35AWW11-041216	09	04/12/16					04/18/2016	6.5	14		04/18/16	6.5	14	
35AWW16-041216	10	04/12/16					04/18/2016	6.3	14		04/18/16	6.3	14	
35AWW16MS-041216	11	04/12/16					04/18/2016	6.1	14		04/18/16	6.1	14	
35AWW16MSD-041216	12	04/12/16					04/18/2016	6.2	14		04/18/16	6.2	14	
35AWW19-041216	13	04/13/16					04/18/2016	5.7	14		04/18/16	5.7	14	
LHSMW06-041316	14	04/13/16					04/19/2016	5.7	14		04/19/16	5.7	14	
35AWW14-041316	15	04/13/16					04/19/2016	5.7	14		04/19/16	5.7	14	
35AWW08-041316	16	04/13/16					04/19/2016	5.7	14		04/19/16	5.7	14	
35AWW22-041316	19	04/13/16					04/19/2016	5.7	14		04/19/16	5.7	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4724673
Report generated 04/25/2016 16:01

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B AAB#: WG565517

Login Number: L16040858

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
03WW01-041316	17	04/13/16					04/19/2016	6.6	14		04/19/16	6.6	14	
LHSMW04-041316	18	04/13/16					04/19/2016	6.6	14		04/19/16	6.6	14	
35AWW21-041316	20	04/13/16					04/19/2016	6.4	14		04/19/16	6.4	14	
35AWW21FD-041316	21	04/13/16					04/19/2016	6.4	14		04/19/16	6.4	14	
35AWW13-041316	22	04/13/16					04/19/2016	6.4	14		04/19/16	6.4	14	
35ASW03-041316	23	04/13/16					04/19/2016	6.3	14		04/19/16	6.3	14	
35AWW10-041316	24	04/13/16					04/19/2016	6.2	14		04/19/16	6.2	14	
35AWW10MS-041316	25	04/13/16					04/19/2016	6.1	14		04/19/16	6.1	14	
35AWW10MSD-041316	26	04/13/16					04/19/2016	6.1	14		04/19/16	6.1	14	
35AWW20-041316	27	04/13/16					04/20/2016	6.5	14		04/20/16	6.5	14	
35AWW15-041416	28	04/14/16					04/19/2016	5.5	14		04/19/16	5.5	14	
35AWW05-041416	29	04/14/16					04/19/2016	5.5	14		04/19/16	5.5	14	
LHSMW07-041416	30	04/14/16					04/20/2016	5.6	14		04/20/16	5.6	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4724673
Report generated 04/25/2016 16:01

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B AAB#: WG565673

Login Number: L16040858

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
TRIP BLANK	31	04/14/16					04/20/2016	6.8	14		04/20/16	6.8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4724673
Report generated 04/25/2016 16:01

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG565880

Login Number: L16040858

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
35AWW20-041316	27	04/13/16					04/21/2016	8.1	14		04/21/16	8.1	14	
LHSMW07-041416	30	04/14/16					04/21/2016	7.3	14		04/21/16	7.3	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4724673
Report generated 04/25/2016 16:01

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16040858
Instrument Id: HPMS8
Workgroup (AAB#): WG565880

Method: 8260
CAL ID: HPMS8-13-APR-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16040858-27	20.0	DL02	112	102	93.8	92.7
L16040858-30	100	DL01	111	103	94.5	93.2
WG565880-01	1.00	01	111	103	93.6	94.6
WG565880-02	1.00	01	113	101	91.7	93.8
WG565880-03	1.00	01	112	102	92.2	91.7
WG565880-04	1.00	01	114	102	91.0	93.6

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: 4724693
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16040858
Instrument Id: HPMS8
Workgroup (AAB#): WG565386

Method: 8260
CAL ID: HPMS8-13-APR-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16040858-06	1.00	01	101	96.5	97.5	97.0
L16040858-07	1.00	01	97.7	94.2	97.2	97.3
L16040858-08	1.00	01	99.0	95.2	98.3	97.7
L16040858-09	1.00	01	100	96.3	95.6	96.6
L16040858-10	1.00	01	100	96.0	97.1	95.6
L16040858-11	1.00	01	96.7	94.4	92.0	96.9
L16040858-12	1.00	01	96.5	94.9	90.8	95.6
L16040858-13	1.00	01	98.7	95.8	95.4	96.2
L16040858-14	1.00	01	100	95.2	97.3	96.2
L16040858-15	1.00	01	101	97.3	96.5	96.9
L16040858-16	25.0	DL01	98.1	91.7	94.5	98.3
L16040858-19	1.00	01	98.9	95.6	95.3	96.6
WG565386-01	1.00	01	95.9	95.9	96.3	98.4
WG565386-02	1.00	01	94.9	94.0	91.7	96.4
WG565386-06	1.00	01	99.9	97.4	96.2	97.9

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: 4724693
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16040858
Instrument Id: HPMS6
Workgroup (AAB#): WG565673

Method: 8260
CAL ID: HPMS6-11-APR-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16040858-31	1.00	01	110	108	107	104
WG565673-01	1.00	01	109	108	108	105
WG565673-02	1.00	01	106	108	106	106
WG565673-03	1.00	01	107	107	105	107
WG565673-04	1.00	01	111	110	106	104

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: 4724693
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16040858
Instrument Id: HPMS6
Workgroup (AAB#): WG565328

Method: 8260
CAL ID: HPMS6-11-APR-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16040858-01	1.00	01	107	106	107	102
L16040858-02	1.00	01	105	108	107	102
L16040858-03	1.00	01	108	108	106	102
L16040858-04	1.00	01	106	107	106	103
L16040858-05	1.00	01	107	108	107	104
WG565328-01	1.00	01	104	103	105	103
WG565328-02	1.00	01	102	104	105	105
WG565328-03	1.00	01	102	105	105	105
WG565328-04	1.00	01	101	103	108	104

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: 4724693
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16040858
Instrument Id: HPMS8
Workgroup (AAB#): WG565517

Method: 8260
CAL ID: HPMS8-13-APR-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16040858-17	25.0	DL02	97.6	93.4	94.3	98.2
L16040858-18	2.50	DL01	95.6	105	97.2	97.5
L16040858-20	1.00	01	93.7	91.8	96.3	96.6
L16040858-21	1.00	01	96.9	94.0	96.4	97.4
L16040858-22	1.00	01	101	96.4	96.8	97.9
L16040858-23	1.00	01	96.3	95.5	97.5	96.8
L16040858-24	1.00	01	91.6	94.3	96.8	95.3
L16040858-25	1.00	01	92.5	92.5	94.0	96.5
L16040858-26	1.00	01	94.4	93.5	92.0	97.1
L16040858-27	10.0	DL01	97.8	97.0	96.5	98.0
L16040858-28	1.00	01	98.8	96.3	96.2	96.6
L16040858-29	1.00	01	96.8	95.4	98.2	96.2
L16040858-30	1.00	01	94.1	95.1	95.4	94.9
WG565517-01	1.00	01	97.0	95.1	98.5	96.8
WG565517-02	1.00	01	95.2	93.2	95.1	95.9

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: 4724693
Report generated: 04/25/2016 16:02

METHOD BLANK SUMMARY

Login Number: L16040858
Work Group: WG565328
Blank File ID: 6M138592
Blank Sample ID: WG565328-01
Prep Date: 04/18/16 14:47
Instrument ID: HPMS6
Analyzed Date: 04/18/16 14:47
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG565328-02	6M138593	04/18/16 15:19	01
LCS2	WG565328-03	6M138594	04/18/16 15:52	01
35AWW17-041116	L16040858-01	6M138598	04/18/16 18:01	01
35AWW18-041116	L16040858-02	6M138599	04/18/16 18:32	01
35AWW18FD-041116	L16040858-03	6M138600	04/18/16 19:04	01
35AWW06-041116	L16040858-04	6M138601	04/18/16 19:37	01
35AWW12-041216	L16040858-05	6M138602	04/18/16 20:09	01

Report Name: BLANK_SUMMARY
PDF File ID: 4725033
Report generated 04/25/2016 16:01

METHOD BLANK SUMMARY

Login Number:	L16040858	**Work Group:**	WG565673
Blank File ID:	6M138659	**Blank Sample ID:**	WG565673-01
Prep Date:	04/20/16 13:27	**Instrument ID:**	HPMS6
Analyzed Date:	04/20/16 13:27	**Method:**	8260B
Analyst:	TMB		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG565673-02	6M138660	04/20/16 14:00	01
LCS2	WG565673-03	6M138661	04/20/16 14:32	01
TRIP BLANK	L16040858-31	6M138669	04/20/16 18:50	01

Report Name: BLANK_SUMMARY
PDF File ID: 4725033
Report generated 04/25/2016 16:01

METHOD BLANK SUMMARY

Login Number: L16040858
Work Group: WG565386
Blank File ID: 8M411514
Blank Sample ID: WG565386-01
Prep Date: 04/18/16 17:31
Instrument ID: HPMS8
Analyzed Date: 04/18/16 17:31
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG565386-02	8M411515	04/18/16 18:00	01
35AWW16MS-041216	L16040858-11	8M411516	04/18/16 18:29	01
35AWW16MSD-041216	L16040858-12	8M411517	04/18/16 18:59	01
35AWW01-041216	L16040858-07	8M411523	04/18/16 21:53	01
35AWW01FD-041216	L16040858-08	8M411524	04/18/16 22:23	01
35AWW11-041216	L16040858-09	8M411525	04/18/16 22:52	01
35AWW16-041216	L16040858-10	8M411526	04/18/16 23:21	01
35AWW19-041216	L16040858-13	8M411527	04/18/16 23:49	01
LHSMW06-041316	L16040858-14	8M411528	04/19/16 00:18	01
35AWW14-041316	L16040858-15	8M411529	04/19/16 00:48	01
35AWW22-041316	L16040858-19	8M411530	04/19/16 01:17	01
35AWW08-041316	L16040858-16	8M411531	04/19/16 01:46	DL01
35AWW09-041216	L16040858-06	8M411534	04/19/16 03:14	01

Report Name: BLANK_SUMMARY
PDF File ID: 4725033
Report generated 04/25/2016 16:01

METHOD BLANK SUMMARY

Login Number: L16040858
Work Group: WG565517
Blank File ID: 8M411547
Blank Sample ID: WG565517-01
Prep Date: 04/19/16 15:41
Instrument ID: HPMS8
Analyzed Date: 04/19/16 15:41
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG565517-02	8M411548	04/19/16 16:10	01
35AWW10MS-041316	L16040858-25	8M411549	04/19/16 16:48	01
35AWW10MSD-041316	L16040858-26	8M411550	04/19/16 17:17	01
35AWW10-041316	L16040858-24	8M411553	04/19/16 18:45	01
35AWW21-041316	L16040858-20	8M411554	04/19/16 19:14	01
35AWW21FD-041316	L16040858-21	8M411555	04/19/16 19:44	01
35AWW13-041316	L16040858-22	8M411556	04/19/16 20:13	01
35ASW03-041316	L16040858-23	8M411557	04/19/16 20:42	01
35AWW15-041416	L16040858-28	8M411558	04/19/16 21:11	01
35AWW05-041416	L16040858-29	8M411559	04/19/16 21:40	01
03WW01-041316	L16040858-17	8M411561	04/19/16 22:09	DL02
LHSMW04-041316	L16040858-18	8M411563	04/19/16 23:08	DL01
LHSMW07-041416	L16040858-30	8M411568	04/20/16 01:32	01
35AWW20-041316	L16040858-27	8M411569	04/20/16 02:02	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 4725033
Report generated 04/25/2016 16:01

METHOD BLANK SUMMARY

Login Number:	L16040858	Work Group:	WG565880
Blank File ID:	8M411612	Blank Sample ID:	WG565880-01
Prep Date:	04/21/16 14:31	Instrument ID:	HPMS8
Analyzed Date:	04/21/16 14:31	Method:	8260B
Analyst:	TMB		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG565880-02	8M411613	04/21/16 15:00	01
LCS2	WG565880-03	8M411614	04/21/16 15:29	01
35AWW20-041316	L16040858-27	8M411617	04/21/16 16:57	DL02
LHSMW07-041416	L16040858-30	8M411618	04/21/16 17:25	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 4725033
Report generated 04/25/2016 16:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L16040858 Prep Date:04/18/16 14:47 Sample ID:WG565328-01
Instrument ID:HPMS6 Run Date:04/18/16 14:47 Prep Method:5030B/5030C/503
File ID:6M138592 Analyst:TMB Method:8260B
Workgroup (AAB#):WG565328 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS6-11-APR-16

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
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METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/18/16 14:47 Sample ID: WG565328-01
Instrument ID: HPMS6 Run Date: 04/18/16 14:47 Prep Method: 5030B/5030C/503
File ID: 6M138592 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565328 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-11-APR-16

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	104	70 - 120	PASS
Toluene-d8	103	85 - 120	PASS
4-Bromofluorobenzene	105	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: 4725034
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Login Number: L16040858 Prep Date: 04/20/16 13:27 Sample ID: WG565673-01
Instrument ID: HPMS6 Run Date: 04/20/16 13:27 Prep Method: 5030B/5030C/503
File ID: 6M138659 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565673 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-11-APR-16

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
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/20/16 13:27 Sample ID: WG565673-01
Instrument ID: HPMS6 Run Date: 04/20/16 13:27 Prep Method: 5030B/5030C/503
File ID: 6M138659 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565673 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-11-APR-16

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	108	85	-	115	PASS
1,2-Dichloroethane-d4	109	70	-	120	PASS
Toluene-d8	105	85	-	120	PASS
4-Bromofluorobenzene	108	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
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METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/18/16 17:31 Sample ID: WG565386-01
Instrument ID: HPMS8 Run Date: 04/18/16 17:31 Prep Method: 5030B/5030C/503
File ID: 8M411514 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565386 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-APR-16

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	0.189	1	J
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

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METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/18/16 17:31 Sample ID: WG565386-01
Instrument ID: HPMS8 Run Date: 04/18/16 17:31 Prep Method: 5030B/5030C/503
File ID: 8M411514 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565386 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-APR-16

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	95.9	85 - 115	PASS
1,2-Dichloroethane-d4	95.9	70 - 120	PASS
Toluene-d8	98.4	85 - 120	PASS
4-Bromofluorobenzene	96.3	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: 4725034
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/19/16 15:41 Sample ID: WG565517-01
Instrument ID: HPMS8 Run Date: 04/19/16 15:41 Prep Method: 5030B/5030C/503
File ID: 8M411547 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565517 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-APR-16

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
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/19/16 15:41 Sample ID: WG565517-01
Instrument ID: HPMS8 Run Date: 04/19/16 15:41 Prep Method: 5030B/5030C/503
File ID: 8M411547 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565517 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-APR-16

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	95.1	85 - 115	PASS
1,2-Dichloroethane-d4	97.0	70 - 120	PASS
Toluene-d8	96.8	85 - 120	PASS
4-Bromofluorobenzene	98.5	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: 4725034
25-APR-2016 16:01

Login Number: L16040858 Prep Date: 04/21/16 14:31 Sample ID: WG565880-01
Instrument ID: HPMS8 Run Date: 04/21/16 14:31 Prep Method: 5030B/5030C/503
File ID: 8M411612 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565880 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-APR-16

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
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16040858 Prep Date: 04/21/16 14:31 Sample ID: WG565880-01
Instrument ID: HPMS8 Run Date: 04/21/16 14:31 Prep Method: 5030B/5030C/503
File ID: 8M411612 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565880 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-APR-16

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	111	70 - 120	PASS
Toluene-d8	94.6	85 - 120	PASS
4-Bromofluorobenzene	93.6	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: 4725034
25-APR-2016 16:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Run Date: 04/18/2016 Sample ID: WG565386-02
Instrument ID: HPMS8 Run Time: 18:00 Prep Method: 5030B/5030C/503
File ID: 8M411515 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565386 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75664 Cal ID: HPMS8-13-APR-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	23.1	116	40 - 140	
Benzene	20.0	21.0	105	80 - 120	
Bromobenzene	20.0	19.6	98.1	75 - 125	
Bromochloromethane	20.0	19.5	97.3	65 - 130	
Bromodichloromethane	20.0	20.0	100	75 - 120	
Bromoform	20.0	18.4	92.2	70 - 130	
Bromomethane	20.0	20.9	105	30 - 145	
2-Butanone	20.0	21.9	110	30 - 150	
n-Butylbenzene	20.0	20.9	105	70 - 135	
sec-Butylbenzene	20.0	21.7	108	70 - 125	
tert-Butylbenzene	20.0	20.7	103	70 - 130	
Carbon disulfide	20.0	18.0	90.0	35 - 160	
Carbon tetrachloride	20.0	20.2	101	65 - 140	
Chlorobenzene	20.0	20.5	102	80 - 120	
Chlorodibromomethane	20.0	20.8	104	60 - 135	
Chloroethane	20.0	21.2	106	60 - 135	
Chloroform	20.0	20.6	103	65 - 135	
Chloromethane	20.0	22.4	112	40 - 125	
2-Chlorotoluene	20.0	21.4	107	75 - 125	
4-Chlorotoluene	20.0	20.3	102	75 - 130	
1,2-Dibromo-3-chloropropane	20.0	18.7	93.3	50 - 130	
1,2-Dibromoethane	20.0	20.0	99.8	80 - 120	
Dibromomethane	20.0	20.0	100	75 - 125	
1,2-Dichlorobenzene	20.0	20.3	101	70 - 120	
1,3-Dichlorobenzene	20.0	20.5	103	75 - 125	
1,4-Dichlorobenzene	20.0	20.7	103	75 - 125	
Dichlorodifluoromethane	20.0	20.3	101	30 - 155	
1,1-Dichloroethane	20.0	19.4	97.2	70 - 135	
1,2-Dichloroethane	20.0	20.9	105	70 - 130	
1,1-Dichloroethene	20.0	19.0	94.9	70 - 130	
cis-1,2-Dichloroethene	20.0	20.4	102	70 - 125	
trans-1,2-Dichloroethene	20.0	20.2	101	60 - 140	
1,2-Dichloropropane	20.0	20.8	104	75 - 125	
1,3-Dichloropropane	20.0	21.5	107	75 - 125	
2,2-Dichloropropane	20.0	20.4	102	70 - 135	
cis-1,3-Dichloropropene	20.0	22.4	112	70 - 130	
trans-1,3-Dichloropropene	20.0	20.1	101	55 - 140	
1,1-Dichloropropene	20.0	19.8	99.0	75 - 130	
Ethylbenzene	20.0	20.1	100	75 - 125	
2-Hexanone	20.0	19.1	95.3	55 - 130	
Hexachlorobutadiene	20.0	21.0	105	50 - 140	

LCS - Modified 03/06/2008
PDF File ID: 4725396
Report generated: 04/22/2016 16:24

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Run Date: 04/18/2016 Sample ID: WG565386-02
Instrument ID: HPMS8 Run Time: 18:00 Prep Method: 5030B/5030C/503
File ID: 8M411515 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565386 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75664 Cal ID: HPMS8-13-APR-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Isopropylbenzene	20.0	22.4	112	75 - 125	
p-Isopropyltoluene	20.0	21.0	105	75 - 130	
4-Methyl-2-pentanone	20.0	19.2	96.0	60 - 135	
Methylene chloride	20.0	19.4	97.2	55 - 140	
Naphthalene	20.0	17.5	87.5	55 - 140	
n-Propylbenzene	20.0	22.1	110	70 - 130	
Styrene	20.0	21.6	108	65 - 135	
1,1,1,2-Tetrachloroethane	20.0	20.9	104	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	19.5	97.7	65 - 130	
Tetrachloroethene	20.0	19.6	97.9	45 - 150	
Toluene	20.0	21.2	106	75 - 120	
1,2,3-Trichlorobenzene	20.0	18.9	94.6	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.0	95.0	65 - 135	
1,1,1-Trichloroethane	20.0	20.0	99.8	65 - 130	
1,1,2-Trichloroethane	20.0	20.5	103	75 - 125	
Trichloroethene	20.0	21.2	106	70 - 125	
Trichlorofluoromethane	20.0	19.0	94.8	60 - 145	
1,2,3-Trichloropropane	20.0	19.6	98.2	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.8	104	75 - 130	
1,3,5-Trimethylbenzene	20.0	20.9	104	75 - 130	
Vinyl chloride	20.0	18.4	92.1	50 - 145	
o-Xylene	20.0	20.5	102	80 - 120	
m-,p-Xylene	40.0	42.2	106	75 - 130	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	94.0	85 - 115	PASS
1,2-Dichloroethane-d4	94.9	70 - 120	PASS
Toluene-d8	96.4	85 - 120	PASS
4-Bromofluorobenzene	91.7	75 - 120	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 4725396
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Run Date: 04/19/2016 Sample ID: WG565517-02
Instrument ID: HPMS8 Run Time: 16:10 Prep Method: 5030B/5030C/503
File ID: 8M411548 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565517 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75744 Cal ID: HPMS8-13-APR-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	23.3	117	40 - 140	
Benzene	20.0	21.0	105	80 - 120	
Bromobenzene	20.0	19.9	99.3	75 - 125	
Bromochloromethane	20.0	19.9	99.6	65 - 130	
Bromodichloromethane	20.0	20.6	103	75 - 120	
Bromoform	20.0	18.0	90.1	70 - 130	
Bromomethane	20.0	22.2	111	30 - 145	
2-Butanone	20.0	21.9	109	30 - 150	
n-Butylbenzene	20.0	21.0	105	70 - 135	
sec-Butylbenzene	20.0	21.6	108	70 - 125	
tert-Butylbenzene	20.0	20.5	102	70 - 130	
Carbon disulfide	20.0	18.2	90.9	35 - 160	
Carbon tetrachloride	20.0	20.2	101	65 - 140	
Chlorobenzene	20.0	20.7	103	80 - 120	
Chlorodibromomethane	20.0	20.5	103	60 - 135	
Chloroethane	20.0	21.3	107	60 - 135	
Chloroform	20.0	20.6	103	65 - 135	
Chloromethane	20.0	22.4	112	40 - 125	
2-Chlorotoluene	20.0	22.0	110	75 - 125	
4-Chlorotoluene	20.0	19.7	98.3	75 - 130	
1,2-Dibromo-3-chloropropane	20.0	18.8	94.0	50 - 130	
1,2-Dibromoethane	20.0	20.2	101	80 - 120	
Dibromomethane	20.0	20.3	101	75 - 125	
1,2-Dichlorobenzene	20.0	19.9	99.5	70 - 120	
1,3-Dichlorobenzene	20.0	20.0	99.9	75 - 125	
1,4-Dichlorobenzene	20.0	20.5	103	75 - 125	
Dichlorodifluoromethane	20.0	19.8	99.1	30 - 155	
1,1-Dichloroethane	20.0	19.2	95.8	70 - 135	
1,2-Dichloroethane	20.0	20.8	104	70 - 130	
1,1-Dichloroethene	20.0	19.1	95.4	70 - 130	
cis-1,2-Dichloroethene	20.0	20.6	103	70 - 125	
trans-1,2-Dichloroethene	20.0	19.8	99.2	60 - 140	
1,2-Dichloropropane	20.0	20.9	105	75 - 125	
1,3-Dichloropropane	20.0	21.4	107	75 - 125	
2,2-Dichloropropane	20.0	20.8	104	70 - 135	
cis-1,3-Dichloropropene	20.0	23.0	115	70 - 130	
trans-1,3-Dichloropropene	20.0	20.5	102	55 - 140	
1,1-Dichloropropene	20.0	19.4	96.8	75 - 130	
Ethylbenzene	20.0	19.7	98.3	75 - 125	
2-Hexanone	20.0	19.3	96.3	55 - 130	
Hexachlorobutadiene	20.0	20.5	103	50 - 140	

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Run Date: 04/19/2016 Sample ID: WG565517-02
Instrument ID: HPMS8 Run Time: 16:10 Prep Method: 5030B/5030C/503
File ID: 8M411548 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG565517 Matrix: Water Units: ug/L
QC Key: DOD4 Lot#: STD75744 Cal ID: HPMS8-13-APR-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Isopropylbenzene	20.0	21.6	108	75 - 125	
p-Isopropyltoluene	20.0	20.7	104	75 - 130	
4-Methyl-2-pentanone	20.0	19.6	98.1	60 - 135	
Methylene chloride	20.0	19.9	99.7	55 - 140	
Naphthalene	20.0	16.4	81.9	55 - 140	
n-Propylbenzene	20.0	22.0	110	70 - 130	
Styrene	20.0	21.0	105	65 - 135	
1,1,1,2-Tetrachloroethane	20.0	20.1	101	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	20.1	101	65 - 130	
Tetrachloroethene	20.0	19.1	95.4	45 - 150	
Toluene	20.0	20.9	104	75 - 120	
1,2,3-Trichlorobenzene	20.0	17.3	86.7	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.4	91.9	65 - 135	
1,1,1-Trichloroethane	20.0	20.2	101	65 - 130	
1,1,2-Trichloroethane	20.0	20.9	105	75 - 125	
Trichloroethene	20.0	20.9	105	70 - 125	
Trichlorofluoromethane	20.0	18.9	94.6	60 - 145	
1,2,3-Trichloropropane	20.0	20.3	101	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.5	102	75 - 130	
1,3,5-Trimethylbenzene	20.0	21.0	105	75 - 130	
Vinyl chloride	20.0	22.2	111	50 - 145	
o-Xylene	20.0	20.5	103	80 - 120	
m-,p-Xylene	40.0	41.3	103	75 - 130	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	93.2	85 - 115	PASS
1,2-Dichloroethane-d4	95.2	70 - 120	PASS
Toluene-d8	95.9	85 - 120	PASS
4-Bromofluorobenzene	95.1	75 - 120	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 4725396
Report generated: 04/22/2016 16:24

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS8 Matrix: Water Method: 8260B
Workgroup (AAB#): WG565880 Units: ug/L
QC Key: DOD4 Lot #: STD75744

Sample ID: WG565880-02 LCS File ID: 8M411613 Run Date: 04/21/2016 15:00
Sample ID: WG565880-03 LCS2 File ID: 8M411614 Run Date: 04/21/2016 15:29

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	22.5	112	20.0	22.3	112	0.694	80 - 130	30	
1,1,1-Trichloroethane	20.0	24.6	123	20.0	24.3	121	1.26	65 - 130	30	
1,1,2,2-Tetrachloroethane	20.0	17.3	86.4	20.0	18.0	90.2	4.38	65 - 130	30	
1,1,2-Trichloroethane	20.0	20.4	102	20.0	20.1	100	1.60	75 - 125	30	
1,1-Dichloroethane	20.0	20.0	100	20.0	20.1	100	0.217	70 - 135	30	
1,1-Dichloroethene	20.0	21.3	106	20.0	21.0	105	1.31	70 - 130	30	
1,1-Dichloropropene	20.0	21.2	106	20.0	20.5	102	3.30	75 - 130	30	
1,2,3-Trichlorobenzene	20.0	20.8	104	20.0	20.9	105	0.685	55 - 140	30	
1,2,3-Trichloropropane	20.0	20.6	103	20.0	21.3	106	3.32	75 - 125	30	
1,2,4-Trichlorobenzene	20.0	21.1	106	20.0	21.7	109	2.75	65 - 135	30	
1,2,4-Trimethylbenzene	20.0	20.5	103	20.0	21.2	106	3.11	75 - 130	30	
1,2-Dibromo-3-chloropropane	20.0	20.7	103	20.0	20.9	104	0.915	50 - 130	30	
1,2-Dibromoethane	20.0	20.5	102	20.0	20.9	104	1.92	80 - 120	30	
1,2-Dichlorobenzene	20.0	20.5	103	20.0	21.0	105	2.07	70 - 120	30	
1,2-Dichloroethane	20.0	24.8	124	20.0	25.1	125	0.886	70 - 130	30	
1,2-Dichloropropane	20.0	20.6	103	20.0	20.8	104	0.918	75 - 125	30	
1,3,5-Trimethylbenzene	20.0	21.5	108	20.0	22.1	111	2.66	75 - 130	30	
1,3-Dichlorobenzene	20.0	20.3	101	20.0	20.8	104	2.72	75 - 125	30	
1,3-Dichloropropane	20.0	20.6	103	20.0	20.1	100	2.67	75 - 125	30	
1,4-Dichlorobenzene	20.0	20.6	103	20.0	20.6	103	0.137	75 - 125	30	
2,2-Dichloropropane	20.0	24.2	121	20.0	23.8	119	2.06	70 - 135	30	
2-Butanone	20.0	25.3	127	20.0	23.9	120	5.64	30 - 150	30	
2-Chlorotoluene	20.0	19.7	98.3	20.0	20.7	103	5.03	75 - 125	30	
2-Hexanone	20.0	19.7	98.7	20.0	17.5	87.5	12.1	55 - 130	30	
4-Chlorotoluene	20.0	20.1	101	20.0	20.5	103	2.01	75 - 130	30	
4-Methyl-2-pentanone	20.0	21.7	109	20.0	20.3	101	6.82	60 - 135	30	
Acetone	20.0	23.9	119	20.0	26.0	130	8.42	40 - 140	30	
Benzene	20.0	20.7	104	20.0	20.5	102	1.20	80 - 120	30	
Bromobenzene	20.0	20.3	101	20.0	20.8	104	2.71	75 - 125	30	
Bromochloromethane	20.0	22.4	112	20.0	21.7	108	3.42	65 - 130	30	
Bromodichloromethane	20.0	22.8	114	20.0	22.5	112	1.48	75 - 120	30	
Bromoform	20.0	20.2	101	20.0	20.9	104	3.25	70 - 130	30	
Bromomethane	20.0	24.6	123	20.0	26.6	133	7.97	30 - 145	30	
Carbon disulfide	20.0	16.9	84.7	20.0	16.4	82.0	3.26	35 - 160	30	
Carbon tetrachloride	20.0	25.3	127	20.0	24.8	124	2.08	65 - 140	30	
Chlorobenzene	20.0	20.9	105	20.0	20.6	103	1.35	80 - 120	30	
Chloroethane	20.0	22.2	111	20.0	22.0	110	1.03	60 - 135	30	
Chloroform	20.0	22.0	110	20.0	22.6	113	2.47	65 - 135	30	
Chloromethane	20.0	14.3	71.7	20.0	14.5	72.5	1.07	40 - 125	30	
cis-1,2-Dichloroethene	20.0	20.8	104	20.0	21.5	108	3.29	70 - 125	30	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4724674
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS8 Matrix: Water Method: 8260B
Workgroup (AAB#): WG565880 Units: ug/L
QC Key: DOD4 Lot #: STD75744

Sample ID: WG565880-02 LCS File ID: 8M411613 Run Date: 04/21/2016 15:00
Sample ID: WG565880-03 LCS2 File ID: 8M411614 Run Date: 04/21/2016 15:29

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,3-Dichloropropene	20.0	23.7	118	20.0	23.6	118	0.233	70 - 130	30	
Chlorodibromomethane	20.0	23.0	115	20.0	22.3	111	3.38	60 - 135	30	
Dibromomethane	20.0	21.1	106	20.0	21.6	108	2.06	75 - 125	30	
Dichlorodifluoromethane	20.0	25.5	128	20.0	23.6	118	8.05	30 - 155	30	
Ethylbenzene	20.0	20.2	101	20.0	20.3	102	0.699	75 - 125	30	
Hexachlorobutadiene	20.0	25.4	127	20.0	24.9	124	2.00	50 - 140	30	
Isopropylbenzene	20.0	22.8	114	20.0	22.1	111	2.71	75 - 125	30	
m-,p-Xylene	40.0	42.8	107	40.0	43.4	108	1.31	75 - 130	30	
Methylene chloride	20.0	19.8	98.8	20.0	19.8	99.1	0.294	55 - 140	30	
n-Butylbenzene	20.0	20.2	101	20.0	20.2	101	0.152	70 - 135	30	
n-Propylbenzene	20.0	21.2	106	20.0	21.6	108	2.08	70 - 130	30	
Naphthalene	20.0	18.0	90.2	20.0	18.5	92.4	2.38	55 - 140	30	
o-Xylene	20.0	21.2	106	20.0	21.0	105	0.896	80 - 120	30	
p-Isopropyltoluene	20.0	21.9	110	20.0	21.8	109	0.356	75 - 130	30	
sec-Butylbenzene	20.0	21.1	105	20.0	21.0	105	0.0825	70 - 125	30	
Styrene	20.0	21.1	105	20.0	21.1	106	0.0503	65 - 135	30	
tert-Butylbenzene	20.0	20.4	102	20.0	20.9	104	2.64	70 - 130	30	
Tetrachloroethene	20.0	21.8	109	20.0	21.2	106	2.57	45 - 150	30	
Toluene	20.0	20.3	101	20.0	20.1	100	1.04	75 - 120	30	
trans-1,2-Dichloroethene	20.0	21.7	108	20.0	21.8	109	0.274	60 - 140	30	
trans-1,3-Dichloropropene	20.0	20.9	105	20.0	20.8	104	0.690	55 - 140	30	
Trichloroethene	20.0	23.0	115	20.0	23.0	115	0.0358	70 - 125	30	
Trichlorofluoromethane	20.0	24.0	120	20.0	23.1	116	3.63	60 - 145	30	
Vinyl chloride	20.0	16.2	80.9	20.0	16.0	79.9	1.18	50 - 145	30	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	113	112	70 - 120	PASS
Dibromofluoromethane	101	102	85 - 115	PASS
4-Bromofluorobenzene	91.7	92.2	75 - 120	PASS
Toluene-d8	93.8	91.7	85 - 120	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4724674
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG565328 Units: ug/L
QC Key: DOD4 Lot #: STD75664

Sample ID: WG565328-02 LCS File ID: 6M138593 Run Date: 04/18/2016 15:19
Sample ID: WG565328-03 LCS2 File ID: 6M138594 Run Date: 04/18/2016 15:52

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	20.2	101	20.0	20.1	100	0.796	80 - 130	30	
1,1,1-Trichloroethane	20.0	20.5	103	20.0	20.4	102	0.781	65 - 130	30	
1,1,2,2-Tetrachloroethane	20.0	17.7	88.5	20.0	17.9	89.5	1.06	65 - 130	30	
1,1,2-Trichloroethane	20.0	20.7	104	20.0	20.4	102	1.60	75 - 125	30	
1,1-Dichloroethane	20.0	20.3	102	20.0	20.3	102	0.0878	70 - 135	30	
1,1-Dichloroethene	20.0	20.3	101	20.0	20.6	103	1.66	70 - 130	30	
1,1-Dichloropropene	20.0	20.4	102	20.0	20.5	103	0.417	75 - 130	30	
1,2,3-Trichlorobenzene	20.0	21.1	105	20.0	20.6	103	2.28	55 - 140	30	
1,2,3-Trichloropropane	20.0	20.7	104	20.0	20.3	101	2.25	75 - 125	30	
1,2,4-Trichlorobenzene	20.0	21.2	106	20.0	20.9	104	1.55	65 - 135	30	
1,2,4-Trimethylbenzene	20.0	20.8	104	20.0	20.8	104	0.284	75 - 130	30	
1,2-Dibromo-3-chloropropane	20.0	18.0	90.1	20.0	17.8	89.1	1.15	50 - 130	30	
1,2-Dibromoethane	20.0	20.9	105	20.0	20.5	102	2.07	80 - 120	30	
1,2-Dichlorobenzene	20.0	20.9	104	20.0	20.7	103	1.05	70 - 120	30	
1,2-Dichloroethane	20.0	21.3	106	20.0	21.3	107	0.241	70 - 130	30	
1,2-Dichloropropane	20.0	22.1	110	20.0	21.9	109	0.812	75 - 125	30	
1,3,5-Trimethylbenzene	20.0	21.4	107	20.0	21.3	106	0.521	75 - 130	30	
1,3-Dichlorobenzene	20.0	20.3	101	20.0	20.2	101	0.433	75 - 125	30	
1,3-Dichloropropane	20.0	22.0	110	20.0	21.6	108	1.70	75 - 125	30	
1,4-Dichlorobenzene	20.0	19.8	99.1	20.0	20.0	99.8	0.721	75 - 125	30	
2,2-Dichloropropane	20.0	21.2	106	20.0	22.1	110	4.07	70 - 135	30	
2-Butanone	20.0	21.4	107	20.0	21.4	107	0.265	30 - 150	30	
2-Chlorotoluene	20.0	19.8	99.0	20.0	21.8	109	9.44	75 - 125	30	
2-Hexanone	20.0	19.8	99.0	20.0	20.4	102	3.09	55 - 130	30	
4-Chlorotoluene	20.0	22.3	111	20.0	20.3	102	9.21	75 - 130	30	
4-Methyl-2-pentanone	20.0	20.2	101	20.0	20.8	104	2.64	60 - 135	30	
Acetone	20.0	20.3	101	20.0	20.5	102	0.966	40 - 140	30	
Benzene	20.0	21.0	105	20.0	20.9	105	0.510	80 - 120	30	
Bromobenzene	20.0	19.6	98.1	20.0	19.8	99.0	0.972	75 - 125	30	
Bromochloromethane	20.0	20.8	104	20.0	20.7	103	0.649	65 - 130	30	
Bromodichloromethane	20.0	20.7	104	20.0	20.6	103	0.490	75 - 120	30	
Bromoform	20.0	18.4	92.2	20.0	17.9	89.4	3.09	70 - 130	30	
Bromomethane	20.0	21.7	108	20.0	20.6	103	5.32	30 - 145	30	
Carbon disulfide	20.0	8.91	44.6	20.0	8.64	43.2	3.10	35 - 160	30	
Carbon tetrachloride	20.0	20.4	102	20.0	20.3	102	0.0269	65 - 140	30	
Chlorobenzene	20.0	20.3	102	20.0	20.2	101	0.372	80 - 120	30	
Chloroethane	20.0	22.8	114	20.0	21.0	105	8.11	60 - 135	30	
Chloroform	20.0	20.9	105	20.0	20.7	104	0.769	65 - 135	30	
Chloromethane	20.0	24.8	124	20.0	25.3	127	2.01	40 - 125	30	*
cis-1,2-Dichloroethene	20.0	21.8	109	20.0	21.6	108	0.694	70 - 125	30	

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG565328 Units: ug/L
QC Key: DOD4 Lot #: STD75664

Sample ID: WG565328-02 LCS File ID: 6M138593 Run Date: 04/18/2016 15:19
Sample ID: WG565328-03 LCS2 File ID: 6M138594 Run Date: 04/18/2016 15:52

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,3-Dichloropropene	20.0	23.4	117	20.0	23.5	117	0.375	70 - 130	30	
Chlorodibromomethane	20.0	20.1	101	20.0	19.8	98.8	1.90	60 - 135	30	
Dibromomethane	20.0	20.5	102	20.0	20.7	103	0.840	75 - 125	30	
Dichlorodifluoromethane	20.0	22.6	113	20.0	22.6	113	0.197	30 - 155	30	
Ethylbenzene	20.0	20.6	103	20.0	20.5	102	0.727	75 - 125	30	
Hexachlorobutadiene	20.0	22.3	112	20.0	22.2	111	0.720	50 - 140	30	
Isopropylbenzene	20.0	22.5	112	20.0	22.2	111	1.01	75 - 125	30	
m-,p-Xylene	40.0	42.7	107	40.0	42.6	106	0.414	75 - 130	30	
Methylene chloride	20.0	21.0	105	20.0	20.8	104	0.969	55 - 140	30	
n-Butylbenzene	20.0	21.7	108	20.0	21.6	108	0.422	70 - 135	30	
n-Propylbenzene	20.0	22.6	113	20.0	22.9	114	0.947	70 - 130	30	
Naphthalene	20.0	20.4	102	20.0	19.7	98.6	3.29	55 - 140	30	
o-Xylene	20.0	22.1	110	20.0	21.9	109	0.929	80 - 120	30	
p-Isopropyltoluene	20.0	21.4	107	20.0	21.3	106	0.495	75 - 130	30	
sec-Butylbenzene	20.0	21.8	109	20.0	21.7	108	0.601	70 - 125	30	
Styrene	20.0	22.2	111	20.0	21.9	110	1.11	65 - 135	30	
tert-Butylbenzene	20.0	21.5	108	20.0	21.4	107	0.424	70 - 130	30	
Tetrachloroethene	20.0	19.3	96.7	20.0	19.4	97.0	0.339	45 - 150	30	
Toluene	20.0	21.0	105	20.0	20.9	105	0.399	75 - 120	30	
trans-1,2-Dichloroethene	20.0	21.5	107	20.0	21.4	107	0.550	60 - 140	30	
trans-1,3-Dichloropropene	20.0	20.5	103	20.0	20.4	102	0.820	55 - 140	30	
Trichloroethene	20.0	21.6	108	20.0	21.2	106	2.18	70 - 125	30	
Trichlorofluoromethane	20.0	17.1	85.4	20.0	17.0	84.8	0.622	60 - 145	30	
Vinyl chloride	20.0	23.4	117	20.0	23.8	119	1.91	50 - 145	30	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	102	102	70 - 120	PASS
Dibromofluoromethane	104	105	85 - 115	PASS
4-Bromofluorobenzene	105	105	75 - 120	PASS
Toluene-d8	105	105	85 - 120	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4724674
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG565673 Units: ug/L
QC Key: DOD4 Lot #: STD75744

Sample ID: WG565673-02 LCS File ID: 6M138660 Run Date: 04/20/2016 14:00
Sample ID: WG565673-03 LCS2 File ID: 6M138661 Run Date: 04/20/2016 14:32

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	20.5	103	20.0	20.2	101	1.58	80 - 130	30	
1,1,1-Trichloroethane	20.0	21.6	108	20.0	20.7	104	4.12	65 - 130	30	
1,1,2,2-Tetrachloroethane	20.0	19.1	95.5	20.0	18.8	94.1	1.48	65 - 130	30	
1,1,2-Trichloroethane	20.0	20.7	104	20.0	20.3	102	1.86	75 - 125	30	
1,1-Dichloroethane	20.0	20.5	102	20.0	20.1	100	2.01	70 - 135	30	
1,1-Dichloroethene	20.0	20.5	102	20.0	20.1	100	2.03	70 - 130	30	
1,1-Dichloropropene	20.0	20.7	104	20.0	20.3	101	2.26	75 - 130	30	
1,2,3-Trichlorobenzene	20.0	19.4	97.2	20.0	18.9	94.6	2.67	55 - 140	30	
1,2,3-Trichloropropane	20.0	21.0	105	20.0	20.3	101	3.34	75 - 125	30	
1,2,4-Trichlorobenzene	20.0	20.0	100	20.0	19.3	96.5	3.78	65 - 135	30	
1,2,4-Trimethylbenzene	20.0	20.7	103	20.0	20.3	102	1.74	75 - 130	30	
1,2-Dibromo-3-chloropropane	20.0	19.8	98.9	20.0	18.8	93.8	5.36	50 - 130	30	
1,2-Dibromoethane	20.0	20.4	102	20.0	20.2	101	1.34	80 - 120	30	
1,2-Dichlorobenzene	20.0	20.5	102	20.0	20.2	101	1.53	70 - 120	30	
1,2-Dichloroethane	20.0	21.9	110	20.0	21.5	108	1.93	70 - 130	30	
1,2-Dichloropropane	20.0	22.1	110	20.0	21.7	108	1.85	75 - 125	30	
1,3,5-Trimethylbenzene	20.0	21.3	106	20.0	20.7	104	2.49	75 - 130	30	
1,3-Dichlorobenzene	20.0	20.1	100	20.0	19.8	98.9	1.47	75 - 125	30	
1,3-Dichloropropane	20.0	21.8	109	20.0	21.2	106	2.47	75 - 125	30	
1,4-Dichlorobenzene	20.0	19.8	99.0	20.0	19.4	97.2	1.80	75 - 125	30	
2,2-Dichloropropane	20.0	22.0	110	20.0	21.9	109	0.422	70 - 135	30	
2-Butanone	20.0	23.3	116	20.0	22.0	110	5.58	30 - 150	30	
2-Chlorotoluene	20.0	21.3	106	20.0	21.0	105	1.28	75 - 125	30	
2-Hexanone	20.0	19.8	99.0	20.0	20.0	100	1.06	55 - 130	30	
4-Chlorotoluene	20.0	20.7	104	20.0	20.3	102	1.91	75 - 130	30	
4-Methyl-2-pentanone	20.0	20.5	103	20.0	20.3	102	1.01	60 - 135	30	
Acetone	20.0	23.1	115	20.0	21.6	108	6.51	40 - 140	30	
Benzene	20.0	21.1	105	20.0	20.7	103	1.91	80 - 120	30	
Bromobenzene	20.0	19.7	98.4	20.0	19.2	96.1	2.33	75 - 125	30	
Bromochloromethane	20.0	20.8	104	20.0	20.2	101	2.69	65 - 130	30	
Bromodichloromethane	20.0	21.4	107	20.0	20.9	105	2.08	75 - 120	30	
Bromoform	20.0	18.6	93.1	20.0	18.3	91.5	1.81	70 - 130	30	
Bromomethane	20.0	21.3	107	20.0	21.0	105	1.72	30 - 145	30	
Carbon disulfide	20.0	20.3	101	20.0	20.1	101	0.774	35 - 160	30	
Carbon tetrachloride	20.0	21.2	106	20.0	20.5	102	3.61	65 - 140	30	
Chlorobenzene	20.0	20.4	102	20.0	20.0	99.9	2.15	80 - 120	30	
Chloroethane	20.0	20.8	104	20.0	20.9	104	0.667	60 - 135	30	
Chloroform	20.0	21.3	106	20.0	20.8	104	2.27	65 - 135	30	
Chloromethane	20.0	21.0	105	20.0	21.7	109	3.22	40 - 125	30	
cis-1,2-Dichloroethene	20.0	21.9	110	20.0	21.4	107	2.23	70 - 125	30	

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16040858 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG565673 Units: ug/L
QC Key: DOD4 Lot #: STD75744

Sample ID: WG565673-02 LCS File ID: 6M138660 Run Date: 04/20/2016 14:00
Sample ID: WG565673-03 LCS2 File ID: 6M138661 Run Date: 04/20/2016 14:32

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,3-Dichloropropene	20.0	23.7	118	20.0	23.3	116	1.58	70 - 130	30	
Chlorodibromomethane	20.0	20.5	102	20.0	19.9	99.7	2.60	60 - 135	30	
Dibromomethane	20.0	20.8	104	20.0	20.2	101	2.46	75 - 125	30	
Dichlorodifluoromethane	20.0	21.2	106	20.0	20.4	102	3.68	30 - 155	30	
Ethylbenzene	20.0	20.5	102	20.0	20.2	101	1.34	75 - 125	30	
Hexachlorobutadiene	20.0	20.7	103	20.0	20.3	102	1.69	50 - 140	30	
Isopropylbenzene	20.0	22.4	112	20.0	21.9	110	2.16	75 - 125	30	
m-,p-Xylene	40.0	42.8	107	40.0	42.1	105	1.76	75 - 130	30	
Methylene chloride	20.0	21.0	105	20.0	20.2	101	3.93	55 - 140	30	
n-Butylbenzene	20.0	20.7	104	20.0	20.2	101	2.62	70 - 135	30	
n-Propylbenzene	20.0	22.5	113	20.0	22.0	110	2.51	70 - 130	30	
Naphthalene	20.0	18.1	90.5	20.0	17.7	88.6	2.11	55 - 140	30	
o-Xylene	20.0	21.7	109	20.0	21.3	106	1.99	80 - 120	30	
p-Isopropyltoluene	20.0	20.9	105	20.0	20.5	102	2.29	75 - 130	30	
sec-Butylbenzene	20.0	21.0	105	20.0	20.4	102	2.48	70 - 125	30	
Styrene	20.0	22.2	111	20.0	22.0	110	0.961	65 - 135	30	
tert-Butylbenzene	20.0	20.6	103	20.0	20.7	103	0.0957	70 - 130	30	
Tetrachloroethene	20.0	19.2	96.2	20.0	18.5	92.7	3.66	45 - 150	30	
Toluene	20.0	20.9	105	20.0	20.6	103	1.70	75 - 120	30	
trans-1,2-Dichloroethene	20.0	21.3	107	20.0	20.8	104	2.74	60 - 140	30	
trans-1,3-Dichloropropene	20.0	20.9	104	20.0	20.6	103	1.29	55 - 140	30	
Trichloroethene	20.0	20.9	104	20.0	20.0	99.9	4.39	70 - 125	30	
Trichlorofluoromethane	20.0	17.0	85.2	20.0	16.6	82.8	2.84	60 - 145	30	
Vinyl chloride	20.0	22.3	112	20.0	21.7	108	2.94	50 - 145	30	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	106	107	70 - 120	PASS
Dibromofluoromethane	108	107	85 - 115	PASS
4-Bromofluorobenzene	106	105	75 - 120	PASS
Toluene-d8	106	107	85 - 120	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4724674
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L16040858 Cal ID: HPMS8- 13-APR-16 Worknum: WG565386

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

Parent ID: L16040858-10 File ID: 8M411526 Dil: 1 Method: 5035A

Sample ID: L16040858-11 MS File ID: 8M411516 Dil: 1 Matrix: 8260B

Sample ID: L16040858-12 MSD File ID: 8M411517 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
1,1,1,2-Tetrachloroethane	U	20.0	20.4	102	20.0	19.9	99.7	2.08	80 - 130	30	
1,1,1-Trichloroethane	U	20.0	19.7	98.5	20.0	19.6	97.8	0.778	65 - 130	30	
1,1,2,2-Tetrachloroethane	U	20.0	19.7	98.6	20.0	19.9	99.3	0.717	65 - 130	30	
1,1,2-Trichloroethane	U	20.0	21.0	105	20.0	20.8	104	1.15	75 - 125	30	
1,1-Dichloroethane	U	20.0	19.2	96.1	20.0	19.1	95.5	0.588	70 - 135	30	
1,1-Dichloroethene	U	20.0	18.5	92.4	20.0	18.2	91	1.57	70 - 130	30	
1,1-Dichloropropene	U	20.0	19.1	95.6	20.0	18.6	93.1	2.65	75 - 130	30	
1,2,3-Trichlorobenzene	U	20.0	18.7	93.6	20.0	18.4	92.2	1.51	55 - 140	30	
1,2,3-Trichloropropane	U	20.0	19.6	98.1	20.0	18.8	93.9	4.43	75 - 125	30	
1,2,4-Trichlorobenzene	U	20.0	18.7	93.6	20.0	18.5	92.5	1.17	65 - 135	30	
1,2,4-Trimethylbenzene	U	20.0	20.1	100	20.0	19.8	99.1	1.16	75 - 130	30	
1,2-Dibromo-3-chloropropane	U	20.0	18.7	93.5	20.0	18.6	92.9	0.604	50 - 130	30	
1,2-Dibromoethane	U	20.0	20.5	102	20.0	20.1	101	1.60	80 - 120	30	
1,2-Dichlorobenzene	U	20.0	20.0	100	20.0	19.9	99.4	0.831	70 - 120	30	
1,2-Dichloroethane	U	20.0	20.9	105	20.0	20.9	105	0.0074	70 - 130	30	
1,2-Dichloropropane	U	20.0	20.8	104	20.0	20.4	102	1.77	75 - 125	30	
1,3,5-Trimethylbenzene	U	20.0	20.1	100	20.0	20.0	99.9	0.489	75 - 130	30	
1,3-Dichlorobenzene	U	20.0	19.6	97.8	20.0	19.9	99.5	1.64	75 - 125	30	
1,3-Dichloropropane	U	20.0	21.7	109	20.0	21.2	106	2.49	75 - 125	30	
1,4-Dichlorobenzene	U	20.0	19.8	98.9	20.0	20.1	100	1.48	75 - 125	30	
2,2-Dichloropropane	U	20.0	20.2	101	20.0	19.7	98.4	2.57	70 - 135	30	
2-Butanone	U	20.0	21.0	105	20.0	20.9	104	0.896	30 - 150	30	
2-Chlorotoluene	U	20.0	21.1	105	20.0	20.9	104	1.15	75 - 125	30	
2-Hexanone	U	20.0	20.6	103	20.0	20.5	102	0.504	55 - 130	30	
4-Chlorotoluene	U	20.0	18.9	94.6	20.0	19.2	96.2	1.61	75 - 130	30	
4-Methyl-2-pentanone	U	20.0	20.1	100	20.0	18.9	94.4	5.98	60 - 135	30	
Acetone	3.51	20.0	25.8	111	20.0	27.5	120	6.57	40 - 140	30	
Benzene	0.307	20.0	20.7	102	20.0	20.6	101	0.647	80 - 120	30	
Bromobenzene	U	20.0	19.1	95.5	20.0	18.9	94.5	1.08	75 - 125	30	
Bromochloromethane	U	20.0	20.0	99.8	20.0	19.7	98.7	1.09	65 - 130	30	
Bromodichloromethane	U	20.0	20.3	102	20.0	20.5	102	0.656	75 - 120	30	
Bromoform	U	20.0	18.6	92.9	20.0	18.0	90.1	3.00	70 - 130	30	
Bromomethane	U	20.0	22.1	110	20.0	22.7	114	2.89	30 - 145	30	
Carbon disulfide	U	20.0	18.1	90.4	20.0	17.9	89.7	0.685	35 - 160	30	
Carbon tetrachloride	U	20.0	19.2	96	20.0	19.3	96.6	0.584	65 - 140	30	
Chlorobenzene	U	20.0	20.4	102	20.0	20.1	101	1.28	80 - 120	30	
Chloroethane	U	20.0	21.2	106	20.0	20.6	103	3.03	60 - 135	30	
Chloroform	U	20.0	20.3	101	20.0	20.4	102	0.387	65 - 135	30	
Chloromethane	U	20.0	21.9	109	20.0	21.9	110	0.314	40 - 125	30	
cis-1,2-Dichloroethene	U	20.0	20.5	103	20.0	19.8	99	3.53	70 - 125	30	
cis-1,3-Dichloropropene	U	20.0	22.5	112	20.0	22.4	112	0.279	70 - 130	30	

MS_MSD - Modified 03/06/2008

PDF File ID: 4725397

Report generated 04/25/2016 16:02

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L16040858 Cal ID: HPMS8 13-APR-16 Worknum: WG565386

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

Parent ID: L16040858-10 File ID: 8M411526 Dil: 1 Method: 5035A

Sample ID: L16040858-11 MS File ID: 8M411516 Dil: 1 Matrix: 8260B

Sample ID: L16040858-12 MSD File ID: 8M411517 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
Chlorodibromomethane	U	20.0	20.7	103	20.0	20.4	102	1.41	60 - 135	30	
Dibromomethane	U	20.0	20.0	99.8	20.0	20.1	101	0.745	75 - 125	30	
Dichlorodifluoromethane	U	20.0	20.3	101	20.0	19.1	95.3	6.06	30 - 155	30	
Ethylbenzene	U	20.0	19.3	96.5	20.0	19.4	96.8	0.396	75 - 125	30	
Hexachlorobutadiene	U	20.0	19.1	95.4	20.0	18.6	92.9	2.60	50 - 140	30	
Isopropylbenzene	U	20.0	21.3	107	20.0	21.2	106	0.565	75 - 125	30	
m-,p-Xylene	U	40.0	41.6	104	40.0	41.3	103	0.881	75 - 130	30	
Methylene chloride	U	20.0	19.7	98.4	20.0	19.9	99.3	0.932	55 - 140	30	
n-Butylbenzene	U	20.0	19.7	98.5	20.0	19.7	98.7	0.261	70 - 135	30	
n-Propylbenzene	U	20.0	20.9	105	20.0	21.1	105	0.622	70 - 130	30	
Naphthalene	U	20.0	18.1	90.4	20.0	17.9	89.5	1.04	55 - 140	30	
o-Xylene	U	20.0	20.5	103	20.0	20.0	99.9	2.65	80 - 120	30	
p-Isopropyltoluene	U	20.0	19.9	99.3	20.0	19.8	99.1	0.249	75 - 130	30	
sec-Butylbenzene	U	20.0	20.2	101	20.0	20.2	101	0.203	70 - 125	30	
Styrene	U	20.0	21.3	106	20.0	21.1	106	0.690	65 - 135	30	
tert-Butylbenzene	U	20.0	19.7	98.6	20.0	19.8	99.1	0.523	70 - 130	30	
Tetrachloroethene	U	20.0	19.2	96	20.0	18.4	92.1	4.15	45 - 150	30	
Toluene	U	20.0	20.3	102	20.0	20.1	100	1.04	75 - 120	30	
trans-1,2-Dichloroethene	U	20.0	20.1	100	20.0	20.0	100	0.271	60 - 140	30	
trans-1,3-Dichloropropene	U	20.0	20.2	101	20.0	20.1	100	0.633	55 - 140	30	
Trichloroethene	U	20.0	20.6	103	20.0	20.4	102	1.14	70 - 125	30	
Trichlorofluoromethane	U	20.0	18.4	92.1	20.0	18.3	91.7	0.389	60 - 145	30	
Vinyl chloride	U	20.0	21.7	108	20.0	20.4	102	5.96	50 - 145	30	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 4725397

Report generated 04/25/2016 16:02

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L16040858 Cal ID: HPMS8- 13-APR-16 Worknum: WG565517

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

Parent ID: L16040858-24 File ID: 8M411553 Dil: 1 Method: 5035A

Sample ID: L16040858-25 MS File ID: 8M411549 Dil: 1 Matrix: 8260B

Sample ID: L16040858-26 MSD File ID: 8M411550 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
1,1,1,2-Tetrachloroethane	U	20.0	20.8	104	20.0	20.1	100	3.62	80 - 130	30	
1,1,1-Trichloroethane	U	20.0	20.7	104	20.0	20.4	102	1.59	65 - 130	30	
1,1,2,2-Tetrachloroethane	U	20.0	19.6	97.8	20.0	19.6	97.8	0.0336	65 - 130	30	
1,1,2-Trichloroethane	U	20.0	20.2	101	20.0	20.6	103	2.27	75 - 125	30	
1,1-Dichloroethane	U	20.0	19.9	99.4	20.0	19.3	96.3	3.11	70 - 135	30	
1,1-Dichloroethene	U	20.0	20.0	100	20.0	19.5	97.4	2.65	70 - 130	30	
1,1-Dichloropropene	U	20.0	20.3	101	20.0	19.7	98.6	2.66	75 - 130	30	
1,2,3-Trichlorobenzene	U	20.0	17.5	87.6	20.0	17.3	86.6	1.23	55 - 140	30	
1,2,3-Trichloropropane	U	20.0	19.5	97.4	20.0	18.4	92.1	5.54	75 - 125	30	
1,2,4-Trichlorobenzene	U	20.0	18.8	94	20.0	18.1	90.3	4.01	65 - 135	30	
1,2,4-Trimethylbenzene	U	20.0	21.6	108	20.0	20.1	101	6.74	75 - 130	30	
1,2-Dibromo-3-chloropropane	U	20.0	17.6	88.2	20.0	18.1	90.3	2.32	50 - 130	30	
1,2-Dibromoethane	U	20.0	19.7	98.3	20.0	20.2	101	2.63	80 - 120	30	
1,2-Dichlorobenzene	U	20.0	20.7	104	20.0	19.8	99.2	4.46	70 - 120	30	
1,2-Dichloroethane	U	20.0	20.9	104	20.0	20.7	104	0.677	70 - 130	30	
1,2-Dichloropropane	U	20.0	21.4	107	20.0	21.0	105	1.82	75 - 125	30	
1,3,5-Trimethylbenzene	U	20.0	22.4	112	20.0	20.8	104	7.54	75 - 130	30	
1,3-Dichlorobenzene	U	20.0	20.9	105	20.0	19.6	97.9	6.66	75 - 125	30	
1,3-Dichloropropane	U	20.0	21.1	106	20.0	21.6	108	2.33	75 - 125	30	
1,4-Dichlorobenzene	U	20.0	21.0	105	20.0	19.9	99.7	5.16	75 - 125	30	
2,2-Dichloropropane	U	20.0	21.7	108	20.0	20.3	102	6.26	70 - 135	30	
2-Butanone	U	20.0	18.6	93.1	20.0	19.9	99.5	6.66	30 - 150	30	
2-Chlorotoluene	U	20.0	22.1	110	20.0	20.9	104	5.69	75 - 125	30	
2-Hexanone	U	20.0	19.0	95.2	20.0	20.2	101	5.70	55 - 130	30	
4-Chlorotoluene	U	20.0	21.7	109	20.0	19.8	99.2	9.02	75 - 130	30	
4-Methyl-2-pentanone	U	20.0	18.2	90.9	20.0	19.8	98.8	8.41	60 - 135	30	
Acetone	U	20.0	21.5	107	20.0	21.8	109	1.34	40 - 140	30	
Benzene	U	20.0	21.2	106	20.0	20.8	104	2.02	80 - 120	30	
Bromobenzene	U	20.0	20.3	102	20.0	19.2	96.1	5.49	75 - 125	30	
Bromochloromethane	U	20.0	19.4	97	20.0	19.8	98.9	1.97	65 - 130	30	
Bromodichloromethane	U	20.0	20.5	103	20.0	20.5	103	0.144	75 - 120	30	
Bromoform	U	20.0	17.9	89.3	20.0	17.8	89.1	0.251	70 - 130	30	
Bromomethane	U	20.0	23.3	117	20.0	23.1	116	0.911	30 - 145	30	
Carbon disulfide	U	20.0	19.5	97.7	20.0	18.7	93.4	4.47	35 - 160	30	
Carbon tetrachloride	U	20.0	20.8	104	20.0	19.9	99.3	4.42	65 - 140	30	
Chlorobenzene	U	20.0	21.2	106	20.0	20.6	103	3.18	80 - 120	30	
Chloroethane	U	20.0	22.6	113	20.0	21.5	108	4.63	60 - 135	30	
Chloroform	U	20.0	21.2	106	20.0	20.3	102	4.15	65 - 135	30	
Chloromethane	U	20.0	22.2	111	20.0	21.9	109	1.37	40 - 125	30	
cis-1,2-Dichloroethene	U	20.0	20.8	104	20.0	20.6	103	1.01	70 - 125	30	
cis-1,3-Dichloropropene	U	20.0	22.9	115	20.0	22.8	114	0.295	70 - 130	30	

MS_MSD - Modified 03/06/2008

PDF File ID: 4725397

Report generated 04/25/2016 16:02

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L16040858 Cal ID: HPMS8 13-APR-16 Worknum: WG565517

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

Parent ID: L16040858-24 File ID: 8M411553 Dil: 1 Method: 5035A

Sample ID: L16040858-25 MS File ID: 8M411549 Dil: 1 Matrix: 8260B

Sample ID: L16040858-26 MSD File ID: 8M411550 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
Chlorodibromomethane	U	20.0	20.1	101	20.0	20.5	102	1.65	60 - 135	30	
Dibromomethane	U	20.0	20.4	102	20.0	20.4	102	0.121	75 - 125	30	
Dichlorodifluoromethane	U	20.0	21.9	109	20.0	20.5	102	6.67	30 - 155	30	
Ethylbenzene	U	20.0	20.6	103	20.0	20.1	101	2.28	75 - 125	30	
Hexachlorobutadiene	U	20.0	23.4	117	20.0	21.4	107	9.04	50 - 140	30	
Isopropylbenzene	U	20.0	22.5	112	20.0	21.7	108	3.65	75 - 125	30	
m-,p-Xylene	U	40.0	43.4	108	40.0	41.4	104	4.64	75 - 130	30	
Methylene chloride	U	20.0	20.3	101	20.0	19.9	99.6	1.77	55 - 140	30	
n-Butylbenzene	U	20.0	22.7	113	20.0	20.8	104	8.46	70 - 135	30	
n-Propylbenzene	U	20.0	23.4	117	20.0	21.8	109	6.89	70 - 130	30	
Naphthalene	U	20.0	16.2	81.2	20.0	16.5	82.5	1.54	55 - 140	30	
o-Xylene	U	20.0	21.1	106	20.0	20.4	102	3.57	80 - 120	30	
p-Isopropyltoluene	U	20.0	22.2	111	20.0	20.5	102	8.27	75 - 130	30	
sec-Butylbenzene	U	20.0	22.9	114	20.0	20.8	104	9.35	70 - 125	30	
Styrene	U	20.0	21.7	108	20.0	21.2	106	2.09	65 - 135	30	
tert-Butylbenzene	U	20.0	22.3	111	20.0	20.4	102	8.72	70 - 130	30	
Tetrachloroethene	U	20.0	20.1	101	20.0	19.3	96.7	3.96	45 - 150	30	
Toluene	U	20.0	21.6	108	20.0	20.7	104	4.11	75 - 120	30	
trans-1,2-Dichloroethene	U	20.0	21.4	107	20.0	20.5	102	4.26	60 - 140	30	
trans-1,3-Dichloropropene	U	20.0	20.1	101	20.0	20.2	101	0.323	55 - 140	30	
Trichloroethene	U	20.0	21.9	109	20.0	20.8	104	4.94	70 - 125	30	
Trichlorofluoromethane	U	20.0	20.0	100	20.0	19.4	96.8	3.25	60 - 145	30	
Vinyl chloride	U	20.0	20.9	104	20.0	21.9	109	4.80	50 - 145	30	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 4725397

Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS6
Analyst: TMB
Workgroup: WG541654

Tune ID: WG541654-01
Run Date: 10/06/2015
Run Time: 10:16
File ID: 6M134942
Cal ID: HPMS6-06-OCT-15

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.0	8677	PASS
75.0	95.0	30.0	60.0	51.9	18743	PASS
95.0	95.0	100	100	100	36125	PASS
96.0	95.0	5.00	9.00	7.38	2666	PASS
173	174	0	2.00	0.502	151	PASS
174	95.0	50.0	100	83.2	30053	PASS
175	174	5.00	9.00	7.55	2268	PASS
176	174	95.0	101	95.9	28826	PASS
177	176	5.00	9.00	7.27	2095	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG541654-02	STD	01	10/06/2015 11:14	
WG541654-03	STD	01	10/06/2015 11:46	
WG541654-04	STD	01	10/06/2015 12:18	
WG541654-05	STD-CCV	01	10/06/2015 12:50	
WG541654-06	STD	01	10/06/2015 13:22	
WG541654-07	STD	01	10/06/2015 13:55	
WG541654-08	STD	01	10/06/2015 14:27	
WG541654-09	STD	01	10/06/2015 14:59	
WG541654-10	SSCV	01	10/06/2015 16:36	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS6
Analyst: TMB
Workgroup: WG564297

Tune ID: WG564297-01
Run Date: 04/11/2016
Run Time: 15:06
File ID: 6M138395
Cal ID: HPMS6-11-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	20.9	8246	PASS
75.0	95.0	30.0	60.0	51.8	20428	PASS
95.0	95.0	100	100	100	39445	PASS
96.0	95.0	5.00	9.00	7.07	2790	PASS
173	174	0	2.00	0.324	102	PASS
174	95.0	50.0	100	79.7	31448	PASS
175	174	5.00	9.00	7.15	2247	PASS
176	174	95.0	101	98.8	31080	PASS
177	176	5.00	9.00	6.49	2017	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG564297-02	STD	01	04/11/2016 15:32	
WG564297-03	STD	01	04/11/2016 16:04	
WG564297-04	STD	01	04/11/2016 16:37	
WG564297-05	STD	01	04/11/2016 17:09	
WG564297-06	STD	01	04/11/2016 17:43	
WG564297-07	STD	01	04/11/2016 18:15	
WG564297-08	STD-CCV	01	04/11/2016 18:45	
WG564297-09	STD	01	04/11/2016 19:17	
WG564297-10	STD	01	04/11/2016 19:49	
WG564297-11	STD	01	04/11/2016 20:21	
WG564297-12	SSCV	01	04/11/2016 21:58	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS6
Analyst: TMB
Workgroup: WG565327

Tune ID: WG565327-01
Run Date: 04/18/2016
Run Time: 12:45
File ID: 6M138588
Cal ID: HPMS6 - 11-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	21.4	7066	PASS
75.0	95.0	30.0	60.0	50.3	16590	PASS
95.0	95.0	100	100	100	32960	PASS
96.0	95.0	5.00	9.00	7.05	2324	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	77.1	25418	PASS
175	174	5.00	9.00	8.14	2069	PASS
176	174	95.0	101	99.7	25338	PASS
177	176	5.00	9.00	7.89	2000	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG565327-02	CCV	01	04/18/2016 13:10	
WG565369-01	CCV	01	04/18/2016 13:43	
WG565328-01	BLANK	01	04/18/2016 14:47	
WG565328-02	LCS	01	04/18/2016 15:19	
WG565328-03	LCS2	01	04/18/2016 15:52	
L16040858-01	35AWW17-041116	01	04/18/2016 18:01	
L16040858-02	35AWW18-041116	01	04/18/2016 18:32	
L16040858-03	35AWW18FD-041116	01	04/18/2016 19:04	
L16040858-04	35AWW06-041116	01	04/18/2016 19:37	
L16040858-05	35AWW12-041216	01	04/18/2016 20:09	
WG565328-04	BLANK2	01	04/19/2016 02:02	*

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS6
Analyst: TMB
Workgroup: WG565672

Tune ID: WG565672-01
Run Date: 04/20/2016
Run Time: 11:23
File ID: 6M138655
Cal ID: HPMS6 - 11-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	20.7	9109	PASS
75.0	95.0	30.0	60.0	51.1	22507	PASS
95.0	95.0	100	100	100	44024	PASS
96.0	95.0	5.00	9.00	7.30	3212	PASS
173	174	0	2.00	0.323	117	PASS
174	95.0	50.0	100	82.2	36173	PASS
175	174	5.00	9.00	7.52	2721	PASS
176	174	95.0	101	96.6	34944	PASS
177	176	5.00	9.00	6.90	2410	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG565672-02	CCV	01	04/20/2016 12:23	
WG565673-01	BLANK	01	04/20/2016 13:27	
WG565673-02	LCS	01	04/20/2016 14:00	
WG565673-03	LCS2	01	04/20/2016 14:32	
L16040858-31	TRIP BLANK	01	04/20/2016 18:50	
WG565673-04	BLANK2	01	04/21/2016 00:12	*

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS8
Analyst: TMB
Workgroup: WG540826

Tune ID: WG540826-01
Run Date: 10/05/2015
Run Time: 11:26
File ID: 8M407827
Cal ID: HPMS8-05-OCT-15

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.7	8565	PASS
75.0	95.0	30.0	60.0	52.2	18121	PASS
95.0	95.0	100	100	100	34714	PASS
96.0	95.0	5.00	9.00	6.52	2262	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	74.2	25773	PASS
175	174	5.00	9.00	7.16	1845	PASS
176	174	95.0	101	98.5	25378	PASS
177	176	5.00	9.00	6.88	1746	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG540826-02	STD	01	10/05/2015 11:49	
WG540826-03	STD	01	10/05/2015 12:17	
WG540826-04	STD	01	10/05/2015 12:51	
WG540826-05	STD-CCV	01	10/05/2015 13:20	
WG540826-06	STD	01	10/05/2015 13:49	
WG540826-07	STD	01	10/05/2015 14:17	
WG540826-08	STD	01	10/05/2015 14:47	
WG540826-09	STD	01	10/05/2015 15:15	
WG540826-10	SSCV	01	10/05/2015 16:48	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS8
Analyst: TMB
Workgroup: WG564484

Tune ID: WG564484-01
Run Date: 04/13/2016
Run Time: 11:48
File ID: 8M411391
Cal ID: HPMS8 -

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.8	7834	PASS
75.0	95.0	30.0	60.0	51.4	15628	PASS
95.0	95.0	100	100	100	30408	PASS
96.0	95.0	5.00	9.00	7.21	2191	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	71.5	21755	PASS
175	174	5.00	9.00	7.30	1589	PASS
176	174	95.0	101	99.9	21736	PASS
177	176	5.00	9.00	6.51	1414	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG564484-02	STD	01	04/13/2016 12:11	
WG564484-04	STD	01	04/13/2016 13:13	
WG564484-03	STD	01	04/13/2016 13:43	
WG564484-05	STD	01	04/13/2016 14:13	
WG564484-06	STD	01	04/13/2016 14:42	
WG564484-07	STD	01	04/13/2016 15:12	
WG564484-08	STD-CCV	01	04/13/2016 15:41	
WG564484-09	STD	01	04/13/2016 16:10	
WG564484-10	STD	01	04/13/2016 16:40	
WG564484-11	STD	01	04/13/2016 17:09	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS8
Analyst: TMB
Workgroup: WG564862

Tune ID: WG564862-01
Run Date: 04/14/2016
Run Time: 10:12
File ID: 8M411408
Cal ID: HPMS8-13-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.7	10450	PASS
75.0	95.0	30.0	60.0	48.4	19696	PASS
95.0	95.0	100	100	100	40658	PASS
96.0	95.0	5.00	9.00	7.15	2907	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	71.2	28944	PASS
175	174	5.00	9.00	7.12	2060	PASS
176	174	95.0	101	95.3	27589	PASS
177	176	5.00	9.00	6.34	1748	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG564484-12	SSCV	01	04/14/2016 12:46	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS8
Analyst: TMB
Workgroup: WG565384

Tune ID: WG565384-01
Run Date: 04/18/2016
Run Time: 15:39
File ID: 8M411510
Cal ID: HPMS8-13-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	28.4	8095	PASS
75.0	95.0	30.0	60.0	54.1	15436	PASS
95.0	95.0	100	100	100	28546	PASS
96.0	95.0	5.00	9.00	6.53	1863	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	75.1	21439	PASS
175	174	5.00	9.00	7.76	1664	PASS
176	174	95.0	101	95.7	20507	PASS
177	176	5.00	9.00	7.01	1437	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG565384-02	CCV	01	04/18/2016 16:03	
WG565386-01	BLANK	01	04/18/2016 17:31	
WG565386-02	LCS	01	04/18/2016 18:00	
L16040858-11	35AWW16MS-041216	01	04/18/2016 18:29	
L16040858-12	35AWW16MSD-041216	01	04/18/2016 18:59	
L16040858-07	35AWW01-041216	01	04/18/2016 21:53	
L16040858-08	35AWW01FD-041216	01	04/18/2016 22:23	
L16040858-09	35AWW11-041216	01	04/18/2016 22:52	
L16040858-10	35AWW16-041216	01	04/18/2016 23:21	
L16040858-13	35AWW19-041216	01	04/18/2016 23:49	
L16040858-14	LHSMW06-041316	01	04/19/2016 00:18	
L16040858-15	35AWW14-041316	01	04/19/2016 00:48	
L16040858-19	35AWW22-041316	01	04/19/2016 01:17	
L16040858-16	35AWW08-041316	DL01	04/19/2016 01:46	
L16040858-06	35AWW09-041216	01	04/19/2016 03:14	
WG565386-06	BLANK2	01	04/19/2016 04:12	*

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS8
Analyst: TMB
Workgroup: WG565516

Tune ID: WG565516-01
Run Date: 04/19/2016
Run Time: 14:19
File ID: 8M411544
Cal ID: HPMS8 -

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.5	7131	PASS
75.0	95.0	30.0	60.0	50.8	14188	PASS
95.0	95.0	100	100	100	27917	PASS
96.0	95.0	5.00	9.00	6.35	1774	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	71.1	19838	PASS
175	174	5.00	9.00	7.63	1514	PASS
176	174	95.0	101	99.2	19683	PASS
177	176	5.00	9.00	6.61	1301	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG565516-02	CCV	01	04/19/2016 14:43	
WG565517-01	BLANK	01	04/19/2016 15:41	
WG565517-02	LCS	01	04/19/2016 16:10	
L16040858-25	35AWW10MS-041316	01	04/19/2016 16:48	
L16040858-26	35AWW10MSD-041316	01	04/19/2016 17:17	
L16040858-24	35AWW10-041316	01	04/19/2016 18:45	
L16040858-20	35AWW21-041316	01	04/19/2016 19:14	
L16040858-21	35AWW21FD-041316	01	04/19/2016 19:44	
L16040858-22	35AWW13-041316	01	04/19/2016 20:13	
L16040858-23	35ASW03-041316	01	04/19/2016 20:42	
L16040858-28	35AWW15-041416	01	04/19/2016 21:11	
L16040858-29	35AWW05-041416	01	04/19/2016 21:40	
L16040858-17	03WW01-041316	DL02	04/19/2016 22:09	
L16040858-18	LHSMW04-041316	DL01	04/19/2016 23:08	
L16040858-30	LHSMW07-041416	01	04/20/2016 01:32	
L16040858-27	35AWW20-041316	DL01	04/20/2016 02:02	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16040858
Instrument: HPMS8
Analyst: TMB
Workgroup: WG565879

Tune ID: WG565879-01
Run Date: 04/21/2016
Run Time: 12:39
File ID: 8M411608
Cal ID: HPMS8-13-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	29.2	7083	PASS
75.0	95.0	30.0	60.0	55.3	13386	PASS
95.0	95.0	100	100	100	24226	PASS
96.0	95.0	5.00	9.00	6.43	1557	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	78.0	18892	PASS
175	174	5.00	9.00	6.52	1232	PASS
176	174	95.0	101	96.9	18308	PASS
177	176	5.00	9.00	5.95	1090	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG565879-02	CCV	01	04/21/2016 13:32	
WG565881-01	CCV	01	04/21/2016 14:02	
WG565880-01	BLANK	01	04/21/2016 14:31	
WG565880-02	LCS	01	04/21/2016 15:00	
WG565880-03	LCS2	01	04/21/2016 15:29	
L16040858-27	35AWW20-041316	DL02	04/21/2016 16:57	
L16040858-30	LHSMW07-041416	DL01	04/21/2016 17:25	
WG565880-04	BLANK2	01	04/21/2016 22:18	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4724690
Report generated 04/25/2016 16:02

Calibration Table Report
Method: A9FOOWT.M
Title: A9-FOO Water - IC: 10/06/15 - HPMS6
Last Calibration: Wed Oct 07 14:01:50 2015
Curve: WG541654
Calibration Files

	Compound	5 6M134944.D	20 6M134945.D	50 6M134946.D	100 6M134947.D	200 6M134948.D	300 6M134949.D	400 6M134950.D	500 6M134951.D	Avg	%RSD
I	Fluorobenzene	ISTD									
T	Acetonitrile	0.045	0.056	0.048	0.048	0.048	0.047	0.046	0.046	0.048	7.437
T	3-Chloro-1-propene	0.625	0.672	0.689	0.694	0.713	0.687	0.651	0.629	0.670	4.749
T	2-Chloro-1,3-butadiene	0.447	0.522	0.578	0.617	0.639	0.620	0.598	0.592	0.577	10.938
T	Ethyl Acetate	0.231	0.254	0.258	0.271	0.277	0.277	0.267	0.275	0.264	5.995
T	Methacrylonitrile	0.079	0.097	0.100	0.106	0.108	0.108	0.105	0.109	0.101	10.008
T	Isobutyl Alcohol		0.013	0.013	0.015	0.015	0.016	0.015	0.016	0.015	9.094
T	1-Butanol				0.006	0.006	0.007	0.006	0.007	0.006	6.713
T	Methyl methacrylate	0.186	0.237	0.259	0.276	0.281	0.289	0.283	0.290	0.263	13.600
T	2-Nitropropane			0.071	0.075	0.078	0.081	0.079	0.082	0.077	5.177
I	Chlorobenzene-d5	ISTD									
I	1,4-Dichlorobenzene-d4	ISTD									
T	Cyclohexanone			0.066	0.082	0.087	0.092	0.092	0.093	0.085	12.144

Wed Oct 07 14:06:26 2015

Calibration Table Report
Method: 8260WTR.M
Title: 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Calibration: Tue Apr 12 15:22:51 2016
Curve: WG564297
Calibration Files

	Compound	0.3 6M138396.D	0.4 6M138397.D	1 6M138398.D	2 6M138399.D	5 6M138400.D	20 6M138401.D	50 6M138402.D	100 6M138403.D	200 6M138404.D	300 6M138405.D	Avg	%RSD	Linear	Quad
I	Fluorobenzene	ISTD													
T	Dichlorodifluoromethane			0.415	0.427	0.375	0.482	0.470	0.427	0.434	0.407	0.430	7.927		
P	Chloromethane			0.326	0.325	0.290	0.346	0.333	0.258	0.272	0.254	0.301	12.076		
C	Vinyl Chloride		0.260	0.256	0.259	0.224	0.266	0.251	0.228	0.231	0.214	0.243	7.822		
T	1,3-Butadiene					0.168	0.201	0.157	0.155	0.165	0.147	0.165	11.421		
T	Bromomethane			0.112	0.122	0.106	0.114	0.118	0.120	0.130	0.131	0.119	7.223		
T	Chloroethane			0.142	0.149	0.132	0.152	0.153	0.134	0.135	0.131	0.141	6.456		
T	Trichlorofluoromethane		0.519	0.553	0.544	0.472	0.452	0.442	0.490	0.503	0.500	0.497	7.615		
T	Diethyl ether			0.223	0.234	0.219	0.225	0.211	0.220		0.204	0.219	4.342		
T	Isoprene					0.298	0.352	0.310	0.298	0.318	0.309	0.314	6.431		
T	Acrolein				0.038	0.037	0.040	0.039	0.040		0.039	0.039	2.945		
T	1,1,2-Trichloro-1,2,2-Trifluoroet			0.281	0.289	0.255	0.276	0.272	0.249	0.256	0.257	0.267	5.480		
T	Acetone					0.087	0.082	0.080	0.076	0.071	0.069	0.078	8.633		
C	1,1-Dichloroethene		0.428	0.475	0.470	0.426	0.478	0.470	0.431	0.441	0.437	0.451	4.916		
T	Tert-Butyl Alcohol			0.020	0.021	0.021	0.023	0.023	0.025		0.023	0.022	8.043		
T	Dimethyl Sulfide					0.203	0.240	0.205	0.201	0.209	0.207	0.211	6.859		
T	Iodomethane				0.035	0.054	0.175	0.187	0.187	0.169	0.172	0.140	46.852	0.997	
T	Methyl acetate					0.234	0.232	0.209	0.208	0.206	0.202	0.215	6.541		
T	Methylene Chloride			0.311	0.302	0.282	0.282	0.271	0.249	0.251	0.246	0.274	9.004		
T	Carbon Disulfide			0.887	0.854	0.769	0.863	0.754	0.735	0.774	0.739	0.797	7.667		
T	Acrylonitrile			0.081	0.088	0.085	0.092	0.094	0.097		0.099	0.091	7.352		
T	Methyl Tert Butyl Ether			0.606	0.642	0.647	0.717	0.726	0.697	0.697	0.684	0.677	6.109		
T	trans-1,2-Dichloroethene		0.231	0.274	0.255	0.241	0.264	0.262	0.241	0.246	0.244	0.251	5.368		
T	n-Hexane					0.346	0.400	0.348	0.346	0.362	0.349	0.359	5.864		
T	Diisopropyl ether			1.068	1.115	1.015	1.061	0.973	1.008		0.960	1.029	5.383		
T	Vinyl Acetate					0.384	0.426	0.407	0.382	0.388	0.417	0.401	4.639		
P	1,1-Dichloroethane		0.529	0.569	0.580	0.526	0.559	0.533	0.488	0.495	0.488	0.530	6.574		
T	Ethyl-Tert-Butyl ether			0.830	0.907	0.836	0.884	0.858	0.865		0.836	0.860	3.315		
T	2-Butanone					0.115	0.117	0.120	0.117	0.110	0.108	0.114	4.064		
T	Propionitrile			0.032	0.034	0.033	0.033	0.033	0.035		0.031	0.033	3.329		
T	2,2-Dichloropropane		0.395	0.441	0.449	0.404	0.425	0.416	0.389	0.402	0.399	0.414	5.082		
T	cis-1,2-Dichloroethene		0.240	0.283	0.295	0.266	0.293	0.287	0.266	0.271	0.267	0.274	6.336		
C	Chloroform	0.483	0.480	0.529	0.515	0.490	0.519	0.501	0.464	0.474	0.469	0.492	4.527		
T	1-Bromopropane			0.031	0.039	0.041	0.048	0.044	0.044	0.048	0.048	0.043	13.568		
T	Bromochloromethane		0.155	0.153	0.174	0.166	0.174	0.171	0.161	0.163	0.163	0.164	4.637		
T	Tetrahydrofuran			0.088	0.073	0.071	0.073	0.072	0.075		0.070	0.075	8.270		
S	Dibromofluoromethane				0.270	0.236	0.269	0.264	0.243	0.255	0.256	0.256	5.045		
T	1,1,1-Trichloroethane		0.430	0.472	0.479	0.433	0.471	0.465	0.435	0.447	0.448	0.453	4.153		
T	Cyclohexane			0.449	0.468	0.440	0.512	0.454	0.445	0.473	0.463	0.463	4.947		
T	1,1-Dichloropropene			0.351	0.350	0.338	0.378	0.376	0.349	0.360	0.359	0.358	3.830		
T	Tert-Amyl-Methyl ether			0.619	0.691	0.642	0.683	0.647	0.688		0.670	0.663	4.114		
T	Carbon Tetrachloride		0.391	0.433	0.439	0.4	0.446	0.443	0.416	0.43	0.434	0.4259	4.5393		
S	1,2-Dichloroethane-d4				0.337	0.296	0.323	0.313	0.297	0.305	0.303	0.3107	4.783		
T	Heptane											0	0		
T	1,2-Dichloroethane		0.337	0.428	0.415	0.392	0.411	0.405	0.384	0.383	0.381	0.393	6.7123		
T	Benzene		1.055	1.161	1.145	1.038	1.092	1.045	0.959	0.952	0.899	1.0385	8.5377		
T	Trichloroethene		0.294	0.286	0.273	0.255	0.277	0.272	0.261	0.265	0.262	0.2717	4.5985		
T	Methylcyclohexane					0.325	0.397	0.354	0.355	0.376	0.371	0.3627	6.7525		
C	1,2-Dichloropropane		0.273	0.292	0.299	0.283	0.298	0.289	0.273	0.275	0.273	0.284	3.9158		
T	1,4-Dioxane					0.002	0.002	0.002	0.003		0.002	0.0022	14.144		
T	Bromodichloromethane		0.352	0.382	0.4	0.364	0.398	0.395	0.376	0.382	0.382	0.3811	4.1679		
T	Dibromomethane		0.133	0.147	0.158	0.147	0.161	0.158	0.153	0.153	0.153	0.1515	5.5899		
T	2-Chloroethyl Vinyl Ether				0.103	0.107	0.138	0.15	0.146	0.145	0.134	0.1318	14.607		
T	4-Methyl-2-Pentanone					0.073	0.088	0.093	0.093	0.092	0.088	0.0878	8.9631		
T	cis-1,3-Dichloropropene		0.341	0.361	0.396	0.387	0.442	0.438	0.417	0.421	0.416	0.4022	8.5418		
T	Dimethyl Disulfide					0.16	0.216	0.206	0.214	0.234	0.236	0.2109	13.101		
I	Chlorobenzene-d5	ISTD													
S	Toluene-d8				1.209	1.068	1.187	1.155	1.053	1.097	1.11	1.1255	5.2735		
C	Toluene		1.357	1.474	1.49	1.403	1.496	1.451	1.319	1.3	1.232	1.3914	6.7864		
T	Ethyl Methacrylate			0.305	0.314	0.341	0.421	0.399	0.397	0.413	0.402	0.374	12.441		
T	Paraldehyde											0	0		
T	trans-1,3-Dichloropropene			0.512	0.503	0.509	0.557	0.556	0.521	0.523	0.525	0.5257	3.8681		
T	1,1,2-Trichloroethane		0.228	0.312	0.308	0.275	0.29	0.286	0.27	0.266	0.263	0.2773	9.1232		
T	2-Hexanone					0.192	0.221	0.239	0.239	0.237	0.225	0.2254	8.0245		
T	1,3-Dichloropropane		0.477	0.494	0.512	0.508	0.519	0.51	0.478	0.472	0.467	0.4929	4.0267		
T	Tetrachloroethene		0.379	0.408	0.399	0.371	0.391	0.386	0.356	0.364	0.371	0.3807	4.4986		
T	Dibromochloromethane		0.313	0.372	0.385	0.36	0.396	0.398	0.381	0.384	0.379	0.3743	6.8986		
T	1,2-Dibromoethane		0.194	0.282	0.286	0.269	0.289	0.293	0.281	0.279	0.276	0.272	11.02		
T	1-Chlorohexane		0.219	0.36	0.36	0.374	0.471	0.426	0.425	0.451	0.446	0.3925	19.577	0.999	
P	Chlorobenzene		0.969	1.101	1.059	0.954	0.978	0.955	0.877	0.865	0.83	0.9541	9.2737		
T	1,1,1,2-Tetrachloroethane		0.342	0.406	0.396	0.365	0.399	0.392	0.369	0.372	0.363	0.3783	5.548		
C	Ethylbenzene		0.495	0.52	0.512	0.483	0.532	0.522	0.483	0.481	0.472	0.4999	4.3395		
T	m-,p-Xylene		0.548	0.619	0.639	0.596	0.646	0.63	0.577	0.562	0.52	0.5931	7.4241		
T	o-Xylene			0.545	0.534	0.543	0.628	0.62	0.585	0.582	0.55	0.5733	6.3209		
T	Styrene		0.719	0.865	0.918	0.963	1.114	1.09	1.027	1.025	0.938	0.962	12.667		
P	Bromoform			0.219	0.239	0.233	0.254	0.262	0.263	0.271	0.263	0.2506	7.3017		
T	Isopropylbenzene		1.193	1.352	1.43	1.419	1.651	1.625	1.52	1.49	1.309	1.4432	10.217		
I	1,4-Dichlorobenzene-d4	ISTD													
P	1,1,2,2-Tetrachloroethane		0.588	0.639	0.643	0.591	0.637	0.625	0.586	0.584	0.586	0.6087	4.3154		
S	p-Bromofluorobenzene				0.841	0.76	0.877	0.862	0.815	0.845	0.842	0.8346	4.5616		

T	1,2,3-Trichloropropane			0.183	0.18	0.189	0.201	0.199	0.192	0.191	0.189	0.1904	3.7512	
T	trans-1,4-Dichloro-2-Butene			0.155	0.146	0.173	0.214	0.209	0.213	0.226	0.22	0.1944	16.221	0.999
T	n-Propylbenzene		2.517	2.83	3.099	3.168	3.557	3.374	3.056	2.894	2.542	3.004	11.617	
T	Bromobenzene	0.701	0.704	0.8	0.788	0.764	0.803	0.779	0.722	0.737	0.727	0.7526	5.1734	
T	1,3,5-Trimethylbenzene			2.059	2.177	2.283	2.582	2.497	2.301	2.274	2.062	2.2795	8.2171	
T	2-Chlorotoluene		1.842	2.336	2.372	2.273	2.369	2.266	2.056	2.014	1.82	2.1498	10.291	
T	4-Chlorotoluene		1.963	2.121	2.208	2.148	2.237	2.117	1.965	1.967	1.871	2.0664	6.1865	
T	a-Methylstyrene					1.003	1.269	1.155	1.143	1.204	1.149	1.154	7.6348	
T	tert-Butylbenzene			0.4	0.492	0.476	0.53	0.51	0.47	0.479	0.468	0.478	7.9925	
T	1,2,4-Trimethylbenzene			2.284	2.523	2.49	2.703	2.601	2.402	2.327	2.108	2.4297	7.8125	
T	sec-Butylbenzene			2.64	2.795	2.736	3.067	2.96	2.7	2.609	2.356	2.7329	7.9906	
T	p-Isopropyltoluene			2.059	2.208	2.32	2.631	2.565	2.367	2.302	2.109	2.3204	8.683	
T	1,3-Dichlorobenzene		1.451	1.633	1.546	1.469	1.54	1.496	1.394	1.38	1.322	1.4701	6.5595	
T	1,4-Dichlorobenzene	1.695	1.63	1.731	1.653	1.499	1.541	1.5	1.403	1.384	1.321	1.5358	9.0904	
T	n-Butylbenzene			2.048	2.212	2.125	2.428	2.354	2.178	2.105	1.928	2.172	7.418	
T	1,2-Dichlorobenzene	1.459	1.367	1.52	1.484	1.396	1.453	1.408	1.323	1.3	1.242	1.3952	6.289	
T	1,2-Dibromo-3-Chloropropane				0.102	0.118	0.129	0.131	0.13	0.129	0.125	0.1234	8.2589	
T	1,2,4-Trichlorobenzene		0.961	0.957	0.996	0.928	1.068	1.044	0.983	0.987	0.946	0.9857	4.635	
T	Hexachlorobutadiene		0.348	0.408	0.435	0.395	0.432	0.419	0.391	0.395	0.384	0.4008	6.6649	
T	Naphthalene		1.705	1.751	1.824	1.851	2.202	2.228	2.121	2.005	1.834	1.9467	10.131	
T	1,2,3-Trichlorobenzene	0.877	0.866	0.887	0.964	0.922	1.003	0.982	0.929	0.915	0.881	0.9227	5.1104	

Tue Apr 12 15:29:45 2016

Calibration Table Report
Method: A9FOOWTR.M
Title: A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Calibration: Tue Oct 06 11:55:21 2015
Curve: WG540826
Calibration Files

	Compound		5 8M407828.D	20 8M407829.D	50 8M407830.D	100 8M407831.D	200 8M407832.D	300 8M407833.D	400 8M407834.D	500 8M407835.D	Avg	%RSD
I	Fluorobenzene	ISTD										
T	Acetonitrile		0.020	0.019	0.020	0.019	0.019	0.019	0.019	0.019	0.019	3.019
T	3-Chloro-1-propene		0.474	0.484	0.476	0.471	0.484	0.465	0.458	0.432	0.468	3.632
T	2-Chloro-1,3-butadiene		0.448	0.481	0.482	0.486	0.514	0.495	0.486	0.460	0.481	4.206
T	Ethyl Acetate		0.104	0.129	0.132	0.131	0.132	0.128	0.128	0.133	0.127	7.528
T	Methacrylonitrile		0.046	0.055	0.058	0.057	0.057	0.056	0.057	0.060	0.056	7.551
T	Isobutyl Alcohol				0.005	0.005	0.005	0.005	0.005	0.006	0.005	4.964
T	1-Butanol				0.002	0.002	0.003	0.003	0.003	0.003	0.003	10.874
T	Methyl methacrylate		0.120	0.147	0.158	0.162	0.162	0.158	0.160	0.165	0.154	9.638
T	2-Nitropropane				0.021	0.022	0.025	0.026	0.029	0.031	0.026	14.916
I	Chlorobenzene-d5	ISTD										
I	1,4-Dichlorobenzene-d4	ISTD										
T	Cyclohexanone				0.057	0.052	0.054	0.051	0.052	0.054	0.053	3.733

Tue Oct 06 11:57:17 2015

Calibration Table Report
Method: 8260WT.M
Title: Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Calibration: Thu Apr 14 08:48:16 2016
Curve: WG564484
Calibration Files

	Compound	0.3 8M411392.D	0.4 8M411395.D	1 8M411394.D	2 8M411396.D	5 8M411397.D	20 8M411398.D	50 8M411399.D	100 8M411400.D	200 8M411401.D	300 8M411402.D	Avg	%RSD	Linear	Quad
I	Fluorobenzene	ISTD													
T	Dichlorodifluoromethane		0.319	0.405	0.366	0.361	0.465	0.459	0.415	0.429	0.399	0.402	11.797		
P	Chloromethane			0.684	0.678	0.626	0.673	0.660	0.584	0.563	0.502	0.621	10.593		
C	Vinyl Chloride		0.399	0.414	0.383	0.362	0.403	0.371	0.351	0.332	0.315	0.370	9.002		
T	1,3-Butadiene				0.420	0.388	0.446	0.383	0.303	0.259	0.228	0.347	24.114		1.004
T	Bromomethane			0.099	0.108	0.099	0.130	0.152	0.173	0.208	0.216	0.148	31.867		1.000
T	Chloroethane		0.176	0.198	0.188	0.192	0.216	0.212	0.206	0.224	0.220	0.204	7.931		
T	Trichlorofluoromethane		0.401	0.482	0.440	0.447	0.488	0.470	0.446	0.474	0.470	0.458	5.923		
T	Diethyl ether			0.177	0.196	0.185	0.169	0.175	0.195		0.195	0.185	5.922		
T	Isoprene		0.278	0.342	0.327	0.336	0.377	0.363	0.365	0.379	0.371	0.349	9.270		
T	Acrolein			0.013	0.020	0.020	0.019	0.021	0.026		0.027	0.021	22.765		0.999
T	1,1,2-Trichloro-1,2,2-Trifluoroethane			0.246	0.225	0.241	0.258	0.256	0.243	0.265	0.255	0.249	5.026		
T	Acetone					0.048	0.048	0.051	0.044	0.049	0.045	0.048	5.163		
C	1,1-Dichloroethene		0.428	0.483	0.457	0.458	0.502	0.491	0.468	0.498	0.473	0.473	4.937		
T	Tert-Butyl Alcohol				0.012	0.011	0.011	0.010	0.011		0.012	0.011	5.743		
T	Dimethyl Sulfide		0.169	0.210	0.211	0.204	0.224	0.227	0.222	0.234	0.238	0.215	9.620		
T	Iodomethane					0.036	0.088	0.110	0.121	0.125	0.123	0.100	34.357	0.999	
T	Methyl acetate					0.162	0.164	0.168	0.170	0.166	0.174	0.167	2.584		
T	Methylene Chloride			0.269	0.246	0.257	0.271	0.262	0.255	0.266	0.258	0.261	3.150		
T	Carbon Disulfide			0.920	0.831	0.837	0.899	0.881	0.867	0.878	0.828	0.868	3.857		
T	Acrylonitrile			0.061	0.073	0.066	0.064	0.071	0.078		0.089	0.072	13.207		
T	Methyl Tert Butyl Ether			0.473	0.518	0.506	0.584	0.552	0.529	0.530	0.521	0.527	6.156		
T	trans-1,2-Dichloroethene		0.409	0.448	0.459	0.434	0.480	0.468	0.447	0.472	0.444	0.451	4.792		
T	n-Hexane					0.409	0.435	0.420	0.445	0.470	0.457	0.439	5.179		
T	Diisopropyl ether			1.128	1.210	1.154	1.081	1.101	1.175		1.071	1.131	4.524		
T	Vinyl Acetate				0.403	0.396	0.395	0.403	0.452	0.437	0.430	0.417	5.406		
P	1,1-Dichloroethane		0.552	0.589	0.550	0.549	0.612	0.583	0.553	0.574	0.537	0.566	4.301		
T	Ethyl-Tert-Butyl ether			0.812	0.873	0.844	0.788	0.804	0.864		0.808	0.828	3.944		
T	2-Butanone					0.067	0.080	0.081	0.081	0.079	0.084	0.079	7.385		
T	Propionitrile			0.021	0.023	0.023	0.022	0.022	0.024		0.025	0.023	6.001		
T	2,2-Dichloropropane		0.411	0.436	0.407	0.406	0.436	0.411	0.427	0.442	0.417	0.422	3.317		
T	cis-1,2-Dichloroethene		0.256	0.295	0.268	0.272	0.305	0.290	0.280	0.291	0.278	0.282	5.367		
C	Chloroform	0.454	0.428	0.496	0.492	0.467	0.530	0.499	0.473	0.479	0.448	0.476	6.199		
T	1-Bromopropane			0.031	0.035	0.040	0.045	0.044	0.044	0.047	0.047	0.042	14.241		
T	Bromochloromethane		0.117	0.138	0.148	0.140	0.158	0.149	0.144	0.147	0.144	0.143	7.890		
T	Tetrahydrofuran			0.077	0.057	0.055	0.051	0.053	0.057		0.058	0.058	14.896		
S	Dibromofluoromethane			0.252	0.271	0.251	0.248	0.258	0.250	0.259	0.257	0.256	2.867		
T	1,1,1-Trichloroethane		0.356	0.453	0.434	0.405	0.450	0.440	0.413	0.434	0.411	0.422	7.103		
T	Cyclohexane			0.569	0.552	0.555	0.590	0.577	0.585	0.625	0.603	0.582	4.177		
T	1,1-Dichloropropene			0.356	0.361	0.371	0.391	0.385	0.366	0.384	0.363	0.372	3.446		
T	Tert-Amyl-Methyl ether			0.533	0.595	0.566	0.528	0.543	0.587		0.556	0.558	4.644		
T	Carbon Tetrachloride		0.342	0.367	0.35	0.367	0.403	0.393	0.375	0.395	0.378	0.3744	5.53019		
S	1,2-Dichloroethane-d4			0.268	0.271	0.267	0.27	0.277	0.264	0.266	0.264	0.2684	1.5717		
T	Heptane											0	0		
T	1,2-Dichloroethane		0.302	0.369	0.361	0.367	0.405	0.382	0.36	0.361	0.346	0.3615	7.68188		
T	Benzene		0.99	1.038	1.013	1.034	1.133	1.076	1.002	0.974	0.848	1.012	7.70465		
T	Trichloroethene		0.219	0.25	0.241	0.252	0.284	0.267	0.255	0.267	0.257	0.2548	7.1543		
T	Methylcyclohexane					0.381	0.413	0.401	0.403	0.421	0.41	0.4049	3.41505		
C	1,2-Dichloropropane		0.265	0.293	0.294	0.29	0.334	0.317	0.305	0.319	0.308	0.3028	6.57357		
T	Bromodichloromethane		0.335	0.362	0.343	0.334	0.402	0.381	0.36	0.364	0.348	0.3587	6.19243		
T	1,4-Dioxane					0.001	0.001	0.001	0.001		0.001	0.0011	11.3125		
T	Dibromomethane		0.09	0.122	0.116	0.121	0.145	0.141	0.134	0.135	0.133	0.1265	13.0895		
T	2-Chloroethyl Vinyl Ether				0.108	0.122	0.13	0.13	0.125	0.126	0.122	0.1235	6.0122		
T	4-Methyl-2-Pentanone					0.061	0.065	0.067	0.068	0.068	0.072	0.0668	5.5815		
T	cis-1,3-Dichloropropene		0.329	0.374	0.371	0.379	0.455	0.428	0.414	0.418	0.396	0.3961	9.47017		

T	Dimethyl Disulfide					0.168	0.201	0.215	0.22	0.226	0.23	0.21	10.8425	
I	Chlorobenzene-d5	ISTD												
S	Toluene-d8			1.417	1.257	1.236	1.248	1.266	1.201	1.239	1.144	1.2511	6.19523	
C	Toluene		1.499	1.617	1.465	1.463	1.706	1.563	1.433	1.358	1.13	1.4704	11.182	
T	Ethyl Methacrylate			0.286	0.265	0.291	0.332	0.336	0.33	0.322	0.318	0.3099	8.35115	
T	Paraldehyde											0	0	
T	trans-1,3-Dichloropropene			0.484	0.473	0.456	0.571	0.519	0.495	0.49	0.459	0.4934	7.6037	
T	1,1,2-Trichloroethane		0.182	0.219	0.237	0.225	0.289	0.254	0.24	0.239	0.232	0.2352	12.0548	
T	2-Hexanone					0.081	0.086	0.089	0.09	0.088	0.09	0.0872	3.8362	
T	1,3-Dichloropropane		0.418	0.432	0.453	0.41	0.508	0.464	0.437	0.432	0.408	0.4401	7.18403	
T	Tetrachloroethene		0.224	0.302	0.266	0.275	0.311	0.294	0.28	0.3	0.283	0.2817	9.22721	
T	Dibromochloromethane		0.26	0.268	0.284	0.298	0.373	0.338	0.324	0.329	0.316	0.3099	11.6521	
T	1,2-Dibromoethane		0.148	0.229	0.207	0.216	0.273	0.256	0.244	0.242	0.234	0.2276	15.79	0.999
T	1-Chlorohexane		0.407	0.509	0.489	0.489	0.538	0.525	0.514	0.523	0.489	0.4981	7.75894	
P	Chlorobenzene		0.984	1.037	1.012	0.979	1.145	1.041	0.965	0.947	0.819	0.9921	8.82496	
T	1,1,1,2-Tetrachloroethane		0.302	0.324	0.323	0.32	0.415	0.374	0.357	0.363	0.335	0.3459	10.0073	
C	Ethylbenzene		0.48	0.574	0.53	0.526	0.626	0.575	0.546	0.57	0.518	0.5496	7.70438	
T	m-,p-Xylene		0.616	0.693	0.657	0.621	0.739	0.685	0.638	0.615	0.513	0.642	9.91267	
T	o-Xylene			0.668	0.634	0.609	0.743	0.676	0.639	0.651	0.596	0.6521	6.98714	
T	Styrene		0.876	1	0.995	1.006	1.279	1.164	1.071	1.027	0.896	1.0349	12.1099	
P	Bromoform			0.127	0.152	0.155	0.224	0.199	0.188	0.19	0.188	0.1779	17.481	0.998
T	Isopropylbenzene		1.477	1.624	1.571	1.581	1.906	1.731	1.568	1.463	1.203	1.5693	12.2738	
I	1,4-Dichlorobenzene-d4	ISTD												
P	1,1,2,2-Tetrachloroethane		0.403	0.521	0.558	0.539	0.681	0.576	0.558	0.558	0.551	0.5494	12.9652	
S	p-Bromofluorobenzene				1.025	0.932	0.926	0.965	0.971	1.011	1.007	0.9768	3.98555	
T	1,2,3-Trichloropropane			0.132	0.142	0.136	0.185	0.156	0.145	0.149	0.149	0.1494	10.9973	
T	trans-1,4-Dichloro-2-Butene			0.18	0.193	0.209	0.222	0.232	0.235	0.242	0.248	0.22	11.0405	
T	n-Propylbenzene		3.791	4.038	3.953	3.82	4.454	4.01	3.646	3.317	2.688	3.7463	13.4182	
T	Bromobenzene	0.751	0.678	0.698	0.768	0.728	0.855	0.767	0.723	0.753	0.729	0.745	6.4844	
T	1,3,5-Trimethylbenzene		2.435	2.843	2.602	2.587	3.065	2.79	2.589	2.557	2.194	2.6293	9.49116	
T	2-Chlorotoluene		2.494	2.615	2.498	2.467	2.89	2.57	2.353	2.187	1.863	2.4374	11.7911	
T	4-Chlorotoluene		2.487	2.72	2.543	2.386	2.891	2.574	2.372	2.335		2.5386	7.49147	
T	a-Methylstyrene					1.298	1.474	1.486	1.453	1.482	1.398	1.4319	5.1072	
T	tert-Butylbenzene			0.472	0.508	0.5	0.614	0.559	0.524	0.564	0.543	0.5355	8.26142	
T	1,2,4-Trimethylbenzene		2.826	2.86	2.696	2.749	3.295	2.922	2.686	2.61	2.199	2.7603	10.5153	
T	sec-Butylbenzene			3.602	3.196	3.292	3.877	3.491	3.147	3.008	2.5	3.2641	12.736	
T	p-Isopropyltoluene			2.743	2.581	2.597	3.176	2.857	2.622	2.547	2.164	2.6608	10.8439	
T	1,3-Dichlorobenzene		1.528	1.525	1.502	1.426	1.789	1.577	1.458	1.478	1.359	1.5157	7.9464	
T	1,4-Dichlorobenzene	1.756	1.453	1.533	1.451	1.456	1.762	1.553	1.426	1.451	1.332	1.5173	9.26337	
T	n-Butylbenzene			2.909	2.656	2.67	3.227	2.919	2.658	2.518	2.107	2.708	12.154	
T	1,2-Dichlorobenzene	1.413	1.202	1.325	1.385	1.282	1.607	1.393	1.294	1.301	1.211	1.3413	8.78019	
T	1,2-Dibromo-3-Chloropropane				0.088	0.085	0.123	0.104	0.1	0.097	0.099	0.0992	12.4659	
T	1,2,4-Trichlorobenzene		0.849	0.998	0.875	0.872	1.144	1.001	0.921	0.946	0.888	0.9438	9.84116	
T	Hexachlorobutadiene		0.286	0.374	0.309	0.345	0.451	0.4	0.378	0.407	0.393	0.3715	13.7208	
T	Naphthalene		1.45	1.562	1.549	1.485	1.981	1.739	1.561	1.512	1.389	1.5807	11.2797	
T	1,2,3-Trichlorobenzene	0.755	0.716	0.792	0.767	0.724	0.969	0.845	0.774	0.787	0.747	0.7876	9.33425	

Thu Apr 14 09:12:41 2016

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16040858 Run Date: 04/11/2016 Sample ID: WG564297-12
Instrument ID: HPMS6 Run Time: 21:58 Method: 8260B
File ID: 6M138408 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG564297 Cal ID: HPMS6 - 11-APR-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	50.0	47.6	ug/L	0.469	4.80	20	
1,1-Dichloroethene	CCC	50.0	47.1	ug/L	0.424	5.80	20	
1,2-Dichloropropane	CCC	50.0	50.3	ug/L	0.286	0.700	20	
Ethylbenzene	CCC	50.0	50.0	ug/L	0.500	0	20	
Toluene	CCC	50.0	49.9	ug/L	1.39	0.200	20	
Vinyl Chloride	CCC	50.0	45.9	ug/L	0.223	8.30	20	
Bromoform	SPCC	50.0	47.2	ug/L	0.237	5.60	20	
Chlorobenzene	SPCC	50.0	48.6	ug/L	0.928	2.80	20	
Chloromethane	SPCC	50.0	44.1	ug/L	0.265	11.7	20	
1,1-Dichloroethane	SPCC	50.0	45.5	ug/L	0.483	8.90	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	46.4	ug/L	0.565	7.20	20	
Acetone		50.0	49.4	ug/L	0.0766	1.20	20	
Benzene		50.0	47.7	ug/L	0.990	4.70	20	
Bromobenzene		50.0	49.3	ug/L	0.742	1.50	20	
Bromochloromethane		50.0	48.5	ug/L	0.160	3.00	20	
Bromodichloromethane		50.0	49.0	ug/L	0.374	2.00	20	
Bromomethane		50.0	44.0	ug/L	0.105	12.1	20	
2-Butanone		50.0	49.7	ug/L	0.114	0.600	20	
n-Butylbenzene		50.0	50.2	ug/L	2.18	0.400	20	
sec-Butylbenzene		50.0	52.0	ug/L	2.84	3.90	20	
tert-Butylbenzene		50.0	52.8	ug/L	0.504	5.50	20	
Carbon Disulfide		50.0	46.3	ug/L	0.738	7.40	20	
Carbon Tetrachloride		50.0	48.3	ug/L	0.412	3.30	20	
Dibromochloromethane		50.0	50.2	ug/L	0.376	0.400	20	
Chloroethane		50.0	49.4	ug/L	0.139	1.20	20	
2-Chlorotoluene		50.0	50.5	ug/L	2.17	0.900	20	
4-Chlorotoluene		50.0	50.3	ug/L	2.08	0.600	20	
1,2-Dibromo-3-Chloropropane		50.0	50.4	ug/L	0.125	0.800	20	
1,2-Dibromoethane		50.0	51.4	ug/L	0.280	2.80	20	
Dibromomethane		50.0	47.6	ug/L	0.144	4.70	20	
1,2-Dichlorobenzene		50.0	50.1	ug/L	1.40	0.200	20	
1,3-Dichlorobenzene		50.0	49.2	ug/L	1.45	1.70	20	
1,4-Dichlorobenzene		50.0	48.1	ug/L	1.48	3.90	20	
Dichlorodifluoromethane		50.0	50.4	ug/L	0.433	0.900	20	
1,2-Dichloroethane		50.0	48.9	ug/L	0.384	2.20	20	
cis-1,2-Dichloroethene		50.0	50.1	ug/L	0.275	0.200	20	
trans-1,2-Dichloroethene		50.0	49.9	ug/L	0.251	0.100	20	
1,3-Dichloropropane		50.0	51.8	ug/L	0.511	3.70	20	
2,2-Dichloropropane		50.0	43.9	ug/L	0.363	12.2	20	
cis-1,3-Dichloropropene		50.0	55.3	ug/L	0.445	10.6	20	
trans-1,3-Dichloropropene		50.0	49.2	ug/L	0.518	1.50	20	
1,1-Dichloropropene		50.0	48.0	ug/L	0.344	3.90	20	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4724675
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16040858 Run Date: 04/11/2016 Sample ID: WG564297-12
Instrument ID: HPMS6 Run Time: 21:58 Method: 8260B
File ID: 6M138408 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG564297 Cal ID: HPMS6 - 11-APR-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2-Hexanone		50.0	49.9	ug/L	0.225	0.200	20	
Hexachlorobutadiene		50.0	53.0	ug/L	0.425	5.90	20	
Isopropylbenzene		50.0	54.9	ug/L	1.58	9.70	20	
p-Isopropyltoluene		50.0	52.1	ug/L	2.42	4.20	20	
4-Methyl-2-Pentanone		50.0	50.8	ug/L	0.0892	1.60	20	
Methylene Chloride		50.0	47.1	ug/L	0.258	5.90	20	
Naphthalene		50.0	49.0	ug/L	1.91	1.90	20	
n-Propylbenzene		50.0	54.8	ug/L	3.29	9.60	20	
Styrene		50.0	53.8	ug/L	1.04	7.60	20	
1,1,1,2-Tetrachloroethane		50.0	49.9	ug/L	0.378	0.200	20	
Tetrachloroethene		50.0	48.3	ug/L	0.368	3.40	20	
1,2,3-Trichlorobenzene		50.0	50.5	ug/L	0.933	1.10	20	
1,2,4-Trichlorobenzene		50.0	51.2	ug/L	1.01	2.30	20	
1,1,1-Trichloroethane		50.0	48.1	ug/L	0.436	3.80	20	
1,1,2-Trichloroethane		50.0	48.8	ug/L	0.271	2.40	20	
Trichloroethene		50.0	51.6	ug/L	0.281	3.30	20	
Trichlorofluoromethane		50.0	49.5	ug/L	0.492	1.10	20	
1,2,3-Trichloropropane		50.0	50.9	ug/L	0.194	1.80	20	
1,2,4-Trimethylbenzene		50.0	49.9	ug/L	2.42	0.300	20	
1,3,5-Trimethylbenzene		50.0	52.8	ug/L	2.41	5.50	20	
o-Xylene		50.0	53.4	ug/L	0.613	6.90	20	
m-,p-Xylene		100	103	ug/L	0.611	2.90	20	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4724675
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16040858 Run Date: 04/14/2016 Sample ID: WG564484-12
Instrument ID: HPMS8 Run Time: 12:46 Method: 8260B
File ID: 8M411413 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG564484 Cal ID: HPMS8 - 13-APR-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	50.0	50.4	ug/L	0.480	0.800	20	
1,1-Dichloroethene	CCC	50.0	48.8	ug/L	0.461	2.50	20	
1,2-Dichloropropane	CCC	50.0	53.3	ug/L	0.323	6.70	20	
Ethylbenzene	CCC	50.0	51.0	ug/L	0.561	2.10	20	
Toluene	CCC	50.0	51.8	ug/L	1.52	3.70	20	
Vinyl Chloride	CCC	50.0	42.8	ug/L	0.317	14.4	20	
Bromoform	SPCC	50.0	46.2	ug/L	0.175	7.60	20	
Chlorobenzene	SPCC	50.0	51.6	ug/L	1.02	3.10	20	
Chloromethane	SPCC	50.0	45.3	ug/L	0.563	9.30	20	
1,1-Dichloroethane	SPCC	50.0	48.4	ug/L	0.548	3.20	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	50.7	ug/L	0.557	1.40	20	
Acetone		50.0	49.7	ug/L	0.0472	0.700	20	
Benzene		50.0	51.5	ug/L	1.04	3.10	20	
Bromobenzene		50.0	50.3	ug/L	0.749	0.600	20	
Bromochloromethane		50.0	50.1	ug/L	0.143	0.300	20	
Bromodichloromethane		50.0	49.9	ug/L	0.358	0.100	20	
Bromomethane		50.0	47.8	ug/L	0.152	4.40	20	
2-Butanone		50.0	54.0	ug/L	0.0851	8.00	20	
n-Butylbenzene		50.0	52.2	ug/L	2.83	4.50	20	
sec-Butylbenzene		50.0	53.8	ug/L	3.51	7.50	20	
tert-Butylbenzene		50.0	53.6	ug/L	0.574	7.20	20	
Carbon Disulfide		50.0	41.1	ug/L	0.712	17.9	20	
Carbon Tetrachloride		50.0	50.0	ug/L	0.374	0	20	
Dibromochloromethane		50.0	52.1	ug/L	0.323	4.20	20	
Chloroethane		50.0	57.7	ug/L	0.235	15.3	20	
2-Chlorotoluene		50.0	52.8	ug/L	2.58	5.70	20	
4-Chlorotoluene		50.0	52.3	ug/L	2.65	4.60	20	
1,2-Dibromo-3-Chloropropane		50.0	47.5	ug/L	0.0944	4.90	20	
1,2-Dibromoethane		50.0	51.0	ug/L	0.245	2.00	20	
Dibromomethane		50.0	49.4	ug/L	0.125	1.20	20	
1,2-Dichlorobenzene		50.0	51.3	ug/L	1.38	2.50	20	
1,3-Dichlorobenzene		50.0	51.5	ug/L	1.56	2.90	20	
1,4-Dichlorobenzene		50.0	51.1	ug/L	1.55	2.10	20	
Dichlorodifluoromethane		50.0	53.0	ug/L	0.426	5.90	20	
1,2-Dichloroethane		50.0	50.2	ug/L	0.363	0.500	20	
cis-1,2-Dichloroethene		50.0	51.7	ug/L	0.291	3.40	20	
trans-1,2-Dichloroethene		50.0	51.5	ug/L	0.465	3.10	20	
1,3-Dichloropropane		50.0	53.2	ug/L	0.468	6.40	20	
2,2-Dichloropropane		50.0	52.0	ug/L	0.439	4.00	20	
cis-1,3-Dichloropropene		50.0	56.5	ug/L	0.447	13.0	20	
trans-1,3-Dichloropropene		50.0	50.5	ug/L	0.498	1.00	20	
1,1-Dichloropropene		50.0	49.1	ug/L	0.365	1.80	20	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4724675
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Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16040858 Run Date: 04/14/2016 Sample ID: WG564484-12
Instrument ID: HPMS8 Run Time: 12:46 Method: 8260B
File ID: 8M411413 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG564484 Cal ID: HPMS8 - 13-APR-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2-Hexanone		50.0	52.0	ug/L	0.0907	4.00	20	
Hexachlorobutadiene		50.0	56.1	ug/L	0.417	12.3	20	
Isopropylbenzene		50.0	53.8	ug/L	1.69	7.60	20	
p-Isopropyltoluene		50.0	53.3	ug/L	2.84	6.60	20	
4-Methyl-2-Pentanone		50.0	51.5	ug/L	0.0687	2.90	20	
Methylene Chloride		50.0	50.9	ug/L	0.265	1.80	20	
Naphthalene		50.0	45.4	ug/L	1.43	9.20	20	
n-Propylbenzene		50.0	55.2	ug/L	4.14	10.4	20	
Styrene		50.0	53.9	ug/L	1.12	7.80	20	
1,1,1,2-Tetrachloroethane		50.0	52.1	ug/L	0.360	4.20	20	
Tetrachloroethene		50.0	51.2	ug/L	0.289	2.50	20	
1,2,3-Trichlorobenzene		50.0	48.9	ug/L	0.771	2.20	20	
1,2,4-Trichlorobenzene		50.0	51.0	ug/L	0.962	2.00	20	
1,1,1-Trichloroethane		50.0	49.3	ug/L	0.416	1.50	20	
1,1,2-Trichloroethane		50.0	51.9	ug/L	0.244	3.80	20	
Trichloroethene		50.0	52.9	ug/L	0.269	5.70	20	
Trichlorofluoromethane		50.0	48.2	ug/L	0.441	3.60	20	
1,2,3-Trichloropropane		50.0	50.6	ug/L	0.151	1.20	20	
1,2,4-Trimethylbenzene		50.0	51.9	ug/L	2.86	3.70	20	
1,3,5-Trimethylbenzene		50.0	54.2	ug/L	2.85	8.40	20	
o-Xylene		50.0	52.4	ug/L	0.684	4.90	20	
m-,p-Xylene		100	106	ug/L	0.682	6.20	20	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4724675
Report generated 04/25/2016 16:02

Login Number: L16040858 Run Date: 04/18/2016 Sample ID: WG565327-02
Instrument ID: HPMS6 Run Time: 13:10 Method: 8260B
File ID: 6M138589 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565328 Cal ID: HPMS6 - 11-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	52.3	ug/L	0.515	4.59	20	
1,1-Dichloroethene	CCC	50.0	54.2	ug/L	0.488	8.31	20	
1,2-Dichloropropane	CCC	50.0	52.8	ug/L	0.300	5.52	20	
Ethylbenzene	CCC	50.0	51.6	ug/L	0.516	3.18	20	
Toluene	CCC	50.0	51.5	ug/L	1.43	2.98	20	
Vinyl Chloride	CCC	50.0	52.2	ug/L	0.254	4.46	20	
Bromoform	SPCC	50.0	45.5	ug/L	0.228	8.94	20	
Chlorobenzene	SPCC	50.0	48.5	ug/L	0.925	3.03	20	
Chloromethane	SPCC	50.0	54.0	ug/L	0.324	7.92	20	
1,1-Dichloroethane	SPCC	50.0	53.2	ug/L	0.563	6.32	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	41.2	ug/L	0.501	17.7	20	
Xylenes		150	158	ug/L	0.616	5.22	20	
Acetone		50.0	43.3	ug/L	0.0671	13.4	20	
Benzene		50.0	52.2	ug/L	1.08	4.32	20	
Bromobenzene		50.0	48.9	ug/L	0.737	2.12	20	
Bromochloromethane		50.0	51.5	ug/L	0.169	2.94	20	
Bromodichloromethane		50.0	51.9	ug/L	0.395	3.73	20	
Bromomethane		50.0	51.7	ug/L	0.123	3.48	20	
2-Butanone		50.0	45.5	ug/L	0.104	9.07	20	
n-Butylbenzene		50.0	57.0	ug/L	2.47	13.9	20	
sec-Butylbenzene		50.0	54.7	ug/L	2.99	9.32	20	
tert-Butylbenzene		50.0	52.6	ug/L	0.503	5.28	20	
Carbon Disulfide		50.0	55.1	ug/L	0.878	10.2	20	
Carbon Tetrachloride		50.0	53.3	ug/L	0.454	6.67	20	
Dibromochloromethane		50.0	48.8	ug/L	0.366	2.36	20	
Chloroethane		50.0	49.2	ug/L	0.139	1.65	20	
2-Chlorotoluene		50.0	53.9	ug/L	2.32	7.80	20	
4-Chlorotoluene		50.0	49.2	ug/L	2.03	1.53	20	
1,2-Dibromo-3-Chloropropane		50.0	38.7	ug/L	0.0956	22.6	20	*
1,2-Dibromoethane		50.0	47.8	ug/L	0.260	4.32	20	
Dibromomethane		50.0	51.2	ug/L	0.155	2.44	20	
1,2-Dichlorobenzene		50.0	48.5	ug/L	1.35	2.96	20	
1,3-Dichlorobenzene		50.0	49.6	ug/L	1.46	0.734	20	
1,4-Dichlorobenzene		50.0	47.5	ug/L	1.46	5.05	20	
Dichlorodifluoromethane		50.0	56.5	ug/L	0.486	13.0	20	
1,2-Dichloroethane		50.0	50.8	ug/L	0.400	1.66	20	
cis-1,2-Dichloroethene		50.0	53.9	ug/L	0.296	7.71	20	
trans-1,2-Dichloroethene		50.0	54.4	ug/L	0.273	8.86	20	
1,3-Dichloropropane		50.0	48.2	ug/L	0.475	3.66	20	
2,2-Dichloropropane		50.0	56.6	ug/L	0.469	13.3	20	
cis-1,3-Dichloropropene		50.0	54.8	ug/L	0.441	9.64	20	
trans-1,3-Dichloropropene		50.0	49.9	ug/L	0.525	0.115	20	

CCV - Modified 03/05/2008
PDF File ID: 4724692
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Login Number: L16040858 Run Date: 04/18/2016 Sample ID: WG565327-02
Instrument ID: HPMS6 Run Time: 13:10 Method: 8260B
File ID: 6M138589 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565328 Cal ID: HPMS6 - 11-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	53.8	ug/L	0.385	7.63	20	
2-Hexanone		50.0	42.9	ug/L	0.193	14.2	20	
Hexachlorobutadiene		50.0	53.4	ug/L	0.428	6.71	20	
Isopropylbenzene		50.0	55.8	ug/L	1.61	11.6	20	
p-Isopropyltoluene		50.0	55.5	ug/L	2.58	11.1	20	
4-Methyl-2-Pentanone		50.0	45.6	ug/L	0.0801	8.76	20	
Methylene Chloride		50.0	51.6	ug/L	0.283	3.17	20	
Naphthalene		50.0	49.6	ug/L	1.93	0.875	20	
n-Propylbenzene		50.0	56.5	ug/L	3.39	13.0	20	
Styrene		50.0	55.8	ug/L	1.07	11.7	20	
1,1,1,2-Tetrachloroethane		50.0	50.2	ug/L	0.380	0.330	20	
Tetrachloroethene		50.0	48.8	ug/L	0.372	2.36	20	
1,2,3-Trichlorobenzene		50.0	49.4	ug/L	0.912	1.16	20	
1,2,4-Trichlorobenzene		50.0	50.6	ug/L	0.998	1.28	20	
1,1,1-Trichloroethane		50.0	52.5	ug/L	0.476	5.04	20	
1,1,2-Trichloroethane		50.0	48.0	ug/L	0.266	4.01	20	
Trichloroethene		50.0	52.9	ug/L	0.288	5.83	20	
Trichlorofluoromethane		50.0	48.7	ug/L	0.485	2.53	20	
1,2,3-Trichloropropane		50.0	45.1	ug/L	0.172	9.70	20	
1,2,4-Trimethylbenzene		50.0	53.1	ug/L	2.58	6.25	20	
1,3,5-Trimethylbenzene		50.0	54.0	ug/L	2.46	7.99	20	
o-Xylene		50.0	53.3	ug/L	0.611	6.59	20	
m-,p-Xylene		100	105	ug/L	0.620	4.54	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4724692
Report generated 04/25/2016 16:02

Login Number: L16040858 Run Date: 04/18/2016 Sample ID: WG565384-02
Instrument ID: HPMS8 Run Time: 16:03 Method: 8260B
File ID: 8M411511 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565386 Cal ID: HPMS8 - 13-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	54.6	ug/L	0.521	9.30	20	
1,1-Dichloroethene	CCC	50.0	54.4	ug/L	0.515	8.78	20	
1,2-Dichloropropane	CCC	50.0	52.6	ug/L	0.318	5.11	20	
Ethylbenzene	CCC	50.0	52.7	ug/L	0.580	5.46	20	
Toluene	CCC	50.0	53.7	ug/L	1.58	7.40	20	
Vinyl Chloride	CCC	50.0	57.9	ug/L	0.429	15.8	20	
Bromoform	SPCC	50.0	49.6	ug/L	0.188	0.717	20	
Chlorobenzene	SPCC	50.0	52.5	ug/L	1.04	5.10	20	
Chloromethane	SPCC	50.0	57.8	ug/L	0.718	15.6	20	
1,1-Dichloroethane	SPCC	50.0	53.2	ug/L	0.603	6.39	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	48.9	ug/L	0.537	2.19	20	
Xylenes		150	163	ug/L	0.696	8.37	20	
Acetone		50.0	45.9	ug/L	0.0436	8.24	20	
Benzene		50.0	54.7	ug/L	1.11	9.38	20	
Bromobenzene		50.0	49.7	ug/L	0.740	0.614	20	
Bromochloromethane		50.0	51.1	ug/L	0.146	2.17	20	
Bromodichloromethane		50.0	52.6	ug/L	0.378	5.22	20	
Bromomethane		50.0	56.4	ug/L	0.182	12.8	20	
2-Butanone		50.0	47.1	ug/L	0.0743	5.75	20	
n-Butylbenzene		50.0	56.6	ug/L	3.07	13.2	20	
sec-Butylbenzene		50.0	55.1	ug/L	3.60	10.2	20	
tert-Butylbenzene		50.0	52.9	ug/L	0.567	5.85	20	
Carbon Disulfide		50.0	52.1	ug/L	0.905	4.26	20	
Carbon Tetrachloride		50.0	55.1	ug/L	0.412	10.1	20	
Dibromochloromethane		50.0	52.1	ug/L	0.323	4.11	20	
Chloroethane		50.0	53.2	ug/L	0.217	6.32	20	
2-Chlorotoluene		50.0	55.6	ug/L	2.71	11.2	20	
4-Chlorotoluene		50.0	48.3	ug/L	2.45	3.48	20	
1,2-Dibromo-3-Chloropropane		50.0	47.2	ug/L	0.0938	5.51	20	
1,2-Dibromoethane		50.0	48.8	ug/L	0.234	2.32	20	
Dibromomethane		50.0	52.2	ug/L	0.132	4.37	20	
1,2-Dichlorobenzene		50.0	50.6	ug/L	1.36	1.14	20	
1,3-Dichlorobenzene		50.0	51.2	ug/L	1.55	2.39	20	
1,4-Dichlorobenzene		50.0	51.0	ug/L	1.55	2.06	20	
Dichlorodifluoromethane		50.0	56.6	ug/L	0.455	13.3	20	
1,2-Dichloroethane		50.0	51.6	ug/L	0.373	3.24	20	
cis-1,2-Dichloroethene		50.0	52.3	ug/L	0.295	4.55	20	
trans-1,2-Dichloroethene		50.0	52.8	ug/L	0.476	5.51	20	
1,3-Dichloropropane		50.0	49.0	ug/L	0.431	2.02	20	
2,2-Dichloropropane		50.0	55.5	ug/L	0.468	11.1	20	
cis-1,3-Dichloropropene		50.0	54.2	ug/L	0.429	8.35	20	
trans-1,3-Dichloropropene		50.0	50.5	ug/L	0.499	1.03	20	

CCV - Modified 03/05/2008
PDF File ID: 4724692
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16040858 Run Date: 04/18/2016 Sample ID: WG565384-02
Instrument ID: HPMS8 Run Time: 16:03 Method: 8260B
File ID: 8M411511 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565386 Cal ID: HPMS8 - 13-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	53.8	ug/L	0.400	7.53	20	
2-Hexanone		50.0	44.0	ug/L	0.0767	12.0	20	
Hexachlorobutadiene		50.0	55.4	ug/L	0.412	10.9	20	
Isopropylbenzene		50.0	57.1	ug/L	1.79	14.3	20	
p-Isopropyltoluene		50.0	55.3	ug/L	2.94	10.5	20	
4-Methyl-2-Pentanone		50.0	43.3	ug/L	0.0579	13.4	20	
Methylene Chloride		50.0	50.2	ug/L	0.262	0.484	20	
Naphthalene		50.0	48.9	ug/L	1.55	2.14	20	
n-Propylbenzene		50.0	54.9	ug/L	4.12	9.86	20	
Styrene		50.0	56.6	ug/L	1.17	13.1	20	
1,1,1,2-Tetrachloroethane		50.0	52.9	ug/L	0.366	5.88	20	
Tetrachloroethene		50.0	52.4	ug/L	0.295	4.86	20	
1,2,3-Trichlorobenzene		50.0	49.4	ug/L	0.779	1.10	20	
1,2,4-Trichlorobenzene		50.0	49.8	ug/L	0.940	0.441	20	
1,1,1-Trichloroethane		50.0	53.6	ug/L	0.452	7.18	20	
1,1,2-Trichloroethane		50.0	50.1	ug/L	0.236	0.247	20	
Trichloroethene		50.0	53.8	ug/L	0.274	7.60	20	
Trichlorofluoromethane		50.0	53.1	ug/L	0.486	6.20	20	
1,2,3-Trichloropropane		50.0	46.0	ug/L	0.137	8.05	20	
1,2,4-Trimethylbenzene		50.0	53.9	ug/L	2.98	7.80	20	
1,3,5-Trimethylbenzene		50.0	53.3	ug/L	2.80	6.62	20	
o-Xylene		50.0	52.7	ug/L	0.687	5.31	20	
m-,p-Xylene		100	110	ug/L	0.706	9.90	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4724692
Report generated 04/25/2016 16:02

Login Number: L16040858 Run Date: 04/19/2016 Sample ID: WG565516-02
Instrument ID: HPMS8 Run Time: 14:43 Method: 8260B
File ID: 8M411545 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565517 Cal ID: HPMS8 - 13-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	54.9	ug/L	0.523	9.74	20	
1,1-Dichloroethene	CCC	50.0	55.4	ug/L	0.524	10.7	20	
1,2-Dichloropropane	CCC	50.0	53.2	ug/L	0.322	6.45	20	
Ethylbenzene	CCC	50.0	54.6	ug/L	0.600	9.20	20	
Toluene	CCC	50.0	55.6	ug/L	1.64	11.3	20	
Vinyl Chloride	CCC	50.0	52.1	ug/L	0.386	4.20	20	
Bromoform	SPCC	50.0	49.1	ug/L	0.186	1.84	20	
Chlorobenzene	SPCC	50.0	53.3	ug/L	1.06	6.66	20	
Chloromethane	SPCC	50.0	52.6	ug/L	0.653	5.11	20	
1,1-Dichloroethane	SPCC	50.0	54.7	ug/L	0.620	9.37	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	49.4	ug/L	0.543	1.24	20	
Xylenes		150	164	ug/L	0.701	9.09	20	
Acetone		50.0	45.3	ug/L	0.0430	9.48	20	
Benzene		50.0	55.1	ug/L	1.12	10.3	20	
Bromobenzene		50.0	51.7	ug/L	0.771	3.48	20	
Bromochloromethane		50.0	52.4	ug/L	0.150	4.71	20	
Bromodichloromethane		50.0	52.8	ug/L	0.379	5.56	20	
Bromomethane		50.0	62.7	ug/L	0.205	25.5	20	*
2-Butanone		50.0	48.1	ug/L	0.0758	3.79	20	
n-Butylbenzene		50.0	57.7	ug/L	3.12	15.3	20	
sec-Butylbenzene		50.0	56.4	ug/L	3.68	12.8	20	
tert-Butylbenzene		50.0	54.2	ug/L	0.580	8.38	20	
Carbon Disulfide		50.0	53.0	ug/L	0.920	6.08	20	
Carbon Tetrachloride		50.0	55.5	ug/L	0.416	11.0	20	
Dibromochloromethane		50.0	53.4	ug/L	0.331	6.79	20	
Chloroethane		50.0	54.7	ug/L	0.223	9.41	20	
2-Chlorotoluene		50.0	52.3	ug/L	2.55	4.68	20	
4-Chlorotoluene		50.0	54.0	ug/L	2.74	8.03	20	
1,2-Dibromo-3-Chloropropane		50.0	43.7	ug/L	0.0868	12.6	20	
1,2-Dibromoethane		50.0	50.3	ug/L	0.241	0.574	20	
Dibromomethane		50.0	52.6	ug/L	0.133	5.15	20	
1,2-Dichlorobenzene		50.0	50.3	ug/L	1.35	0.589	20	
1,3-Dichlorobenzene		50.0	52.3	ug/L	1.59	4.62	20	
1,4-Dichlorobenzene		50.0	51.3	ug/L	1.56	2.62	20	
Dichlorodifluoromethane		50.0	54.9	ug/L	0.442	9.86	20	
1,2-Dichloroethane		50.0	51.7	ug/L	0.374	3.48	20	
cis-1,2-Dichloroethene		50.0	54.3	ug/L	0.306	8.56	20	
trans-1,2-Dichloroethene		50.0	54.8	ug/L	0.495	9.65	20	
1,3-Dichloropropane		50.0	50.3	ug/L	0.443	0.675	20	
2,2-Dichloropropane		50.0	56.4	ug/L	0.476	12.8	20	
cis-1,3-Dichloropropene		50.0	54.4	ug/L	0.431	8.80	20	
trans-1,3-Dichloropropene		50.0	51.8	ug/L	0.511	3.64	20	

CCV - Modified 03/05/2008
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Login Number: L16040858 Run Date: 04/19/2016 Sample ID: WG565516-02
Instrument ID: HPMS8 Run Time: 14:43 Method: 8260B
File ID: 8M411545 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565517 Cal ID: HPMS8 - 13-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	53.9	ug/L	0.401	7.72	20	
2-Hexanone		50.0	45.3	ug/L	0.0790	9.43	20	
Hexachlorobutadiene		50.0	56.5	ug/L	0.420	13.0	20	
Isopropylbenzene		50.0	56.5	ug/L	1.77	13.0	20	
p-Isopropyltoluene		50.0	56.4	ug/L	3.00	12.8	20	
4-Methyl-2-Pentanone		50.0	45.6	ug/L	0.0609	8.81	20	
Methylene Chloride		50.0	52.5	ug/L	0.274	5.00	20	
Naphthalene		50.0	45.2	ug/L	1.43	9.63	20	
n-Propylbenzene		50.0	57.3	ug/L	4.29	14.6	20	
Styrene		50.0	56.5	ug/L	1.17	12.9	20	
1,1,1,2-Tetrachloroethane		50.0	54.4	ug/L	0.376	8.72	20	
Tetrachloroethene		50.0	55.0	ug/L	0.310	9.92	20	
1,2,3-Trichlorobenzene		50.0	46.0	ug/L	0.724	8.07	20	
1,2,4-Trichlorobenzene		50.0	48.4	ug/L	0.914	3.14	20	
1,1,1-Trichloroethane		50.0	54.5	ug/L	0.460	8.96	20	
1,1,2-Trichloroethane		50.0	51.7	ug/L	0.243	3.48	20	
Trichloroethene		50.0	53.3	ug/L	0.272	6.57	20	
Trichlorofluoromethane		50.0	52.6	ug/L	0.482	5.27	20	
1,2,3-Trichloropropane		50.0	47.8	ug/L	0.143	4.40	20	
1,2,4-Trimethylbenzene		50.0	55.1	ug/L	3.04	10.3	20	
1,3,5-Trimethylbenzene		50.0	55.7	ug/L	2.93	11.4	20	
o-Xylene		50.0	53.2	ug/L	0.693	6.31	20	
m-,p-Xylene		100	110	ug/L	0.709	10.5	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4724692
Report generated 04/25/2016 16:02

Login Number: L16040858 Run Date: 04/20/2016 Sample ID: WG565672-02
Instrument ID: HPMS6 Run Time: 12:23 Method: 8260B
File ID: 6M138657 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565673 Cal ID: HPMS6 - 11-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	54.1	ug/L	0.533	8.22	20	
1,1-Dichloroethene	CCC	50.0	54.8	ug/L	0.494	9.60	20	
1,2-Dichloropropane	CCC	50.0	54.9	ug/L	0.312	9.87	20	
Ethylbenzene	CCC	50.0	52.4	ug/L	0.524	4.87	20	
Toluene	CCC	50.0	52.4	ug/L	1.46	4.70	20	
Vinyl Chloride	CCC	50.0	51.3	ug/L	0.250	2.68	20	
Bromoform	SPCC	50.0	52.3	ug/L	0.262	4.68	20	
Chlorobenzene	SPCC	50.0	49.8	ug/L	0.951	0.342	20	
Chloromethane	SPCC	50.0	51.6	ug/L	0.310	3.16	20	
1,1-Dichloroethane	SPCC	50.0	53.8	ug/L	0.570	7.62	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	51.7	ug/L	0.629	3.33	20	
Xylenes		150	162	ug/L	0.633	8.10	20	
Acetone		50.0	46.8	ug/L	0.0725	6.48	20	
Benzene		50.0	53.0	ug/L	1.10	5.94	20	
Bromobenzene		50.0	51.5	ug/L	0.775	3.03	20	
Bromochloromethane		50.0	53.3	ug/L	0.175	6.52	20	
Bromodichloromethane		50.0	55.2	ug/L	0.421	10.4	20	
Bromomethane		50.0	55.1	ug/L	0.131	10.3	20	
2-Butanone		50.0	48.5	ug/L	0.111	3.08	20	
n-Butylbenzene		50.0	55.3	ug/L	2.40	10.5	20	
sec-Butylbenzene		50.0	53.8	ug/L	2.94	7.53	20	
tert-Butylbenzene		50.0	52.6	ug/L	0.503	5.14	20	
Carbon Disulfide		50.0	54.2	ug/L	0.864	8.42	20	
Carbon Tetrachloride		50.0	55.3	ug/L	0.471	10.5	20	
Dibromochloromethane		50.0	53.4	ug/L	0.400	6.73	20	
Chloroethane		50.0	48.6	ug/L	0.137	2.85	20	
2-Chlorotoluene		50.0	54.4	ug/L	2.34	8.82	20	
4-Chlorotoluene		50.0	52.1	ug/L	2.15	4.18	20	
1,2-Dibromo-3-Chloropropane		50.0	51.1	ug/L	0.126	2.12	20	
1,2-Dibromoethane		50.0	53.1	ug/L	0.289	6.16	20	
Dibromomethane		50.0	55.2	ug/L	0.167	10.3	20	
1,2-Dichlorobenzene		50.0	50.4	ug/L	1.41	0.788	20	
1,3-Dichlorobenzene		50.0	51.0	ug/L	1.50	1.93	20	
1,4-Dichlorobenzene		50.0	49.3	ug/L	1.51	1.49	20	
Dichlorodifluoromethane		50.0	54.6	ug/L	0.469	9.17	20	
1,2-Dichloroethane		50.0	54.9	ug/L	0.432	9.89	20	
cis-1,2-Dichloroethene		50.0	54.3	ug/L	0.298	8.67	20	
trans-1,2-Dichloroethene		50.0	53.8	ug/L	0.270	7.57	20	
1,3-Dichloropropane		50.0	52.0	ug/L	0.513	4.05	20	
2,2-Dichloropropane		50.0	58.5	ug/L	0.484	16.9	20	
cis-1,3-Dichloropropene		50.0	58.0	ug/L	0.467	16.1	20	
trans-1,3-Dichloropropene		50.0	54.4	ug/L	0.572	8.77	20	

CCV - Modified 03/05/2008
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16040858 Run Date: 04/20/2016 Sample ID: WG565672-02
Instrument ID: HPMS6 Run Time: 12:23 Method: 8260B
File ID: 6M138657 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565673 Cal ID: HPMS6 - 11-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	54.9	ug/L	0.393	9.72	20	
2-Hexanone		50.0	48.5	ug/L	0.219	2.98	20	
Hexachlorobutadiene		50.0	50.3	ug/L	0.403	0.606	20	
Isopropylbenzene		50.0	56.8	ug/L	1.64	13.6	20	
p-Isopropyltoluene		50.0	54.7	ug/L	2.54	9.45	20	
4-Methyl-2-Pentanone		50.0	50.7	ug/L	0.0891	1.47	20	
Methylene Chloride		50.0	51.4	ug/L	0.282	2.72	20	
Naphthalene		50.0	53.7	ug/L	2.09	7.36	20	
n-Propylbenzene		50.0	56.8	ug/L	3.41	13.5	20	
Styrene		50.0	58.1	ug/L	1.12	16.2	20	
1,1,1,2-Tetrachloroethane		50.0	52.5	ug/L	0.397	5.05	20	
Tetrachloroethene		50.0	49.4	ug/L	0.376	1.21	20	
1,2,3-Trichlorobenzene		50.0	50.3	ug/L	0.929	0.663	20	
1,2,4-Trichlorobenzene		50.0	51.6	ug/L	1.02	3.14	20	
1,1,1-Trichloroethane		50.0	54.2	ug/L	0.492	8.41	20	
1,1,2-Trichloroethane		50.0	51.9	ug/L	0.288	3.83	20	
Trichloroethene		50.0	51.4	ug/L	0.279	2.74	20	
Trichlorofluoromethane		50.0	45.8	ug/L	0.456	8.32	20	
1,2,3-Trichloropropane		50.0	52.7	ug/L	0.201	5.46	20	
1,2,4-Trimethylbenzene		50.0	54.3	ug/L	2.64	8.56	20	
1,3,5-Trimethylbenzene		50.0	55.0	ug/L	2.51	10.0	20	
o-Xylene		50.0	54.9	ug/L	0.629	9.71	20	
m-,p-Xylene		100	107	ug/L	0.636	7.29	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4724692
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16040858 Run Date: 04/21/2016 Sample ID: WG565879-02
Instrument ID: HPMS8 Run Time: 13:32 Method: 8260B
File ID: 8M411610 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG565880 Cal ID: HPMS8 - 13-APR-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	56.8	ug/L	0.541	13.6	20	
1,1-Dichloroethene	CCC	50.0	57.0	ug/L	0.540	14.0	20	
1,2-Dichloropropane	CCC	50.0	50.8	ug/L	0.307	1.52	20	
Ethylbenzene	CCC	50.0	50.6	ug/L	0.557	1.27	20	
Toluene	CCC	50.0	50.3	ug/L	1.48	0.509	20	
Vinyl Chloride	CCC	50.0	40.6	ug/L	0.300	18.8	20	
Bromoform	SPCC	50.0	54.8	ug/L	0.208	9.65	20	
Chlorobenzene	SPCC	50.0	50.7	ug/L	1.01	1.39	20	
Chloromethane	SPCC	50.0	35.2	ug/L	0.437	29.6	20	*
1,1-Dichloroethane	SPCC	50.0	53.0	ug/L	0.601	6.02	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	45.9	ug/L	0.504	8.19	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4724692
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number:L16040858
Instrument ID:HPMS6
Workgroup (AAB#):WG565328

ICAL CCV Number:WG564297-08
CAL ID: HPMS6-11-APR-16
Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564297-08	NA	NA	307429	539131	732076
Upper Limit	NA	NA	614858	1078262	1464152
Lower Limit	NA	NA	153715	269566	366038
L16040858-01	1.00	01	270590	503239	662284
L16040858-02	1.00	01	270095	499099	652539
L16040858-03	1.00	01	272749	503467	651234
L16040858-04	1.00	01	270370	494910	651357
L16040858-05	1.00	01	267168	493219	648620
WG565328-01	1.00	01	284534	520443	691976
WG565328-02	1.00	01	306702	526147	689288
WG565328-03	1.00	01	306531	532673	697190

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: 4725035
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number:L16040858
Instrument ID:HPMS8
Workgroup (AAB#):WG565386

ICAL CCV Number:WG564484-08
CAL ID: HPMS8-13-APR-16
Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564484-08	NA	NA	264713	501557	706197
Upper Limit	NA	NA	529426	1003114	1412394
Lower Limit	NA	NA	132357	250779	353099
L16040858-06	1.00	01	169744	350951	488644
L16040858-07	1.00	01	200502	417884	589381
L16040858-08	1.00	01	176378	373508	515501
L16040858-09	1.00	01	184754	379644	525599
L16040858-10	1.00	01	180712	371810	510714
L16040858-11	1.00	01	225710	416533	581432
L16040858-12	1.00	01	230101	428163	594559
L16040858-13	1.00	01	179662	370257	509171
L16040858-14	1.00	01	177457	367359	505283
L16040858-15	1.00	01	178455	363047	501763
L16040858-16	25.0	DL01	169503	342718	487982
L16040858-19	1.00	01	176141	369271	504017
WG565386-01	1.00	01	187820	388562	546020
WG565386-02	1.00	01	220060	408953	575198

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: 4725035
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16040858
Instrument ID: HPMS8
Workgroup (AAB#): WG565517

ICAL CCV Number: WG564484-08
CAL ID: HPMS8-13-APR-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564484-08	NA	NA	264713	501557	706197
Upper Limit	NA	NA	529426	1003114	1412394
Lower Limit	NA	NA	132357	250779	353099
L16040858-17	25.0	DL02	205471	418849	593639
L16040858-18	2.50	DL01	213057	444637	634820
L16040858-20	1.00	01	261384	539405	755907
L16040858-21	1.00	01	216988	451350	633094
L16040858-22	1.00	01	219545	453452	633413
L16040858-23	1.00	01	215488	453155	632889
L16040858-24	1.00	01	266679	564967	782131
L16040858-25	1.00	01	272607	530935	748223
L16040858-26	1.00	01	295853	556011	781231
L16040858-27	10.0	DL01	212661	442275	614386
L16040858-28	1.00	01	221194	456044	636472
L16040858-29	1.00	01	212447	447325	615035
L16040858-30	1.00	01	251117	510523	698770
WG565517-01	1.00	01	260453	536901	758953
WG565517-02	1.00	01	282307	541336	756245

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: 4725035
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16040858
Instrument ID: HPMS6
Workgroup (AAB#): WG565673

ICAL CCV Number: WG564297-08
CAL ID: HPMS6-11-APR-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564297-08	NA	NA	307429	539131	732076
Upper Limit	NA	NA	614858	1078262	1464152
Lower Limit	NA	NA	153715	269566	366038
L16040858-31	1.00	01	251675	462489	611363
WG565673-01	1.00	01	253482	472009	628545
WG565673-02	1.00	01	287445	491497	646359
WG565673-03	1.00	01	291494	494945	649226

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: 4725035
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16040858
Instrument ID: HPMS8
Workgroup (AAB#): WG565880

ICAL CCV Number: WG564484-08
CAL ID: HPMS8-13-APR-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564484-08	NA	NA	264713	501557	706197
Upper Limit	NA	NA	529426	1003114	1412394
Lower Limit	NA	NA	132357	250779	353099
L16040858-27	20.0	DL02	264408	504281	679481
L16040858-30	100	DL01	261683	502048	668496
WG565880-01	1.00	01	270342	512792	683373
WG565880-02	1.00	01	278030	512606	691169
WG565880-03	1.00	01	273061	518564	689483

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: 4725035
Report generated 04/25/2016 16:02

Microbac Laboratories Inc.
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16040858
Instrument ID: HPMS6
Workgroup (AAB#): WG565328

ICAL CCV Number: WG564297-08
CAL ID: HPMS6-11-APR-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564297-08	NA	NA	19.66	16.07	11.57
Upper Limit	NA	NA	20.16	16.57	12.07
Lower Limit	NA	NA	19.16	15.57	11.07
L16040858-01	1.00	01	19.65	16.07	11.57
L16040858-02	1.00	01	19.65	16.08	11.57
L16040858-03	1.00	01	19.66	16.07	11.57
L16040858-04	1.00	01	19.65	16.07	11.57
L16040858-05	1.00	01	19.65	16.08	11.57
WG565328-01	1.00	01	19.65	16.07	11.57
WG565328-02	1.00	01	19.65	16.07	11.57
WG565328-03	1.00	01	19.65	16.07	11.57

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: 4725036
Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY

(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16040858

Instrument ID: HPMS6

Workgroup (AAB#): WG565673

ICAL CCV Number: WG564297-08

CAL ID: HPMS6 - 11-APR-16

Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564297-08	NA	NA	19.66	16.07	11.57
Upper Limit	NA	NA	20.16	16.57	12.07
Lower Limit	NA	NA	19.16	15.57	11.07
L16040858-31	1.00	01	19.66	16.07	11.57
WG565673-01	1.00	01	19.65	16.07	11.57
WG565673-02	1.00	01	19.66	16.07	11.57
WG565673-03	1.00	01	19.66	16.07	11.57

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: 4725036

Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY

(COMPARED TO MIDPOINT OF ICAL)

Login Number:L16040858

Instrument ID:HPMS8

Workgroup (AAB#):WG565386

ICAL CCV Number:WG564484-08

CAL ID: HPMS8-13-APR-16

Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564484-08	NA	NA	17.59	14.57	10.71
Upper Limit	NA	NA	18.09	15.07	11.21
Lower Limit	NA	NA	17.09	14.07	10.21
L16040858-06	1.00	01	17.59	14.57	10.71
L16040858-07	1.00	01	17.59	14.57	10.71
L16040858-08	1.00	01	17.59	14.57	10.71
L16040858-09	1.00	01	17.59	14.58	10.71
L16040858-10	1.00	01	17.59	14.57	10.71
L16040858-11	1.00	01	17.59	14.58	10.71
L16040858-12	1.00	01	17.59	14.58	10.71
L16040858-13	1.00	01	17.59	14.57	10.71
L16040858-14	1.00	01	17.59	14.57	10.71
L16040858-15	1.00	01	17.59	14.57	10.71
L16040858-16	25.0	DL01	17.59	14.57	10.71
L16040858-19	1.00	01	17.59	14.57	10.71
WG565386-01	1.00	01	17.59	14.58	10.71
WG565386-02	1.00	01	17.59	14.57	10.71

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: 4725036

Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY

(COMPARED TO MIDPOINT OF ICAL)

Login Number:L16040858

Instrument ID:HPMS8

Workgroup (AAB#):WG565517

ICAL CCV Number:WG564484-08

CAL ID: HPMS8-13-APR-16

Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564484-08	NA	NA	17.59	14.57	10.71
Upper Limit	NA	NA	18.09	15.07	11.21
Lower Limit	NA	NA	17.09	14.07	10.21
L16040858-17	25.0	DL02	17.59	14.58	10.71
L16040858-18	2.50	DL01	17.59	14.57	10.71
L16040858-20	1.00	01	17.59	14.58	10.71
L16040858-21	1.00	01	17.59	14.57	10.71
L16040858-22	1.00	01	17.59	14.57	10.71
L16040858-23	1.00	01	17.59	14.58	10.71
L16040858-24	1.00	01	17.59	14.58	10.71
L16040858-25	1.00	01	17.59	14.57	10.71
L16040858-26	1.00	01	17.59	14.57	10.71
L16040858-27	10.0	DL01	17.59	14.57	10.71
L16040858-28	1.00	01	17.59	14.57	10.71
L16040858-29	1.00	01	17.59	14.57	10.71
L16040858-30	1.00	01	17.59	14.57	10.71
WG565517-01	1.00	01	17.59	14.58	10.71
WG565517-02	1.00	01	17.59	14.58	10.71

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: 4725036

Report generated: 04/25/2016 16:02

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16040858
Instrument ID: HPMS8
Workgroup (AAB#): WG565880

ICAL CCV Number: WG564484-08
CAL ID: HPMS8-13-APR-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG564484-08	NA	NA	17.59	14.57	10.71
Upper Limit	NA	NA	18.09	15.07	11.21
Lower Limit	NA	NA	17.09	14.07	10.21
L16040858-27	20.0	DL02	17.59	14.57	10.72
L16040858-30	100	DL01	17.59	14.57	10.71
WG565880-01	1.00	01	17.59	14.57	10.71
WG565880-02	1.00	01	17.59	14.57	10.71
WG565880-03	1.00	01	17.59	14.57	10.71

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: 4725036
Report generated: 04/25/2016 16:02

2.1.1.3 Sample Data

Data File : C:\MSDCHEM\1\DATA\041816\6M138598.D Vial: 11
Acq On : 18 Apr 2016 18:01 Operator: TMB
Sample : L16040858-01 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:07:44 2016 Quant Results File: 8260WTR.RES

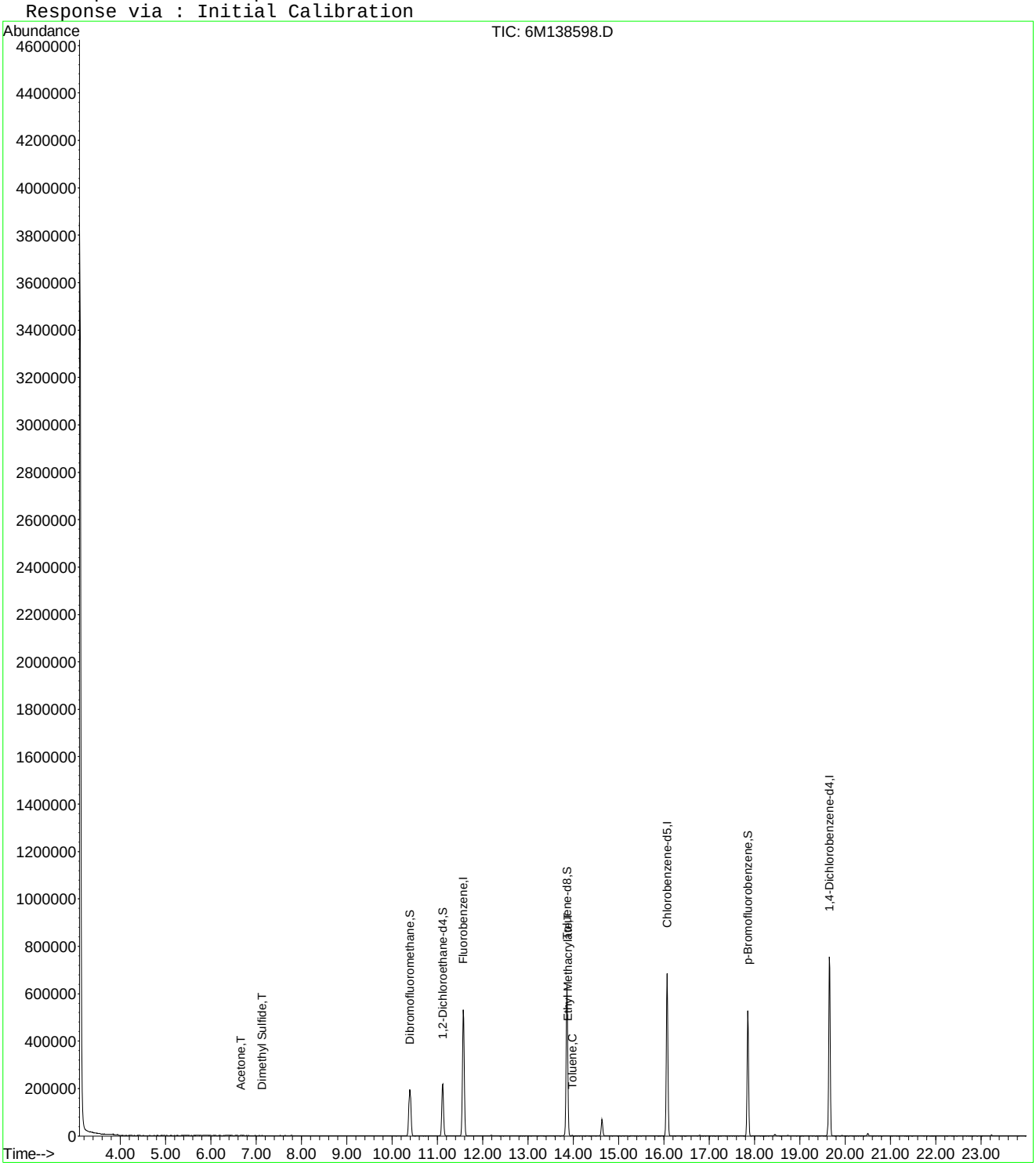
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

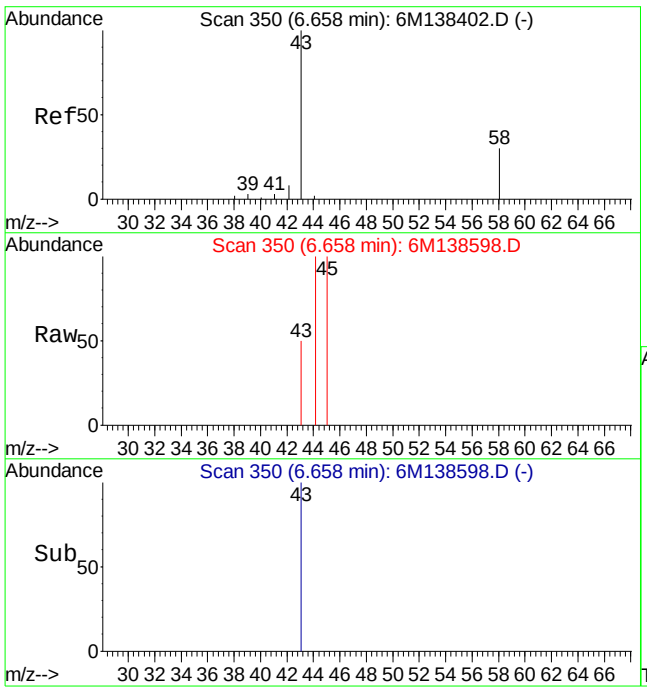
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	662284	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	503239	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	270590	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	180274	26.5786	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 106.32%			
43) 1,2-Dichloroethane-d4	11.12	65	220517	26.7882	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 107.16%			
58) Toluene-d8	13.86	98	580131	25.6062	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.44%			
80) p-Bromofluorobenzene	17.85	95	240891	26.6653	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.68%			
Target Compounds						Qvalue
13) Acetone	6.66	43	709	0.3452	ug/L #	1
16) Dimethyl Sulfide	7.13	62	897	0.1606	ug/L #	1
59) Toluene	13.98	91	3444	0.1230	ug/L	98
60) Ethyl Methacrylate	13.88	69	1497	0.1988	ug/L	91

(#) = qualifier out of range (m) = manual integration
6M138598.D 8260WTR.M Tue Apr 19 09:07:44 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041816\6M138598.D Vial: 11
Acq On : 18 Apr 2016 18:01 Operator: TMB
Sample : L16040858-01 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:07 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

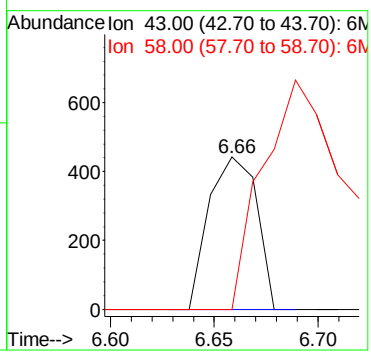


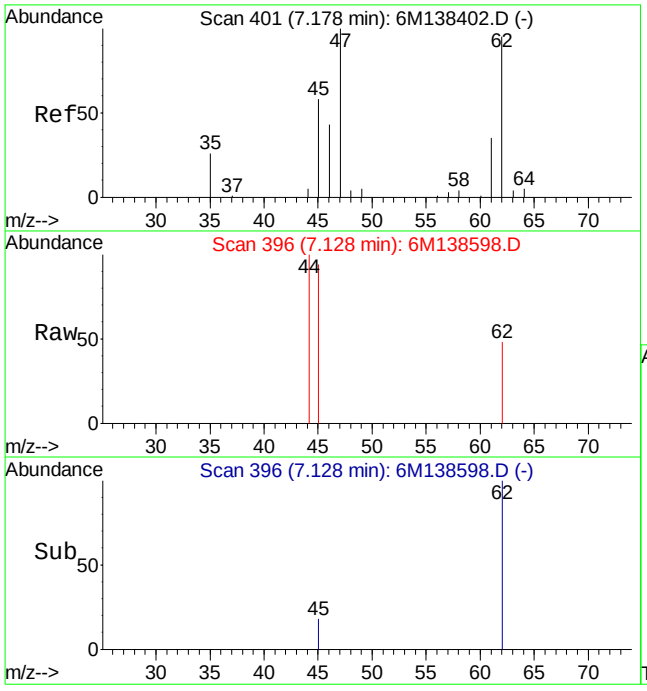


#13
Acetone
Concen: 0.35 ug/L
RT: 6.66 min Scan# 350
Delta R.T. -0.01 min
Lab File: 6M138598.D
Acq: 18 Apr 2016 18:01

Tgt Ion: 43 Resp: 709

Ion	Ratio	Lower	Upper
43	100		
58	240.3	17.3	40.3#

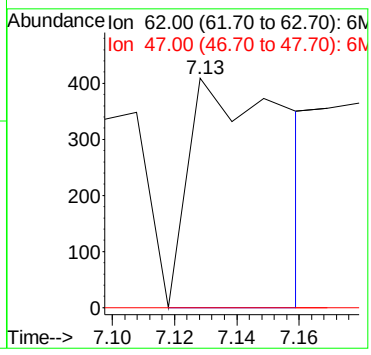


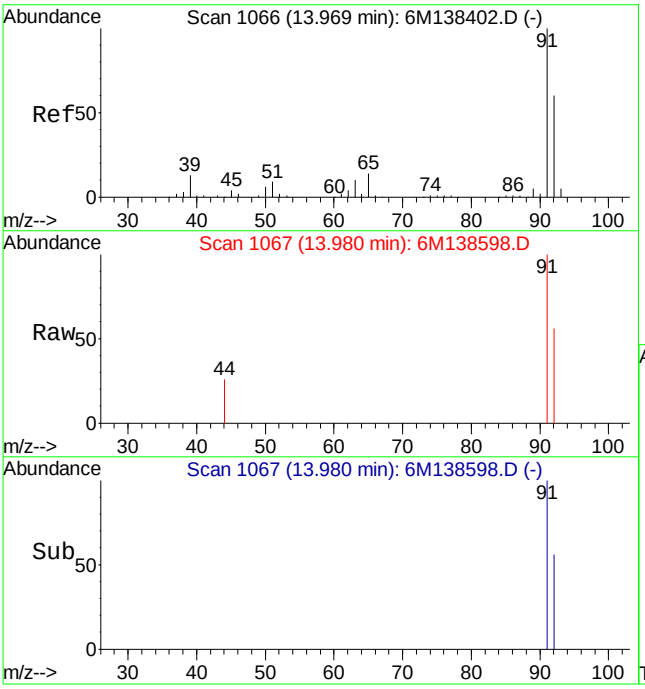


#16
Dimethyl Sulfide
Concen: 0.16 ug/L
RT: 7.13 min Scan# 396
Delta R.T. -0.04 min
Lab File: 6M138598.D
Acq: 18 Apr 2016 18:01

Tgt Ion: 62 Resp: 897

Ion	Ratio	Lower	Upper
62	100		
47	0.0	58.0	135.2#

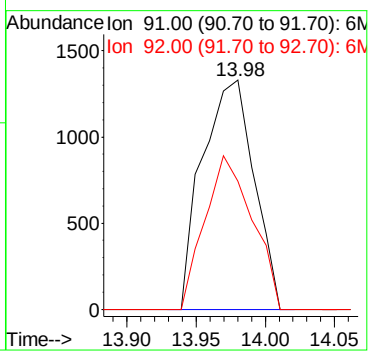


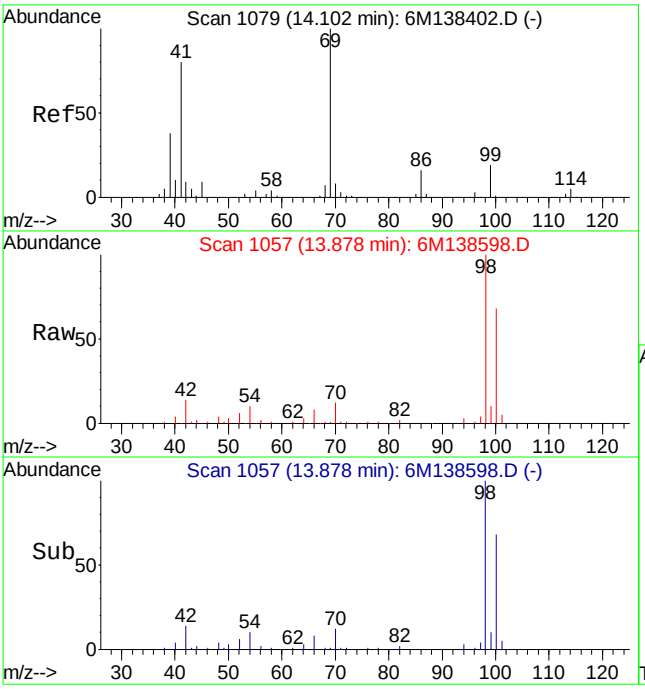


#59
Toluene
Concen: 0.12 ug/L
RT: 13.98 min Scan# 1067
Delta R.T. 0.00 min
Lab File: 6M138598.D
Acq: 18 Apr 2016 18:01

Tgt Ion: 91 Resp: 3444

Ion	Ratio	Lower	Upper
91	100		
92	61.8	36.3	84.7

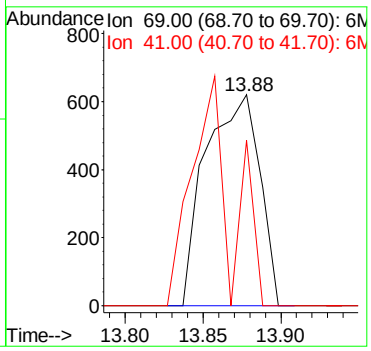




#60
Ethyl Methacrylate
Concen: 0.20 ug/L
RT: 13.88 min Scan# 1057
Delta R.T. -0.22 min
Lab File: 6M138598.D
Acq: 18 Apr 2016 18:01

Tgt Ion: 69 Resp: 1497

Ion	Ratio	Lower	Upper
69	100		
41	78.8	42.9	100.1



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138599.D Vial: 12
Acq On : 18 Apr 2016 18:32 Operator: TMB
Sample : L16040858-02 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:07:45 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

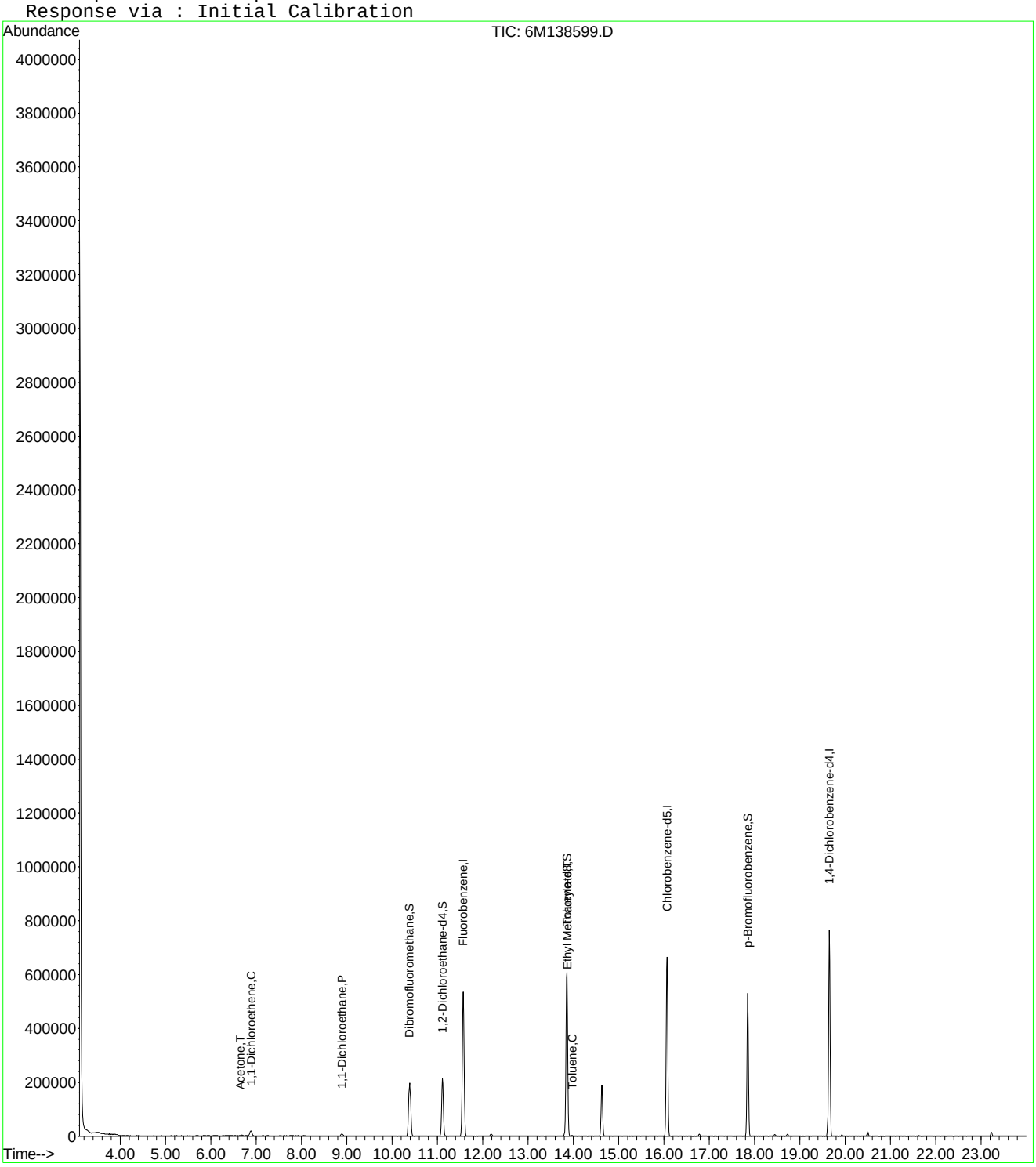
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	652539	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.08	117	499099	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	270095	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	180764	27.0488	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.20%			
43) 1,2-Dichloroethane-d4	11.11	65	212662	26.2198	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 104.88%			
58) Toluene-d8	13.86	98	574156	25.5527	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.20%			
80) p-Bromofluorobenzene	17.85	95	240990	26.7251	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.92%			
Target Compounds						Qvalue
13) Acetone	6.65	43	1393	0.6884	ug/L #	1
14) 1,1-Dichloroethene	6.90	61	25027	2.1275	ug/L	92
27) 1,1-Dichloroethane	8.90	63	14553	1.0527	ug/L	98
59) Toluene	13.98	91	3473	0.1250	ug/L	94
60) Ethyl Methacrylate	13.87	69	1255	0.1681	ug/L #	39

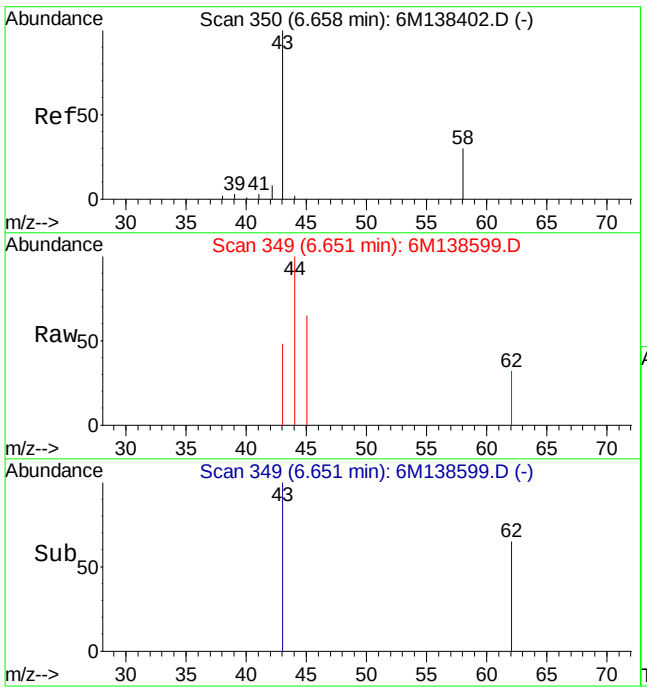
(#) = qualifier out of range (m) = manual integration
6M138599.D 8260WTR.M Tue Apr 19 09:07:45 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138599.D Vial: 12
Acq On : 18 Apr 2016 18:32 Operator: TMB
Sample : L16040858-02 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:07 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

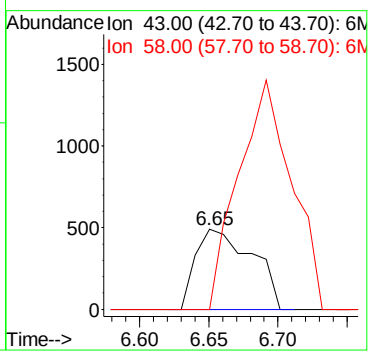


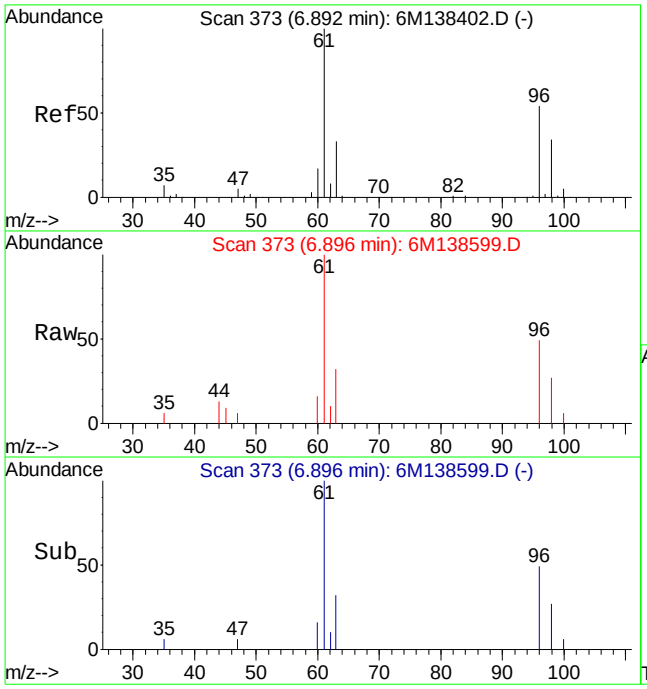


#13
Acetone
Concen: 0.69 ug/L
RT: 6.65 min Scan# 349
Delta R.T. -0.02 min
Lab File: 6M138599.D
Acq: 18 Apr 2016 18:32

Tgt Ion: 43 Resp: 1393

Ion	Ratio	Lower	Upper
43	100		
58	268.2	17.3	40.3#

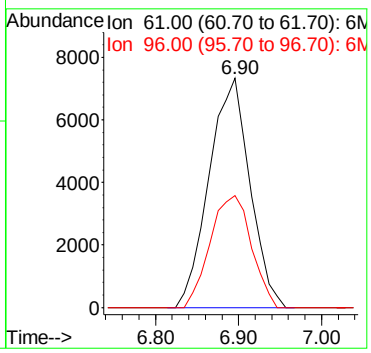


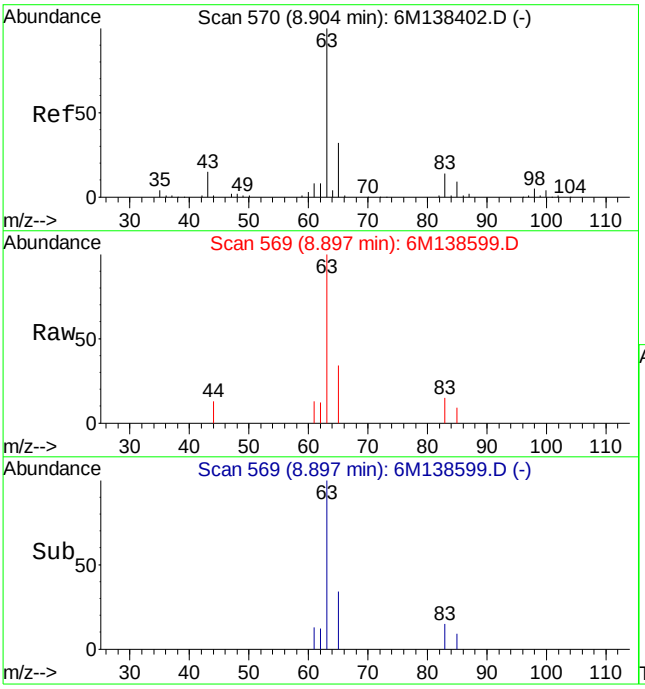


#14
1,1-Dichloroethene
Concen: 2.13 ug/L
RT: 6.90 min Scan# 373
Delta R.T. 0.01 min
Lab File: 6M138599.D
Acq: 18 Apr 2016 18:32

Tgt Ion: 61 Resp: 25027

Ion	Ratio	Lower	Upper
61	100		
96	49.2	33.1	77.3

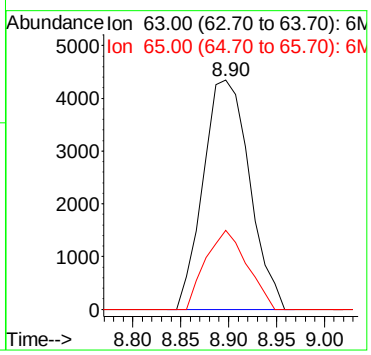


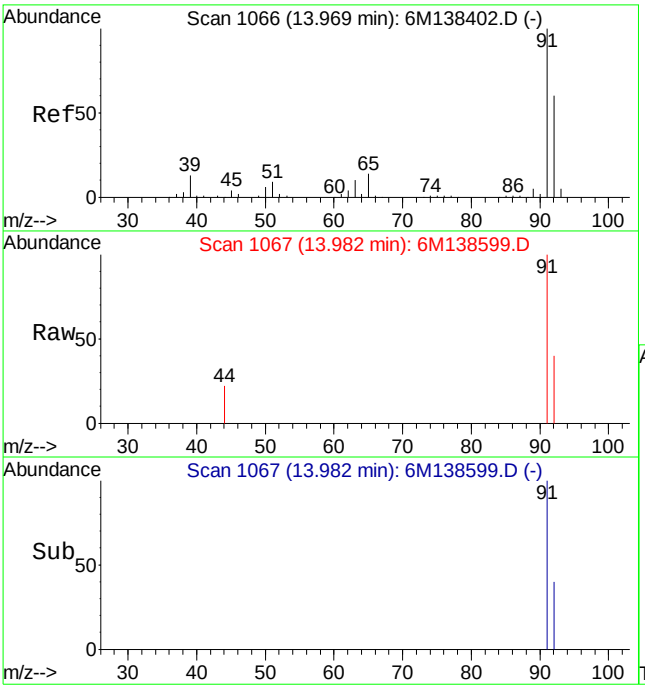


#27
1,1-Dichloroethane
Concen: 1.05 ug/L
RT: 8.90 min Scan# 569
Delta R.T. 0.00 min
Lab File: 6M138599.D
Acq: 18 Apr 2016 18:32

Tgt Ion: 63 Resp: 14553

Ion	Ratio	Lower	Upper
63	100		
65	30.8	19.3	45.1

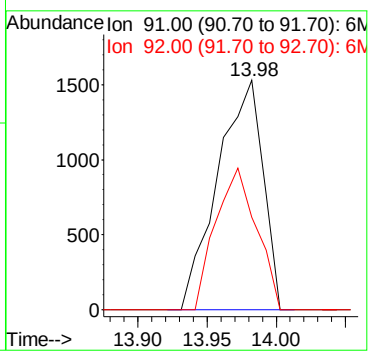


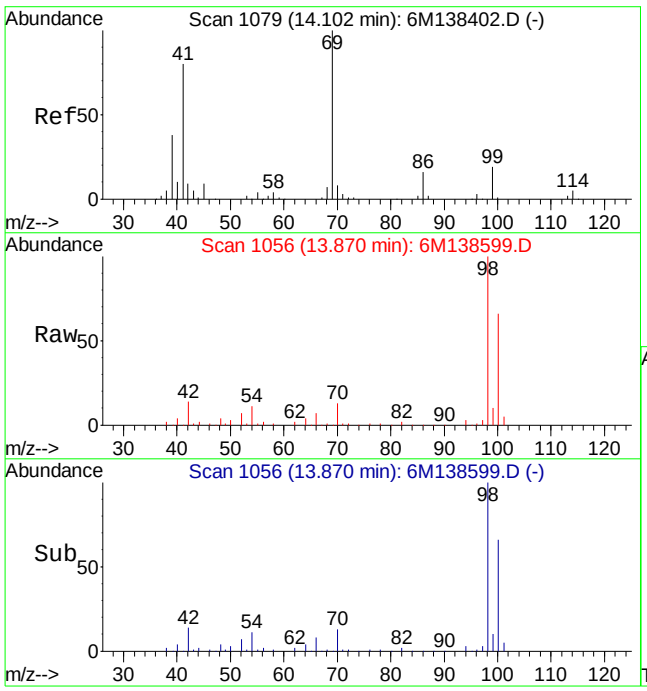


#59
Toluene
Concen: 0.13 ug/L
RT: 13.98 min Scan# 1067
Delta R.T. 0.00 min
Lab File: 6M138599.D
Acq: 18 Apr 2016 18:32

Tgt Ion: 91 Resp: 3473

Ion	Ratio	Lower	Upper
91	100		
92	55.8	36.3	84.7

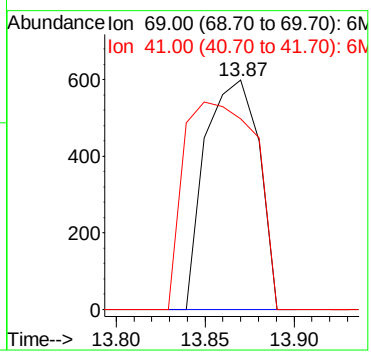




#60
Ethyl Methacrylate
Concen: 0.17 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138599.D
Acq: 18 Apr 2016 18:32

Tgt Ion: 69 Resp: 1255

Ion	Ratio	Lower	Upper
69	100		
41	122.2	42.9	100.1#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138600.D Vial: 13
Acq On : 18 Apr 2016 19:04 Operator: TMB
Sample : L16040858-03 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:07:46 2016 Quant Results File: 8260WTR.RES

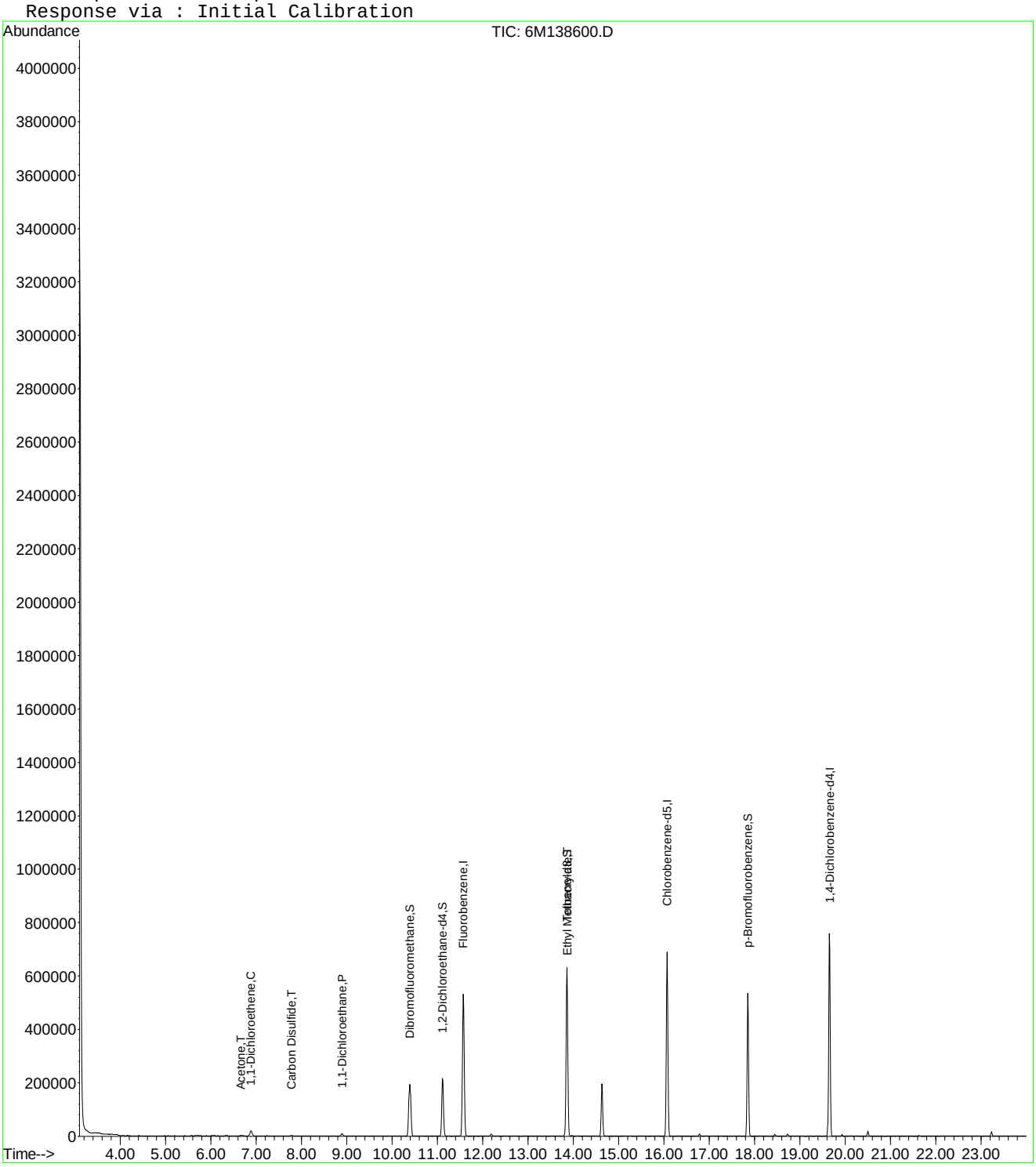
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

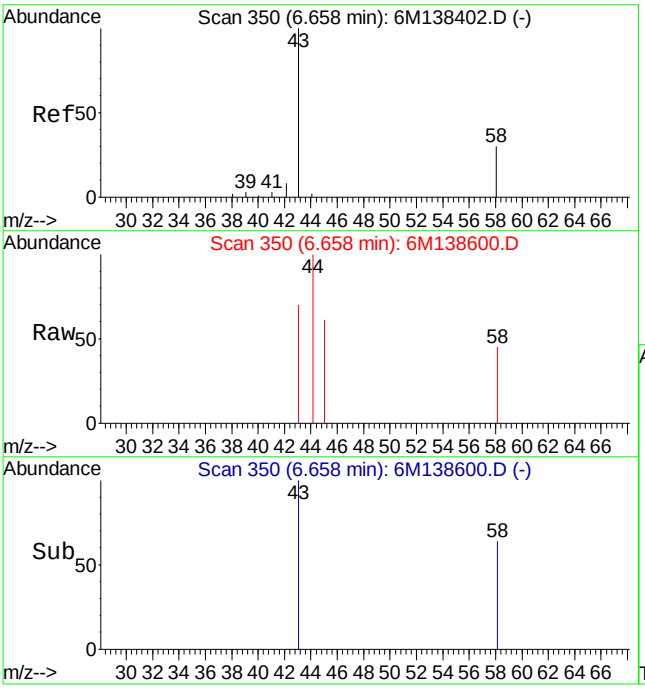
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	651234	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	503467	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	272749	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	180310	27.0349	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.12%			
43) 1,2-Dichloroethane-d4	11.11	65	217773	26.9037	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 107.60%			
58) Toluene-d8	13.86	98	577224	25.4664	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.88%			
80) p-Bromofluorobenzene	17.85	95	241973	26.5730	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.28%			
Target Compounds						Qvalue
13) Acetone	6.66	43	1264	0.6259	ug/L #	1
14) 1,1-Dichloroethene	6.88	61	24572	2.0930	ug/L	91
20) Carbon Disulfide	7.78	76	2681	0.1291	ug/L #	74
27) 1,1-Dichloroethane	8.90	63	15134	1.0969	ug/L	96
60) Ethyl Methacrylate	13.87	69	1216	0.1614	ug/L #	19

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

Data File : C:\MSDCHEM\1\DATA\041816\6M138600.D Vial: 13
Acq On : 18 Apr 2016 19:04 Operator: TMB
Sample : L16040858-03 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:07 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

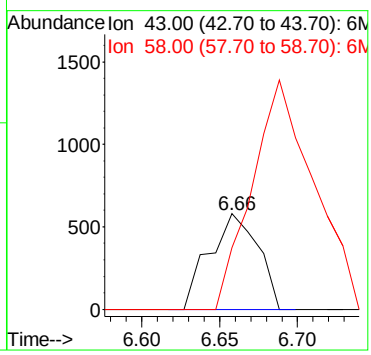


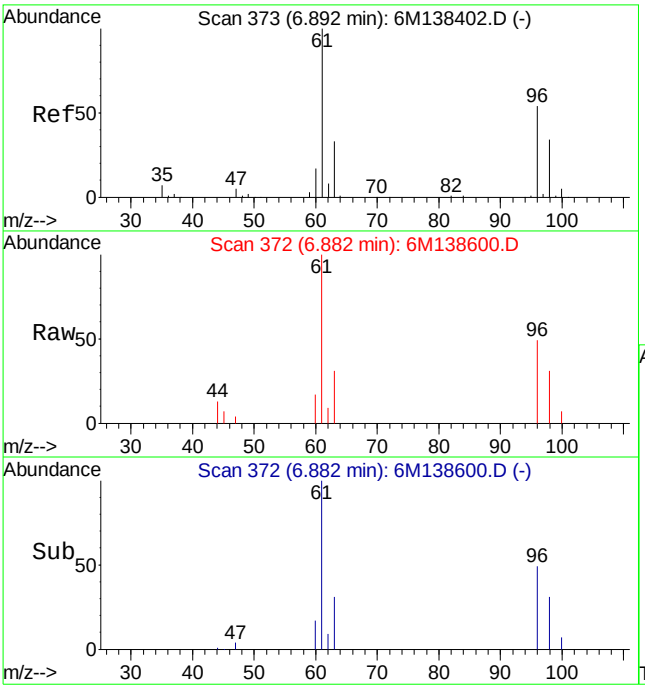


#13
Acetone
Concen: 0.63 ug/L
RT: 6.66 min Scan# 350
Delta R.T. -0.01 min
Lab File: 6M138600.D
Acq: 18 Apr 2016 19:04

Tgt Ion: 43 Resp: 1264

Ion	Ratio	Lower	Upper
43	100		
58	302.8	17.3	40.3#

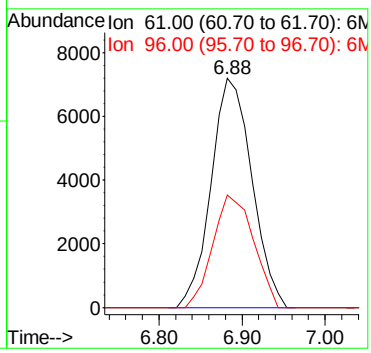


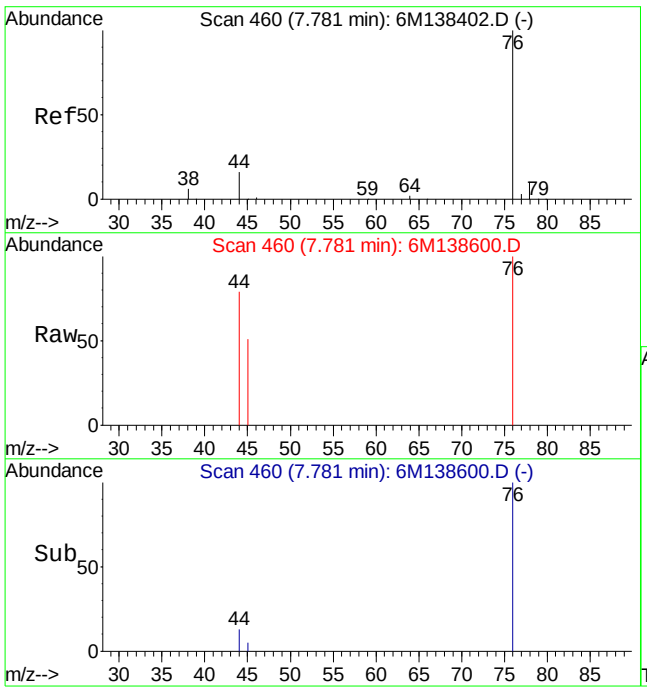


#14
1,1-Dichloroethene
Concen: 2.09 ug/L
RT: 6.88 min Scan# 372
Delta R.T. 0.00 min
Lab File: 6M138600.D
Acq: 18 Apr 2016 19:04

Tgt Ion: 61 Resp: 24572

Ion	Ratio	Lower	Upper
61	100		
96	48.8	33.1	77.3

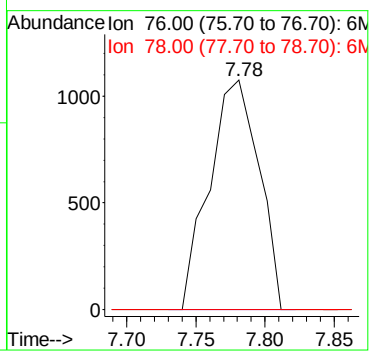


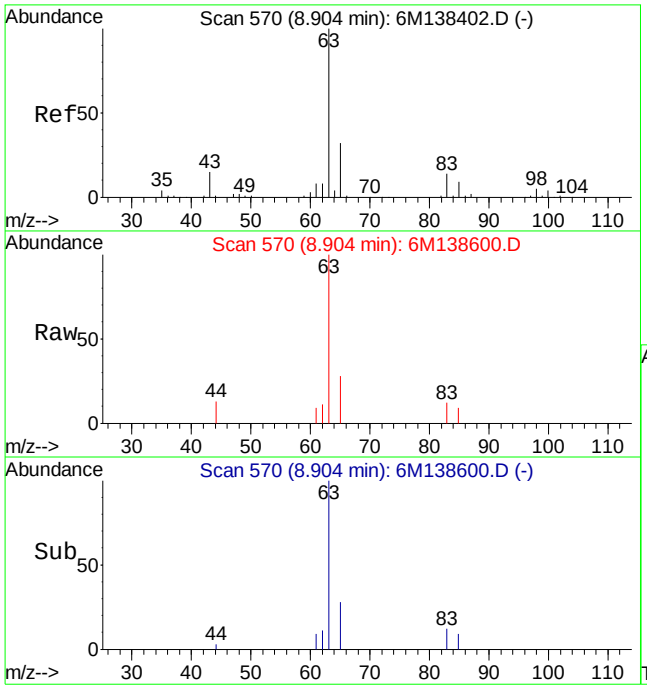


#20
Carbon Disulfide
Concen: 0.13 ug/L
RT: 7.78 min Scan# 460
Delta R.T. 0.01 min
Lab File: 6M138600.D
Acq: 18 Apr 2016 19:04

Tgt Ion: 76 Resp: 2681

Ion	Ratio	Lower	Upper
76	100		
78	0.0	5.8	13.4#

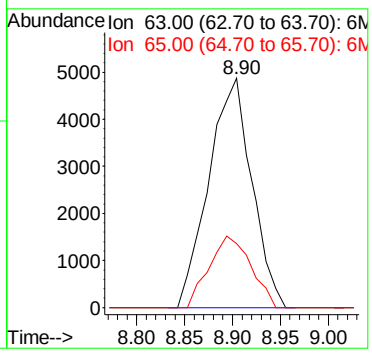


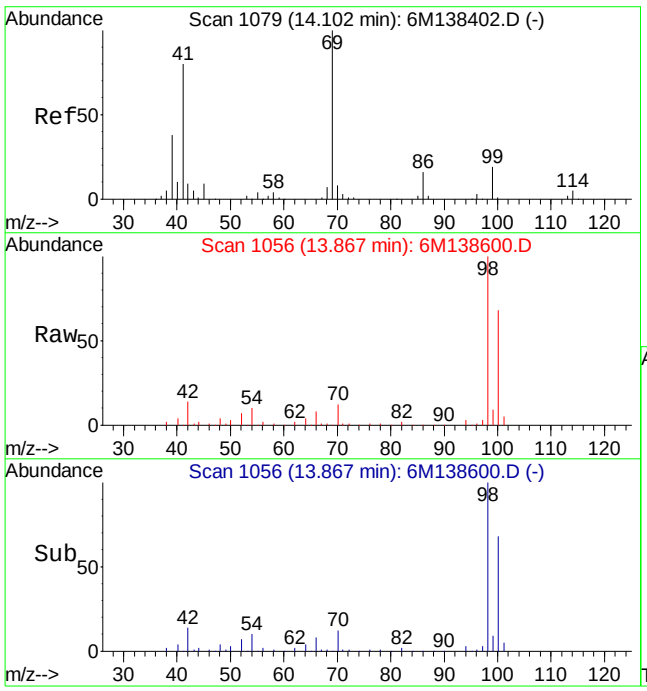


#27
1,1-Dichloroethane
Concen: 1.10 ug/L
RT: 8.90 min Scan# 570
Delta R.T. 0.01 min
Lab File: 6M138600.D
Acq: 18 Apr 2016 19:04

Tgt Ion: 63 Resp: 15134

Ion	Ratio	Lower	Upper
63	100		
65	30.2	19.3	45.1

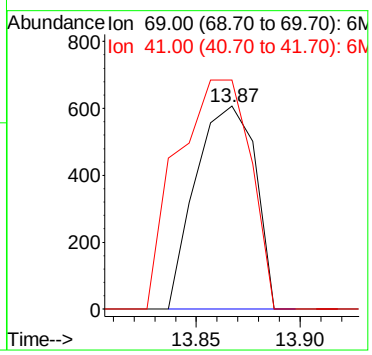




#60
Ethyl Methacrylate
Concen: 0.16 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138600.D
Acq: 18 Apr 2016 19:04

Tgt Ion: 69 Resp: 1216

Ion	Ratio	Lower	Upper
69	100		
41	138.7	42.9	100.1#



Data File : C:\MSDCHEM\1\DATA\041816\6M138601.D Vial: 14
Acq On : 18 Apr 2016 19:37 Operator: TMB
Sample : L16040858-04 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:07:47 2016 Quant Results File: 8260WTR.RES

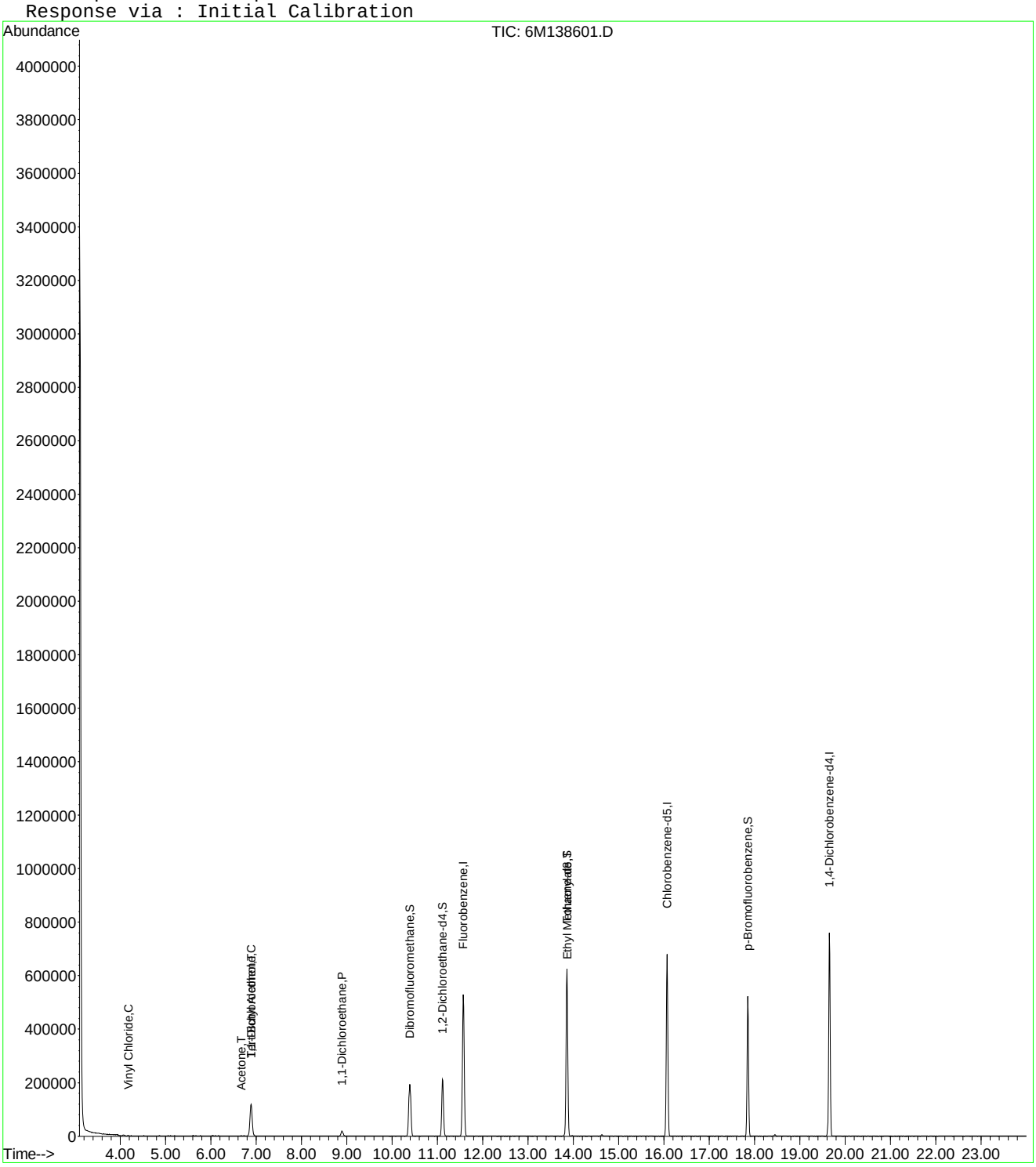
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

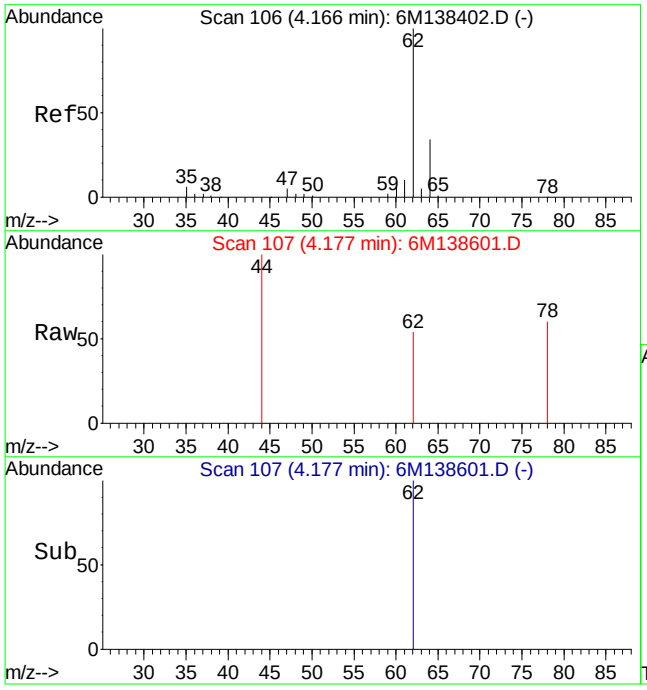
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	651357	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	494910	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	270370	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	178939	26.8243	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 107.28%			
43) 1,2-Dichloroethane-d4	11.11	65	215194	26.5801	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 106.32%			
58) Toluene-d8	13.86	98	575706	25.8386	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.36%			
80) p-Bromofluorobenzene	17.85	95	238634	26.4369	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 105.76%			
Target Compounds						Qvalue
4) Vinyl Chloride	4.18	62	983	0.1552	ug/L #	42
13) Acetone	6.67	43	522	0.2584	ug/L #	46
14) 1,1-Dichloroethene	6.89	61	152520	12.9888	ug/L	93
15) Tert-Butyl Alcohol	6.89	59	4868	8.3896	ug/L #	59
27) 1,1-Dichloroethane	8.89	63	31411	2.2763	ug/L	98
60) Ethyl Methacrylate	13.87	69	1517	0.2049	ug/L #	58

(#) = qualifier out of range (m) = manual integration
6M138601.D 8260WTR.M Tue Apr 19 09:07:47 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041816\6M138601.D Vial: 14
Acq On : 18 Apr 2016 19:37 Operator: TMB
Sample : L16040858-04 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:07 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

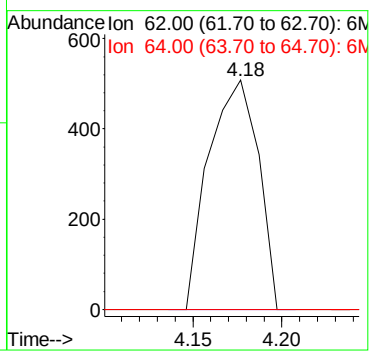


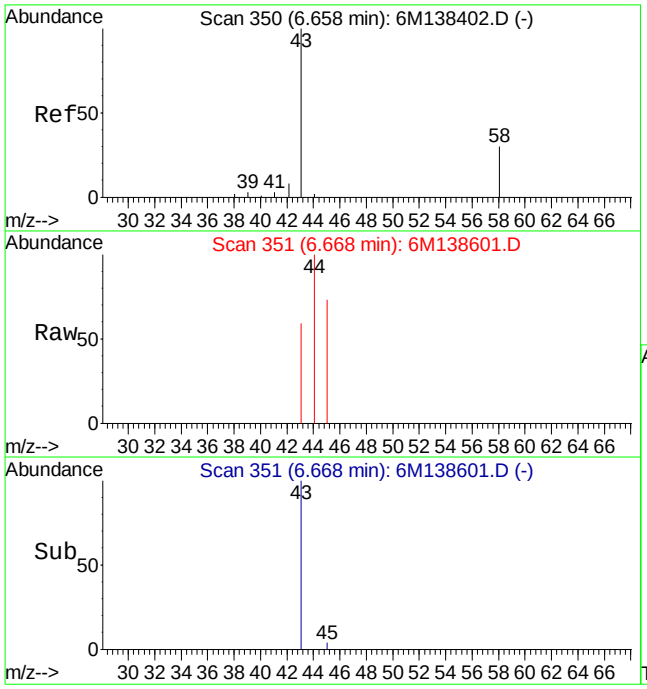


#4
Vinyl Chloride
Concen: 0.16 ug/L
RT: 4.18 min Scan# 107
Delta R.T. 0.01 min
Lab File: 6M138601.D
Acq: 18 Apr 2016 19:37

Tgt Ion: 62 Resp: 983

Ion	Ratio	Lower	Upper
62	100		
64	0.0	19.7	46.1#

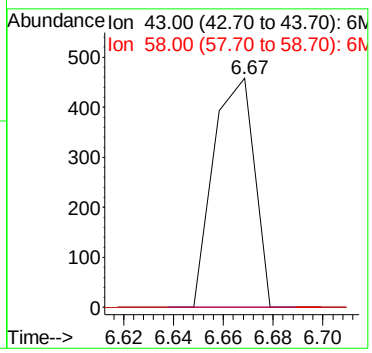


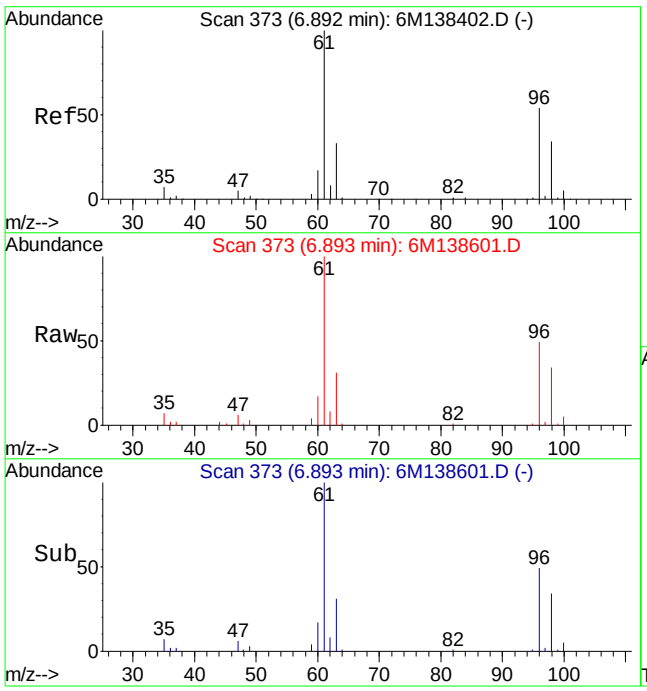


#13
Acetone
Concen: 0.26 ug/L
RT: 6.67 min Scan# 351
Delta R.T. 0.00 min
Lab File: 6M138601.D
Acq: 18 Apr 2016 19:37

Tgt Ion: 43 Resp: 522

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

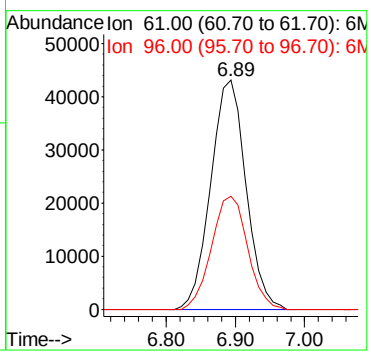


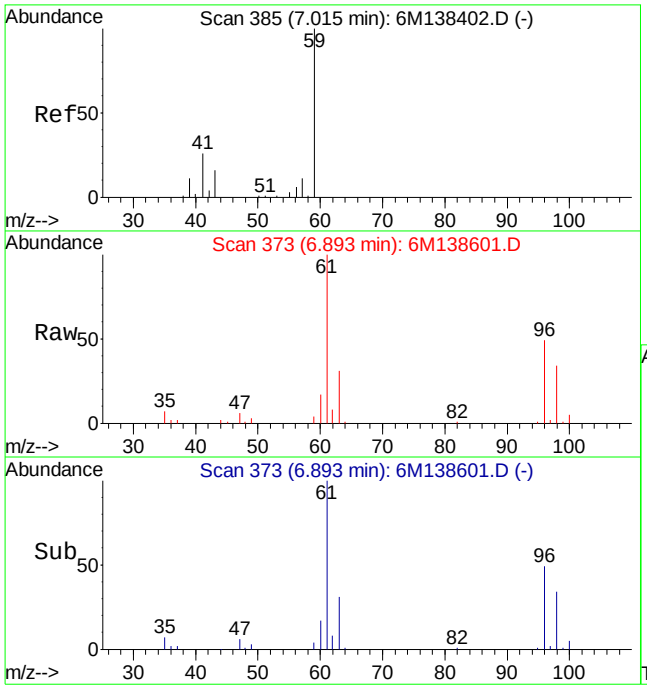


#14
1,1-Dichloroethene
Concen: 12.99 ug/L
RT: 6.89 min Scan# 373
Delta R.T. 0.01 min
Lab File: 6M138601.D
Acq: 18 Apr 2016 19:37

Tgt Ion: 61 Resp: 152520

Ion	Ratio	Lower	Upper
61	100		
96	50.5	33.1	77.3

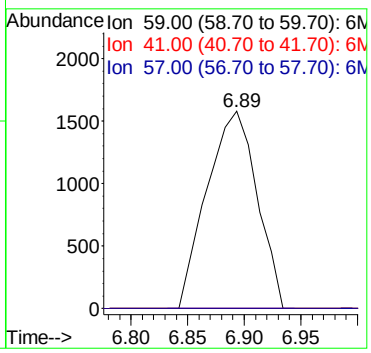


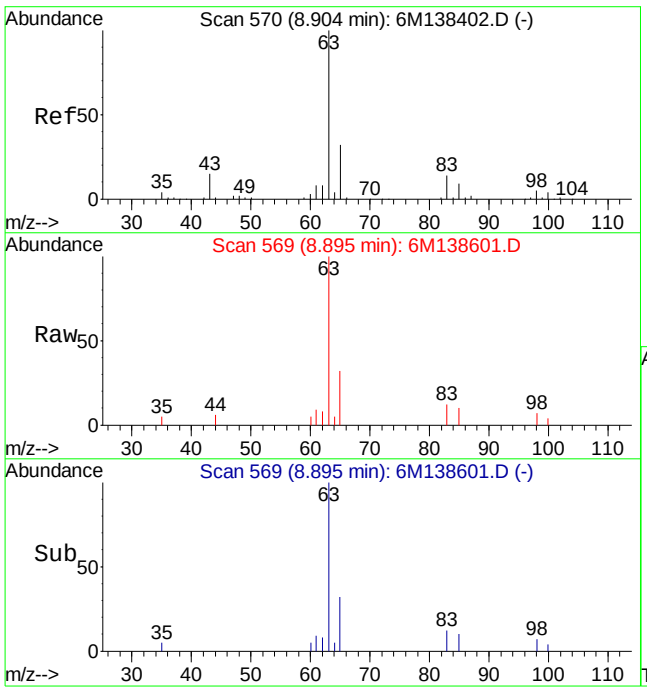


#15
Tert-Butyl Alcohol
Concen: 8.39 ug/L
RT: 6.89 min Scan# 373
Delta R.T. -0.16 min
Lab File: 6M138601.D
Acq: 18 Apr 2016 19:37

Tgt Ion: 59 Resp: 4868

Ion	Ratio	Lower	Upper
59	100		
41	0.0	13.8	32.2#
57	0.0	6.1	14.1#

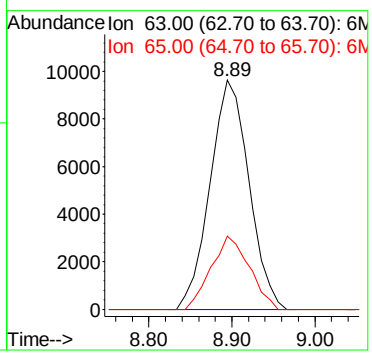


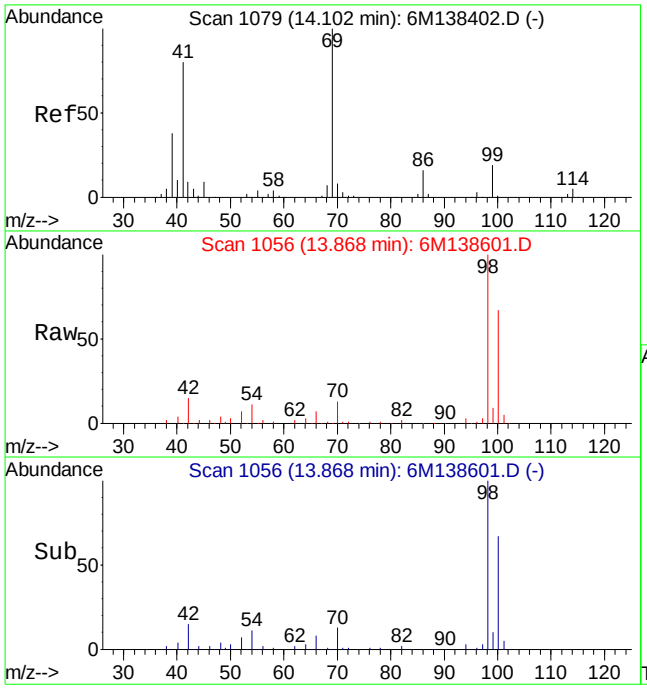


#27
1,1-Dichloroethane
Concen: 2.28 ug/L
RT: 8.89 min Scan# 569
Delta R.T. 0.00 min
Lab File: 6M138601.D
Acq: 18 Apr 2016 19:37

Tgt Ion: 63 Resp: 31411

Ion	Ratio	Lower	Upper
63	100		
65	31.3	19.3	45.1

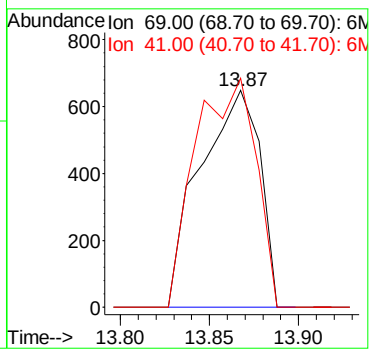




#60
Ethyl Methacrylate
Concen: 0.20 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138601.D
Acq: 18 Apr 2016 19:37

Tgt Ion: 69 Resp: 1517

Ion	Ratio	Lower	Upper
69	100		
41	106.7	42.9	100.1#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138602.D Vial: 15
Acq On : 18 Apr 2016 20:09 Operator: TMB
Sample : L16040858-05 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:07:48 2016 Quant Results File: 8260WTR.RES

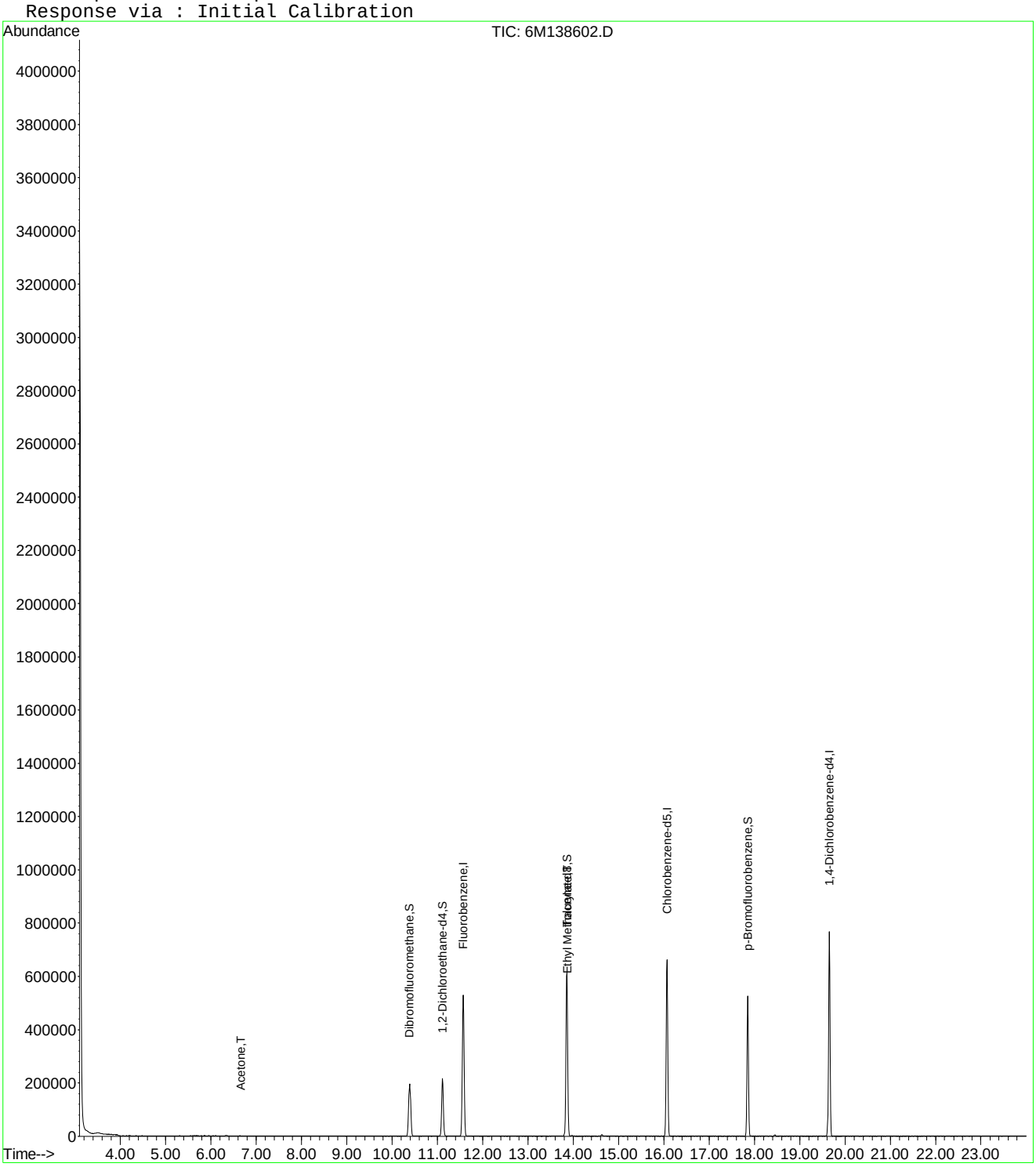
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

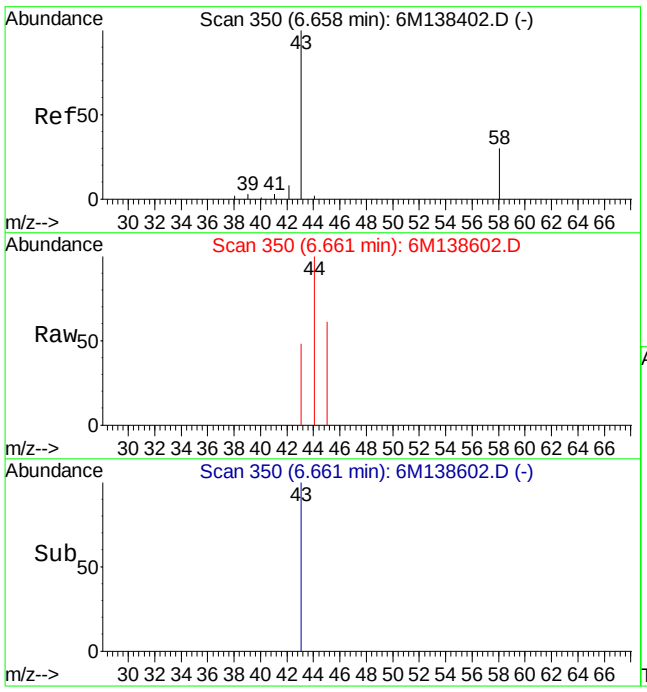
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	648620	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.08	117	493219	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	267168	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	179222	26.9801	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 107.92%			
43) 1,2-Dichloroethane-d4	11.11	65	215105	26.6812	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 106.72%			
58) Toluene-d8	13.86	98	574792	25.8860	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.56%			
80) p-Bromofluorobenzene	17.85	95	237675	26.6463	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.60%			
Target Compounds						Qvalue
13) Acetone	6.66	43	1051	0.5225	ug/L #	46
60) Ethyl Methacrylate	13.87	69	1181	0.1601	ug/L #	20

(#) = qualifier out of range (m) = manual integration
6M138602.D 8260WTR.M Tue Apr 19 09:07:48 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041816\6M138602.D Vial: 15
Acq On : 18 Apr 2016 20:09 Operator: TMB
Sample : L16040858-05 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:07 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

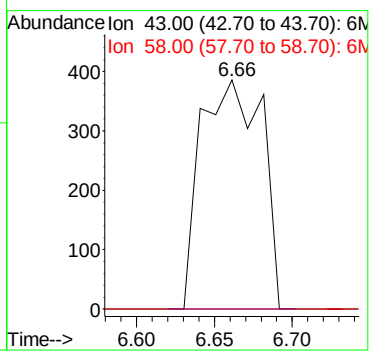


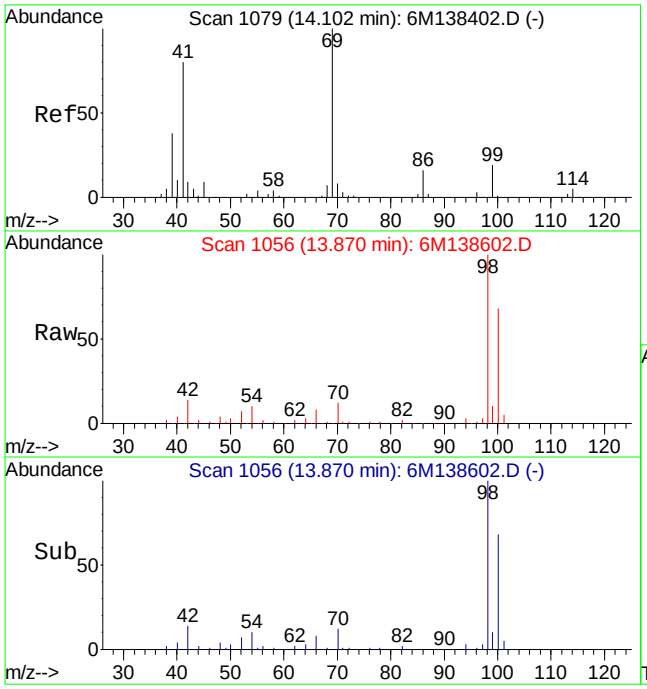


#13
Acetone
Concen: 0.52 ug/L
RT: 6.66 min Scan# 350
Delta R.T. -0.01 min
Lab File: 6M138602.D
Acq: 18 Apr 2016 20:09

Tgt Ion: 43 Resp: 1051

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

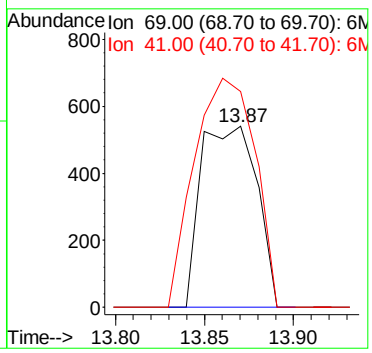




#60
Ethyl Methacrylate
Concen: 0.16 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138602.D
Acq: 18 Apr 2016 20:09

Tgt Ion: 69 Resp: 1181

Ion	Ratio	Lower	Upper
69	100		
41	137.5	42.9	100.1#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411534.D Vial: 25
Acq On : 19 Apr 2016 3:14 Operator: TMB
Sample : L16040858-06 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:26 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

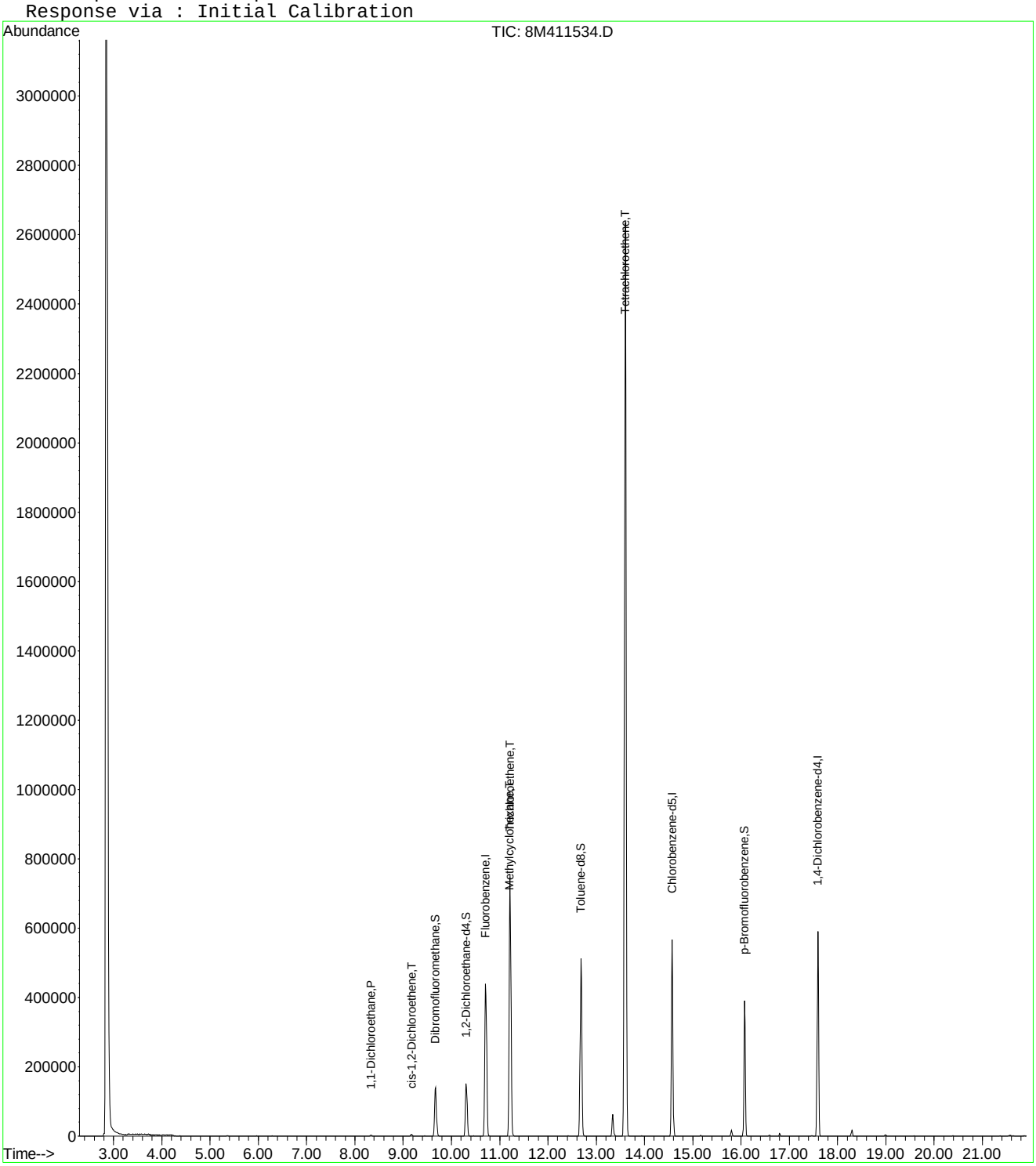
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	488644	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	350951	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	169744	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	120518	24.1220	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.48%			
43) 1,2-Dichloroethane-d4	10.30	65	132204	25.2030	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.80%			
58) Toluene-d8	12.68	98	426060	24.2600	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.04%			
80) p-Bromofluorobenzene	16.07	95	161702	24.3825	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.52%			
Target Compounds						Qvalue
27) 1,1-Dichloroethane	8.33	63	6936	0.6264	ug/L	89
32) cis-1,2-Dichloroethene	9.18	96	2836	0.5151	ug/L	92
47) Trichloroethene	11.21	130	277350	55.6910	ug/L	96
48) Methylcyclohexane	11.20	83	3848	0.4862	ug/L #	1
66) Tetrachloroethene	13.60	164	681968	172.4813	ug/L	89

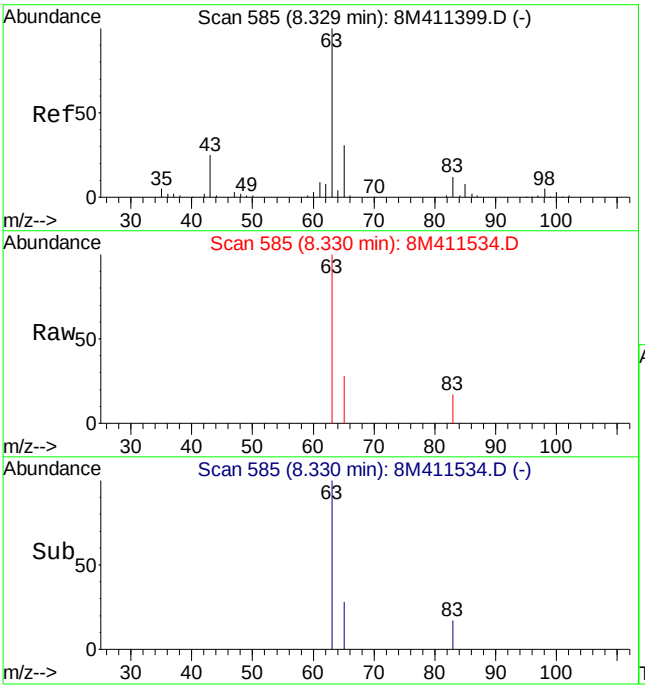
(#) = qualifier out of range (m) = manual integration
8M411534.D 8260WT.M Tue Apr 19 08:41:26 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411534.D Vial: 25
Acq On : 19 Apr 2016 3:14 Operator: TMB
Sample : L16040858-06 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

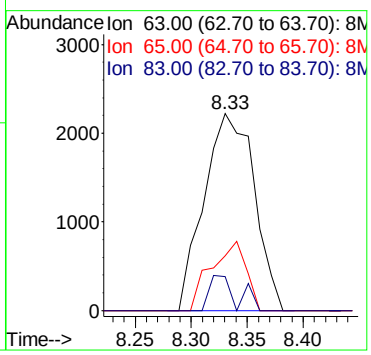


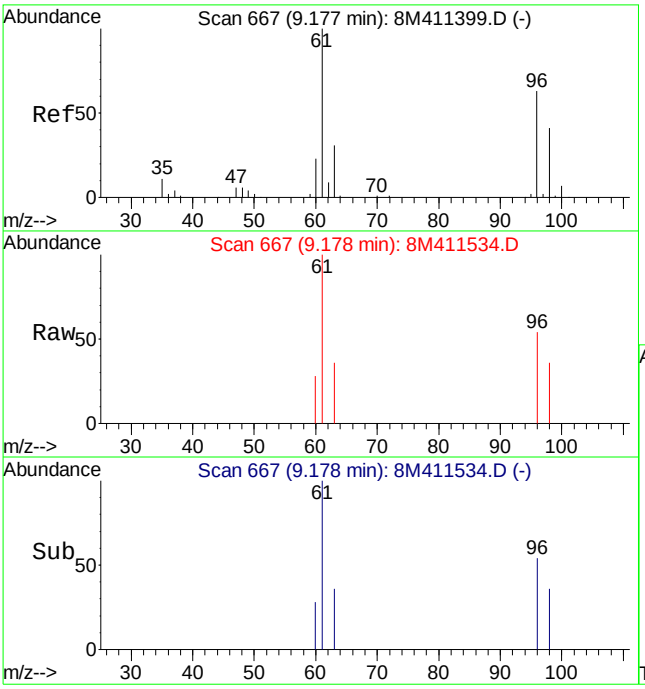


#27
1,1-Dichloroethane
Concen: 0.63 ug/L
RT: 8.33 min Scan# 585
Delta R.T. 0.00 min
Lab File: 8M411534.D
Acq: 19 Apr 2016 3:14

Tgt Ion: 63 Resp: 6936

Ion	Ratio	Lower	Upper
63	100		
65	24.6	19.1	44.5
83	9.7	7.7	18.1

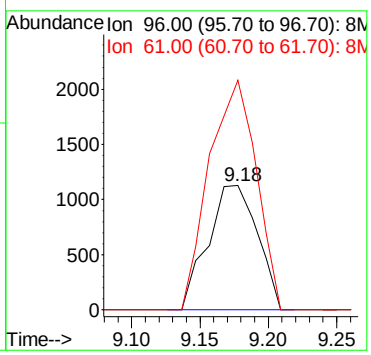


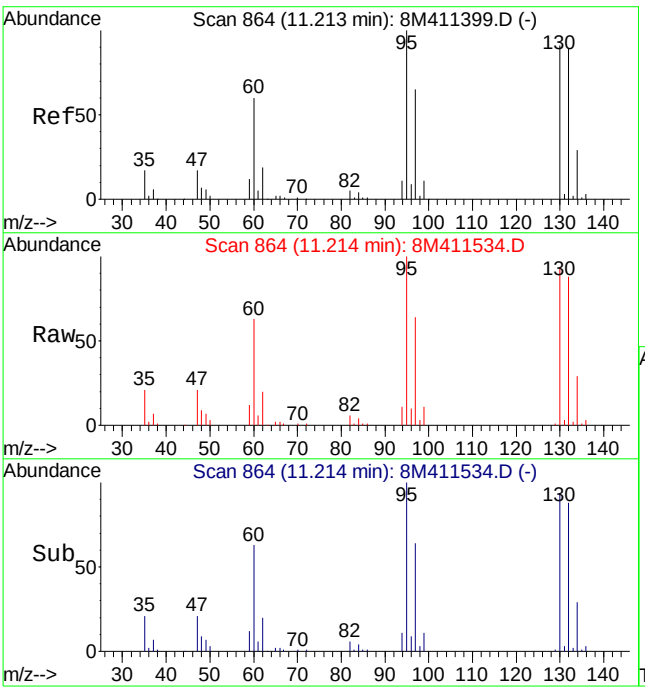


#32
cis-1,2-Dichloroethene
Concen: 0.52 ug/L
RT: 9.18 min Scan# 667
Delta R.T. 0.01 min
Lab File: 8M411534.D
Acq: 19 Apr 2016 3:14

Tgt Ion: 96 Resp: 2836

Ion	Ratio	Lower	Upper
96	100		
61	175.6	98.9	230.7

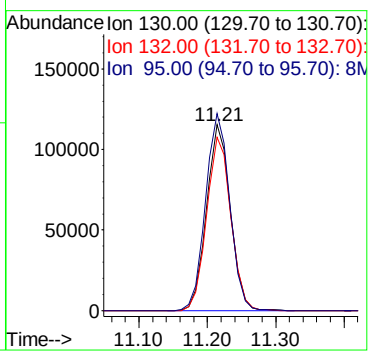


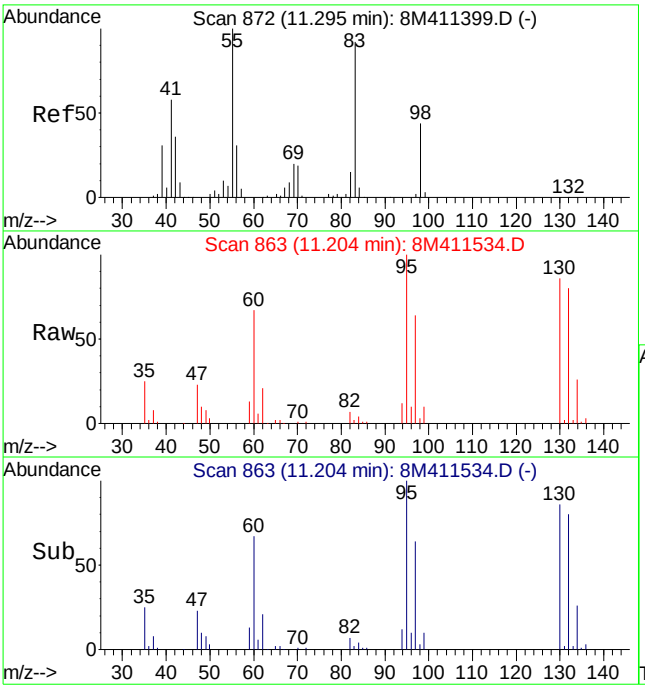


#47
Trichloroethene
Concen: 55.69 ug/L
RT: 11.21 min Scan# 864
Delta R.T. 0.00 min
Lab File: 8M411534.D
Acq: 19 Apr 2016 3:14

Tgt Ion:130 Resp: 277350

Ion	Ratio	Lower	Upper
130	100		
132	95.0	59.9	139.7
95	107.9	62.3	145.5

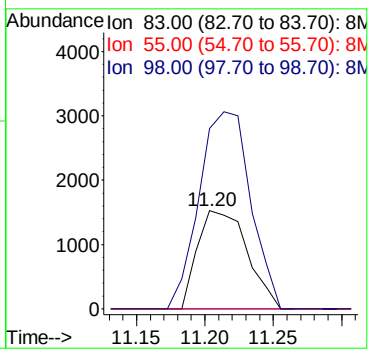


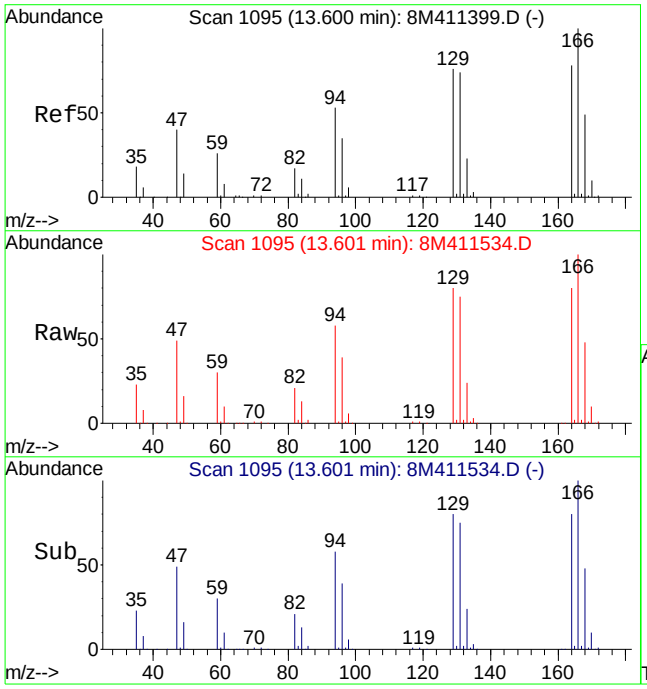


#48
Methylcyclohexane
Concen: 0.49 ug/L
RT: 11.20 min Scan# 863
Delta R.T. -0.09 min
Lab File: 8M411534.D
Acq: 19 Apr 2016 3:14

Tgt Ion: 83 Resp: 3848

Ion	Ratio	Lower	Upper
83	100		
55	0.0	55.6	129.8#
98	208.5	28.3	66.1#

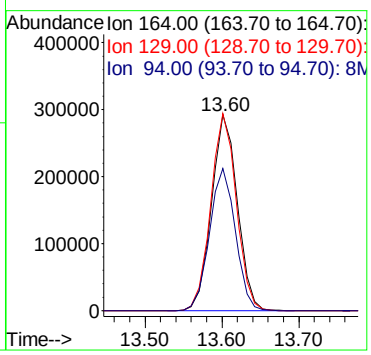




#66
Tetrachloroethene
Concen: 172.48 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. 0.00 min
Lab File: 8M411534.D
Acq: 19 Apr 2016 3:14

Tgt Ion:164 Resp: 681968

Ion	Ratio	Lower	Upper
164	100		
129	99.4	54.1	126.3
94	72.7	37.6	87.6



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411523.D Vial: 14
Acq On : 18 Apr 2016 21:53 Operator: TMB
Sample : L16040858-07 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:12 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

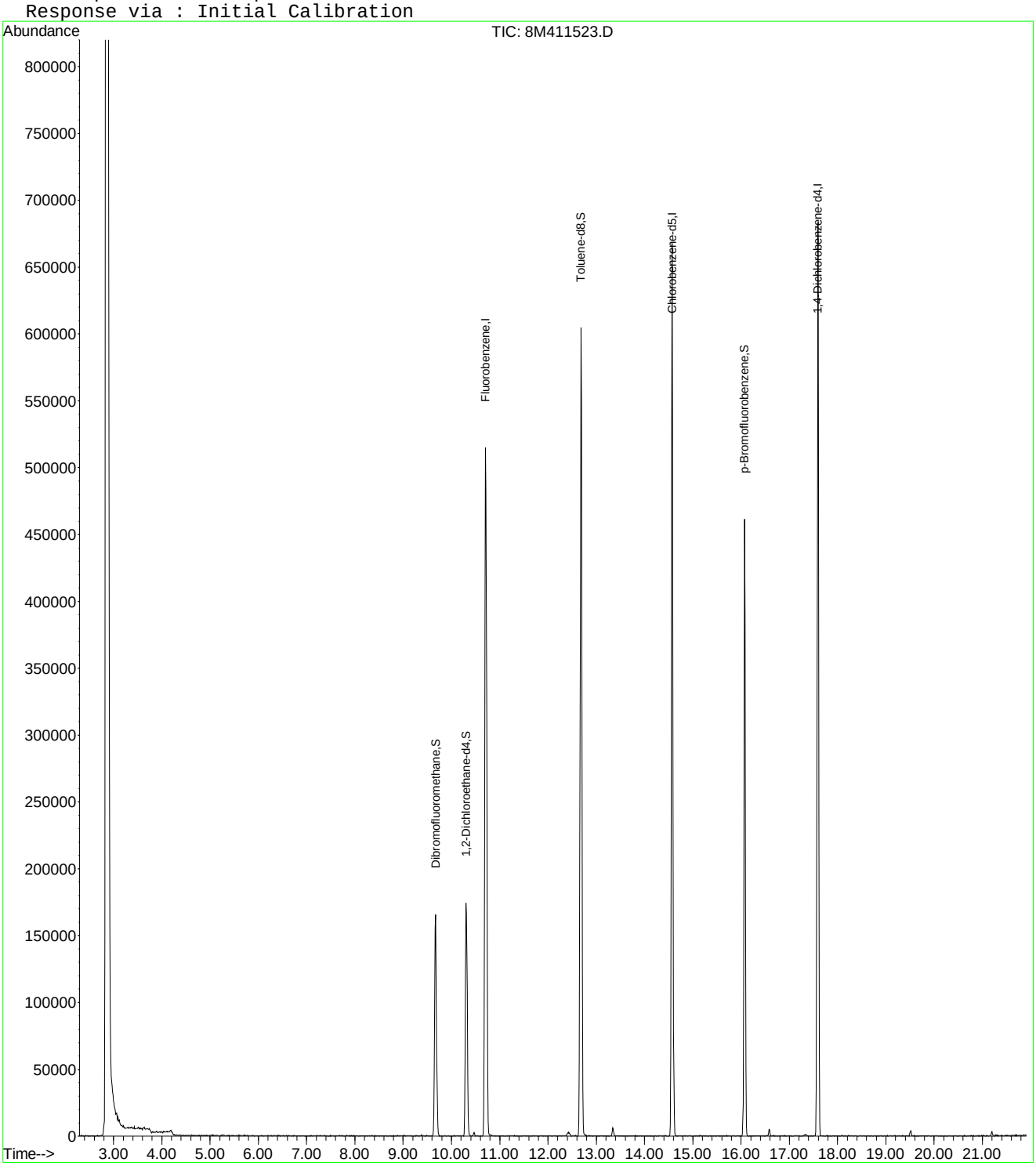
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	589381	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	417884	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	200502	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	141901	23.5474	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.20%			
43) 1,2-Dichloroethane-d4	10.30	65	154597	24.4346	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.72%			
58) Toluene-d8	12.68	98	508598	24.3212	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.28%			
80) p-Bromofluorobenzene	16.07	95	190274	24.2894	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.16%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration
8M411523.D 8260WT.M Tue Apr 19 08:41:12 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411523.D Vial: 14
Acq On : 18 Apr 2016 21:53 Operator: TMB
Sample : L16040858-07 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411523.D 8260WT.M Tue Apr 19 08:41:13 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411524.D Vial: 15
Acq On : 18 Apr 2016 22:23 Operator: TMB
Sample : L16040858-08 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:13 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

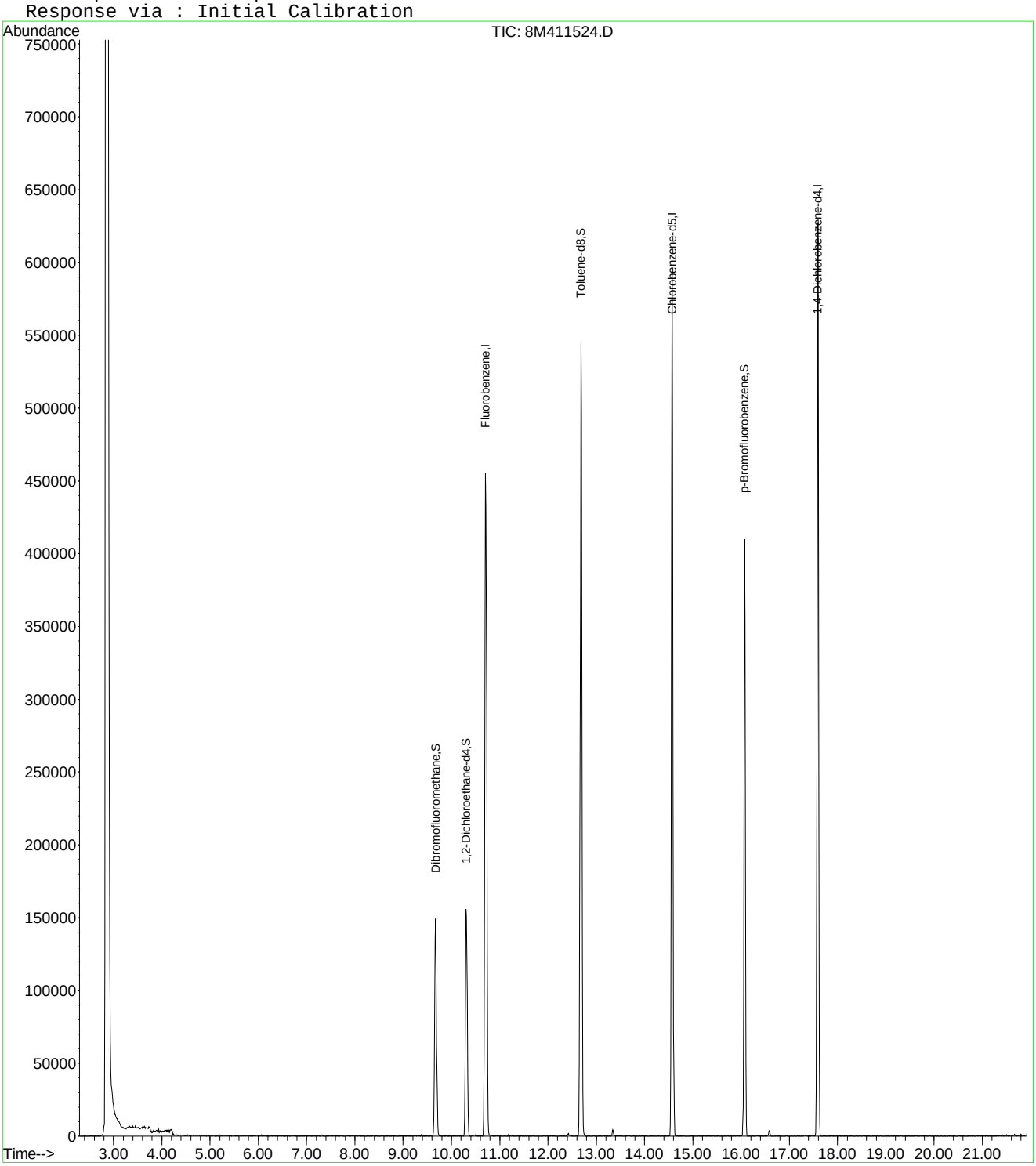
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	515501	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	373508	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	176378	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	125449	23.8008	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.20%			
43) 1,2-Dichloroethane-d4	10.30	65	137012	24.7588	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.04%			
58) Toluene-d8	12.68	98	456601	24.4288	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.72%			
80) p-Bromofluorobenzene	16.07	95	169396	24.5819	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.32%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration
8M411524.D 8260WT.M Tue Apr 19 08:41:13 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411524.D Vial: 15
Acq On : 18 Apr 2016 22:23 Operator: TMB
Sample : L16040858-08 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041816\8M411525.D Vial: 16
Acq On : 18 Apr 2016 22:52 Operator: TMB
Sample : L16040858-09 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:14 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

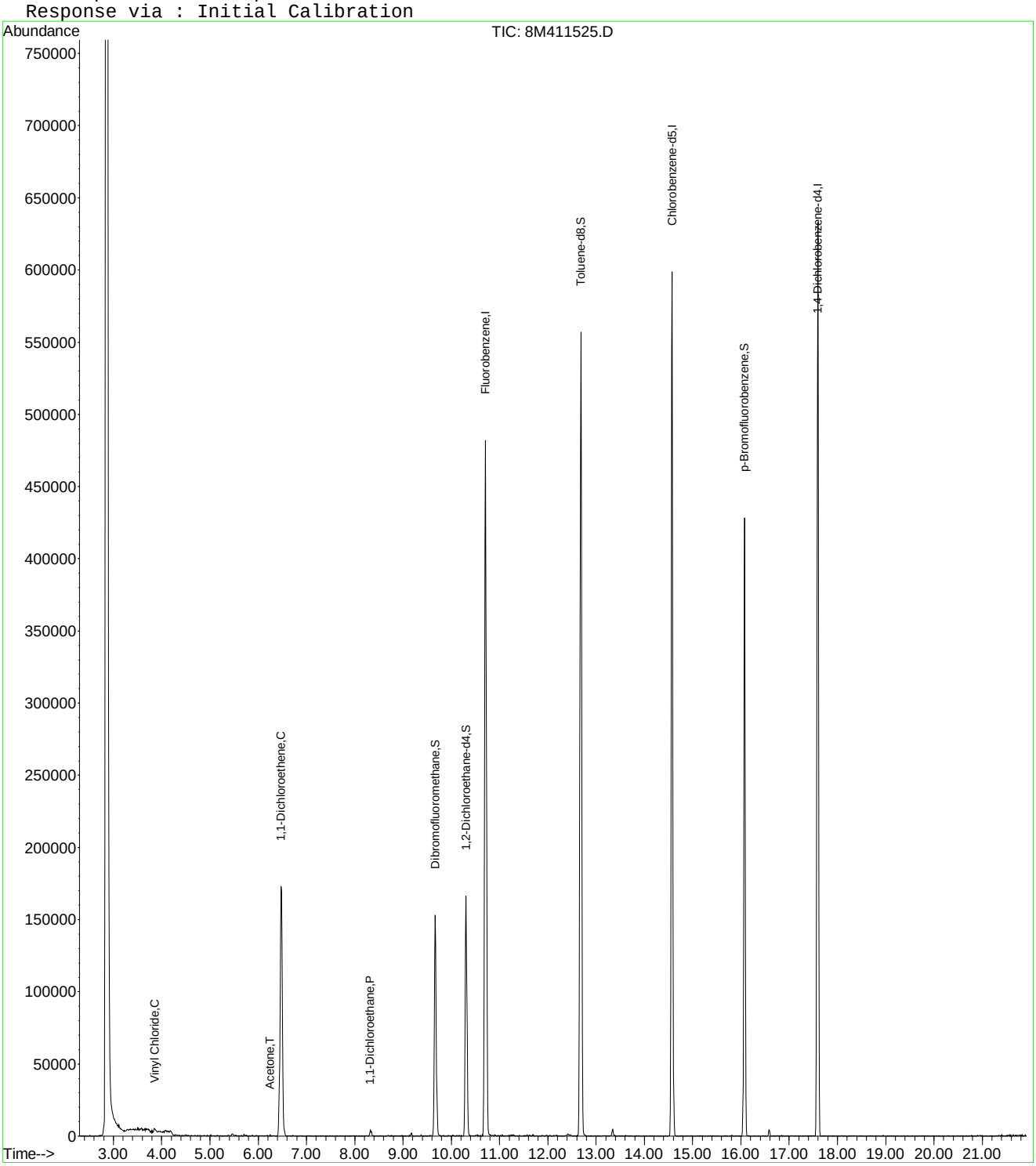
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	525599	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	379644	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	184754	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	129336	24.0668	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.28%			
43) 1,2-Dichloroethane-d4	10.31	65	141366	25.0548	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.20%			
58) Toluene-d8	12.68	98	458694	24.1442	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.56%			
80) p-Bromofluorobenzene	16.07	95	172564	23.9063	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.64%			
Target Compounds						Qvalue
4) Vinyl Chloride	3.86	62	4141	0.5323	ug/L	83
13) Acetone	6.25	43	539	0.5394	ug/L #	48
14) 1,1-Dichloroethene	6.47	61	212227	21.3375	ug/L	92
27) 1,1-Dichloroethane	8.32	63	7662	0.6434	ug/L #	90

(#) = qualifier out of range (m) = manual integration
8M411525.D 8260WT.M Tue Apr 19 08:41:14 2016 Page 1

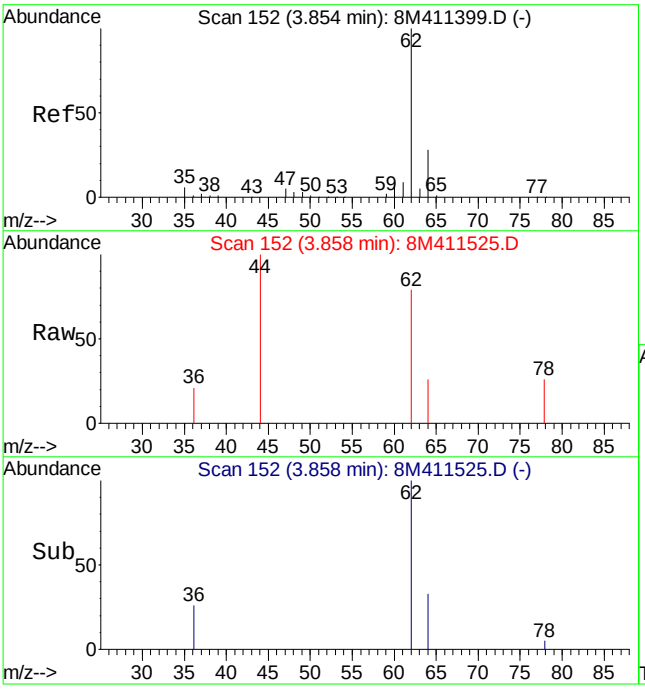
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411525.D Vial: 16
Acq On : 18 Apr 2016 22:52 Operator: TMB
Sample : L16040858-09 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



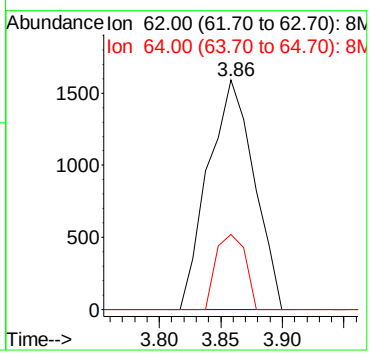
8M411525.D 8260WT.M Tue Apr 19 08:41:15 2016 Page 2

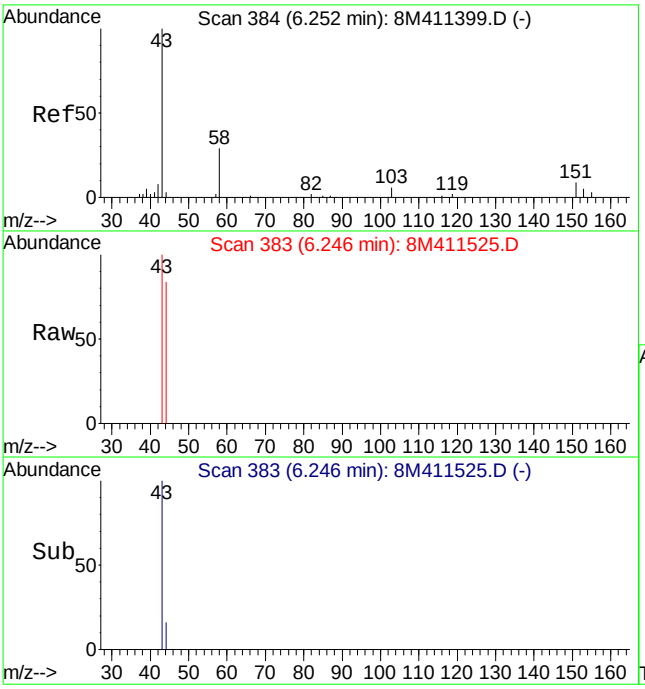


#4
Vinyl Chloride
Concen: 0.53 ug/L
RT: 3.86 min Scan# 152
Delta R.T. 0.01 min
Lab File: 8M411525.D
Acq: 18 Apr 2016 22:52

Tgt Ion: 62 Resp: 4141

Ion	Ratio	Lower	Upper
62	100		
64	20.8	18.1	42.1

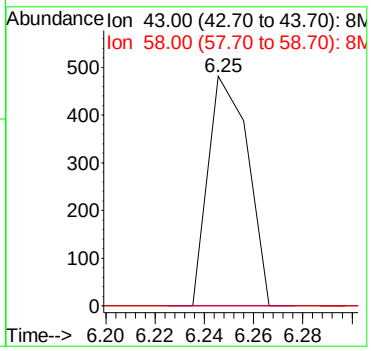


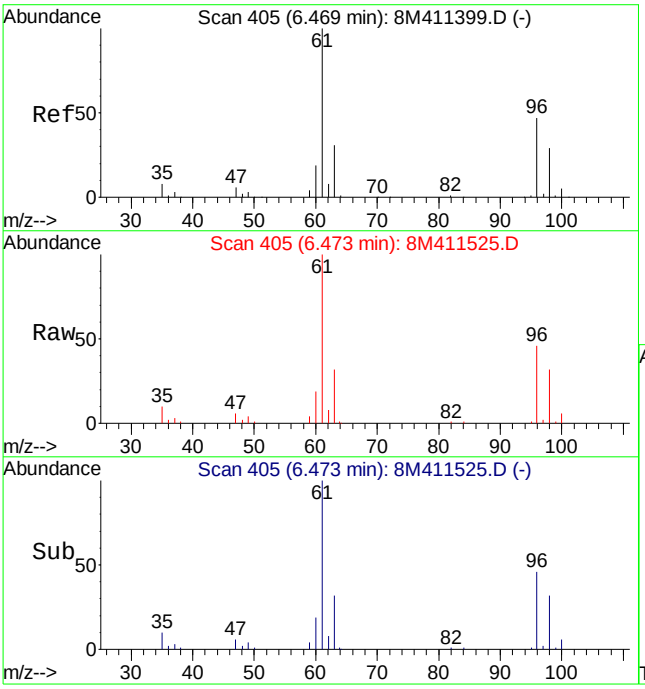


#13
Acetone
Concen: 0.54 ug/L
RT: 6.25 min Scan# 383
Delta R.T. -0.01 min
Lab File: 8M411525.D
Acq: 18 Apr 2016 22:52

Tgt Ion: 43 Resp: 539

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

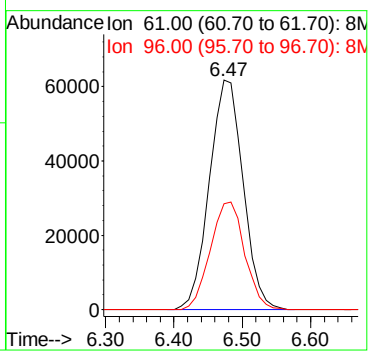


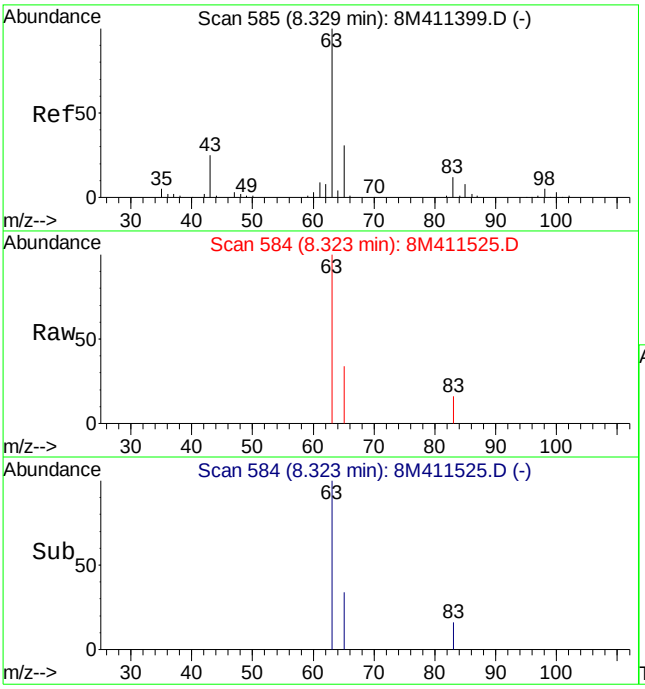


#14
1,1-Dichloroethene
Concen: 21.34 ug/L
RT: 6.47 min Scan# 405
Delta R.T. 0.00 min
Lab File: 8M411525.D
Acq: 18 Apr 2016 22:52

Tgt Ion: 61 Resp: 212227

Ion	Ratio	Lower	Upper
61	100		
96	47.6	31.9	74.5

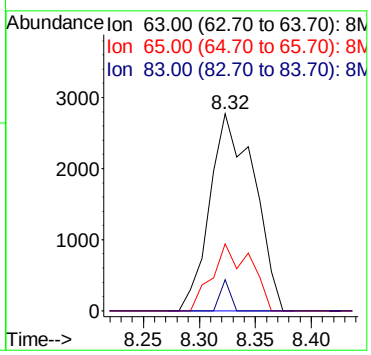




#27
1,1-Dichloroethane
Concen: 0.64 ug/L
RT: 8.32 min Scan# 584
Delta R.T. -0.01 min
Lab File: 8M411525.D
Acq: 18 Apr 2016 22:52

Tgt Ion: 63 Resp: 7662

Ion	Ratio	Lower	Upper
63	100		
65	29.6	19.1	44.5
83	3.5	7.7	18.1#



Data File : C:\MSDCHEM\2\DATA\041816\8M411526.D Vial: 17
Acq On : 18 Apr 2016 23:21 Operator: TMB
Sample : L16040858-10 A REF 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:15 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

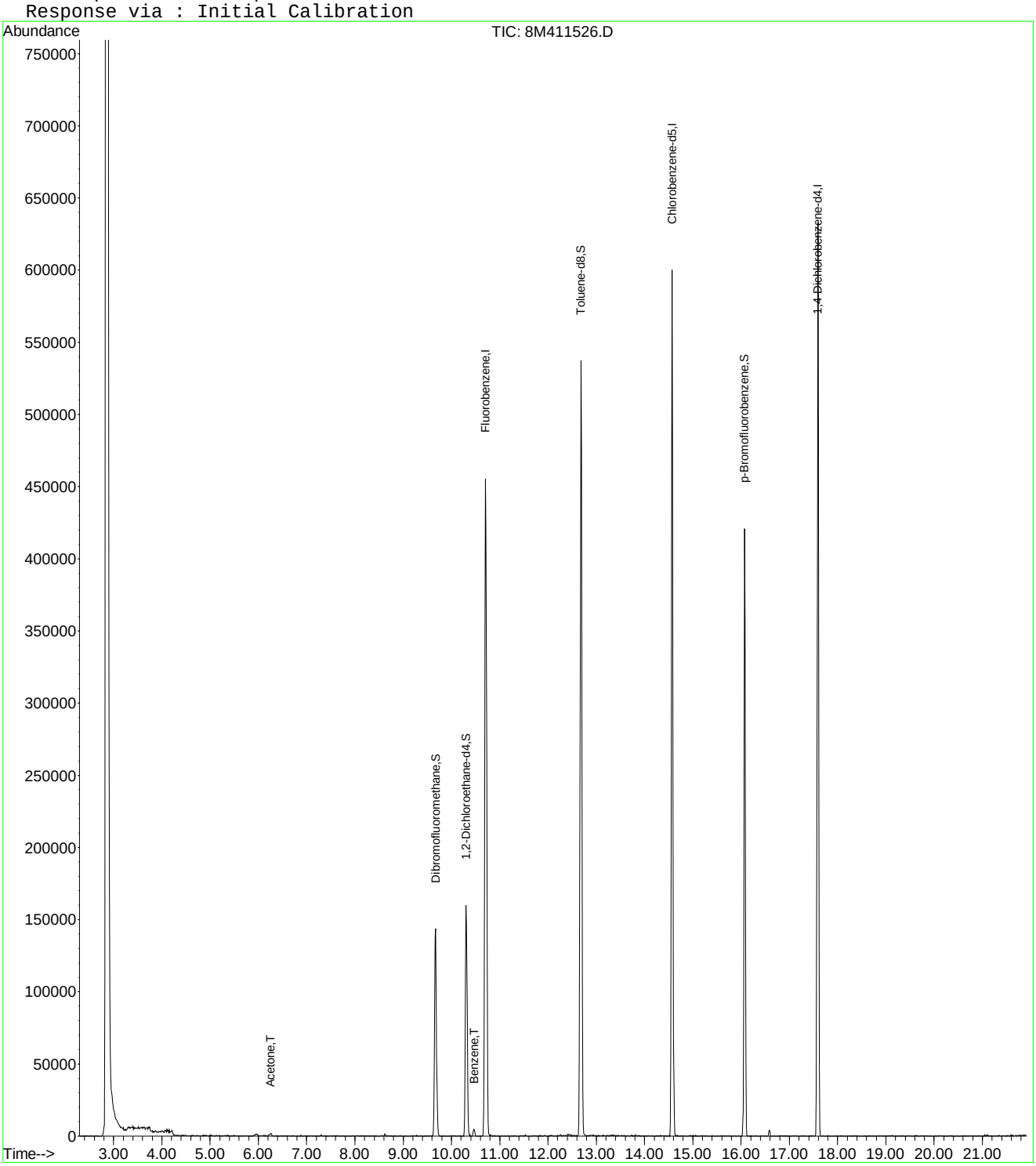
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	510714	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	371810	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	180712	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	125348	24.0045	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.00%			
43) 1,2-Dichloroethane-d4	10.30	65	137042	24.9963	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.00%			
58) Toluene-d8	12.68	98	444561	23.8933	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.56%			
80) p-Bromofluorobenzene	16.07	95	171455	24.2840	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.12%			
Target Compounds						Qvalue
13) Acetone	6.25	43	3407	3.5091	ug/L #	75
46) Benzene	10.47	78	6353	0.3073	ug/L	97

(#) = qualifier out of range (m) = manual integration
8M411526.D 8260WT.M Tue Apr 19 08:41:16 2016 Page 1

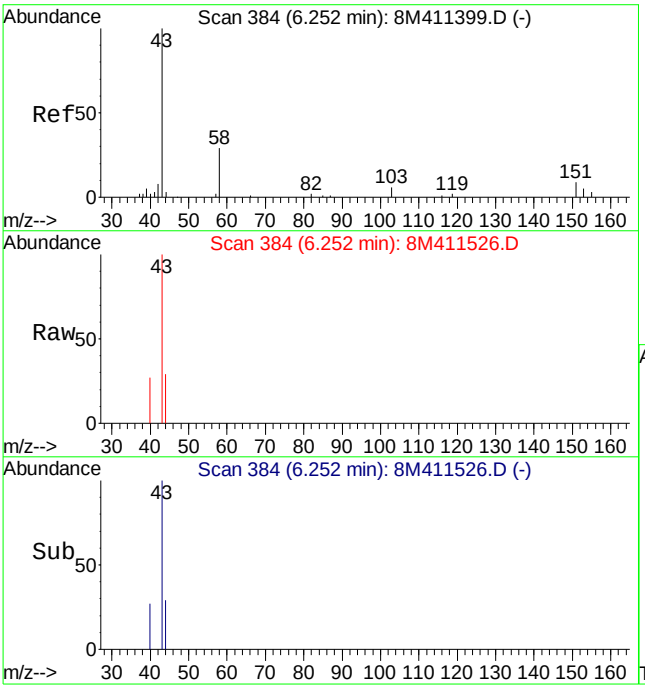
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411526.D Vial: 17
Acq On : 18 Apr 2016 23:21 Operator: TMB
Sample : L16040858-10 A REF 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



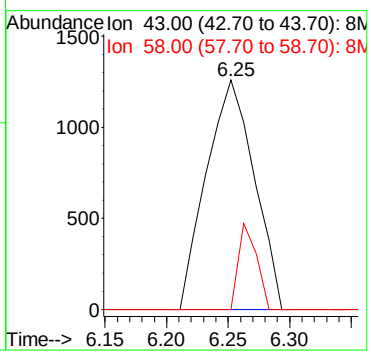
8M411526.D 8260WT.M Tue Apr 19 08:41:16 2016 Page 2

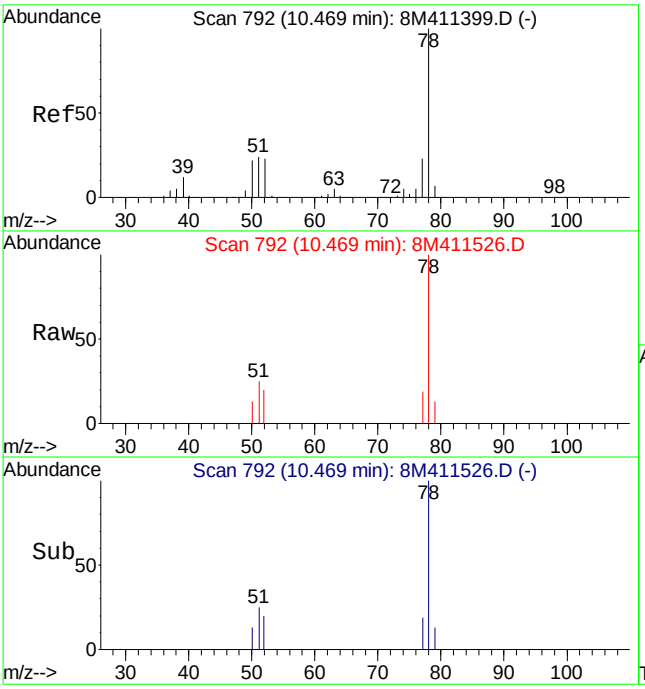


#13
Acetone
Concen: 3.51 ug/L
RT: 6.25 min Scan# 384
Delta R.T. -0.00 min
Lab File: 8M411526.D
Acq: 18 Apr 2016 23:21

Tgt Ion: 43 Resp: 3407

Ion	Ratio	Lower	Upper
43	100		
58	14.1	16.2	37.8#

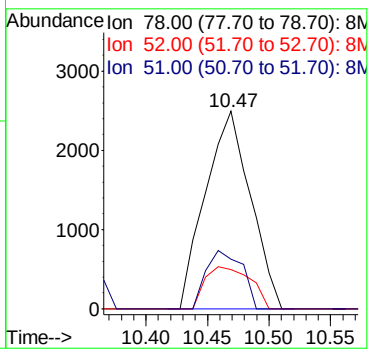




#46
Benzene
Concen: 0.31 ug/L
RT: 10.47 min Scan# 792
Delta R.T. -0.00 min
Lab File: 8M411526.D
Acq: 18 Apr 2016 23:21

Tgt Ion: 78 Resp: 6353

Ion	Ratio	Lower	Upper
78	100		
52	21.3	12.2	28.4
51	23.5	14.9	34.9



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411516.D Vial: 7
Acq On : 18 Apr 2016 18:29 Operator: TMB
Sample : L16040858-11 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 18:51:46 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	581432	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	416533	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	225710	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	140238	23.5896 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.36%		
43) 1,2-Dichloroethane-d4	10.31	65	150839	24.1665 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.68%		
58) Toluene-d8	12.68	98	505049	24.2298 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.92%		
80) p-Bromofluorobenzene	16.07	95	202767	22.9934 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.96%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.17	85	189439	20.2573 ug/L	99
3) Chloromethane	3.63	50	315756	21.8539 ug/L	98
4) Vinyl Chloride	3.85	62	186700	21.6938 ug/L	95
5) 1,3-Butadiene	3.89	54	131702	14.8950 ug/L	96
6) Bromomethane	4.74	94	77216	22.0623 ug/L	99
7) Chloroethane	4.90	64	100615	21.2404 ug/L	97
8) Trichlorofluoromethane	5.39	101	195999	18.4156 ug/L	98
9) Diethyl ether	5.92	59	2489	0.5800 ug/L #	1
10) Isoprene	5.96	67	177968	21.9431 ug/L	93
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	110811	19.1632 ug/L	92
13) Acetone	6.26	43	28473	25.7595 ug/L	99
14) 1,1-Dichloroethene	6.47	61	203375	18.4840 ug/L	92
15) Tert-Butyl Alcohol	6.57	59	210	0.8134 ug/L #	55
16) Dimethyl Sulfide	6.74	62	142031	28.3621 ug/L	88
17) Iodomethane	6.99	142	52785	22.2334 ug/L	100
18) Methyl acetate	7.01	43	69557	17.8616 ug/L	94
19) Methylene Chloride	7.26	84	119237	19.6735 ug/L	78
20) Carbon Disulfide	7.30	76	364601	18.0706 ug/L	100
21) Acrylonitrile	7.44	53	35447	21.2557 ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	263175	21.4816 ug/L	95
23) trans-1,2-Dichloroethene	7.71	61	210410	20.0534 ug/L	89
24) n-Hexane	7.78	57	177785	17.3964 ug/L	97
26) Vinyl Acetate	8.30	43	259676	26.8005 ug/L	97
27) 1,1-Dichloroethane	8.33	63	253159	19.2158 ug/L	97
29) 2-Butanone	8.89	43	38570	21.0413 ug/L	96
31) 2,2-Dichloropropane	9.11	77	198107	20.2021 ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	134418	20.5163 ug/L	83
33) Chloroform	9.38	83	224675	20.2758 ug/L	100
34) 1-Bromopropane	9.51	122	26692	27.5084 ug/L	100
35) Bromochloromethane	9.61	130	66330	19.9633 ug/L	80
38) 1,1,1-Trichloroethane	9.91	97	193363	19.7083 ug/L	98
39) Cyclohexane	9.94	56	250734	18.5239 ug/L	91
40) 1,1-Dichloropropene	10.11	75	165464	19.1206 ug/L	95
42) Carbon Tetrachloride	10.26	117	167228	19.2061 ug/L	100
45) 1,2-Dichloroethane	10.42	62	175870	20.9201 ug/L	98
46) Benzene	10.46	78	487678	20.7204 ug/L	94
47) Trichloroethene	11.22	130	122071	20.5998 ug/L	97
48) Methylcyclohexane	11.30	83	175913	18.6794 ug/L	90
49) 1,2-Dichloropropane	11.42	63	146226	20.7623 ug/L	91
50) Bromodichloromethane	11.72	83	169578	20.3247 ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411516.D 8260WT.M Mon Apr 18 18:51:46 2016 Page 1

Data File : C:\MSDchem\2\data\041816\8M411516.D Vial: 7
Acq On : 18 Apr 2016 18:29 Operator: TMB
Sample : L16040858-11 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 18:51:46 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

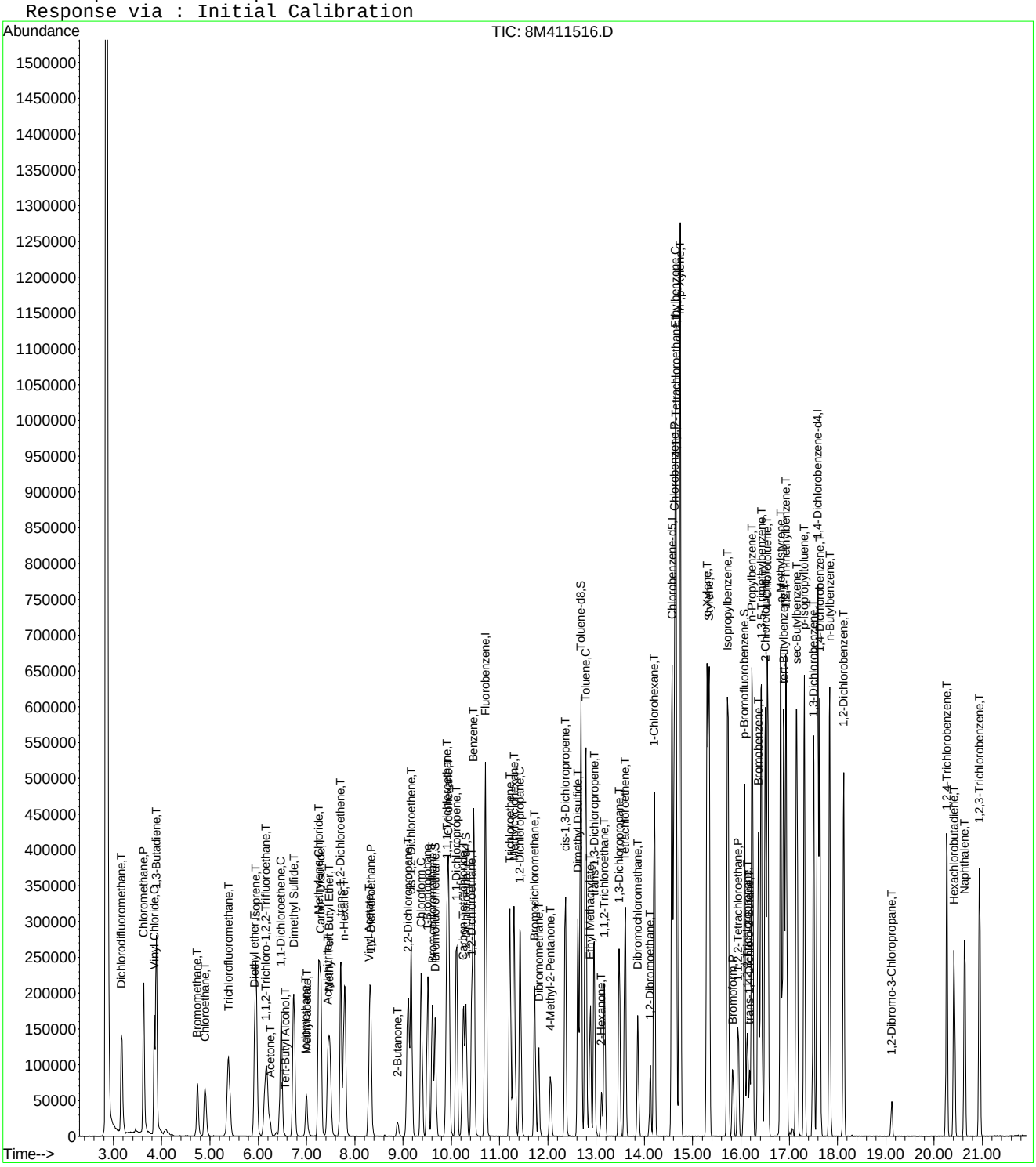
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	Dibromomethane	11.82	93	58735	19.9567	ug/L		93
54)	4-Methyl-2-Pentanone	12.05	58	31147	20.0526	ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	206855	22.4570	ug/L		99
56)	Dimethyl Disulfide	12.62	79	101708	20.8253	ug/L		97
59)	Toluene	12.79	91	497478	20.3058	ug/L		99
60)	Ethyl Methacrylate	12.88	69	115484	22.3636	ug/L		90
62)	trans-1,3-Dichloropropene	12.96	75	165956	20.1872	ug/L		99
63)	1,1,2-Trichloroethane	13.17	97	82416	21.0334	ug/L		98
64)	2-Hexanone	13.11	58	29882	20.5604	ug/L	#	99
65)	1,3-Dichloropropane	13.48	76	159173	21.7094	ug/L		87
66)	Tetrachloroethene	13.60	164	90123	19.2048	ug/L		95
67)	Dibromochloromethane	13.86	129	106849	20.6910	ug/L		98
68)	1,2-Dibromoethane	14.12	107	81568	20.4648	ug/L		99
69)	1-Chlorohexane	14.20	91	170659	20.5638	ug/L		87
70)	Chlorobenzene	14.63	112	337274	20.4032	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.66	131	117339	20.3582	ug/L		99
72)	Ethylbenzene	14.65	106	176640	19.2912	ug/L		91
73)	m-,p-Xylene	14.74	106	445257	41.6254	ug/L		95
74)	o-Xylene	15.30	106	222939	20.5190	ug/L		98
75)	Styrene	15.34	104	366498	21.2560	ug/L		99
76)	Bromoform	15.84	173	58088	18.5720	ug/L		99
77)	Isopropylbenzene	15.72	105	557171	21.3099	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.94	83	97847	19.7266	ug/L		99
81)	1,2,3-Trichloropropane	16.14	110	26473	19.6260	ug/L		97
82)	trans-1,4-Dichloro-2-Buten	16.18	53	30072	15.1387	ug/L		76
83)	n-Propylbenzene	16.23	91	707617	20.9209	ug/L		98
84)	Bromobenzene	16.36	156	128517	19.1080	ug/L		88
85)	1,3,5-Trimethylbenzene	16.43	105	476666	20.0803	ug/L		100
86)	2-Chlorotoluene	16.51	91	464306	21.0997	ug/L		99
87)	4-Chlorotoluene	16.55	91	433744	18.9248	ug/L		98
88)	a-Methylstyrene	16.83	118	274525	21.2360	ug/L		97
89)	tert-Butylbenzene	16.89	134	95361	19.7228	ug/L		90
90)	1,2,4-Trimethylbenzene	16.93	105	499787	20.0550	ug/L		99
91)	sec-Butylbenzene	17.16	105	595662	20.2127	ug/L		97
92)	p-Isopropyltoluene	17.31	119	477204	19.8649	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	267766	19.5676	ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	270900	19.7761	ug/L		93
95)	n-Butylbenzene	17.84	91	481543	19.6956	ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	242725	20.0443	ug/L		93
97)	1,2-Dibromo-3-Chloropropan	19.12	75	16746	18.6916	ug/L		90
98)	1,2,4-Trichlorobenzene	20.27	180	159432	18.7101	ug/L		99
99)	Hexachlorobutadiene	20.41	225	63960	19.0704	ug/L		99
100)	Naphthalene	20.63	128	258057	18.0821	ug/L		99
101)	1,2,3-Trichlorobenzene	20.94	180	133102	18.7175	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411516.D 8260WT.M Mon Apr 18 18:51:46 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411516.D Vial: 7
Acq On : 18 Apr 2016 18:29 Operator: TMB
Sample : L16040858-11 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 18:51 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411516.D 8260WT.M Mon Apr 18 18:51:47 2016 Page 3

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411517.D Vial: 8
Acq On : 18 Apr 2016 18:59 Operator: TMB
Sample : L16040858-12 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 19:21:00 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	594559	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	428163	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	230101	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	144201	23.7207 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.88%		
43) 1,2-Dichloroethane-d4	10.31	65	153996	24.1276 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.52%		
58) Toluene-d8	12.68	98	512132	23.9022 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.60%		
80) p-Bromofluorobenzene	16.07	95	204116	22.7047 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 90.80%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.18	85	182330	19.0666 ug/L	99
3) Chloromethane	3.63	50	323901	21.9227 ug/L	97
4) Vinyl Chloride	3.85	62	179868	20.4385 ug/L	98
5) 1,3-Butadiene	3.89	54	131376	14.5093 ug/L	96
6) Bromomethane	4.75	94	81422	22.7083 ug/L	99
7) Chloroethane	4.90	64	99817	20.6067 ug/L	97
8) Trichlorofluoromethane	5.39	101	199646	18.3441 ug/L	98
9) Diethyl ether	5.92	59	3824	0.8715 ug/L #	1
10) Isoprene	5.96	67	175011	21.1021 ug/L	90
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	110839	18.7449 ug/L	93
13) Acetone	6.26	43	31095	27.5105 ug/L	99
14) 1,1-Dichloroethene	6.47	61	204723	18.1957 ug/L	93
15) Tert-Butyl Alcohol	6.58	59	2116	8.0151 ug/L #	55
16) Dimethyl Sulfide	6.74	62	141602	27.6521 ug/L	89
17) Iodomethane	6.99	142	54464	22.3971 ug/L	96
18) Methyl acetate	7.01	43	70754	17.7678 ug/L	95
19) Methylene Chloride	7.26	84	123071	19.8578 ug/L	79
20) Carbon Disulfide	7.30	76	370287	17.9472 ug/L	99
21) Acrylonitrile	7.44	53	34927	20.4815 ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	257267	20.5358 ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	214579	19.9993 ug/L	88
24) n-Hexane	7.78	57	180581	17.2798 ug/L	97
26) Vinyl Acetate	8.30	43	258563	26.0965 ug/L	96
27) 1,1-Dichloroethane	8.33	63	257357	19.1032 ug/L	98
29) 2-Butanone	8.89	43	39089	20.8536 ug/L	96
31) 2,2-Dichloropropane	9.11	77	197443	19.6898 ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	132687	19.8050 ug/L	81
33) Chloroform	9.38	83	230639	20.3545 ug/L	100
34) 1-Bromopropane	9.51	122	26260	26.4657 ug/L	94
35) Bromochloromethane	9.61	130	67094	19.7474 ug/L	80
38) 1,1,1-Trichloroethane	9.91	97	196197	19.5556 ug/L	98
39) Cyclohexane	9.95	56	250169	18.0741 ug/L	91
40) 1,1-Dichloropropene	10.11	75	164773	18.6203 ug/L	97
42) Carbon Tetrachloride	10.26	117	172005	19.3185 ug/L	98
45) 1,2-Dichloroethane	10.42	62	179854	20.9216 ug/L	97
46) Benzene	10.46	78	495474	20.5869 ug/L	93
47) Trichloroethene	11.22	130	123415	20.3668 ug/L	97
48) Methylcyclohexane	11.30	83	175216	18.1946 ug/L	90
49) 1,2-Dichloropropane	11.42	63	146902	20.3978 ug/L	94
50) Bromodichloromethane	11.73	83	174547	20.4583 ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411517.D 8260WT.M Mon Apr 18 19:21:00 2016 Page 1

Data File : C:\MSDchem\2\data\041816\8M411517.D Vial: 8
Acq On : 18 Apr 2016 18:59 Operator: TMB
Sample : L16040858-12 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 19:21:00 2016 Quant Results File: 8260WT.RES

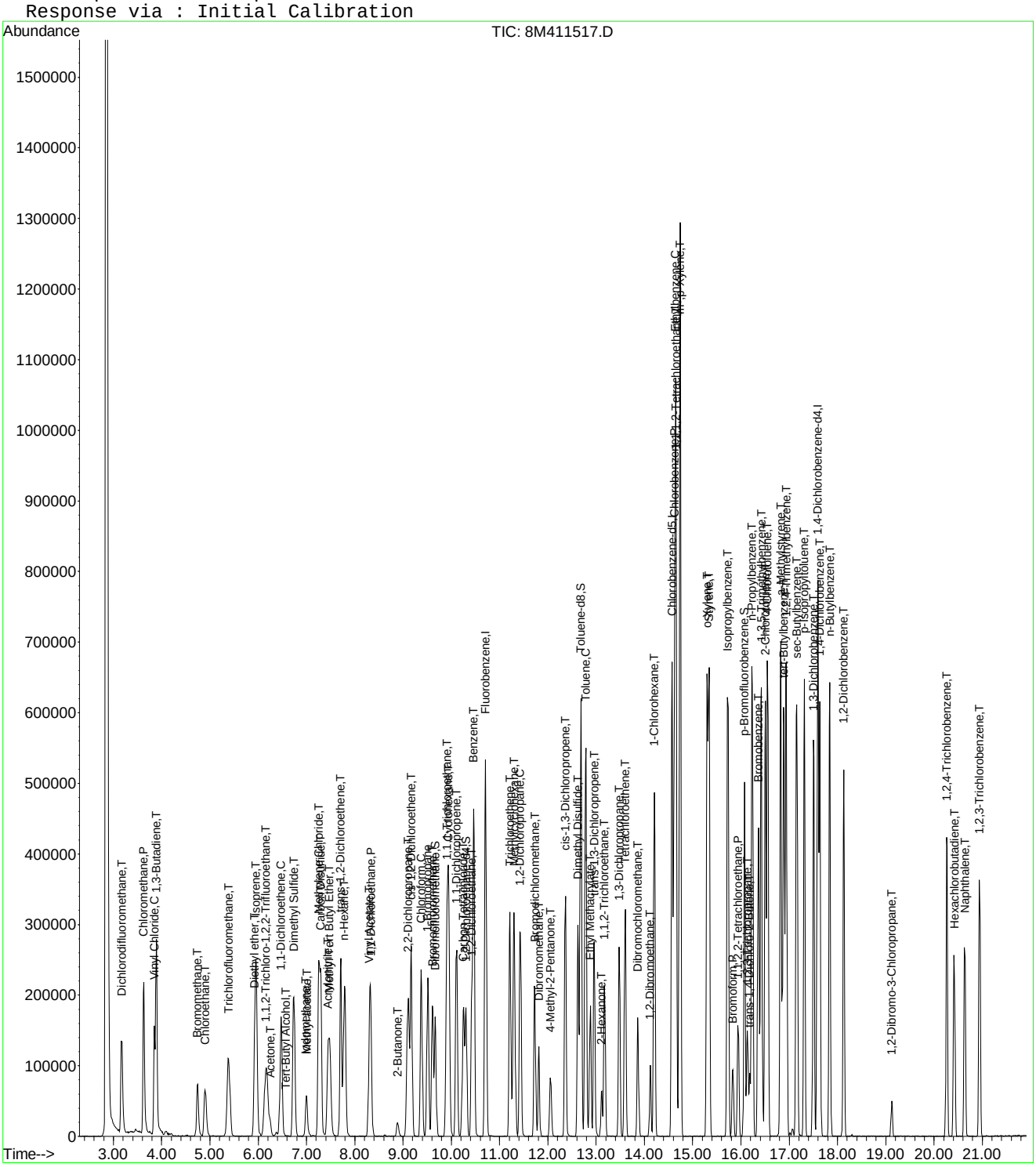
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	Dibromomethane	11.82	93	60510	20.1059	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	30000	18.8877	ug/L		95
55)	cis-1,3-Dichloropropene	12.36	75	210936	22.3945	ug/L		99
56)	Dimethyl Disulfide	12.62	79	100427	20.1090	ug/L		91
59)	Toluene	12.79	91	506060	20.0950	ug/L		99
60)	Ethyl Methacrylate	12.88	69	117074	22.0556	ug/L		90
62)	trans-1,3-Dichloropropene	12.96	75	169514	20.0599	ug/L		100
63)	1,1,2-Trichloroethane	13.17	97	83748	20.7928	ug/L		100
64)	2-Hexanone	13.12	58	30562	20.4571	ug/L	#	98
65)	1,3-Dichloropropane	13.48	76	159594	21.1755	ug/L		83
66)	Tetrachloroethene	13.60	164	88874	18.4243	ug/L		92
67)	Dibromochloromethane	13.86	129	108294	20.4012	ug/L		100
68)	1,2-Dibromoethane	14.12	107	82511	20.1409	ug/L		99
69)	1-Chlorohexane	14.20	91	171789	20.1377	ug/L		85
70)	Chlorobenzene	14.63	112	342292	20.1444	ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.66	131	118135	19.9396	ug/L		100
72)	Ethylbenzene	14.65	106	182292	19.3677	ug/L		94
73)	m-,p-Xylene	14.74	106	453673	41.2602	ug/L		98
74)	o-Xylene	15.30	106	223167	19.9821	ug/L		98
75)	Styrene	15.34	104	374141	21.1099	ug/L		99
76)	Bromoform	15.84	173	57916	18.0231	ug/L		99
77)	Isopropylbenzene	15.72	105	569501	21.1898	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.94	83	100468	19.8684	ug/L		98
81)	1,2,3-Trichloropropane	16.14	110	25819	18.7759	ug/L	#	7
82)	trans-1,4-Dichloro-2-Buten	16.18	53	33947	16.7633	ug/L	#	13
83)	n-Propylbenzene	16.23	91	725887	21.0515	ug/L		98
84)	Bromobenzene	16.36	156	129605	18.9021	ug/L		87
85)	1,3,5-Trimethylbenzene	16.43	105	483571	19.9824	ug/L		100
86)	2-Chlorotoluene	16.51	91	467922	20.8582	ug/L		99
87)	4-Chlorotoluene	16.55	91	449354	19.2317	ug/L		97
88)	a-Methylstyrene	16.83	118	269484	20.4482	ug/L		96
89)	tert-Butylbenzene	16.89	134	97726	19.8263	ug/L		90
90)	1,2,4-Trimethylbenzene	16.94	105	503623	19.8233	ug/L		99
91)	sec-Butylbenzene	17.16	105	606017	20.1716	ug/L		96
92)	p-Isopropyltoluene	17.31	119	485277	19.8154	ug/L		95
93)	1,3-Dichlorobenzene	17.51	146	277479	19.8905	ug/L		95
94)	1,4-Dichlorobenzene	17.63	146	280298	20.0717	ug/L		94
95)	n-Butylbenzene	17.84	91	492195	19.7471	ug/L		95
96)	1,2-Dichlorobenzene	18.13	146	245399	19.8784	ug/L		94
97)	1,2-Dibromo-3-Chloropropan	19.12	75	16969	18.5790	ug/L		90
98)	1,2,4-Trichlorobenzene	20.27	180	160649	18.4932	ug/L		100
99)	Hexachlorobutadiene	20.42	225	63530	18.5808	ug/L		95
100)	Naphthalene	20.64	128	260365	17.8957	ug/L		99
101)	1,2,3-Trichlorobenzene	20.94	180	133658	18.4370	ug/L		100

(#) = qualifier out of range (m) = manual integration
8M411517.D 8260WT.M Mon Apr 18 19:21:01 2016 Page 2

Data File : C:\MSDchem\2\data\041816\8M411517.D Vial: 8
Acq On : 18 Apr 2016 18:59 Operator: TMB
Sample : L16040858-12 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 19:21 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041816\8M411527.D Vial: 18
Acq On : 18 Apr 2016 23:49 Operator: TMB
Sample : L16040858-13 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:16 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

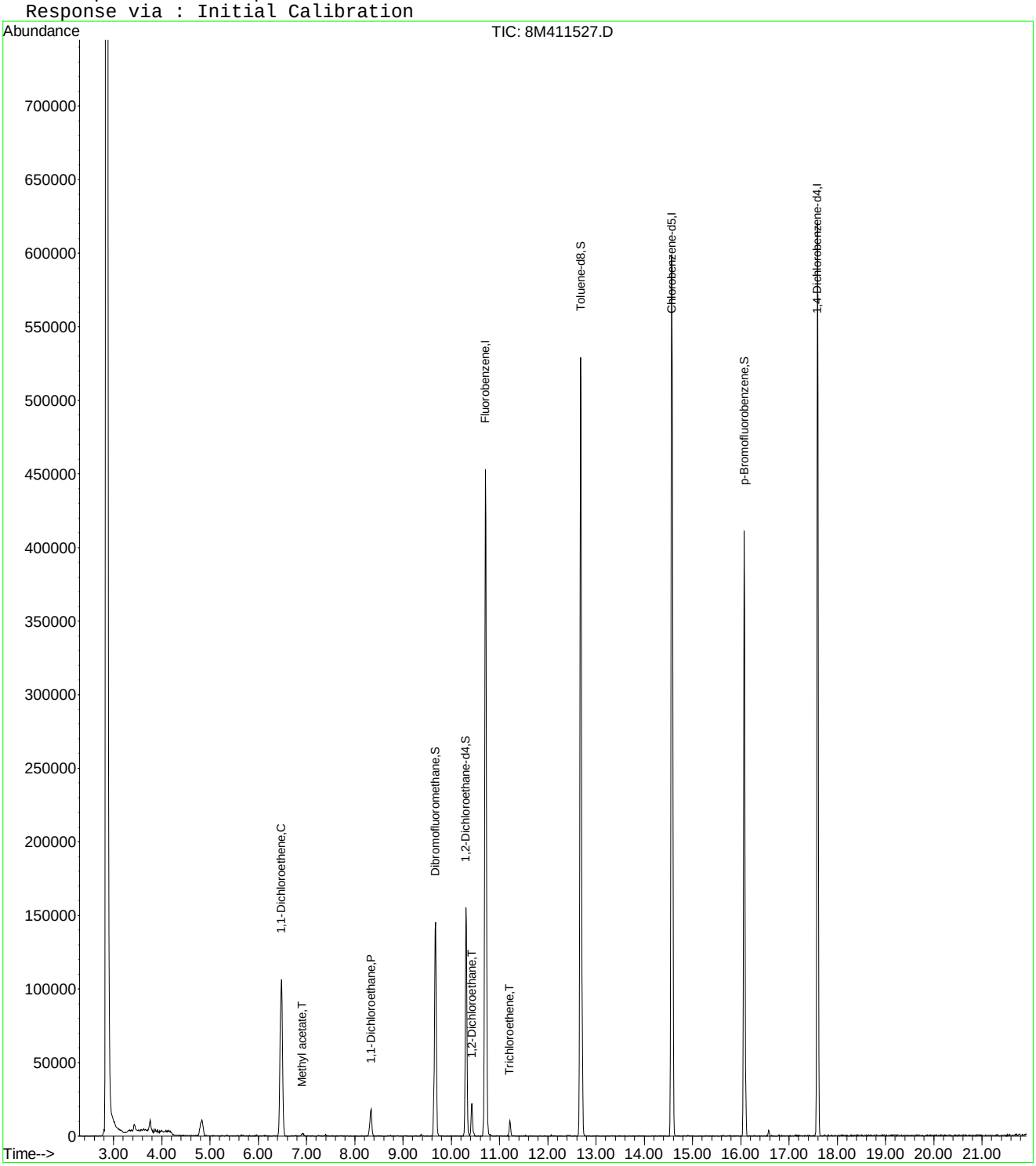
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	509171	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	370257	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	179662	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	124647	23.9426	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.76%			
43) 1,2-Dichloroethane-d4	10.30	65	134904	24.6809	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.72%			
58) Toluene-d8	12.68	98	445528	24.0457	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.20%			
80) p-Bromofluorobenzene	16.07	95	167490	23.8610	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.44%			
Target Compounds						Qvalue
14) 1,1-Dichloroethene	6.48	61	130433	13.5370	ug/L	90
18) Methyl acetate	6.91	43	2622	0.7689	ug/L #	66
27) 1,1-Dichloroethane	8.34	63	29935	2.5947	ug/L	96
45) 1,2-Dichloroethane	10.43	62	21768	2.9568	ug/L	95
47) Trichloroethene	11.21	130	4667	0.8993	ug/L	95

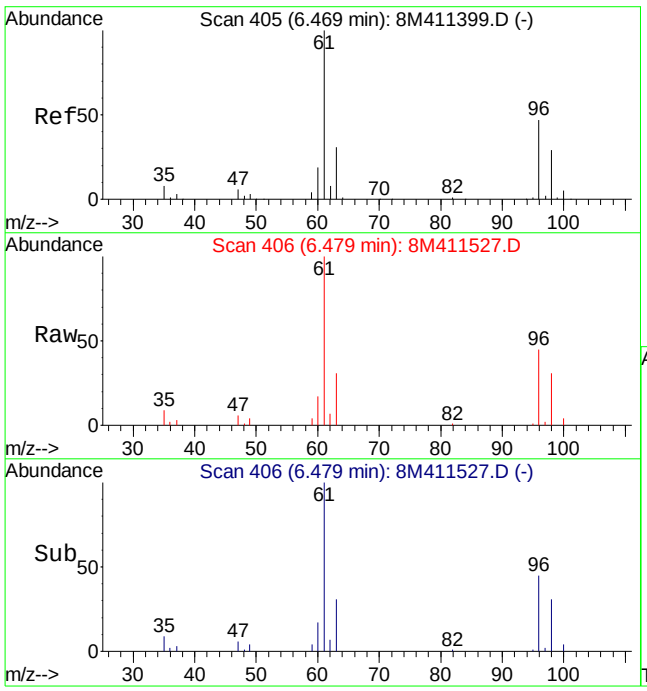
(#) = qualifier out of range (m) = manual integration
8M411527.D 8260WT.M Tue Apr 19 08:41:17 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411527.D Vial: 18
Acq On : 18 Apr 2016 23:49 Operator: TMB
Sample : L16040858-13 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

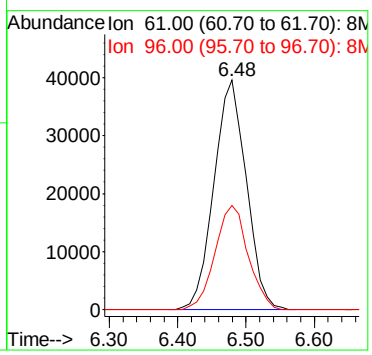


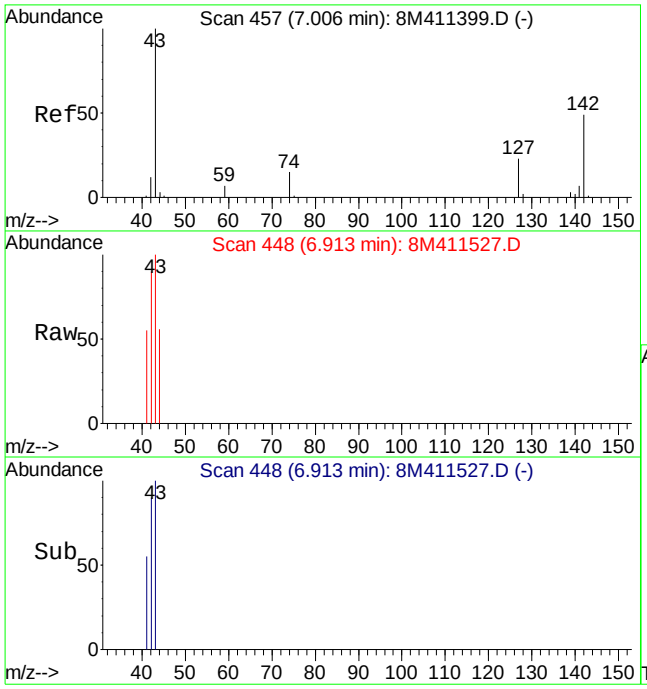


#14
1,1-Dichloroethene
Concen: 13.54 ug/L
RT: 6.48 min Scan# 406
Delta R.T. 0.01 min
Lab File: 8M411527.D
Acq: 18 Apr 2016 23:49

Tgt Ion: 61 Resp: 130433

Ion	Ratio	Lower	Upper
61	100		
96	46.4	31.9	74.5

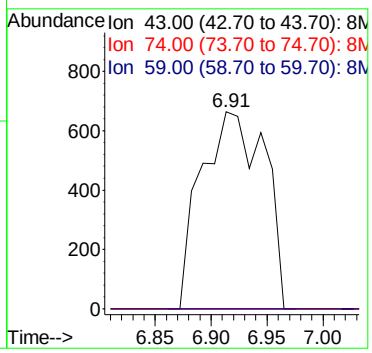


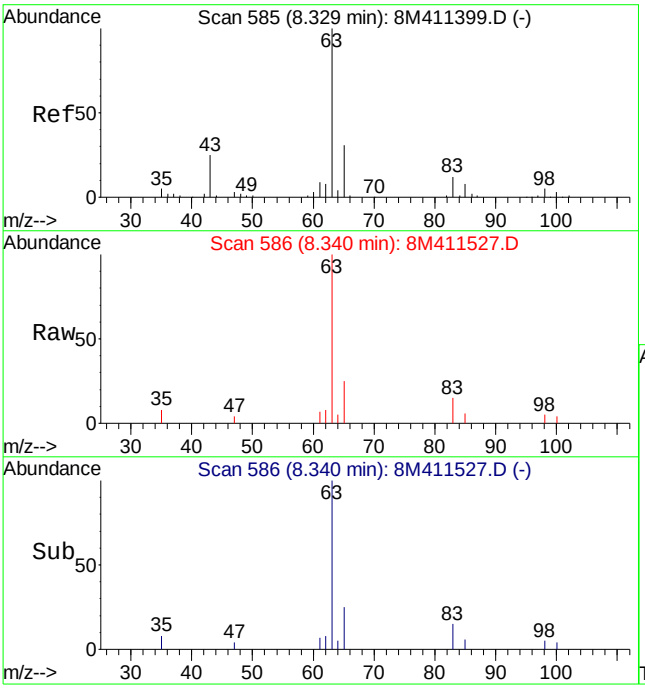


#18
Methyl acetate
Concen: 0.77 ug/L
RT: 6.91 min Scan# 448
Delta R.T. -0.09 min
Lab File: 8M411527.D
Acq: 18 Apr 2016 23:49

Tgt Ion: 43 Resp: 2622

Ion	Ratio	Lower	Upper
43	100		
74	0.0	10.4	24.4#
59	0.0	4.5	10.5#

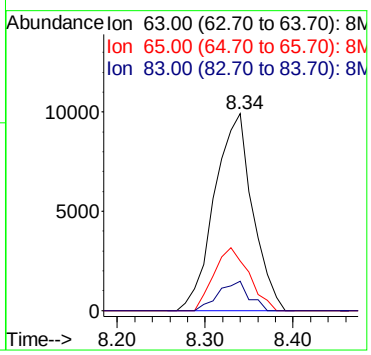


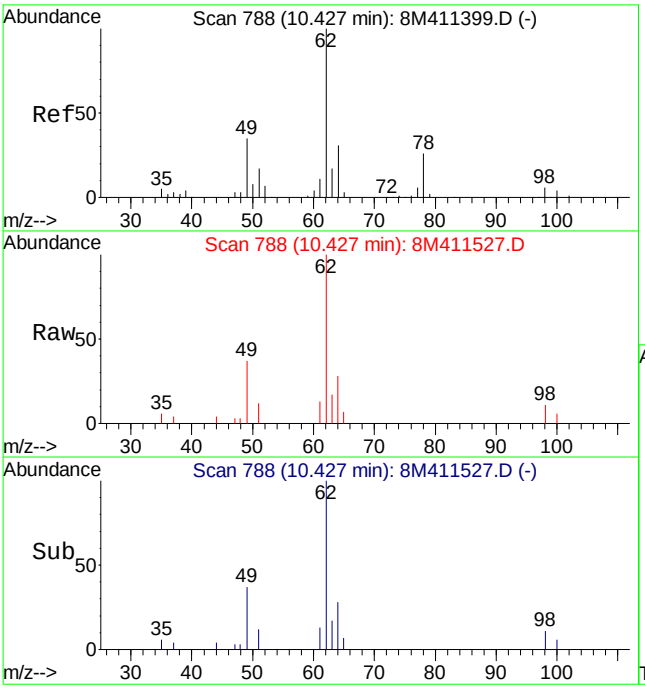


#27
1,1-Dichloroethane
Concen: 2.59 ug/L
RT: 8.34 min Scan# 586
Delta R.T. 0.01 min
Lab File: 8M411527.D
Acq: 18 Apr 2016 23:49

Tgt Ion: 63 Resp: 29935

Ion	Ratio	Lower	Upper
63	100		
65	29.4	19.1	44.5
83	11.9	7.7	18.1

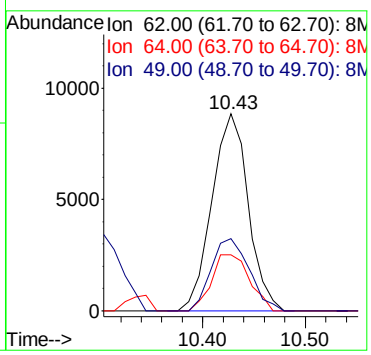


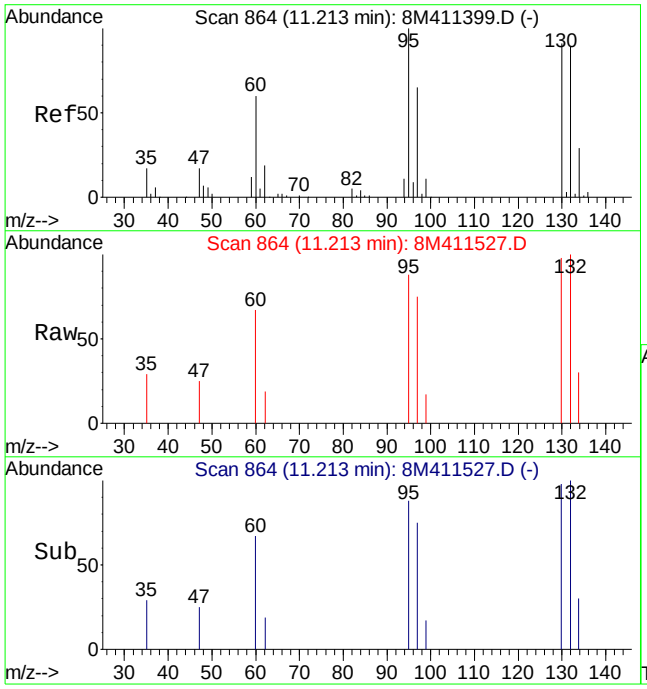


#45
1,2-Dichloroethane
Concen: 2.96 ug/L
RT: 10.43 min Scan# 788
Delta R.T. -0.00 min
Lab File: 8M411527.D
Acq: 18 Apr 2016 23:49

Tgt Ion: 62 Resp: 21768

Ion	Ratio	Lower	Upper
62	100		
64	29.8	19.1	44.7
49	38.4	25.4	59.4

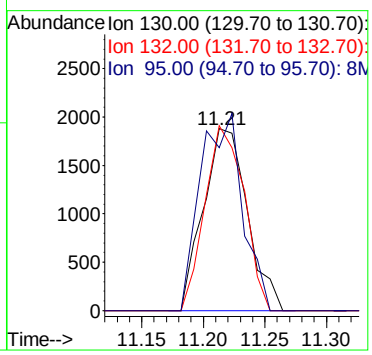




#47
Trichloroethene
Concen: 0.90 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.00 min
Lab File: 8M411527.D
Acq: 18 Apr 2016 23:49

Tgt Ion:130 Resp: 4667

Ion	Ratio	Lower	Upper
130	100		
132	90.5	59.9	139.7
95	103.7	62.3	145.5



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411528.D Vial: 19
Acq On : 19 Apr 2016 00:18 Operator: TMB
Sample : L16040858-14 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:18 2016 Quant Results File: 8260WT.RES

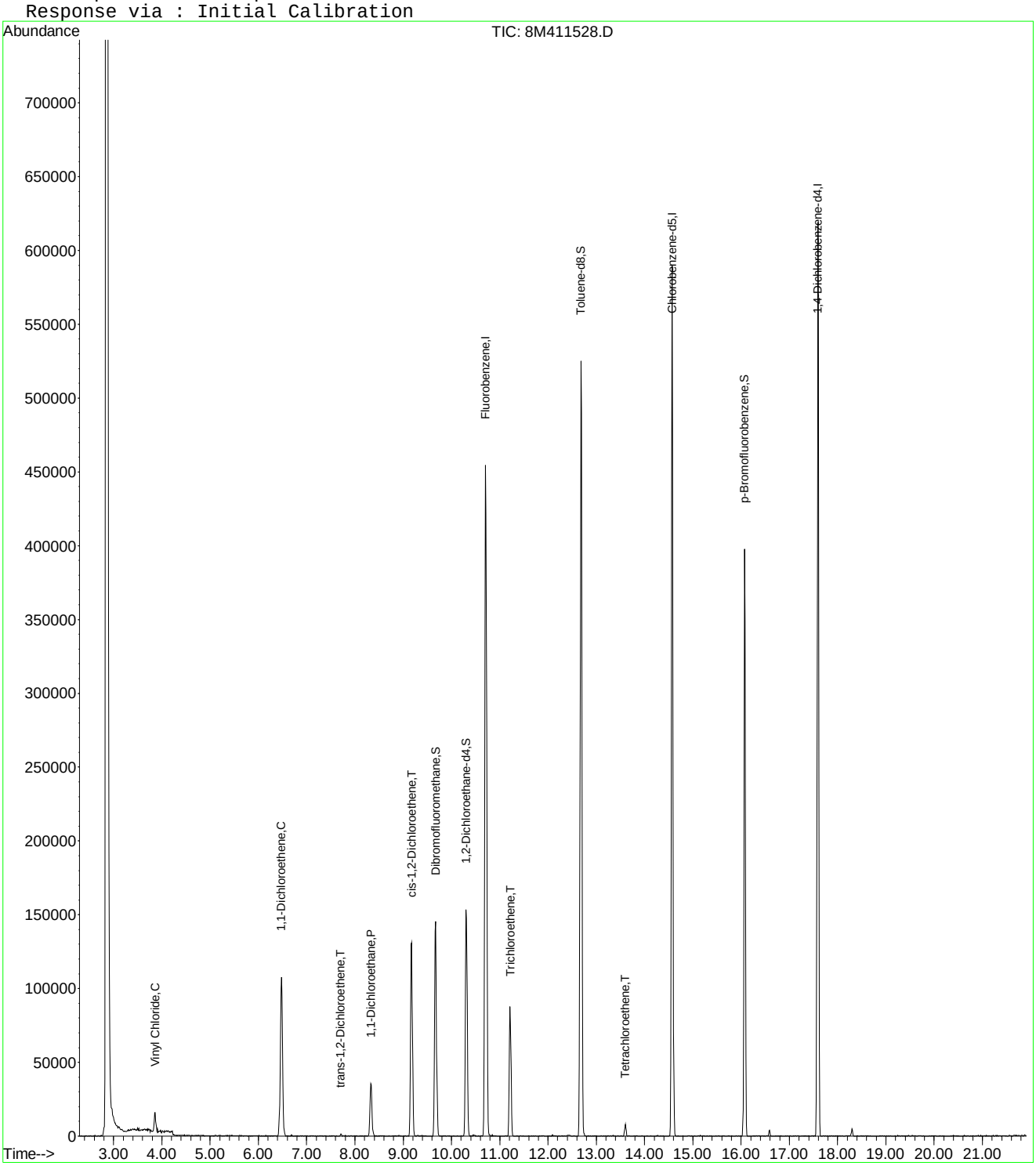
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

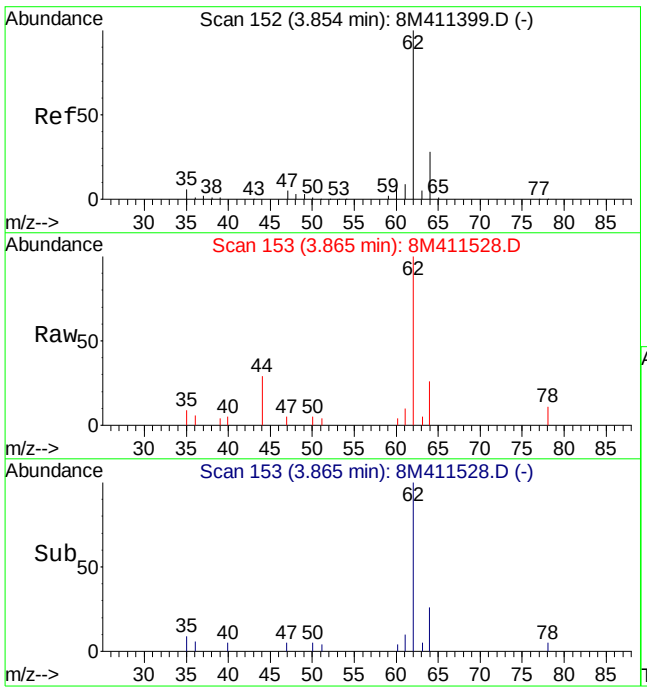
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	505283	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	367359	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	177457	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	122967	23.8017	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.20%			
43) 1,2-Dichloroethane-d4	10.30	65	135906	25.0555	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.24%			
58) Toluene-d8	12.68	98	442295	24.0595	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.24%			
80) p-Bromofluorobenzene	16.07	95	168667	24.3273	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.32%			
Target Compounds						Qvalue
4) Vinyl Chloride	3.86	62	17801	2.3801	ug/L	95
14) 1,1-Dichloroethene	6.48	61	131417	13.7440	ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	1825	0.2001	ug/L	69
27) 1,1-Dichloroethane	8.33	63	55728	4.8675	ug/L	97
32) cis-1,2-Dichloroethene	9.18	96	67784	11.9051	ug/L	99
47) Trichloroethene	11.22	130	33465	6.4984	ug/L	98
66) Tetrachloroethene	13.60	164	2330	0.5630	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M411528.D 8260WT.M Tue Apr 19 08:41:18 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041816\8M411528.D Vial: 19
Acq On : 19 Apr 2016 00:18 Operator: TMB
Sample : L16040858-14 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

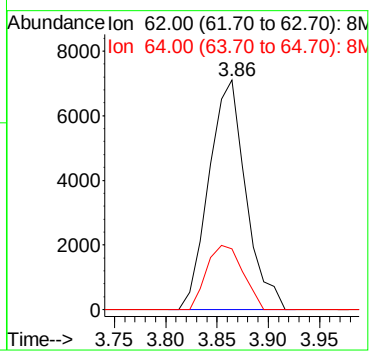


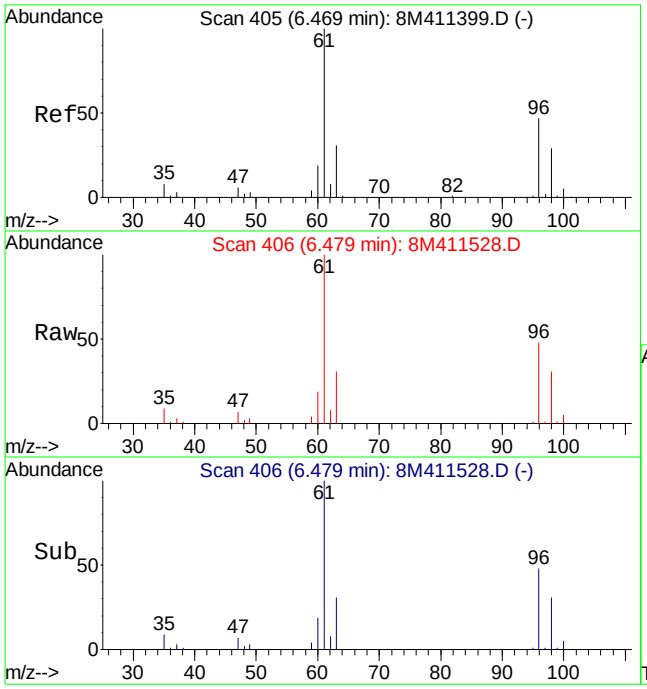


#4
Vinyl Chloride
Concen: 2.38 ug/L
RT: 3.86 min Scan# 153
Delta R.T. 0.02 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion: 62 Resp: 17801

Ion	Ratio	Lower	Upper
62	100		
64	27.4	18.1	42.1

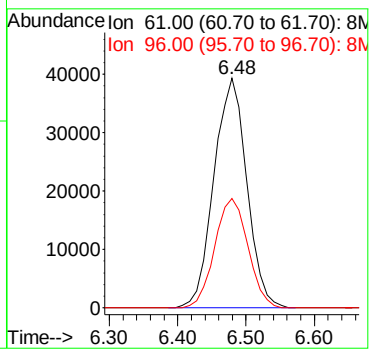


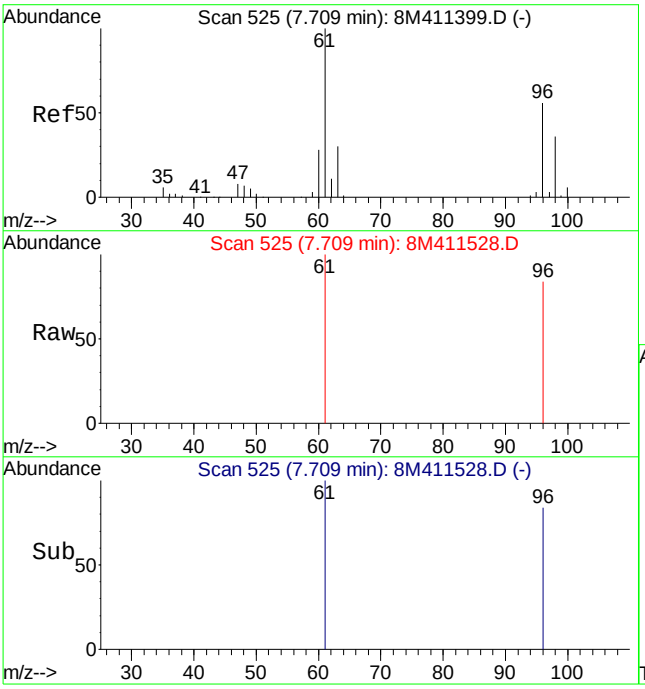


#14
1,1-Dichloroethene
Concen: 13.74 ug/L
RT: 6.48 min Scan# 406
Delta R.T. 0.01 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion: 61 Resp: 131417

Ion	Ratio	Lower	Upper
61	100		
96	48.1	31.9	74.5

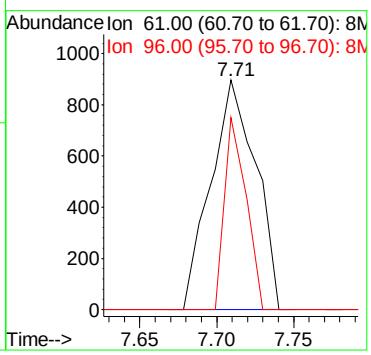


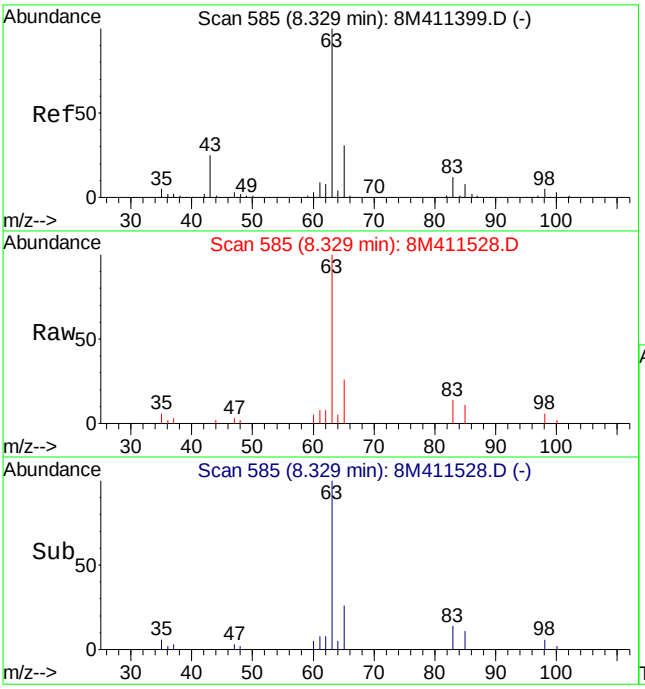


#23
trans-1,2-Dichloroethene
Concen: 0.20 ug/L
RT: 7.71 min Scan# 525
Delta R.T. -0.00 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion: 61 Resp: 1825

Ion	Ratio	Lower	Upper
61	100		
96	40.1	38.6	90.2

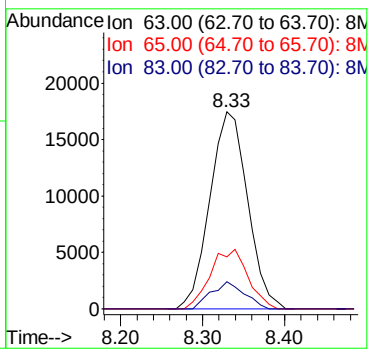


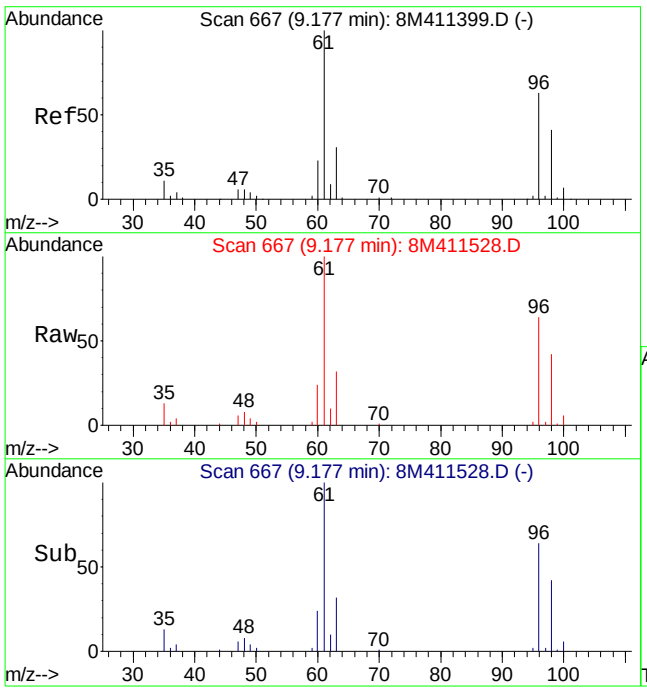


#27
1,1-Dichloroethane
Concen: 4.87 ug/L
RT: 8.33 min Scan# 585
Delta R.T. -0.00 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion: 63 Resp: 55728

Ion	Ratio	Lower	Upper
63	100		
65	29.9	19.1	44.5
83	12.1	7.7	18.1

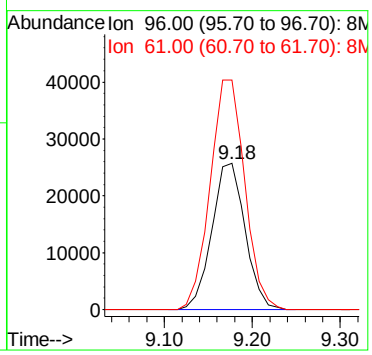


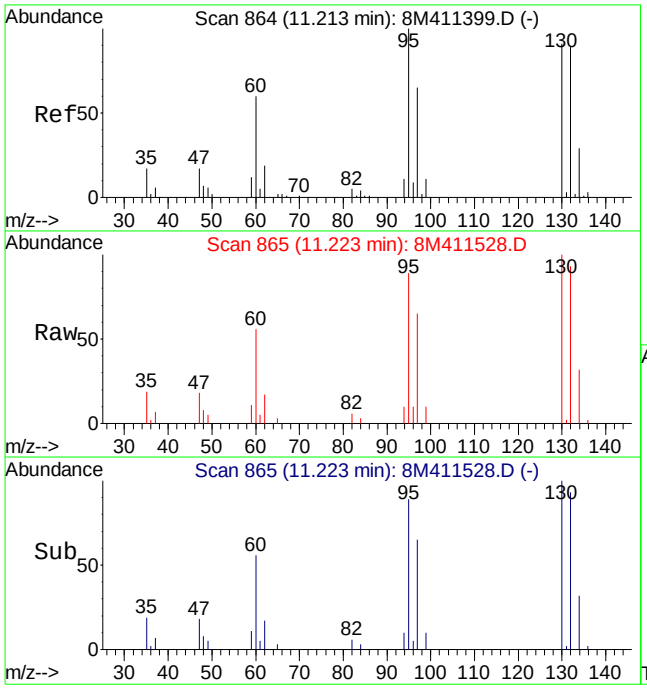


#32
cis-1,2-Dichloroethene
Concen: 11.91 ug/L
RT: 9.18 min Scan# 667
Delta R.T. 0.01 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion: 96 Resp: 67784

Ion	Ratio	Lower	Upper
96	100		
61	163.3	98.9	230.7

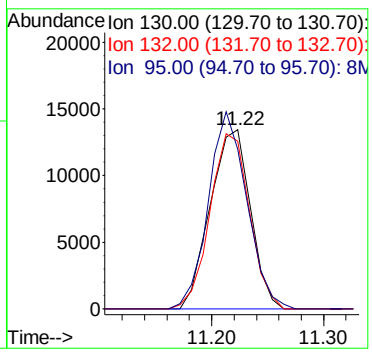


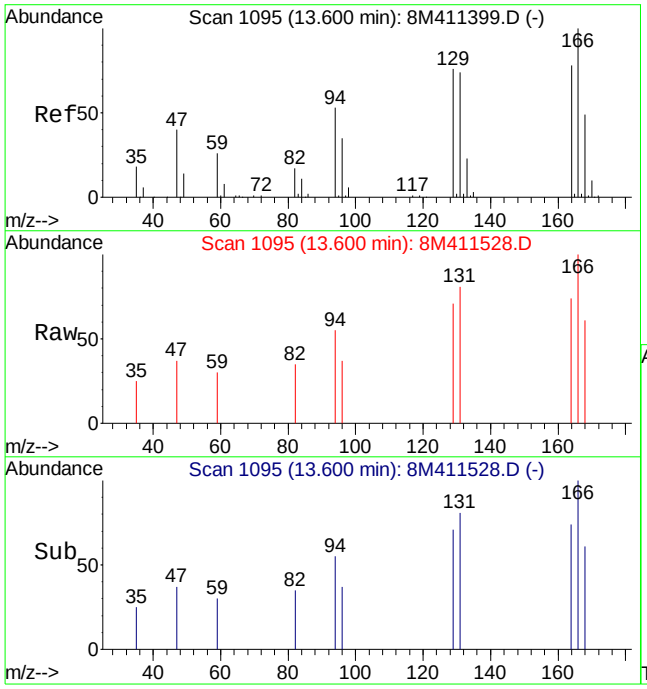


#47
Trichloroethene
Concen: 6.50 ug/L
RT: 11.22 min Scan# 865
Delta R.T. 0.01 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion:130 Resp: 33465

Ion	Ratio	Lower	Upper
130	100		
132	96.3	59.9	139.7
95	105.3	62.3	145.5

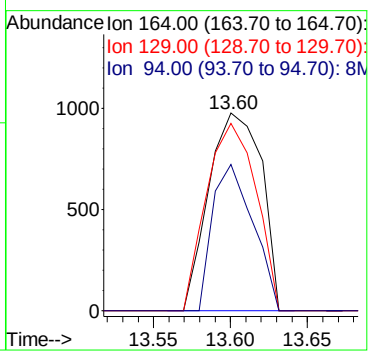




#66
Tetrachloroethene
Concen: 0.56 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. -0.00 min
Lab File: 8M411528.D
Acq: 19 Apr 2016 00:18

Tgt Ion:164 Resp: 2330

Ion	Ratio	Lower	Upper
164	100		
129	89.2	54.1	126.3
94	56.9	37.6	87.6



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411529.D Vial: 20
Acq On : 19 Apr 2016 00:48 Operator: TMB
Sample : L16040858-15 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:19 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

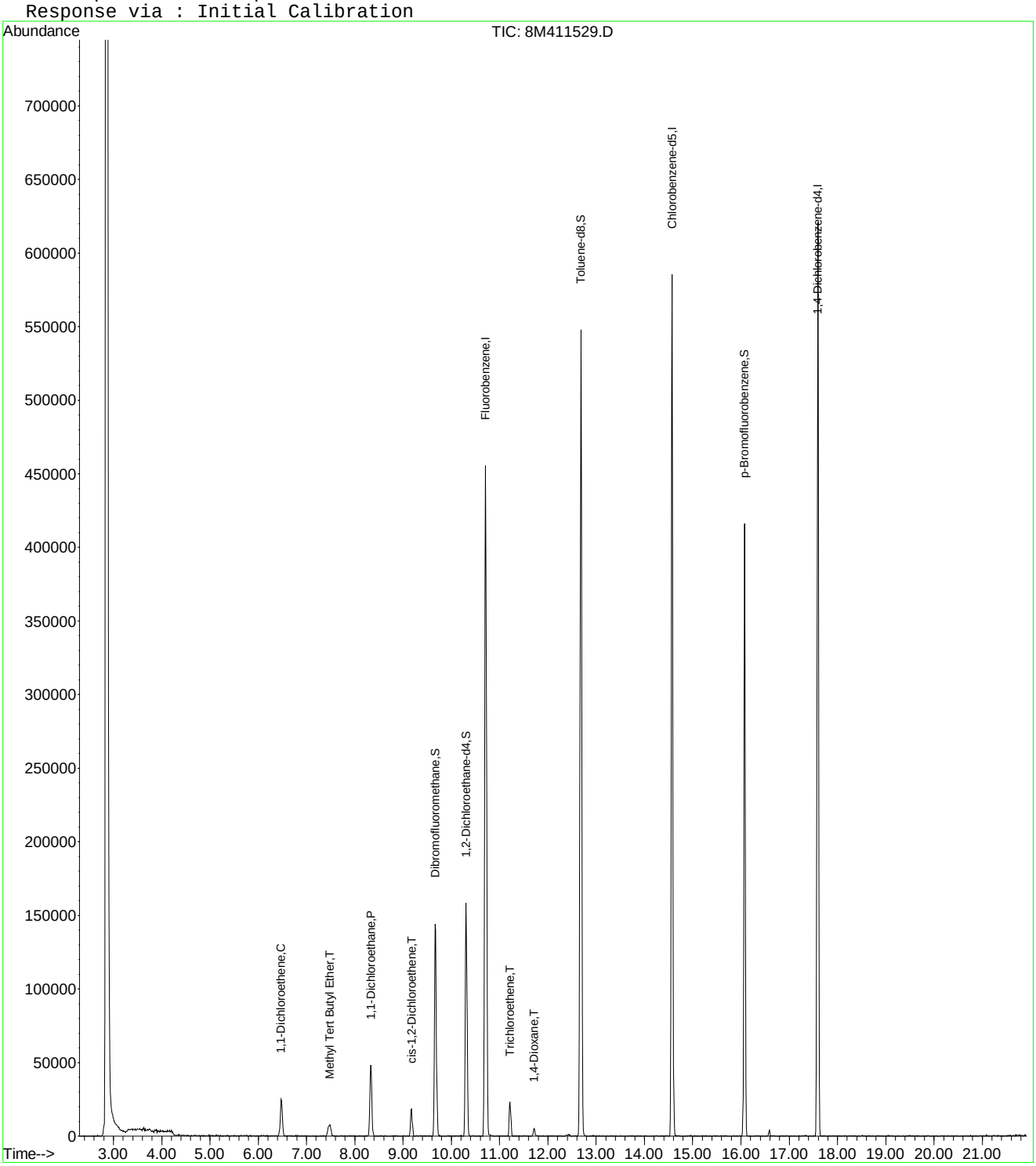
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	501763	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	363047	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	178455	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	124846	24.3349	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.32%			
43) 1,2-Dichloroethane-d4	10.31	65	135360	25.1300	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.52%			
58) Toluene-d8	12.68	98	439938	24.2156	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.88%			
80) p-Bromofluorobenzene	16.07	95	168250	24.1314	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.52%			
Target Compounds						Qvalue
14) 1,1-Dichloroethene	6.47	61	30812	3.2450	ug/L	88
22) Methyl Tert Butyl Ether	7.48	73	15138	1.4318	ug/L	96
27) 1,1-Dichloroethane	8.33	63	74681	6.5687	ug/L	97
32) cis-1,2-Dichloroethene	9.18	96	10060	1.7793	ug/L	97
47) Trichloroethene	11.22	130	9141	1.7875	ug/L	92
51) 1,4-Dioxane	11.71	88	4027	190.5787	ug/L	68

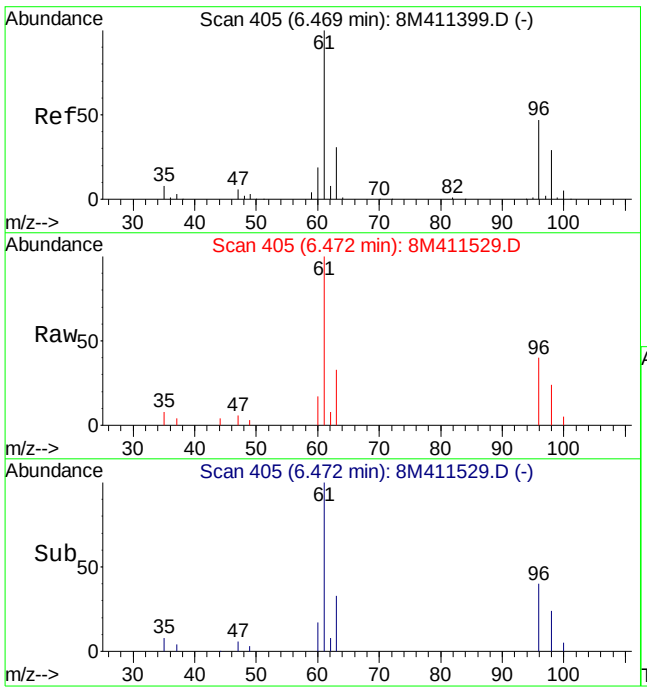
(#) = qualifier out of range (m) = manual integration
8M411529.D 8260WT.M Tue Apr 19 08:41:20 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411529.D Vial: 20
Acq On : 19 Apr 2016 00:48 Operator: TMB
Sample : L16040858-15 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

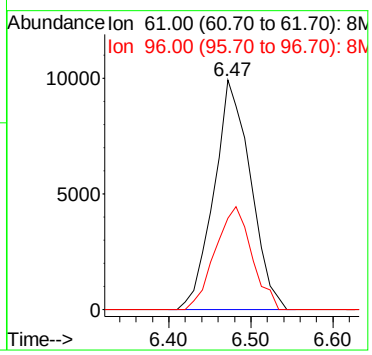


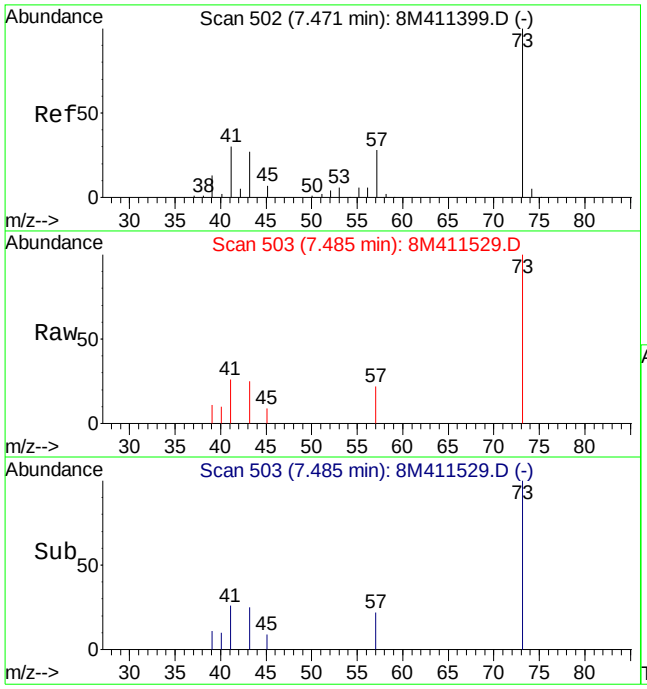


#14
1,1-Dichloroethene
Concen: 3.25 ug/L
RT: 6.47 min Scan# 405
Delta R.T. 0.00 min
Lab File: 8M411529.D
Acq: 19 Apr 2016 00:48

Tgt Ion: 61 Resp: 30812

Ion	Ratio	Lower	Upper
61	100		
96	44.7	31.9	74.5

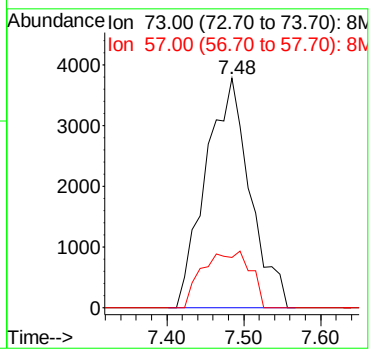


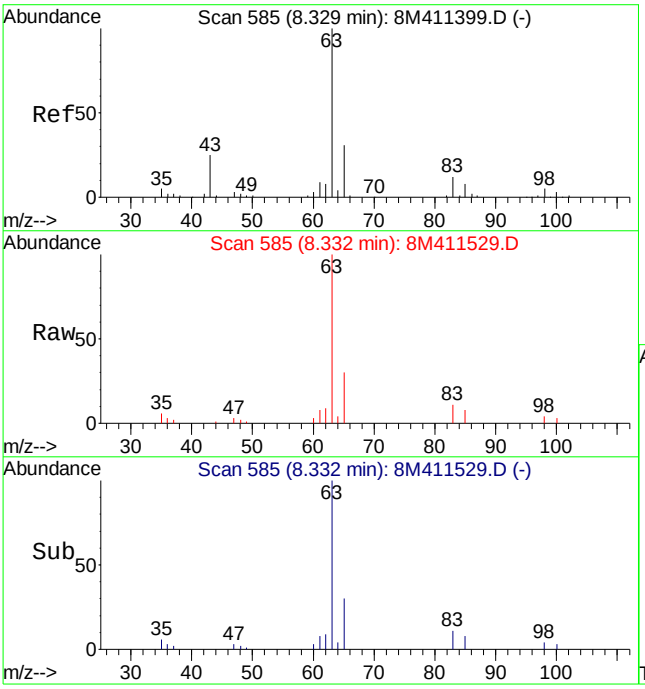


#22
Methyl Tert Butyl Ether
Concen: 1.43 ug/L
RT: 7.48 min Scan# 503
Delta R.T. 0.01 min
Lab File: 8M411529.D
Acq: 19 Apr 2016 00:48

Tgt Ion: 73 Resp: 15138

Ion	Ratio	Lower	Upper
73	100		
57	26.5	14.8	34.6

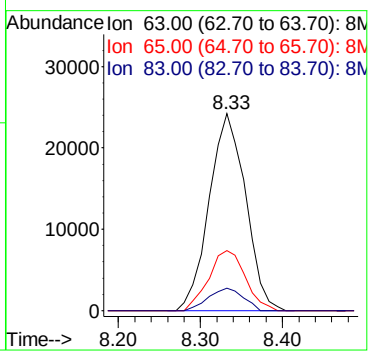


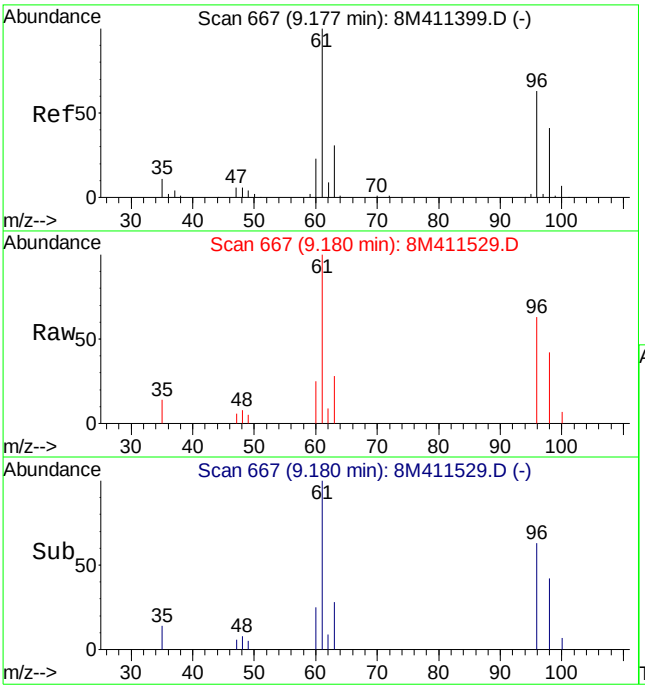


#27
1,1-Dichloroethane
Concen: 6.57 ug/L
RT: 8.33 min Scan# 585
Delta R.T. 0.00 min
Lab File: 8M411529.D
Acq: 19 Apr 2016 00:48

Tgt Ion: 63 Resp: 74681

Ion	Ratio	Lower	Upper
63	100		
65	30.7	19.1	44.5
83	10.9	7.7	18.1

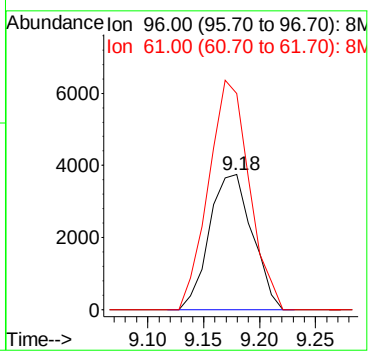


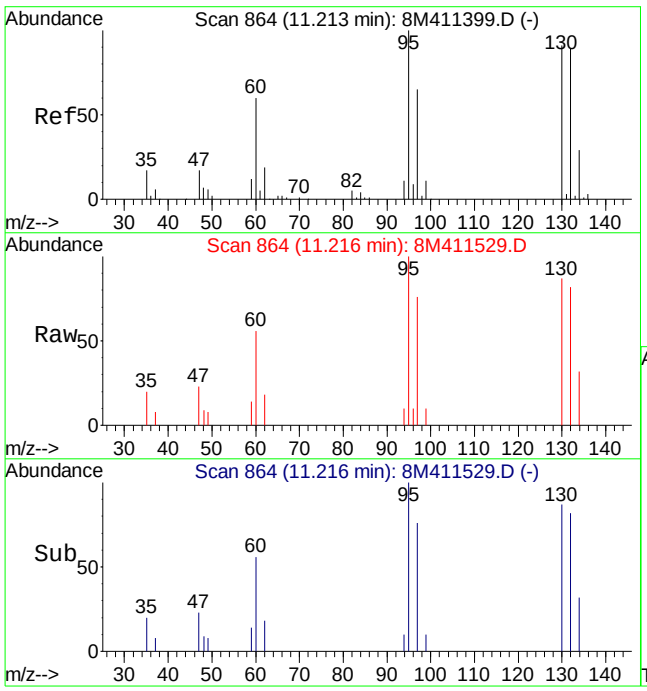


#32
cis-1,2-Dichloroethene
Concen: 1.78 ug/L
RT: 9.18 min Scan# 667
Delta R.T. 0.01 min
Lab File: 8M411529.D
Acq: 19 Apr 2016 00:48

Tgt Ion: 96 Resp: 10060

Ion	Ratio	Lower	Upper
96	100		
61	160.5	98.9	230.7

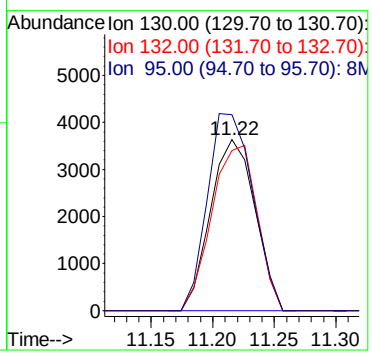


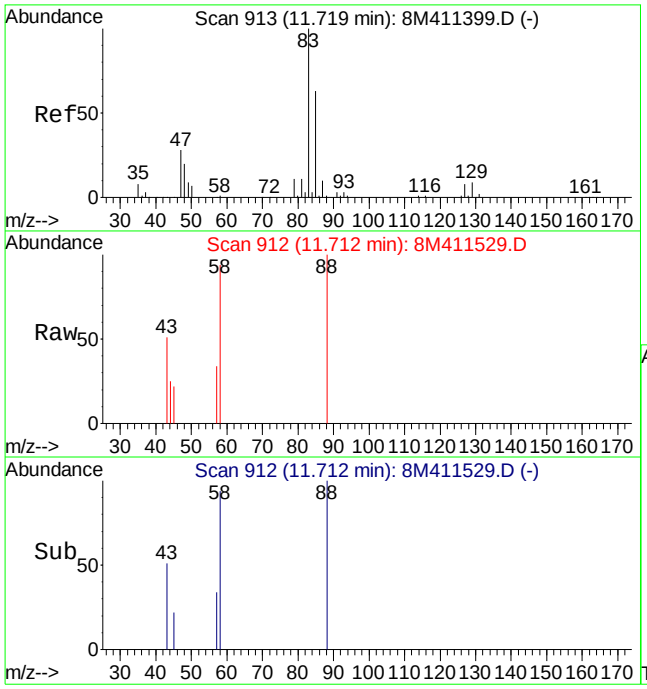


#47
Trichloroethene
Concen: 1.79 ug/L
RT: 11.22 min Scan# 864
Delta R.T. 0.00 min
Lab File: 8M411529.D
Acq: 19 Apr 2016 00:48

Tgt Ion:130 Resp: 9141

Ion	Ratio	Lower	Upper
130	100		
132	98.6	59.9	139.7
95	117.9	62.3	145.5

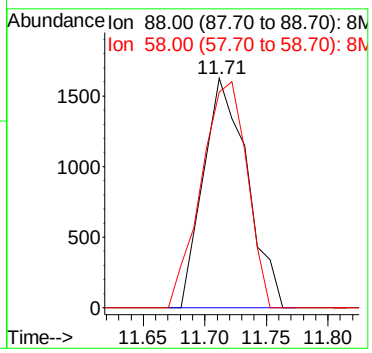




#51
1,4-Dioxane
Concen: 190.58 ug/L
RT: 11.71 min Scan# 912
Delta R.T. -0.01 min
Lab File: 8M411529.D
Acq: 19 Apr 2016 00:48

Tgt Ion: 88 Resp: 4027

Ion	Ratio	Lower	Upper
88	100		
58	102.8	45.3	105.7



Data File : C:\MSDCHEM\2\DATA\041816\8M411531.D Vial: 22
Acq On : 19 Apr 2016 1:46 Operator: TMB
Sample : L16040858-16 25X A 826-SPE Inst : HPMS8
Misc : 1,25 W/AF Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:22 2016 Quant Results File: 8260WT.RES

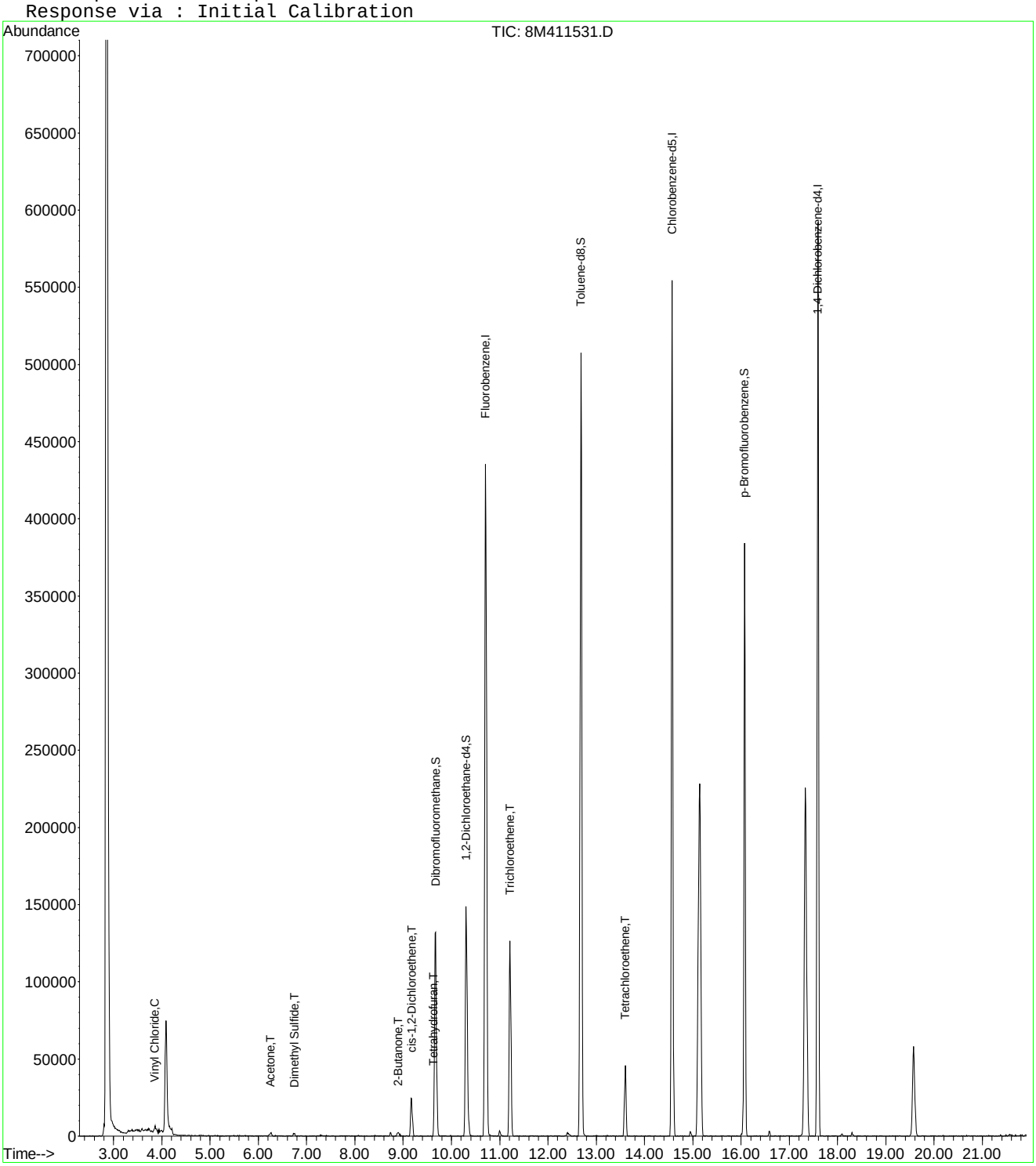
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

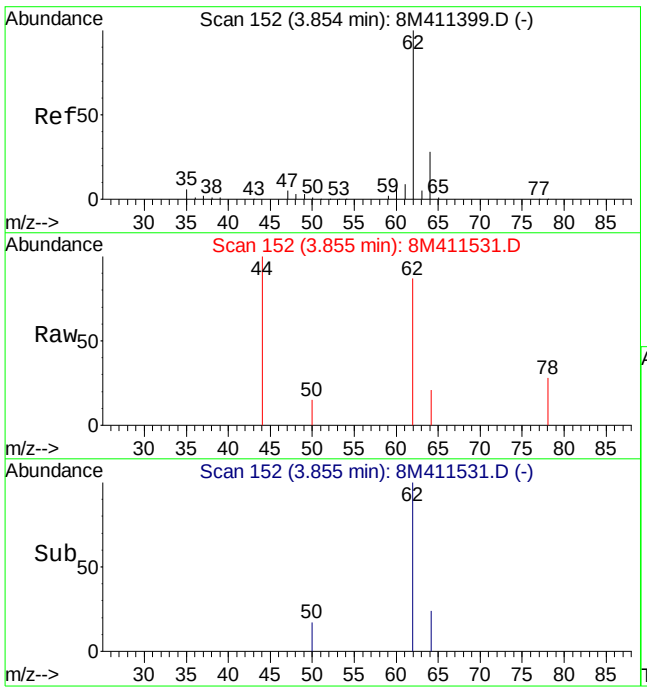
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	487982	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	342718	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	169503	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	114416	22.9317	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 91.72%			
43) 1,2-Dichloroethane-d4	10.30	65	128505	24.5311	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.12%			
58) Toluene-d8	12.68	98	421571	24.5810	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.32%			
80) p-Bromofluorobenzene	16.07	95	156390	23.6150	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 94.48%			
Target Compounds						Qvalue
4) Vinyl Chloride	3.85	62	4101	0.5678	ug/L	93
13) Acetone	6.25	43	4539	4.8928	ug/L	90
16) Dimethyl Sulfide	6.75	62	853	0.2030	ug/L	94
29) 2-Butanone	8.90	43	5646	3.6699	ug/L #	57
32) cis-1,2-Dichloroethene	9.18	96	13389	2.4349	ug/L	98
36) Tetrahydrofuran	9.63	42	205	0.1806	ug/L #	41
47) Trichloroethene	11.21	130	46531	9.3560	ug/L	98
66) Tetrachloroethene	13.60	164	12375	3.2050	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M411531.D 8260WT.M Tue Apr 19 08:41:22 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041816\8M411531.D Vial: 22
Acq On : 19 Apr 2016 1:46 Operator: TMB
Sample : L16040858-16 25X A 826-SPE Inst : HPMS8
Misc : 1,25 W/AF Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

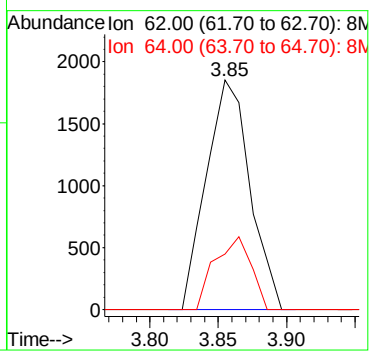


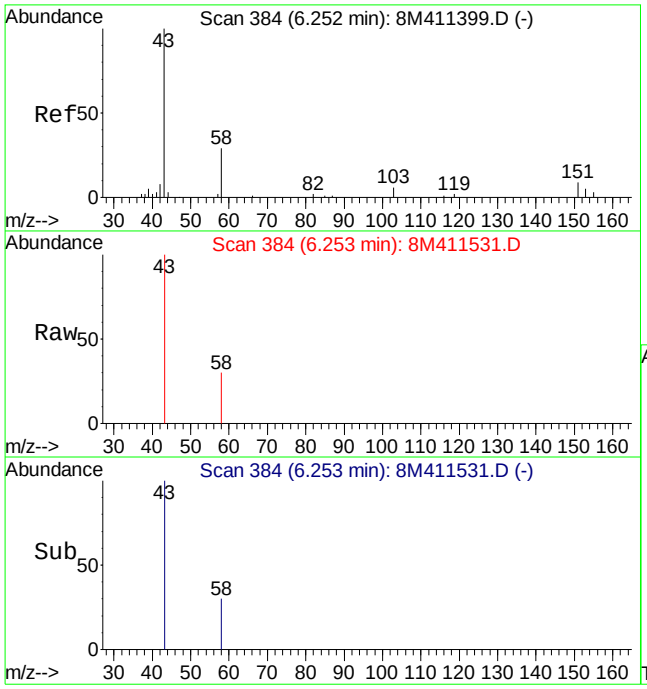


#4
Vinyl Chloride
Concen: 0.57 ug/L
RT: 3.85 min Scan# 152
Delta R.T. 0.01 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion: 62 Resp: 4101

Ion	Ratio	Lower	Upper
62	100		
64	26.4	18.1	42.1

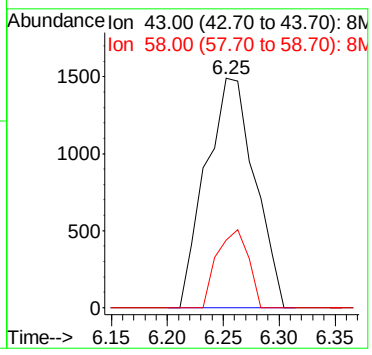


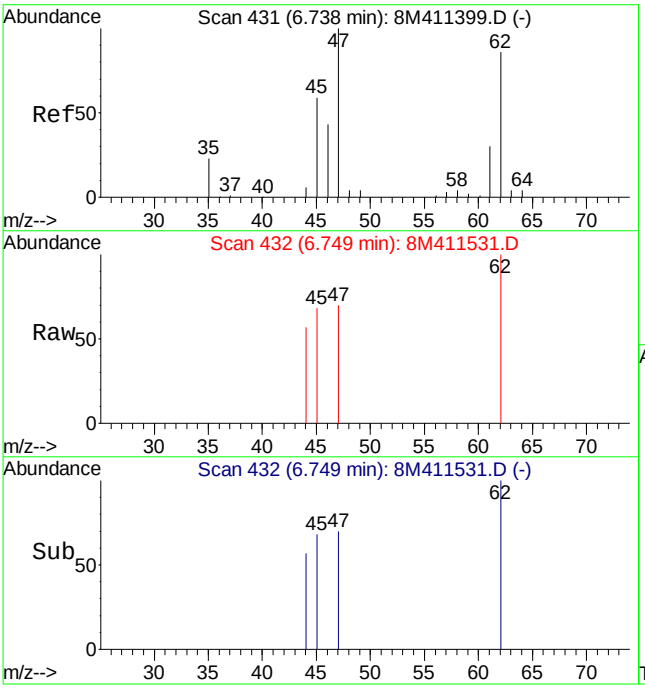


#13
Acetone
Concen: 4.89 ug/L
RT: 6.25 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion: 43 Resp: 4539

Ion	Ratio	Lower	Upper
43	100		
58	21.7	16.2	37.8

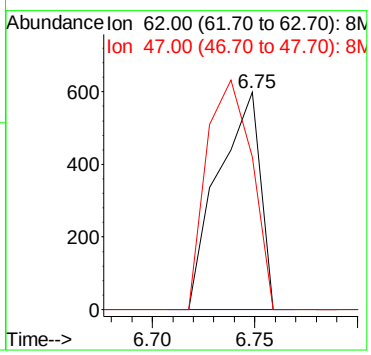


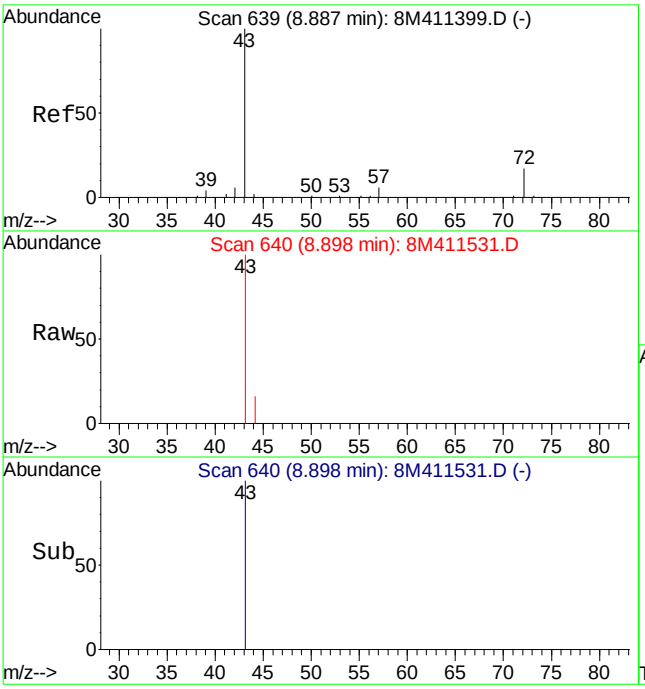


#16
Dimethyl Sulfide
Concen: 0.20 ug/L
RT: 6.75 min Scan# 432
Delta R.T. 0.01 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion: 62 Resp: 853

Ion	Ratio	Lower	Upper
62	100		
47	113.6	64.2	149.8

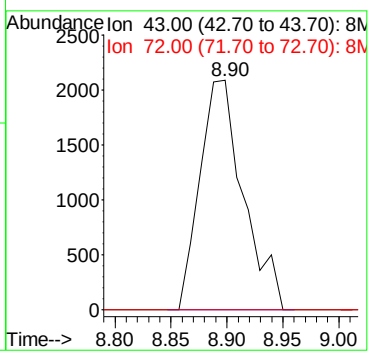


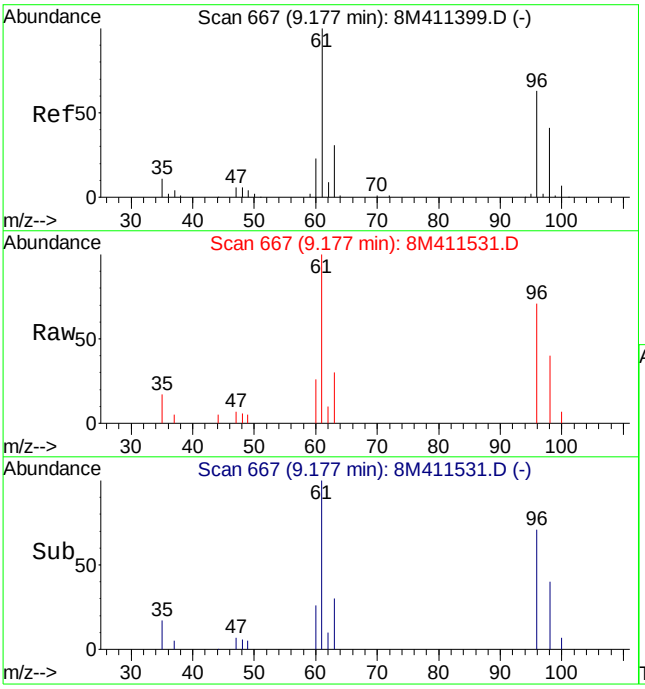


#29
2-Butanone
Concen: 3.67 ug/L
RT: 8.90 min Scan# 640
Delta R.T. 0.01 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion: 43 Resp: 5646

Ion	Ratio	Lower	Upper
43	100		
72	0.0	11.6	27.2#

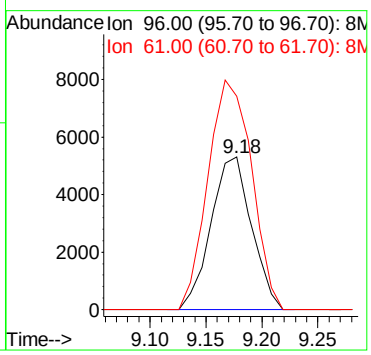


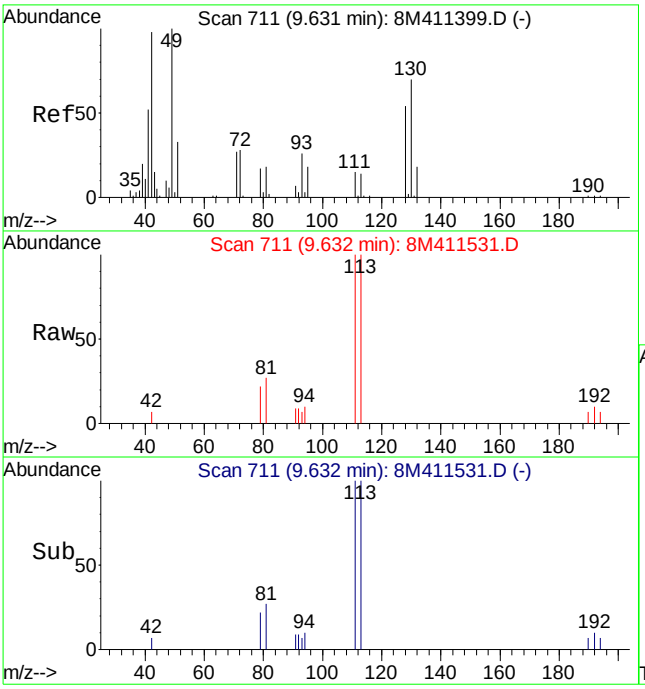


#32
cis-1,2-Dichloroethene
Concen: 2.43 ug/L
RT: 9.18 min Scan# 667
Delta R.T. 0.01 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion: 96 Resp: 13389

Ion	Ratio	Lower	Upper
96	100		
61	162.1	98.9	230.7

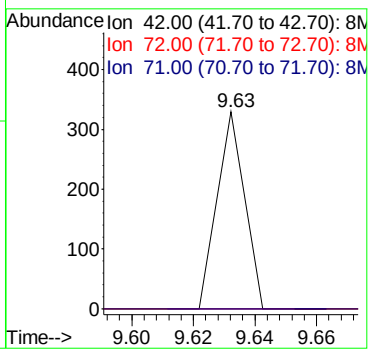


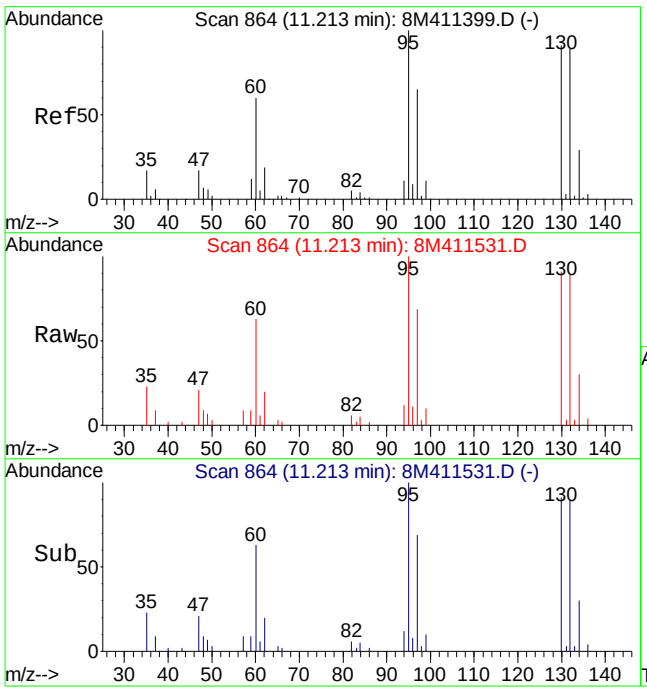


#36
Tetrahydrofuran
Concen: 0.18 ug/L
RT: 9.63 min Scan# 711
Delta R.T. 0.00 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion: 42 Resp: 205

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

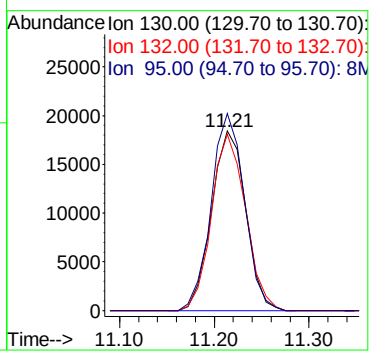


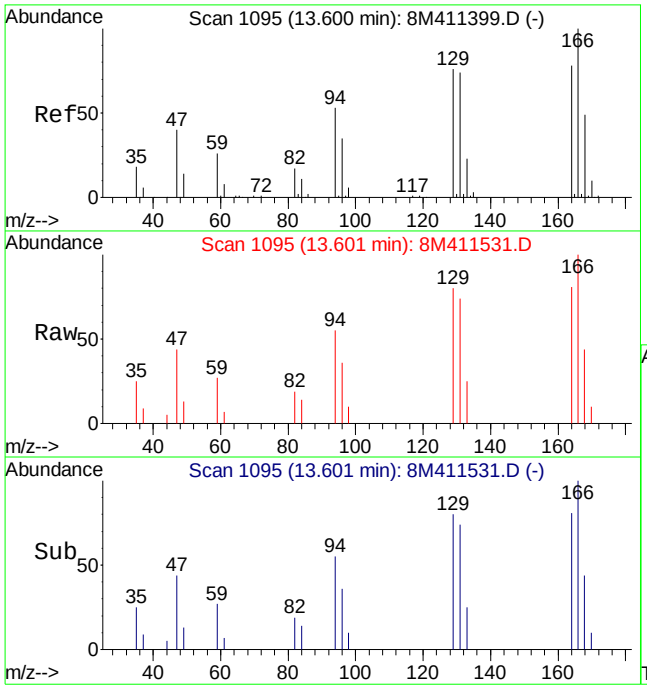


#47
Trichloroethene
Concen: 9.36 ug/L
RT: 11.21 min Scan# 864
Delta R.T. 0.00 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion:130 Resp: 46531

Ion	Ratio	Lower	Upper
130	100		
132	97.7	59.9	139.7
95	106.6	62.3	145.5

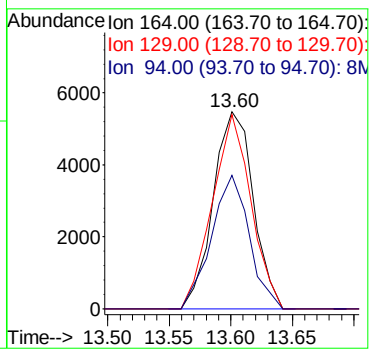




#66
Tetrachloroethene
Concen: 3.21 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. 0.00 min
Lab File: 8M411531.D
Acq: 19 Apr 2016 1:46

Tgt Ion:164 Resp: 12375

Ion	Ratio	Lower	Upper
164	100		
129	95.0	54.1	126.3
94	64.0	37.6	87.6



Data File : C:\MSDCHEM\2\DATA\041916\8M411561.D Vial: 17
Acq On : 19 Apr 2016 22:09 Operator: TMB
Sample : L16040858-17 B 25X 826-LOW Inst : HPMS8
Misc : 1,25 W/AF Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:34 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

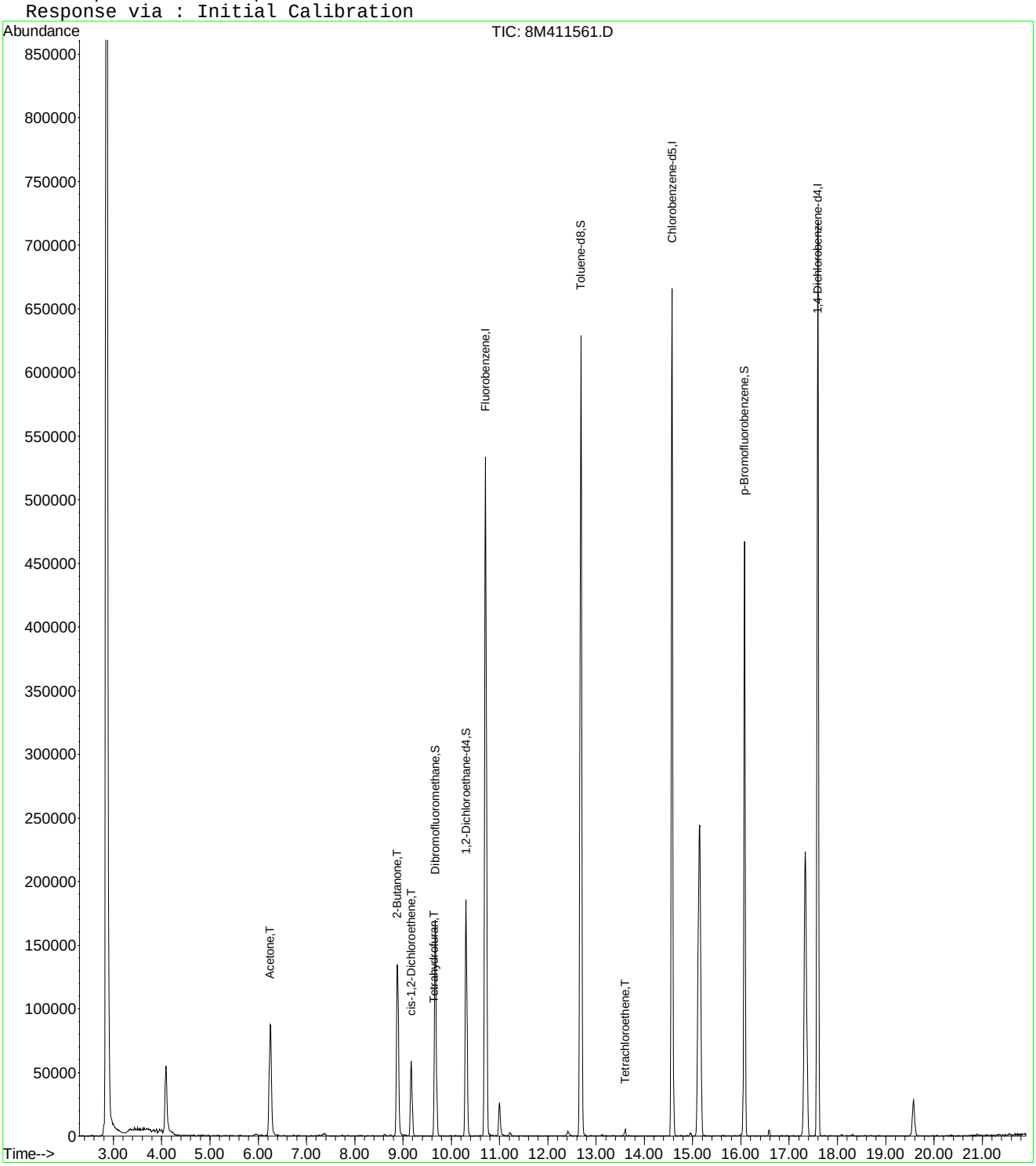
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	593639	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	418849	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	205471	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	141760	23.3553	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 93.44%			
43) 1,2-Dichloroethane-d4	10.31	65	155521	24.4043	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.60%			
58) Toluene-d8	12.68	98	514381	24.5411	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.16%			
80) p-Bromofluorobenzene	16.07	95	189345	23.5863	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 94.36%			
Target Compounds						Qvalue
13) Acetone	6.25	43	188770	167.2681	ug/L	97
29) 2-Butanone	8.88	43	270293	144.4225	ug/L	92
32) cis-1,2-Dichloroethene	9.17	96	31219	4.6670	ug/L	93
36) Tetrahydrofuran	9.65	42	228	0.1651	ug/L #	41
66) Tetrachloroethene	13.60	164	1225	0.2596	ug/L	86

(#) = qualifier out of range (m) = manual integration
8M411561.D 8260WT.M Wed Apr 20 08:38:34 2016 Page 1

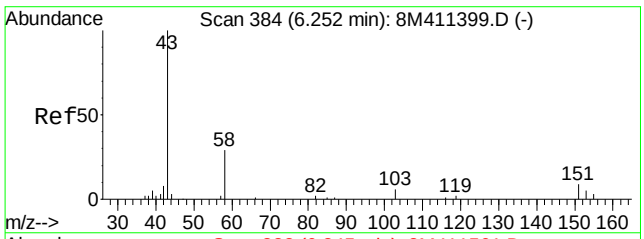
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411561.D Vial: 17
Acq On : 19 Apr 2016 22:09 Operator: TMB
Sample : L16040858-17 B 25X 826-LOW Inst : HPMS8
Misc : 1,25 W/AF Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



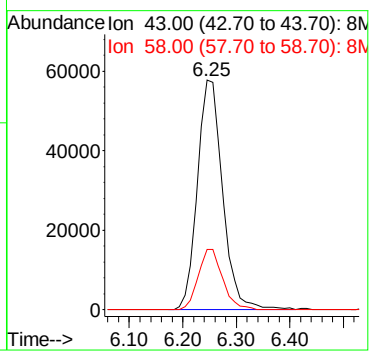
8M411561.D 8260WT.M Wed Apr 20 08:38:34 2016 Page 2

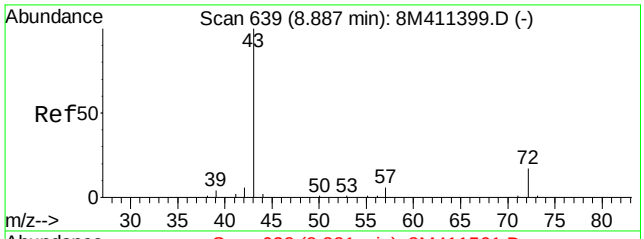


#13
Acetone
Concen: 167.27 ug/L
RT: 6.25 min Scan# 383
Delta R.T. -0.01 min
Lab File: 8M411561.D
Acq: 19 Apr 2016 22:09

Tgt Ion: 43 Resp: 188770

Ion	Ratio	Lower	Upper
43	100		
58	25.2	16.2	37.8

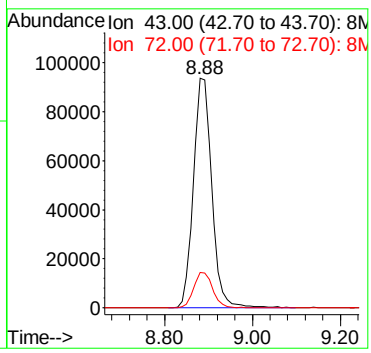


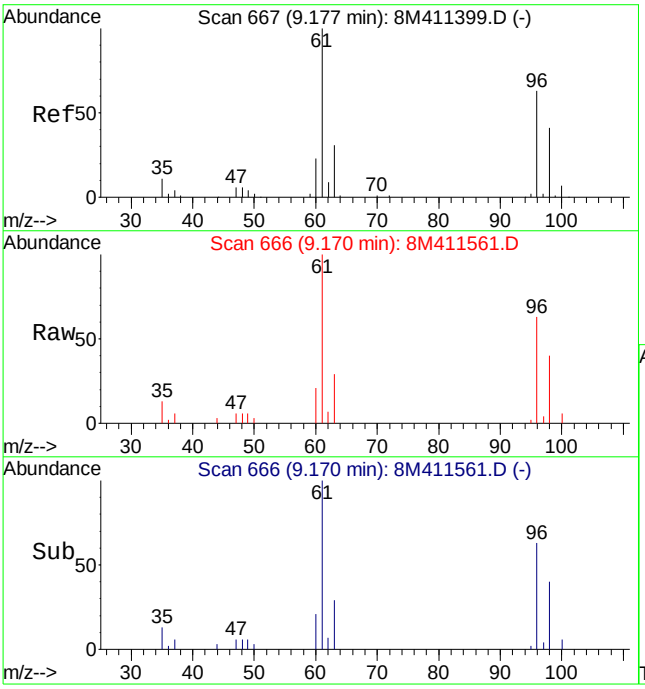


#29
2-Butanone
Concen: 144.42 ug/L
RT: 8.88 min Scan# 638
Delta R.T. -0.01 min
Lab File: 8M411561.D
Acq: 19 Apr 2016 22:09

Tgt Ion: 43 Resp: 270293

Ion	Ratio	Lower	Upper
43	100		
72	15.8	11.6	27.2

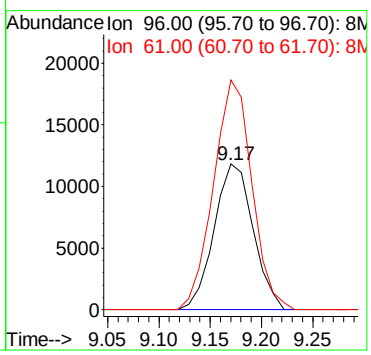


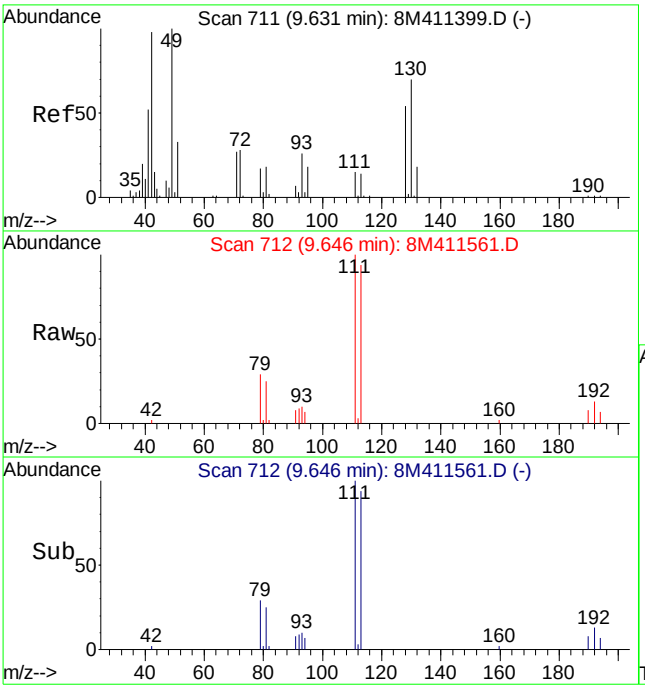


#32
cis-1,2-Dichloroethene
Concen: 4.67 ug/L
RT: 9.17 min Scan# 666
Delta R.T. 0.00 min
Lab File: 8M411561.D
Acq: 19 Apr 2016 22:09

Tgt Ion: 96 Resp: 31219

Ion	Ratio	Lower	Upper
96	100		
61	155.4	98.9	230.7

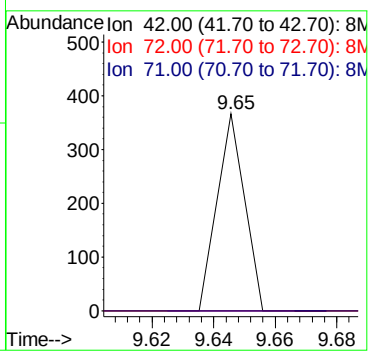


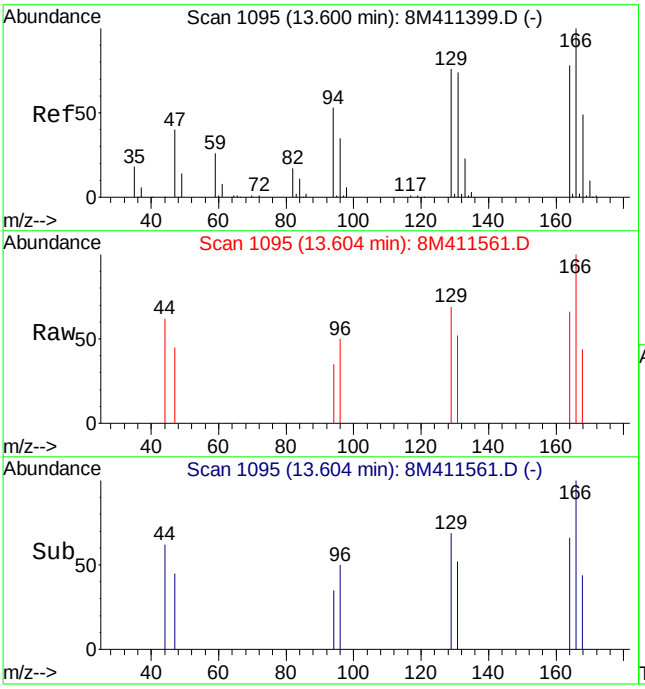


#36
Tetrahydrofuran
Concen: 0.17 ug/L
RT: 9.65 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411561.D
Acq: 19 Apr 2016 22:09

Tgt Ion: 42 Resp: 228

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

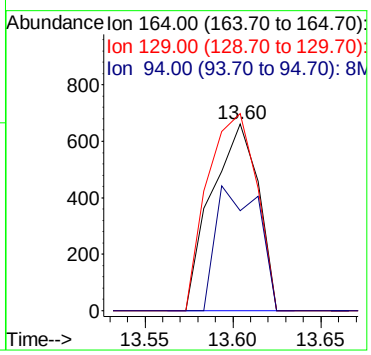




#66
Tetrachloroethene
Concen: 0.26 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. 0.00 min
Lab File: 8M411561.D
Acq: 19 Apr 2016 22:09

Tgt Ion:164 Resp: 1225

Ion	Ratio	Lower	Upper
164	100		
129	110.9	54.1	126.3
94	60.8	37.6	87.6



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411563.D Vial: 19
Acq On : 19 Apr 2016 23:08 Operator: TMB
Sample : L16040858-18 B 2.5X 826-LOW 00 Inst : HPMS8
Misc : 1,2.5 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:37 2016 Quant Results File: 8260WT.RES

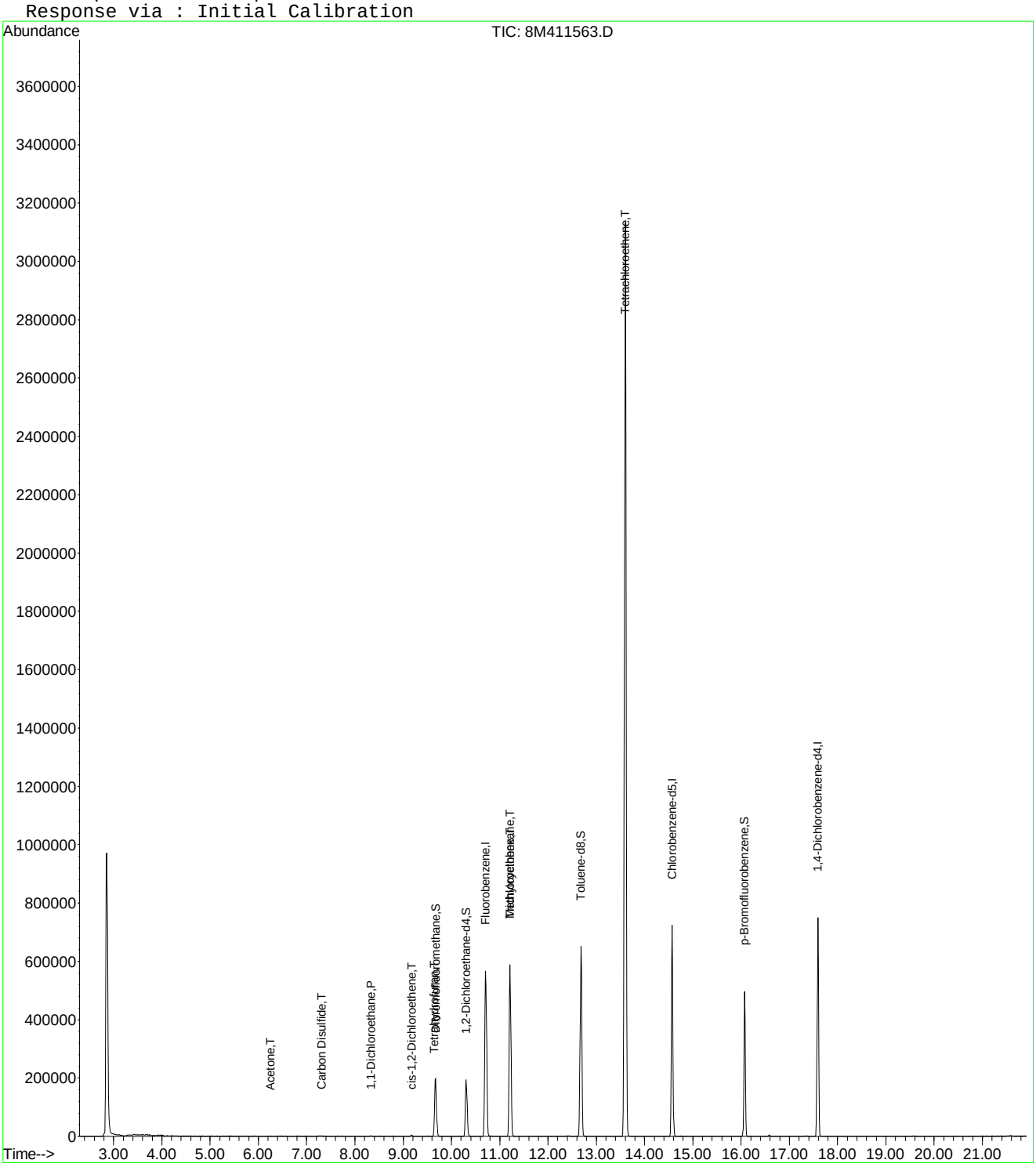
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

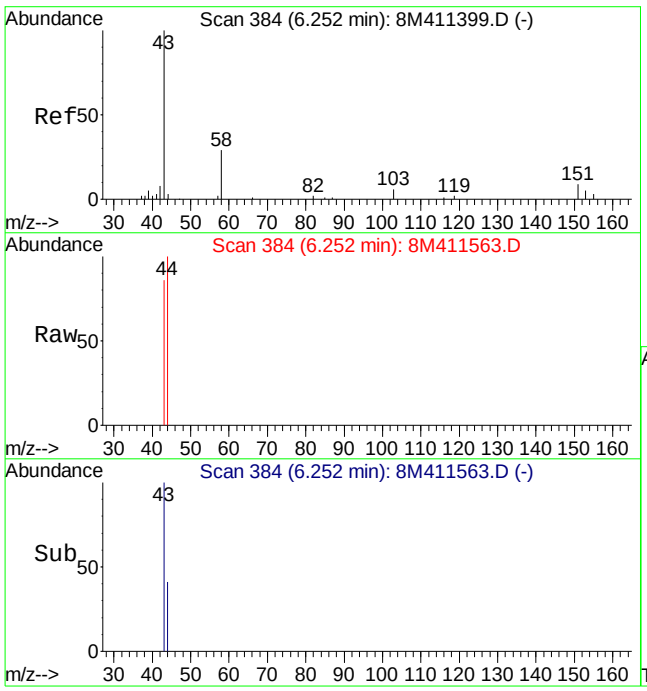
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	634820	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	444637	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	213057	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	171110	26.3620	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 105.44%			
43) 1,2-Dichloroethane-d4	10.30	65	162816	23.8917	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 95.56%			
58) Toluene-d8	12.68	98	542093	24.3632	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.44%			
80) p-Bromofluorobenzene	16.07	95	202322	24.3055	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.24%			
Target Compounds						Qvalue
13) Acetone	6.25	43	518	0.4292	ug/L #	48
20) Carbon Disulfide	7.31	76	4510	0.2047	ug/L #	74
27) 1,1-Dichloroethane	8.33	63	3123	0.2171	ug/L #	69
32) cis-1,2-Dichloroethene	9.18	96	2435	0.3404	ug/L	67
36) Tetrahydrofuran	9.65	42	216	0.1463	ug/L #	41
47) Trichloroethene	11.21	130	222711	34.4224	ug/L	96
48) Methylcyclohexane	11.21	83	2952	0.2871	ug/L #	1
66) Tetrachloroethene	13.60	164	795827	158.8684	ug/L	87

(#) = qualifier out of range (m) = manual integration
8M411563.D 8260WT.M Wed Apr 20 08:38:37 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041916\8M411563.D Vial: 19
Acq On : 19 Apr 2016 23:08 Operator: TMB
Sample : L16040858-18 B 2.5X 826-LOW 00 Inst : HPMS8
Misc : 1,2.5 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

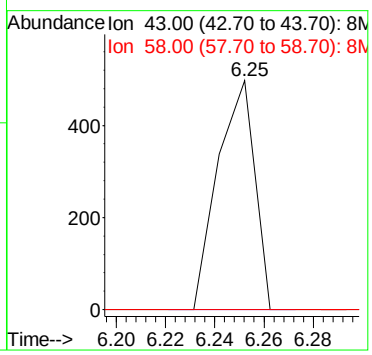


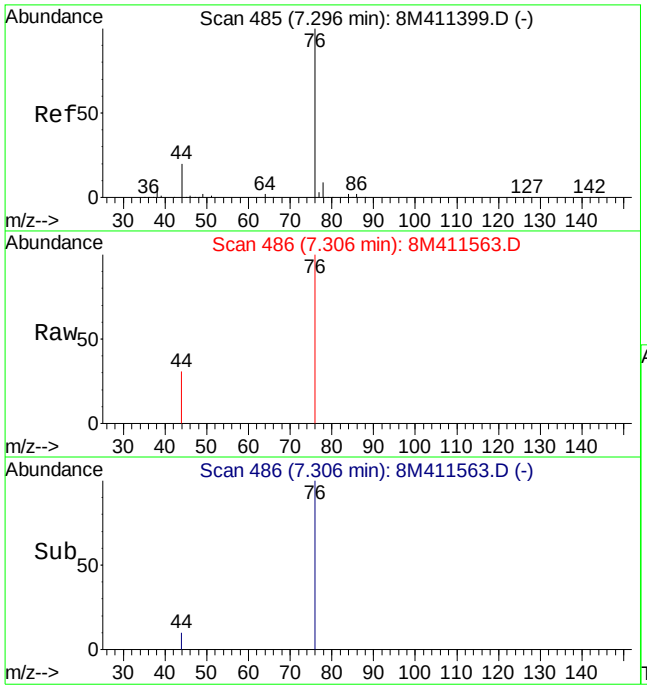


#13
Acetone
Concen: 0.43 ug/L
RT: 6.25 min Scan# 384
Delta R.T. -0.00 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion: 43 Resp: 518

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

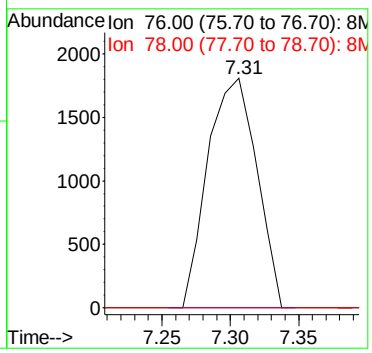


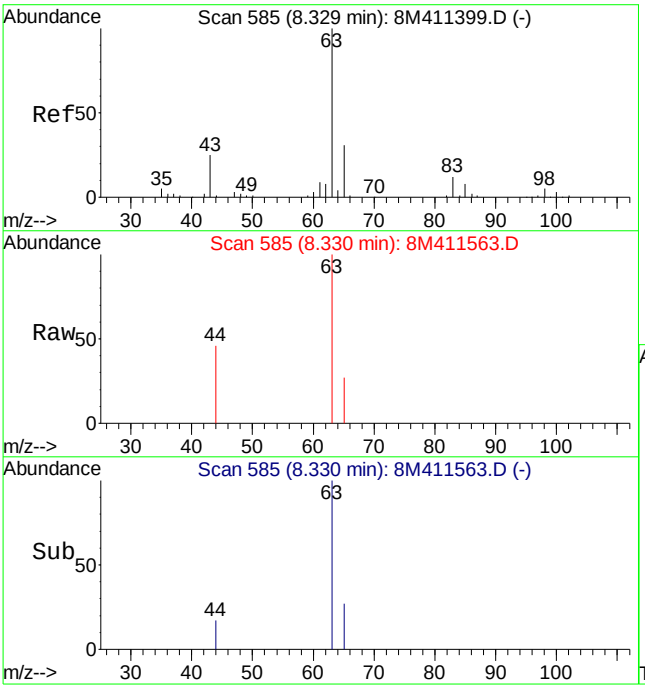


#20
Carbon Disulfide
Concen: 0.20 ug/L
RT: 7.31 min Scan# 486
Delta R.T. 0.01 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion: 76 Resp: 4510

Ion	Ratio	Lower	Upper
76	100		
78	0.0	5.8	13.4#

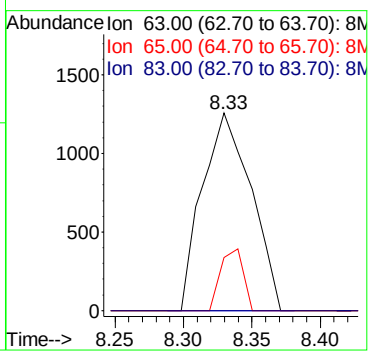


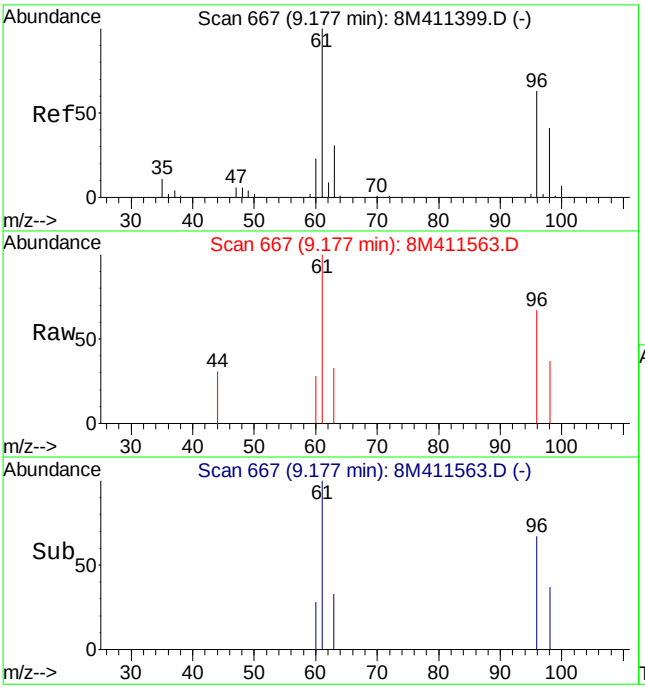


#27
1,1-Dichloroethane
Concen: 0.22 ug/L
RT: 8.33 min Scan# 585
Delta R.T. -0.00 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion: 63 Resp: 3123

Ion	Ratio	Lower	Upper
63	100		
65	14.5	19.1	44.5#
83	0.0	7.7	18.1#

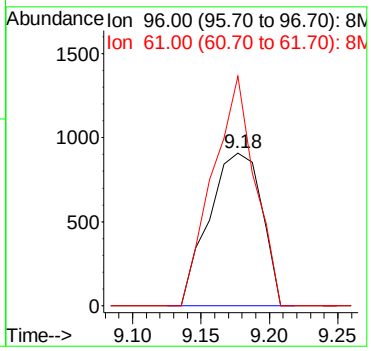


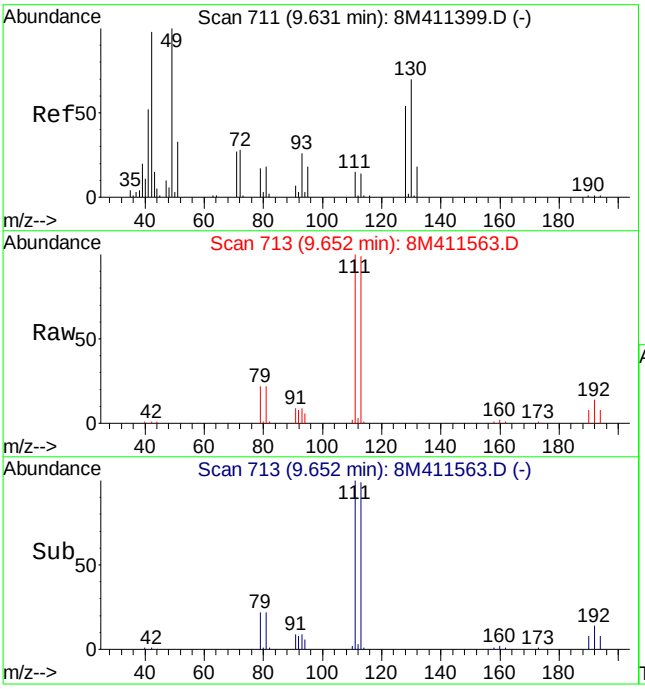


#32
cis-1,2-Dichloroethene
Concen: 0.34 ug/L
RT: 9.18 min Scan# 667
Delta R.T. 0.01 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion: 96 Resp: 2435

Ion	Ratio	Lower	Upper
96	100		
61	120.7	98.9	230.7

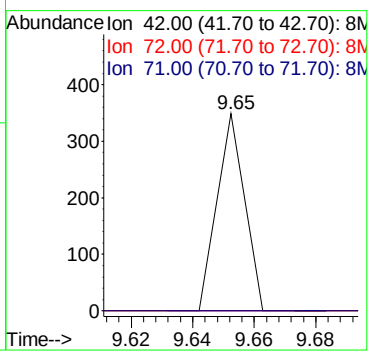


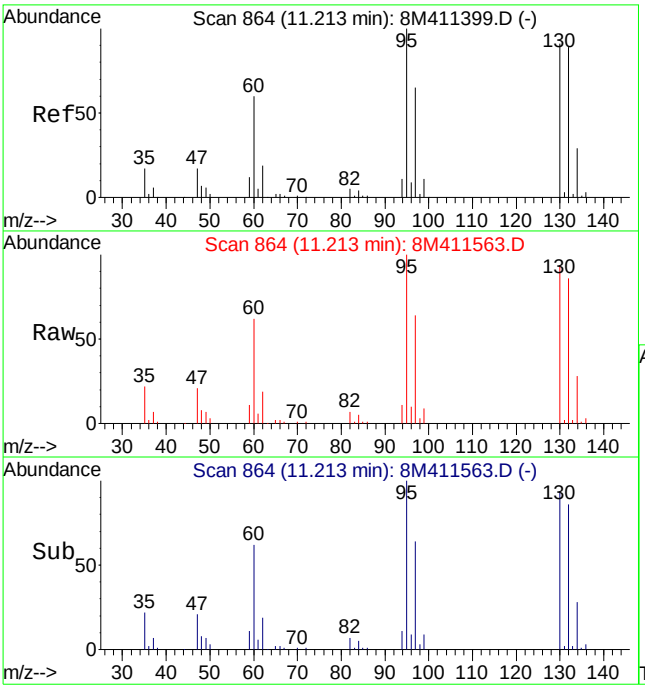


#36
Tetrahydrofuran
Concen: 0.15 ug/L
RT: 9.65 min Scan# 713
Delta R.T. 0.02 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion: 42 Resp: 216

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

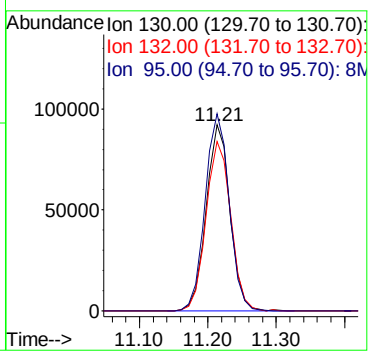


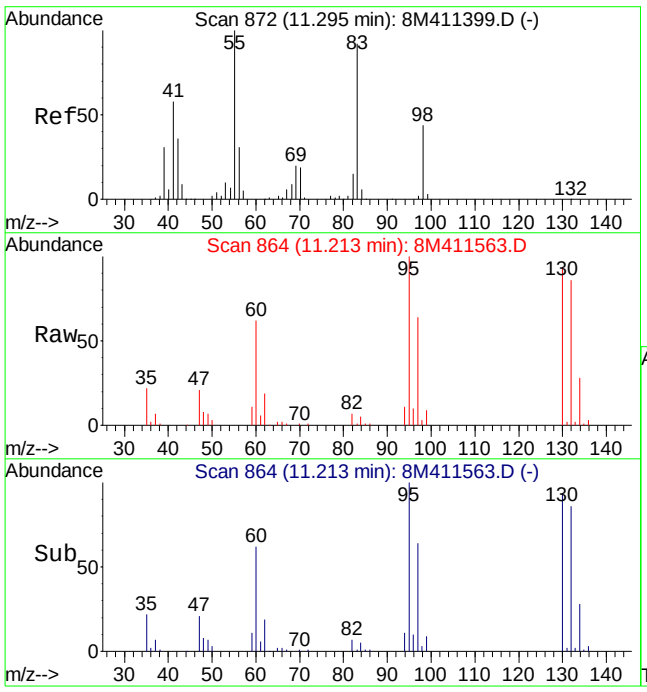


#47
Trichloroethene
Concen: 34.42 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.00 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion:130 Resp: 222711

Ion	Ratio	Lower	Upper
130	100		
132	94.2	59.9	139.7
95	106.9	62.3	145.5

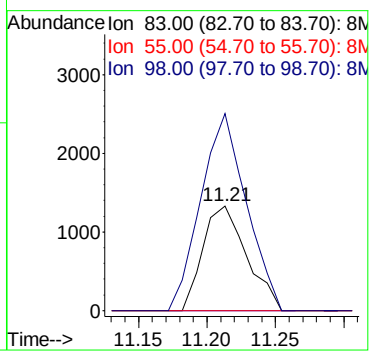


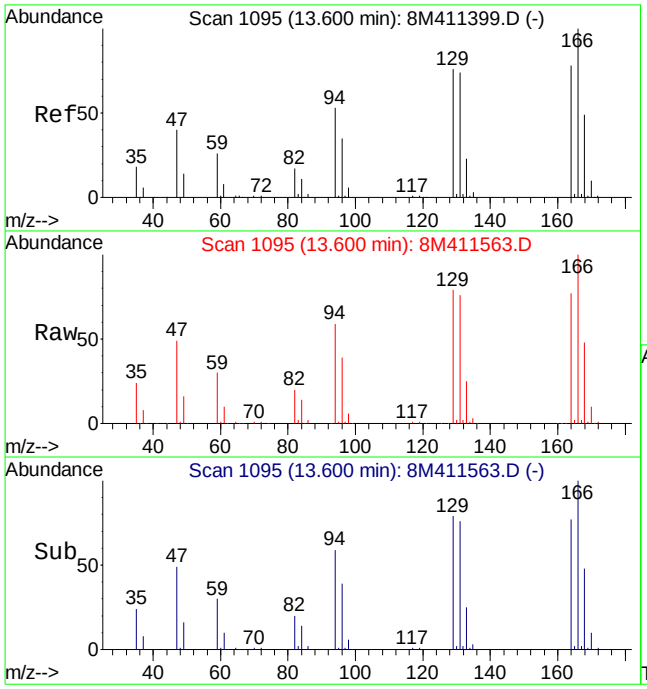


#48
Methylcyclohexane
Concen: 0.29 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.08 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion: 83 Resp: 2952

Ion	Ratio	Lower	Upper
83	100		
55	0.0	55.6	129.8#
98	196.0	28.3	66.1#

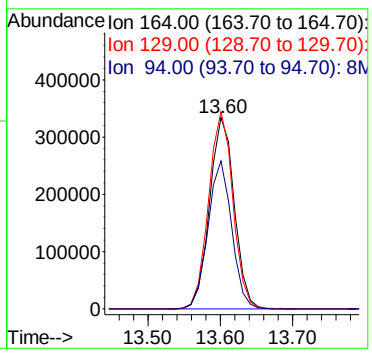




#66
Tetrachloroethene
Concen: 158.87 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. -0.00 min
Lab File: 8M411563.D
Acq: 19 Apr 2016 23:08

Tgt Ion:164 Resp: 795827

Ion	Ratio	Lower	Upper
164	100		
129	101.3	54.1	126.3
94	74.3	37.6	87.6



Data File : C:\MSDCHEM\2\DATA\041816\8M411530.D Vial: 21
Acq On : 19 Apr 2016 1:17 Operator: TMB
Sample : L16040858-19 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:21 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

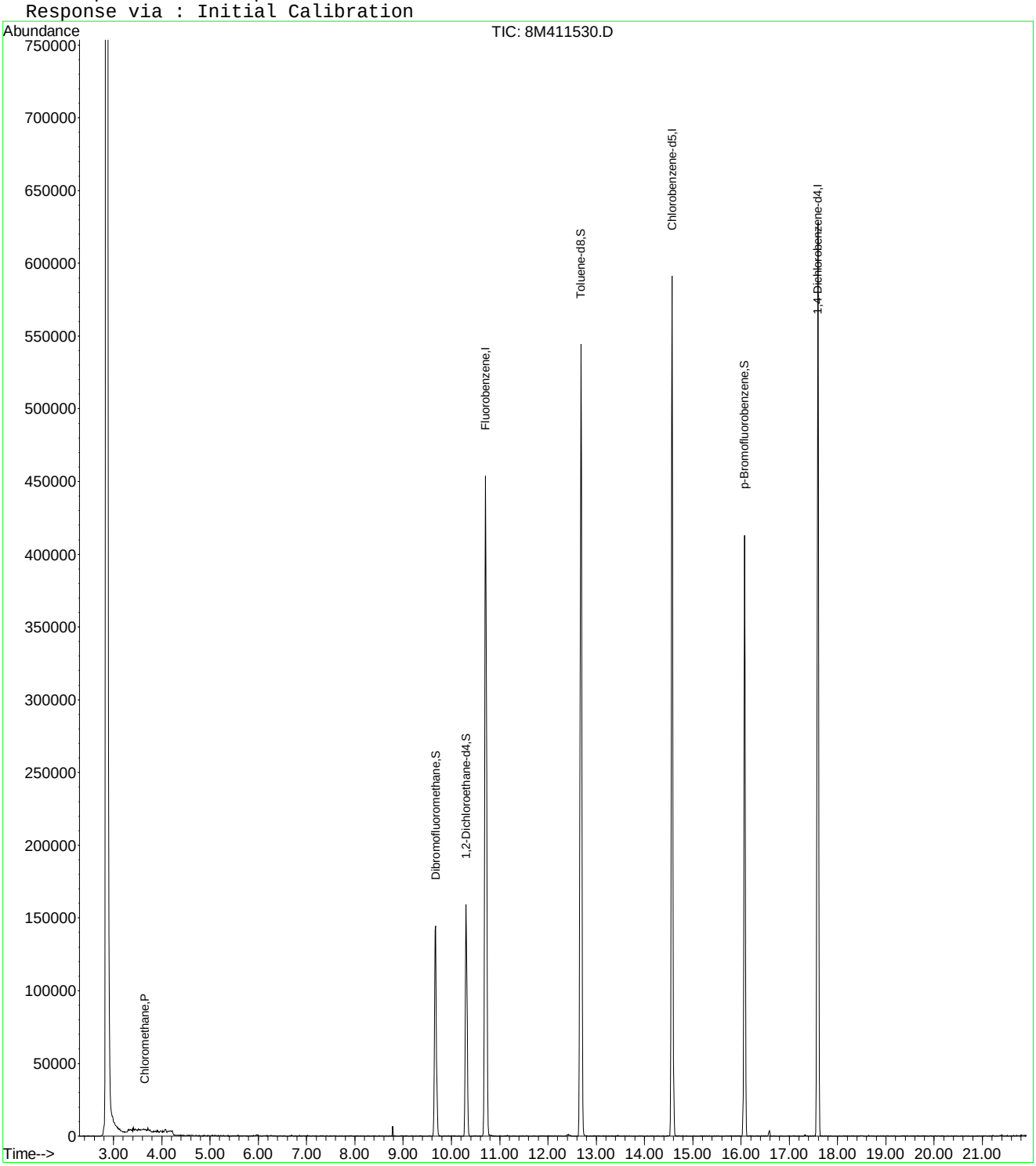
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	504017	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	369271	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	176141	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	123127	23.8925	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.56%			
43) 1,2-Dichloroethane-d4	10.30	65	133752	24.7204	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.88%			
58) Toluene-d8	12.68	98	446441	24.1593	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.64%			
80) p-Bromofluorobenzene	16.07	95	163901	23.8165	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.28%			
Target Compounds						Qvalue
3) Chloromethane	3.65	50	1519	0.1213	ug/L #	71

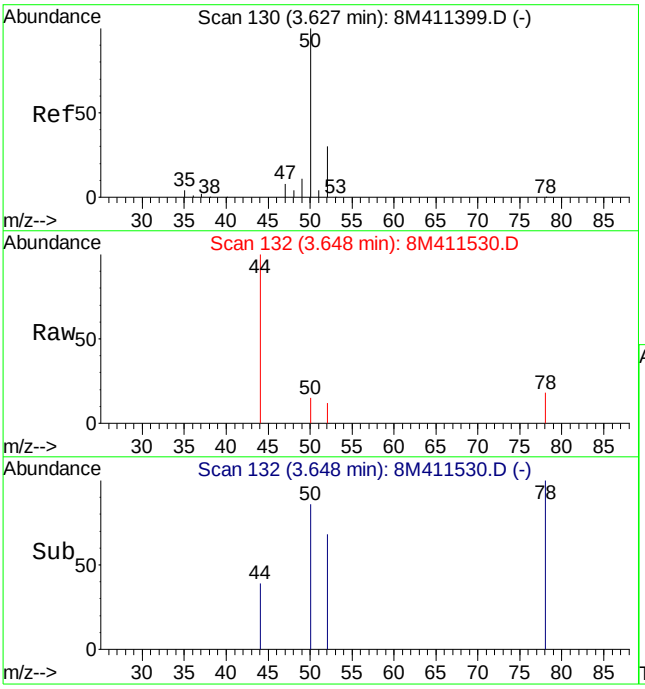
(#) = qualifier out of range (m) = manual integration
8M411530.D 8260WT.M Tue Apr 19 08:41:21 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411530.D Vial: 21
Acq On : 19 Apr 2016 1:17 Operator: TMB
Sample : L16040858-19 A 826-SPE Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

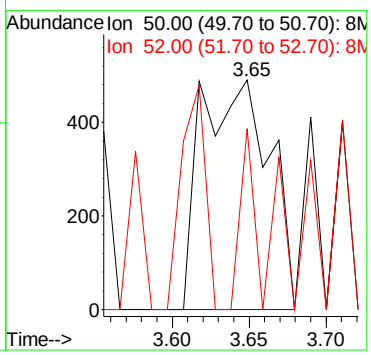




#3
Chloromethane
Concen: 0.12 ug/L
RT: 3.65 min Scan# 132
Delta R.T. 0.02 min
Lab File: 8M411530.D
Acq: 19 Apr 2016 1:17

Tgt Ion: 50 Resp: 1519

Ion	Ratio	Lower	Upper
50	100		
52	15.8	19.3	44.9#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411554.D Vial: 11
Acq On : 19 Apr 2016 19:14 Operator: TMB
Sample : L16040858-20 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:27 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	755907	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	539405	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	261384	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	177371	22.9492	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 91.80%			
43) 1,2-Dichloroethane-d4	10.31	65	190078	23.4241	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 93.68%			
58) Toluene-d8	12.68	98	651945	24.1525	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.60%			
80) p-Bromofluorobenzene	16.07	95	245922	24.0810	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.32%			

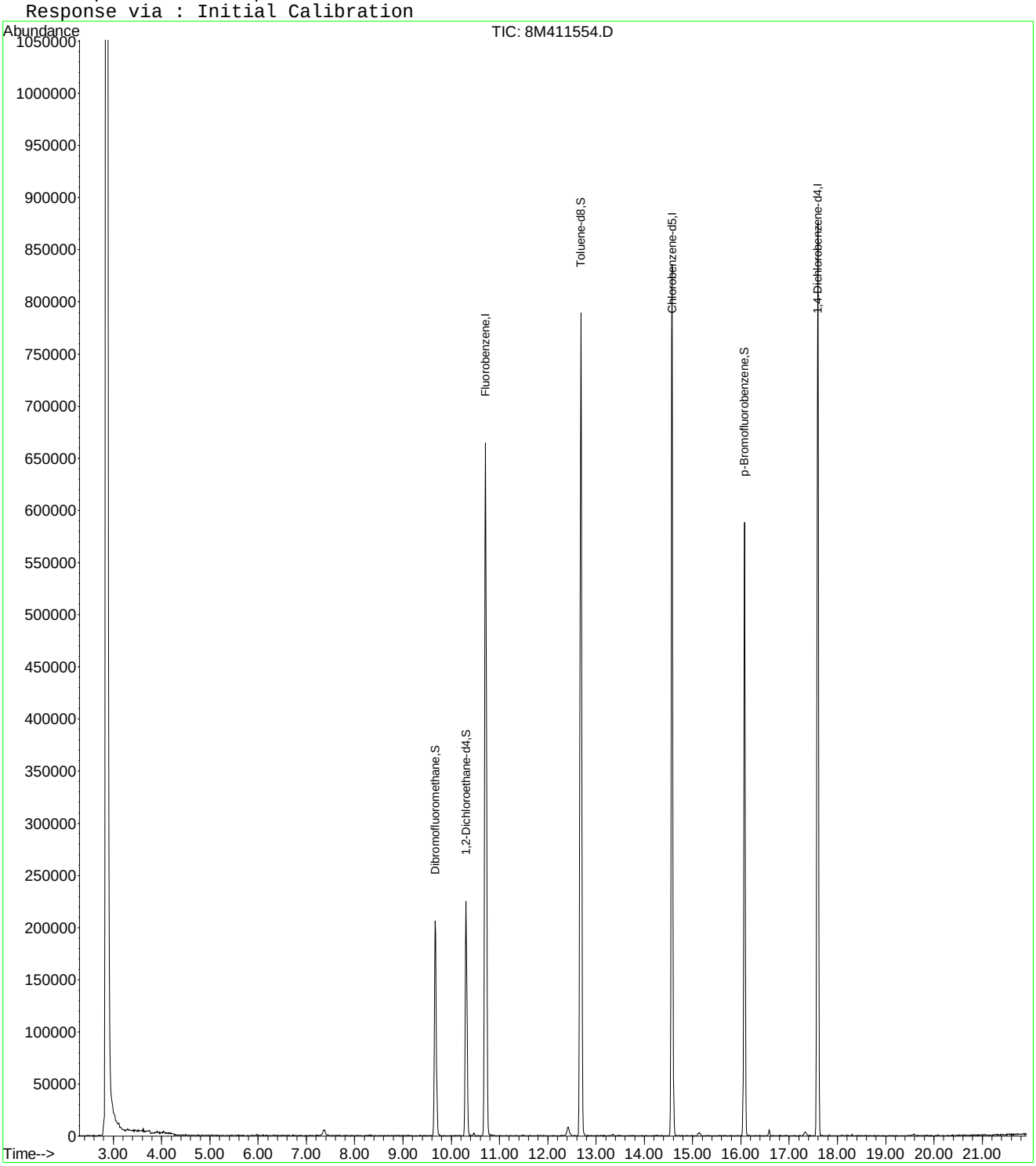
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
8M411554.D 8260WT.M Wed Apr 20 08:38:28 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411554.D Vial: 11
Acq On : 19 Apr 2016 19:14 Operator: TMB
Sample : L16040858-20 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041916\8M411555.D Vial: 12
Acq On : 19 Apr 2016 19:44 Operator: TMB
Sample : L16040858-21 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:28 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	633094	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	451350	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	216988	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	152129	23.5016	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.00%			
43) 1,2-Dichloroethane-d4	10.31	65	164640	24.2252	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.92%			
58) Toluene-d8	12.68	98	550133	24.3568	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.44%			
80) p-Bromofluorobenzene	16.07	95	204399	24.1101	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.44%			

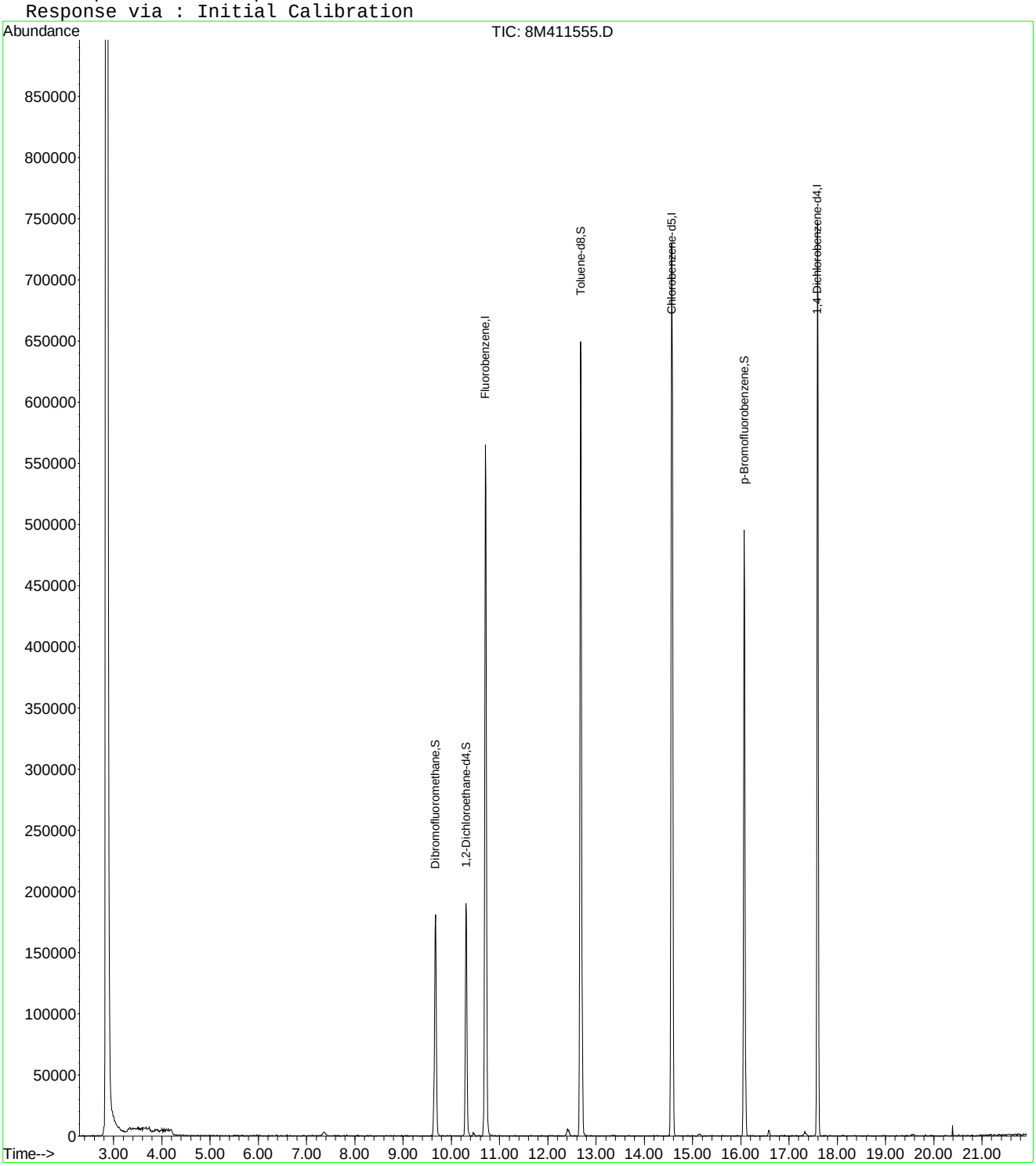
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
8M411555.D 8260WT.M Wed Apr 20 08:38:29 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411555.D Vial: 12
Acq On : 19 Apr 2016 19:44 Operator: TMB
Sample : L16040858-21 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411556.D Vial: 13
Acq On : 19 Apr 2016 20:13 Operator: TMB
Sample : L16040858-22 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:29 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

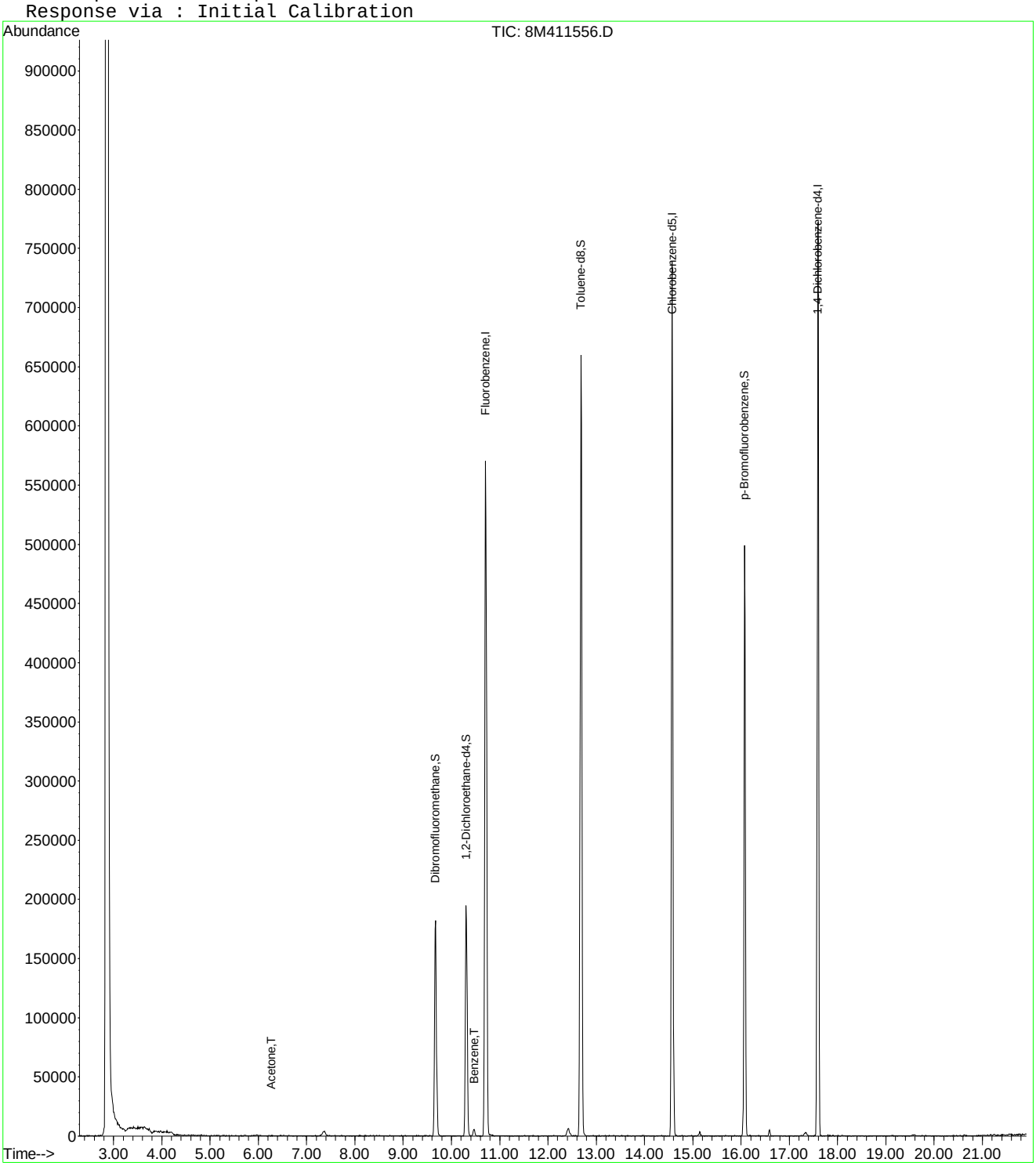
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	633413	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	453452	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	219545	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	156158	24.1119	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.44%			
43) 1,2-Dichloroethane-d4	10.30	65	171131	25.1676	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.68%			
58) Toluene-d8	12.68	98	555428	24.4772	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.92%			
80) p-Bromofluorobenzene	16.07	95	207529	24.1942	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.76%			
Target Compounds						Qvalue
13) Acetone	6.27	43	505	0.4194	ug/L #	48
46) Benzene	10.47	78	7762	0.3027	ug/L	95

(#) = qualifier out of range (m) = manual integration
8M411556.D 8260WT.M Wed Apr 20 08:38:30 2016 Page 1

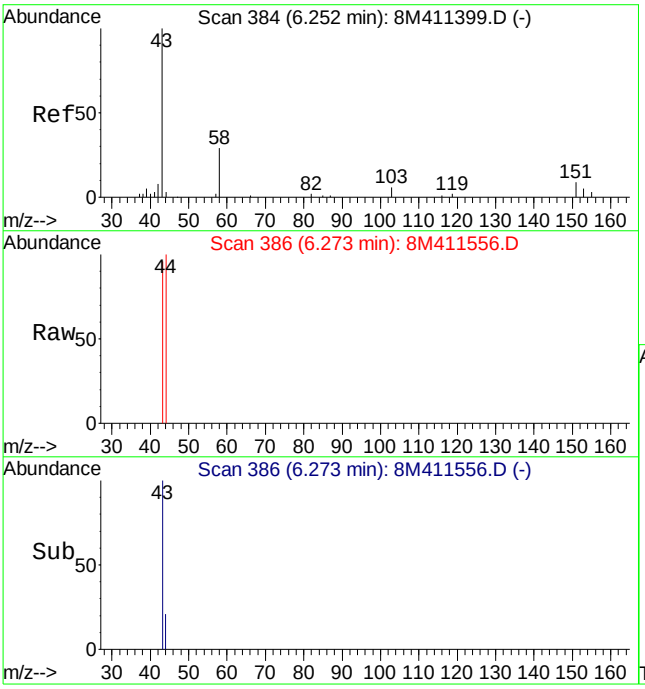
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411556.D Vial: 13
Acq On : 19 Apr 2016 20:13 Operator: TMB
Sample : L16040858-22 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



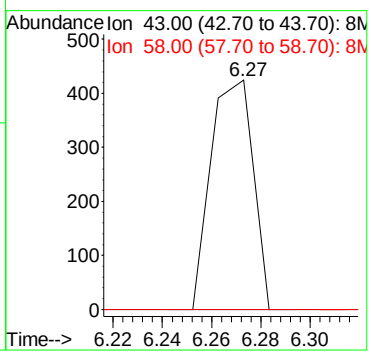
8M411556.D 8260WT.M Wed Apr 20 08:38:30 2016 Page 2

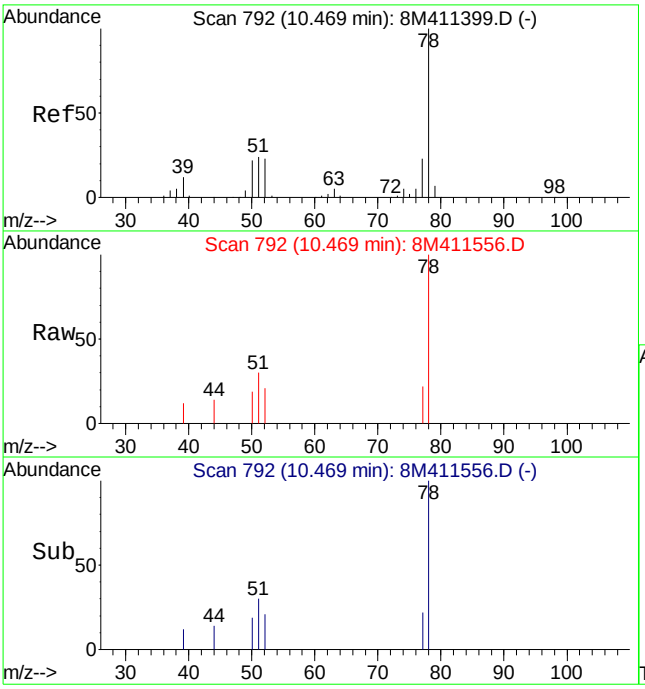


#13
Acetone
Concen: 0.42 ug/L
RT: 6.27 min Scan# 386
Delta R.T. 0.02 min
Lab File: 8M411556.D
Acq: 19 Apr 2016 20:13

Tgt Ion: 43 Resp: 505

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

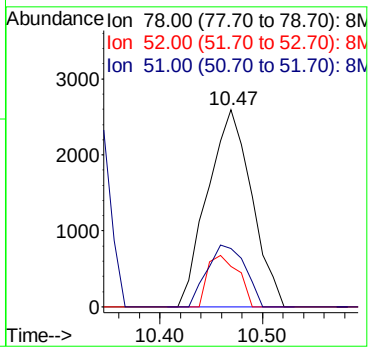




#46
Benzene
Concen: 0.30 ug/L
RT: 10.47 min Scan# 792
Delta R.T. -0.00 min
Lab File: 8M411556.D
Acq: 19 Apr 2016 20:13

Tgt Ion: 78 Resp: 7762

Ion	Ratio	Lower	Upper
78	100		
52	18.0	12.2	28.4
51	27.0	14.9	34.9



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411557.D Vial: 14
Acq On : 19 Apr 2016 20:42 Operator: TMB
Sample : L16040858-23 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:30 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

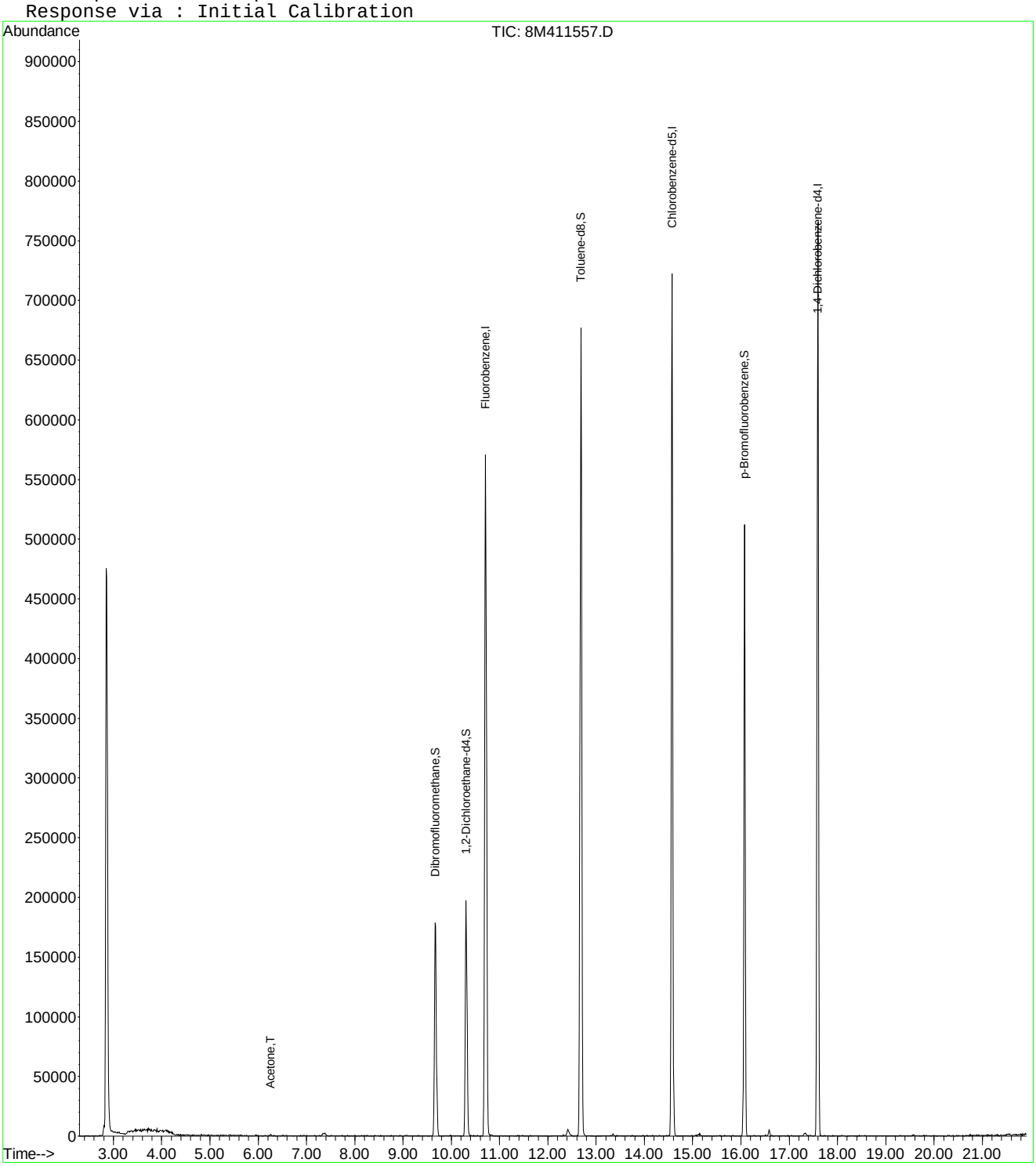
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	632889	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	453155	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	215488	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	154549	23.8832 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.52%		
43) 1,2-Dichloroethane-d4	10.31	65	163483	24.0627 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.24%		
58) Toluene-d8	12.68	98	548740	24.1983 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.80%		
80) p-Bromofluorobenzene	16.07	95	205280	24.3826 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.52%		
Target Compounds					Qvalue
13) Acetone	6.26	43	1356	1.1270 ug/L #	48

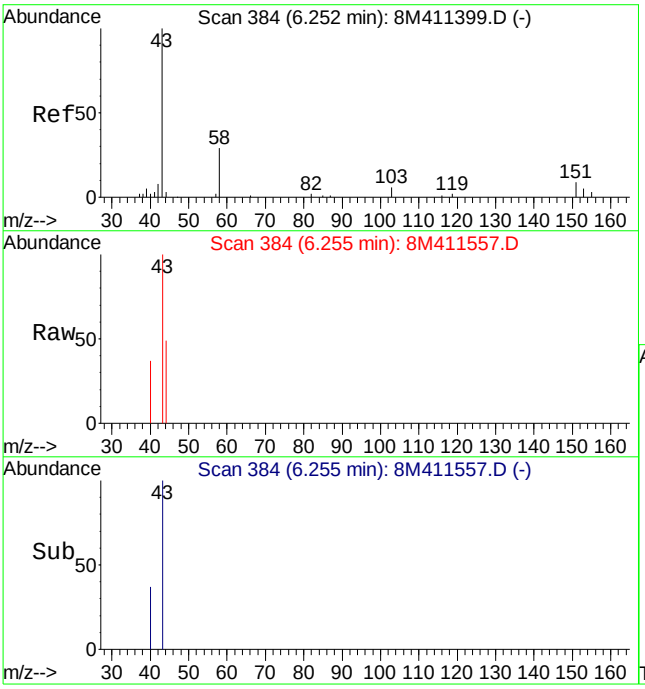
(#) = qualifier out of range (m) = manual integration
8M411557.D 8260WT.M Wed Apr 20 08:38:31 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411557.D Vial: 14
Acq On : 19 Apr 2016 20:42 Operator: TMB
Sample : L16040858-23 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

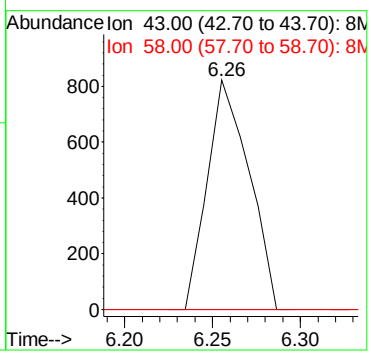




#13
Acetone
Concen: 1.13 ug/L
RT: 6.26 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411557.D
Acq: 19 Apr 2016 20:42

Tgt Ion: 43 Resp: 1356

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#



Data File : C:\MSDCHEM\2\DATA\041916\8M411553.D Vial: 10
Acq On : 19 Apr 2016 18:45 Operator: TMB
Sample : L16040858-24 A REF 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:26 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	782131	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	564967	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	266679	25.00	ug/L	0.00

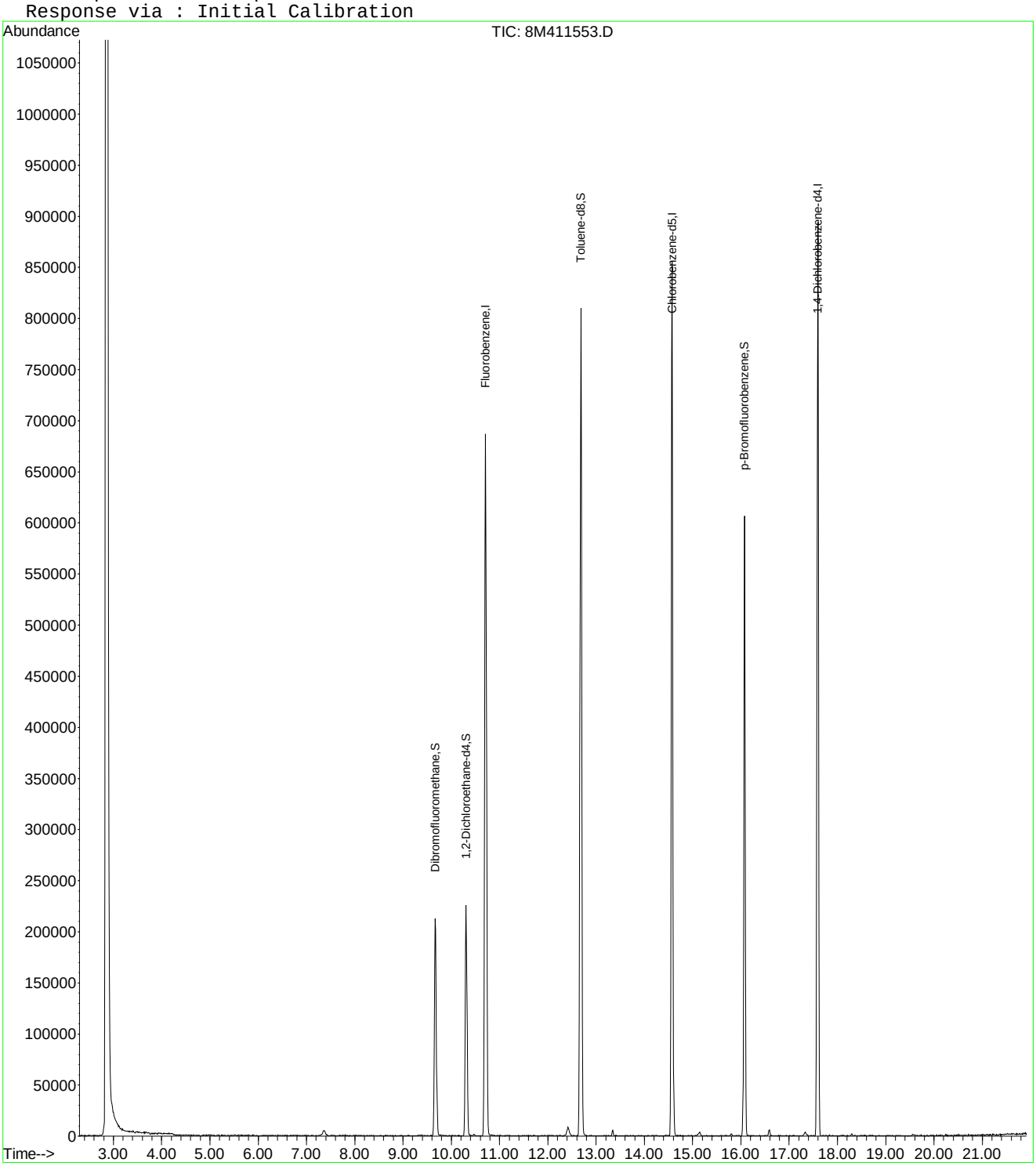
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	188555	23.5783	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.32%			
43) 1,2-Dichloroethane-d4	10.31	65	192265	22.8992	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 91.60%			
58) Toluene-d8	12.68	98	673734	23.8304	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.32%			
80) p-Bromofluorobenzene	16.07	95	252018	24.1880	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.76%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
8M411553.D 8260WT.M Wed Apr 20 08:38:27 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041916\8M411553.D Vial: 10
Acq On : 19 Apr 2016 18:45 Operator: TMB
Sample : L16040858-24 A REF 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041916\8M411549.D Vial: 6
Acq On : 19 Apr 2016 16:48 Operator: TMB
Sample : L16040858-25 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 17:10:23 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	748223	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	530935	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	272607	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.66	111	176944	23.1291 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 92.52%		
43) 1,2-Dichloroethane-d4	10.30	65	185748	23.1256 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 92.52%		
58) Toluene-d8	12.68	98	641227	24.1344 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.52%		
80) p-Bromofluorobenzene	16.07	95	250249	23.4959 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 94.00%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.17	85	263104	21.8628 ug/L	100
3) Chloromethane	3.63	50	412080	22.1629 ug/L	97
4) Vinyl Chloride	3.85	62	231055	20.8629 ug/L	97
5) 1,3-Butadiene	3.91	54	976	Below Cal #	1
6) Bromomethane	4.74	94	105453	23.3298 ug/L	97
7) Chloroethane	4.90	64	137523	22.5602 ug/L	97
8) Trichlorofluoromethane	5.38	101	273798	19.9908 ug/L	99
9) Diethyl ether	5.91	59	2733	0.4949 ug/L #	29
10) Isoprene	5.95	67	248914	23.8492 ug/L	92
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	160069	21.5110 ug/L	93
13) Acetone	6.24	43	30569	21.4908 ug/L	97
14) 1,1-Dichloroethene	6.48	61	283203	20.0016 ug/L	92
16) Dimethyl Sulfide	6.74	62	188259	29.2131 ug/L	88
17) Iodomethane	7.00	142	70033	22.7954 ug/L	100
18) Methyl acetate	7.00	43	82177	16.3982 ug/L	95
19) Methylene Chloride	7.25	84	158065	20.2663 ug/L	76
20) Carbon Disulfide	7.30	76	507104	19.5308 ug/L	98
21) Acrylonitrile	7.44	53	43949	20.4792 ug/L	98
22) Methyl Tert Butyl Ether	7.48	73	322166	20.4348 ug/L	94
23) trans-1,2-Dichloroethene	7.71	61	288302	21.3520 ug/L	87
24) n-Hexane	7.79	57	272448	20.7164 ug/L	96
27) 1,1-Dichloroethane	8.33	63	336912	19.8724 ug/L	97
29) 2-Butanone	8.89	43	43927	18.6219 ug/L	94
31) 2,2-Dichloropropane	9.10	77	273253	21.6535 ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	175409	20.8047 ug/L	81
33) Chloroform	9.37	83	302029	21.1807 ug/L	98
34) 1-Bromopropane	9.52	122	37755	30.2361 ug/L	97
35) Bromochloromethane	9.61	130	82940	19.3979 ug/L	76
36) Tetrahydrofuran	9.63	42	536	0.3079 ug/L #	41
38) 1,1,1-Trichloroethane	9.91	97	261663	20.7246 ug/L	99
39) Cyclohexane	9.94	56	365722	20.9960 ug/L	89
40) 1,1-Dichloropropene	10.11	75	225605	20.2588 ug/L	95
42) Carbon Tetrachloride	10.25	117	232629	20.7616 ug/L	98
45) 1,2-Dichloroethane	10.43	62	225900	20.8812 ug/L	97
46) Benzene	10.47	78	642965	21.2286 ug/L	93
47) Trichloroethene	11.21	130	166831	21.8774 ug/L	97
48) Methylcyclohexane	11.30	83	256841	21.1933 ug/L	89
49) 1,2-Dichloropropane	11.43	63	193604	21.3616 ug/L	93
50) Bromodichloromethane	11.73	83	220162	20.5052 ug/L	99
51) 1,4-Dioxane	11.73	88	220	6.9821 ug/L #	12

(#) = qualifier out of range (m) = manual integration
8M411549.D 8260WT.M Tue Apr 19 17:10:23 2016 Page 1

Data File : C:\MSDchem\2\data\041916\8M411549.D Vial: 6
Acq On : 19 Apr 2016 16:48 Operator: TMB
Sample : L16040858-25 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 17:10:23 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

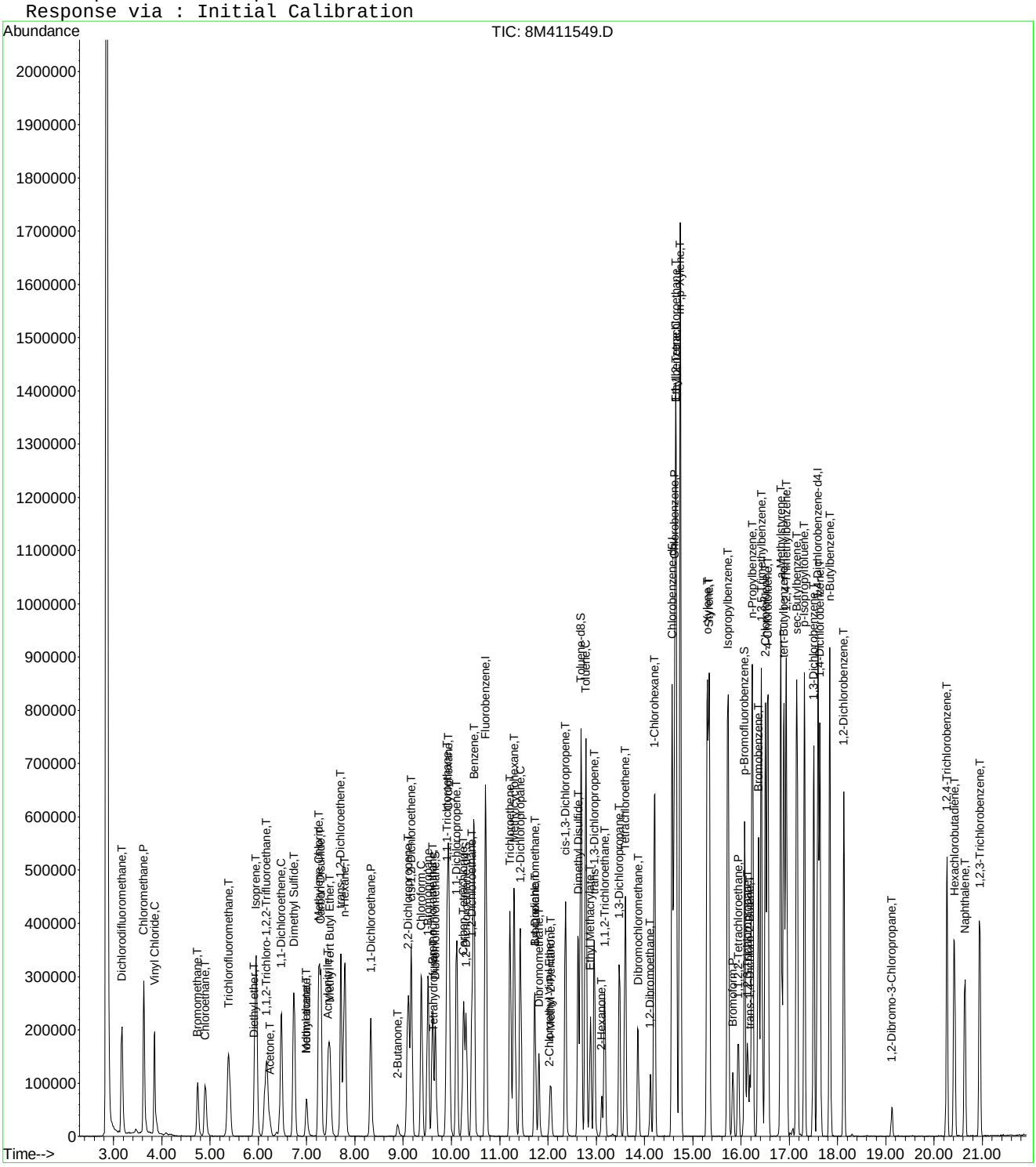
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
52)	Dibromomethane	11.81	93	77270	20.4019 ug/L		93
53)	2-Chloroethyl Vinyl Ether	12.03	63	7488	2.0253 ug/L		84
54)	4-Methyl-2-Pentanone	12.06	58	36327	18.1741 ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	271529	22.9071 ug/L		99
56)	Dimethyl Disulfide	12.63	79	133592	21.2561 ug/L		97
59)	Toluene	12.78	91	674238	21.5908 ug/L		98
60)	Ethyl Methacrylate	12.88	69	142001	21.5734 ug/L		91
62)	trans-1,3-Dichloropropene	12.96	75	210697	20.1071 ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	100665	20.1550 ug/L		97
64)	2-Hexanone	13.11	58	35280	19.0440 ug/L	#	99
65)	1,3-Dichloropropane	13.48	76	197390	21.1208 ug/L		86
66)	Tetrachloroethene	13.60	164	120412	20.1304 ug/L		89
67)	Dibromochloromethane	13.87	129	132425	20.1182 ug/L		98
68)	1,2-Dibromoethane	14.12	107	99860	19.6601 ug/L		99
69)	1-Chlorohexane	14.21	91	239955	22.6836 ug/L		87
70)	Chlorobenzene	14.62	112	447072	21.2179 ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.65	131	152772	20.7945 ug/L		99
72)	Ethylbenzene	14.65	106	240399	20.5973 ug/L		95
73)	m-,p-Xylene	14.74	106	591694	43.3963 ug/L		95
74)	o-Xylene	15.31	106	292888	21.1485 ug/L		98
75)	Styrene	15.34	104	476687	21.6896 ug/L		99
76)	Bromoform	15.83	173	71143	17.8567 ug/L		98
77)	Isopropylbenzene	15.73	105	749448	22.4876 ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	117133	19.5523 ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	31734	19.4790 ug/L		98
82)	trans-1,4-Dichloro-2-Buten	16.18	53	41831	17.4356 ug/L		91
83)	n-Propylbenzene	16.24	91	955098	23.3800 ug/L		98
84)	Bromobenzene	16.36	156	164979	20.3095 ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	642611	22.4139 ug/L		98
86)	2-Chlorotoluene	16.50	91	587267	22.0963 ug/L		99
87)	4-Chlorotoluene	16.56	91	601028	21.7123 ug/L		97
88)	a-Methylstyrene	16.83	118	362174	23.1964 ug/L		98
89)	tert-Butylbenzene	16.89	134	130088	22.2766 ug/L		93
90)	1,2,4-Trimethylbenzene	16.94	105	648727	21.5533 ug/L		99
91)	sec-Butylbenzene	17.16	105	813361	22.8518 ug/L		96
92)	p-Isopropyltoluene	17.31	119	645507	22.2483 ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	345785	20.9220 ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	347391	20.9973 ug/L		93
95)	n-Butylbenzene	17.84	91	670050	22.6911 ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	303322	20.7393 ug/L		93
97)	1,2-Dibromo-3-Chloropropan	19.12	75	19096	17.6478 ug/L		80
98)	1,2,4-Trichlorobenzene	20.27	180	193577	18.8091 ug/L		99
99)	Hexachlorobutadiene	20.42	225	94679	23.3733 ug/L		96
100)	Naphthalene	20.64	128	279924	16.2400 ug/L		99
101)	1,2,3-Trichlorobenzene	20.95	180	150544	17.5283 ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411549.D 8260WT.M Tue Apr 19 17:10:23 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041916\8M411549.D Vial: 6
Acq On : 19 Apr 2016 16:48 Operator: TMB
Sample : L16040858-25 A MS 826-LOW Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 17:10 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411549.D 8260WT.M Tue Apr 19 17:10:24 2016 Page 3

Data File : C:\MSDchem\2\data\041916\8M411550.D Vial: 7
Acq On : 19 Apr 2016 17:17 Operator: TMB
Sample : L16040858-26 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 17:39:07 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	781231	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	556011	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	295853	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.66	111	186799	23.3856 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 93.56%		
43) 1,2-Dichloroethane-d4	10.30	65	197870	23.5939 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.36%		
58) Toluene-d8	12.68	98	675468	24.2766 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.12%		
80) p-Bromofluorobenzene	16.07	95	265735	22.9895 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.96%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.17	85	256977	20.4515 ug/L	99
3) Chloromethane	3.63	50	424394	21.8608 ug/L	97
4) Vinyl Chloride	3.85	62	253107	21.8884 ug/L	98
5) 1,3-Butadiene	3.89	54	765	Below Cal #	1
6) Bromomethane	4.74	94	109043	23.1183 ug/L	100
7) Chloroethane	4.90	64	137089	21.5388 ug/L	98
8) Trichlorofluoromethane	5.39	101	276748	19.3524 ug/L	99
9) Diethyl ether	5.92	59	3069	0.5323 ug/L #	51
10) Isoprene	5.95	67	248764	22.8277 ug/L	92
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	158669	20.4220 ug/L	93
13) Acetone	6.25	43	32347	21.7800 ug/L	98
14) 1,1-Dichloroethene	6.47	61	287960	19.4782 ug/L	92
16) Dimethyl Sulfide	6.74	62	197559	29.3610 ug/L	92
17) Iodomethane	7.00	142	67835	21.4440 ug/L	97
18) Methyl acetate	7.01	43	88159	16.8487 ug/L	96
19) Methylene Chloride	7.26	84	162141	19.9106 ug/L	77
20) Carbon Disulfide	7.30	76	506311	18.6763 ug/L	98
21) Acrylonitrile	7.44	53	47203	21.0662 ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	350189	21.2738 ug/L	96
23) trans-1,2-Dichloroethene	7.71	61	288470	20.4617 ug/L	89
24) n-Hexane	7.79	57	271085	19.7419 ug/L	98
27) 1,1-Dichloroethane	8.33	63	341004	19.2639 ug/L	97
29) 2-Butanone	8.89	43	49025	19.9049 ug/L	96
31) 2,2-Dichloropropane	9.11	77	267993	20.3394 ug/L	97
32) cis-1,2-Dichloroethene	9.17	96	181309	20.5959 ug/L	85
33) Chloroform	9.37	83	302540	20.3201 ug/L	100
34) 1-Bromopropane	9.52	122	39484	30.2848 ug/L	92
35) Bromochloromethane	9.61	130	88321	19.7836 ug/L	77
38) 1,1,1-Trichloroethane	9.91	97	268886	20.3968 ug/L	98
39) Cyclohexane	9.94	56	365662	20.1056 ug/L	90
40) 1,1-Dichloropropene	10.11	75	229374	19.7270 ug/L	94
42) Carbon Tetrachloride	10.25	117	232391	19.8641 ug/L	99
45) 1,2-Dichloroethane	10.43	62	234274	20.7403 ug/L	97
46) Benzene	10.47	78	657890	20.8036 ug/L	94
47) Trichloroethene	11.21	130	165785	20.8217 ug/L	97
48) Methylcyclohexane	11.30	83	263605	20.8324 ug/L	90
49) 1,2-Dichloropropane	11.43	63	198490	20.9753 ug/L	92
50) Bromodichloromethane	11.73	83	230205	20.5347 ug/L	98
52) Dibromomethane	11.81	93	80581	20.3772 ug/L	93
54) 4-Methyl-2-Pentanone	12.06	58	41259	19.7694 ug/L	92

(#) = qualifier out of range (m) = manual integration
8M411550.D 8260WT.M Tue Apr 19 17:39:07 2016 Page 1

Data File : C:\MSDchem\2\data\041916\8M411550.D Vial: 7
Acq On : 19 Apr 2016 17:17 Operator: TMB
Sample : L16040858-26 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 17:39:07 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

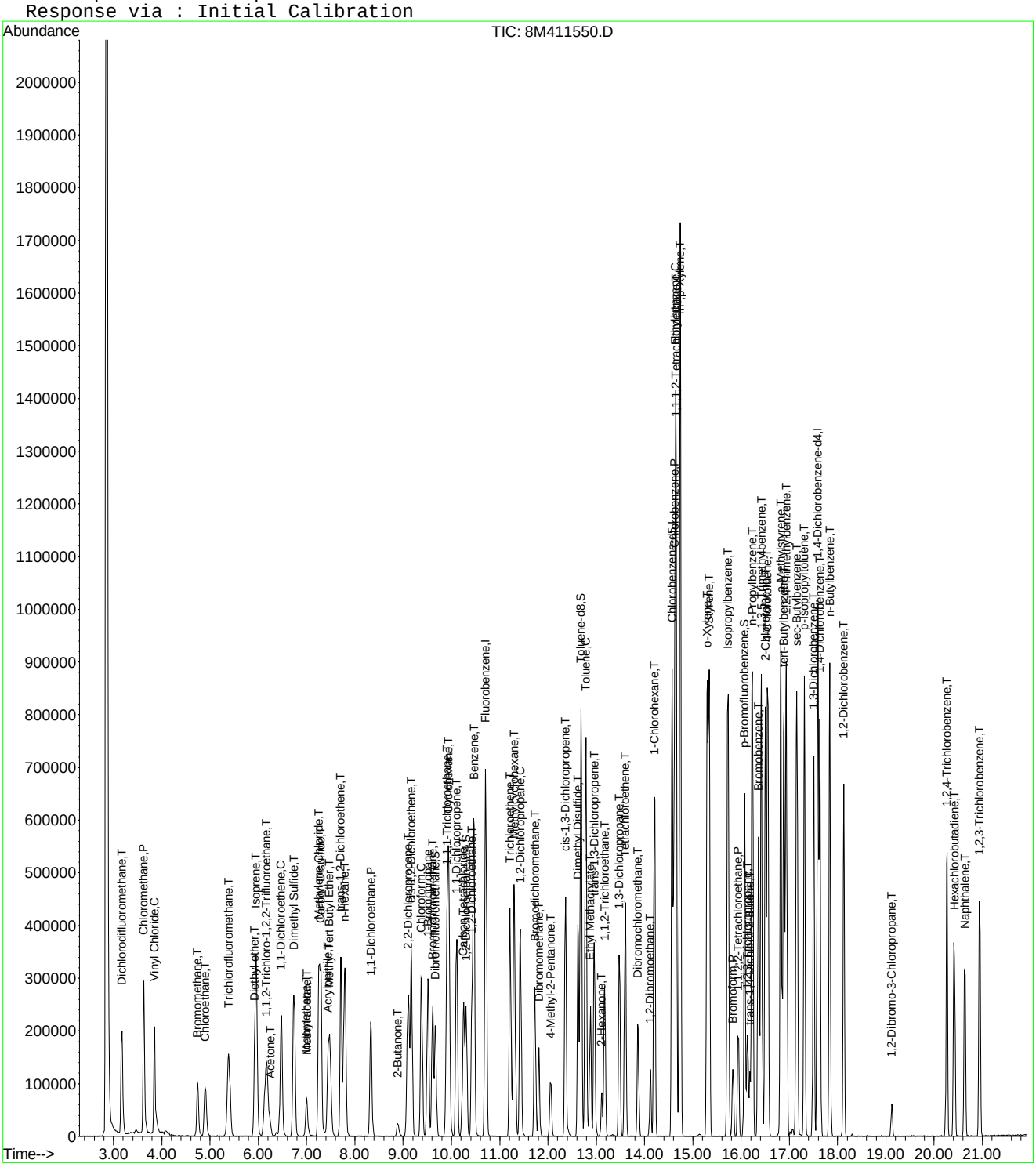
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	cis-1,3-Dichloropropene	12.36	75	282673	22.8397	ug/L		99
56)	Dimethyl Disulfide	12.62	79	137339	20.9290	ug/L		95
59)	Toluene	12.79	91	677633	20.7208	ug/L		99
60)	Ethyl Methacrylate	12.88	69	152338	22.1001	ug/L		88
62)	trans-1,3-Dichloropropene	12.96	75	221362	20.1721	ug/L		98
63)	1,1,2-Trichloroethane	13.18	97	107835	20.6169	ug/L		97
64)	2-Hexanone	13.12	58	39114	20.1614	ug/L	#	99
65)	1,3-Dichloropropane	13.48	76	211589	21.6191	ug/L		87
66)	Tetrachloroethene	13.60	164	121200	19.3483	ug/L		91
67)	Dibromochloromethane	13.86	129	140989	20.4532	ug/L		99
68)	1,2-Dibromoethane	14.12	107	107376	20.1834	ug/L		99
69)	1-Chlorohexane	14.21	91	238878	21.5634	ug/L		83
70)	Chlorobenzene	14.62	112	453513	20.5529	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.66	131	154294	20.0545	ug/L		99
72)	Ethylbenzene	14.65	106	246086	20.1337	ug/L		96
73)	m-,p-Xylene	14.74	106	591562	41.4299	ug/L		95
74)	o-Xylene	15.30	106	295972	20.4074	ug/L		98
75)	Styrene	15.34	104	488885	21.2414	ug/L		100
76)	Bromoform	15.83	173	74313	17.8119	ug/L		100
77)	Isopropylbenzene	15.73	105	756732	21.6821	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.94	83	127164	19.5588	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	32583	18.4287	ug/L		90
82)	trans-1,4-Dichloro-2-Buten	16.19	53	43969	16.8868	ug/L		86
83)	n-Propylbenzene	16.24	91	967488	21.8224	ug/L		97
84)	Bromobenzene	16.36	156	169476	19.2238	ug/L		89
85)	1,3,5-Trimethylbenzene	16.42	105	646718	20.7848	ug/L		99
86)	2-Chlorotoluene	16.51	91	602057	20.8729	ug/L		99
87)	4-Chlorotoluene	16.55	91	595979	19.8382	ug/L		98
88)	a-Methylstyrene	16.83	118	356950	21.0655	ug/L		98
89)	tert-Butylbenzene	16.89	134	129387	20.4157	ug/L		91
90)	1,2,4-Trimethylbenzene	16.94	105	658129	20.1476	ug/L		100
91)	sec-Butylbenzene	17.16	105	803834	20.8097	ug/L		96
92)	p-Isopropyltoluene	17.31	119	644911	20.4812	ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	351099	19.5744	ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	358040	19.9406	ug/L		93
95)	n-Butylbenzene	17.84	91	668154	20.8490	ug/L		95
96)	1,2-Dichlorobenzene	18.13	146	314819	19.8341	ug/L		93
97)	1,2-Dibromo-3-Chloropropan	19.12	75	21210	18.0613	ug/L		80
98)	1,2,4-Trichlorobenzene	20.27	180	201823	18.0695	ug/L		100
99)	Hexachlorobutadiene	20.42	225	93866	21.3519	ug/L		99
100)	Naphthalene	20.64	128	308503	16.4918	ug/L		100
101)	1,2,3-Trichlorobenzene	20.94	180	161392	17.3149	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411550.D 8260WT.M Tue Apr 19 17:39:07 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041916\8M411550.D Vial: 7
Acq On : 19 Apr 2016 17:17 Operator: TMB
Sample : L16040858-26 A MSD 826-LOW Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 17:39 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411550.D 8260WT.M Tue Apr 19 17:39:07 2016 Page 3

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411569.D Vial: 25
Acq On : 20 Apr 2016 2:02 Operator: TMB
Sample : L16040858-27 A 10X 826-LOW Inst : HPMS8
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:49 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

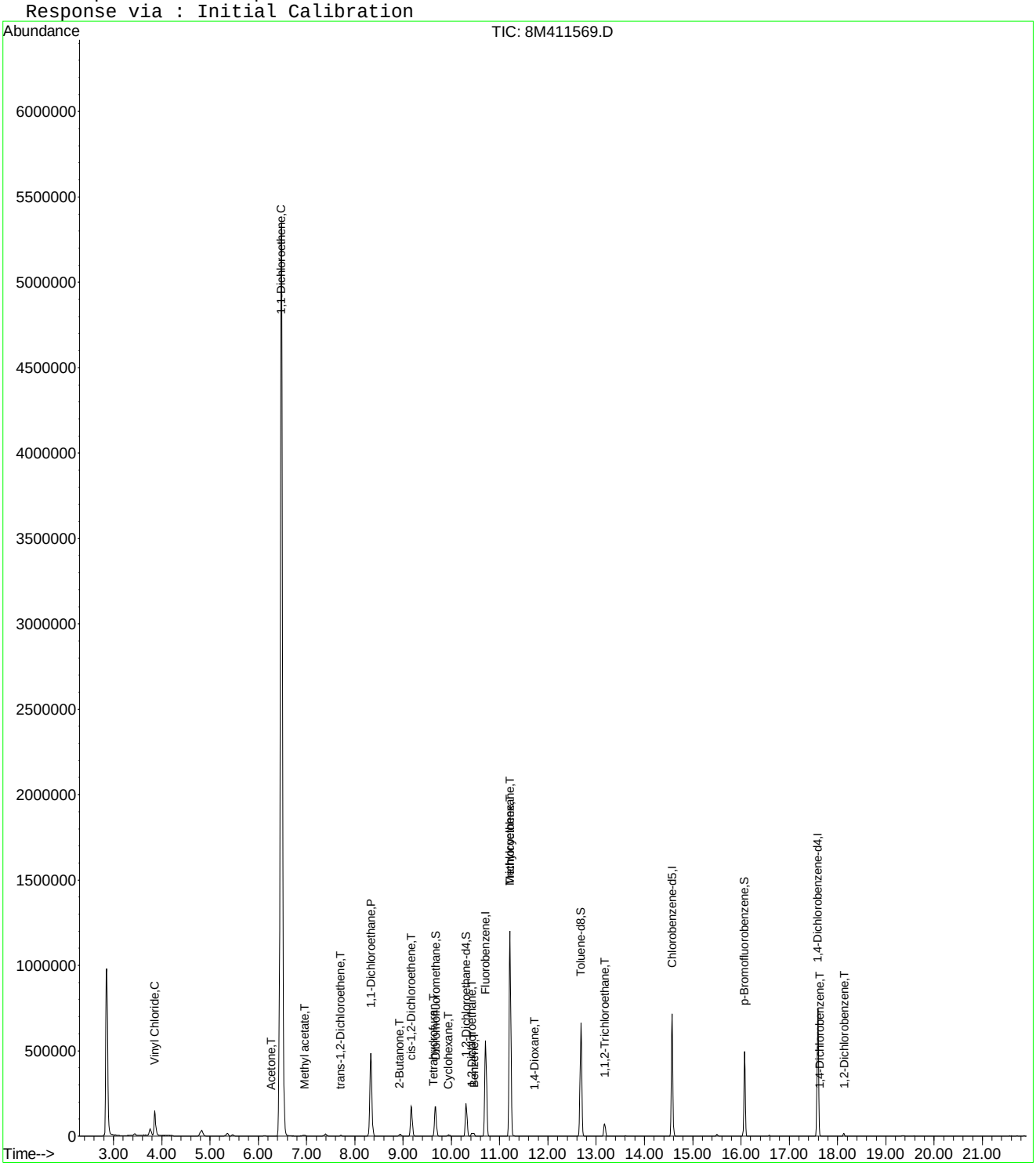
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	614386	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	442275	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	212661	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	152374	24.2562	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.04%			
43) 1,2-Dichloroethane-d4	10.31	65	161199	24.4411	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.76%			
58) Toluene-d8	12.68	98	542082	24.4928	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.96%			
80) p-Bromofluorobenzene	16.07	95	200532	24.1353	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.56%			
Target Compounds						Qvalue
4) Vinyl Chloride	3.86	62	196561	21.6145	ug/L	98
13) Acetone	6.27	43	256	0.2192	ug/L #	48
14) 1,1-Dichloroethene	6.48	61	6284458	540.5348	ug/L	93
18) Methyl acetate	6.97	43	11027	2.6797	ug/L #	66
23) trans-1,2-Dichloroethene	7.71	61	5722	0.5161	ug/L	86
27) 1,1-Dichloroethane	8.33	63	726681	52.1996	ug/L	98
29) 2-Butanone	8.93	43	543	0.2803	ug/L #	57
32) cis-1,2-Dichloroethene	9.17	96	87265	12.6049	ug/L	98
36) Tetrahydrofuran	9.63	42	2073	1.4503	ug/L #	60
39) Cyclohexane	9.94	56	6812	0.4763	ug/L	84
45) 1,2-Dichloroethane	10.43	62	15732	1.7710	ug/L	93
46) Benzene	10.47	78	17623	0.7086	ug/L #	83
47) Trichloroethene	11.21	130	442467	70.6625	ug/L	96
48) Methylcyclohexane	11.21	83	6273	0.6304	ug/L #	1
51) 1,4-Dioxane	11.72	88	239	9.2374	ug/L #	12
63) 1,1,2-Trichloroethane	13.18	97	27860	6.6963	ug/L	96
94) 1,4-Dichlorobenzene	17.63	146	1612	0.1249	ug/L #	1
96) 1,2-Dichlorobenzene	18.14	146	8313	0.7286	ug/L	91

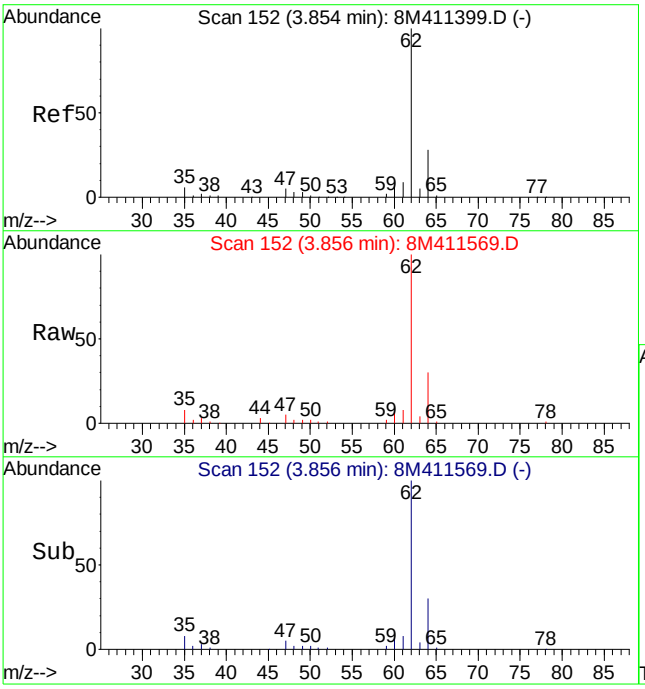
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411569.D Vial: 25
Acq On : 20 Apr 2016 2:02 Operator: TMB
Sample : L16040858-27 A 10X 826-LOW Inst : HPMS8
Misc : 1,10 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

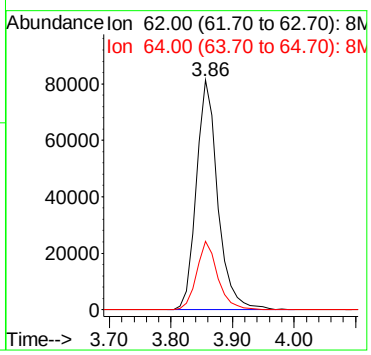


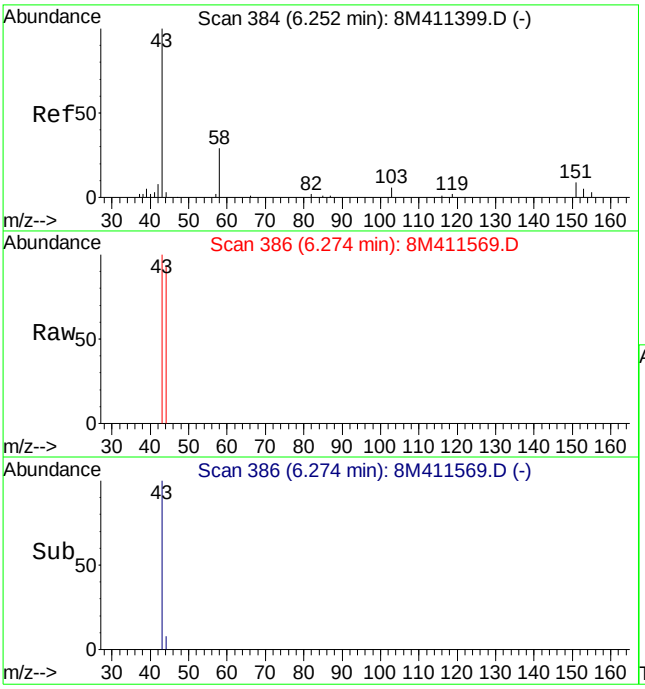


#4
Vinyl Chloride
Concen: 21.61 ug/L
RT: 3.86 min Scan# 152
Delta R.T. 0.01 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 62 Resp: 196561

Ion	Ratio	Lower	Upper
62	100		
64	29.1	18.1	42.1

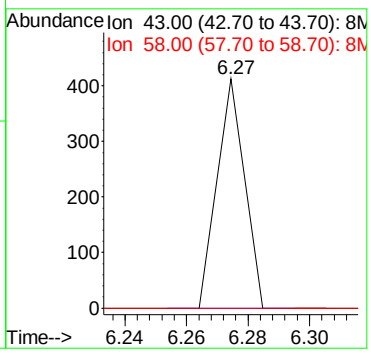


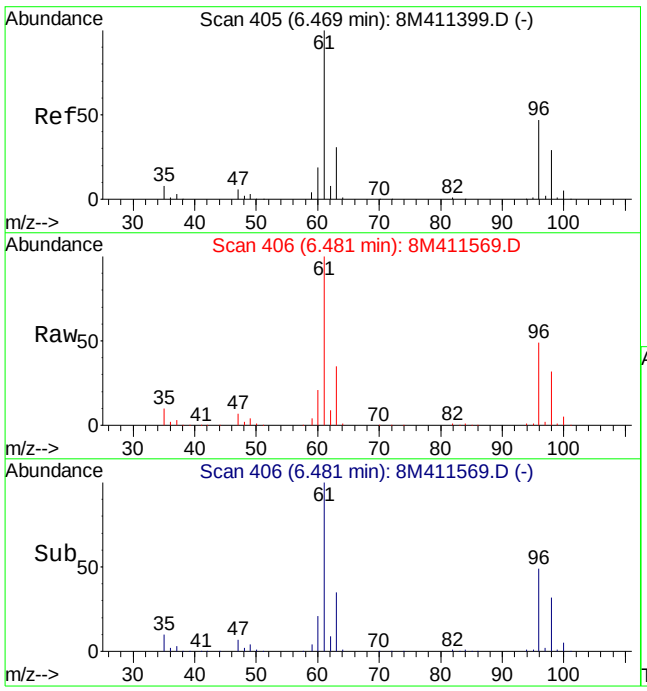


#13
Acetone
Concen: 0.22 ug/L
RT: 6.27 min Scan# 386
Delta R.T. 0.02 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 43 Resp: 256

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

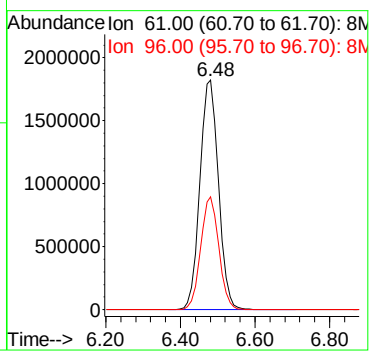


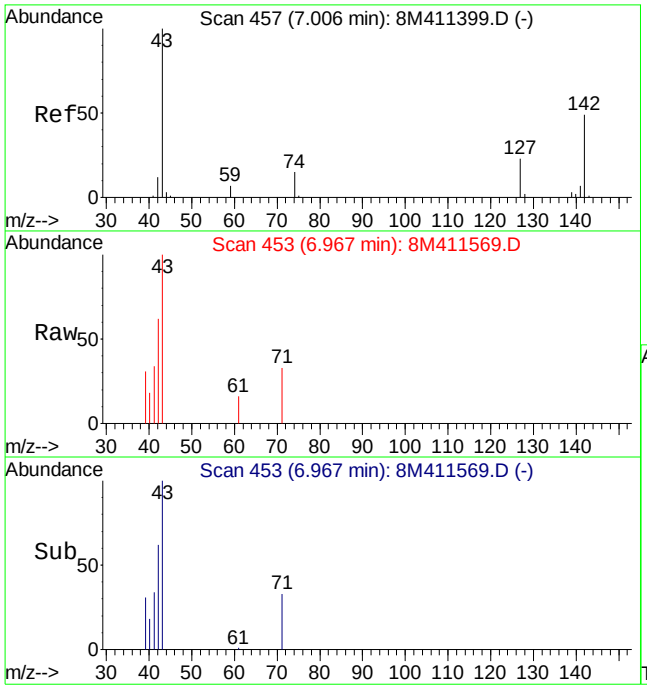


#14
1,1-Dichloroethene
Concen: 540.53 ug/L
RT: 6.48 min Scan# 406
Delta R.T. 0.01 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 61 Resp: 6284458

Ion	Ratio	Lower	Upper
61	100		
96	47.9	31.9	74.5

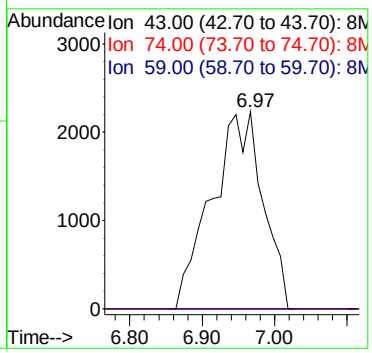


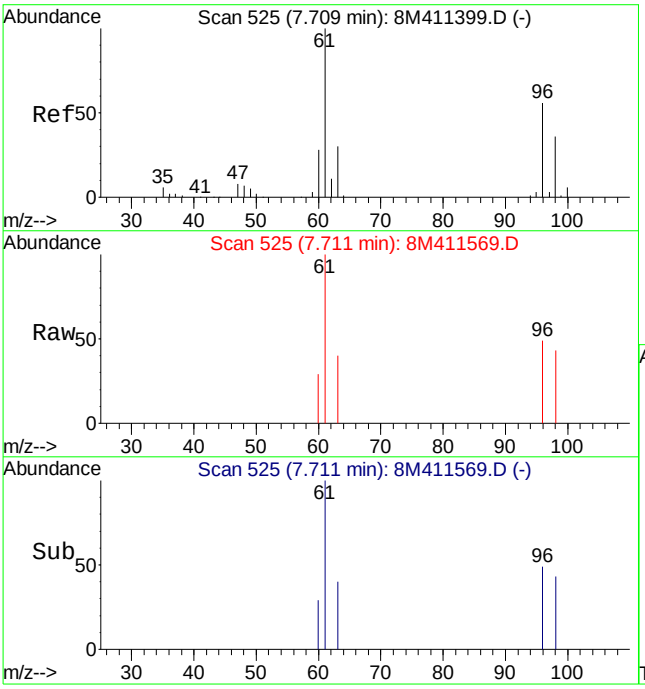


#18
Methyl acetate
Concen: 2.68 ug/L
RT: 6.97 min Scan# 453
Delta R.T. -0.04 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 43 Resp: 11027

Ion	Ratio	Lower	Upper
43	100		
74	0.0	10.4	24.4#
59	0.0	4.5	10.5#

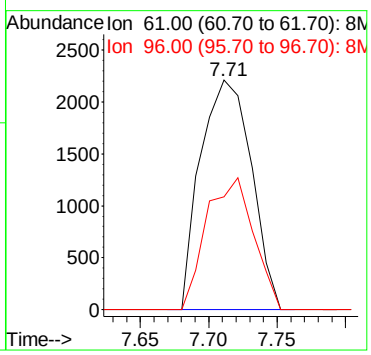


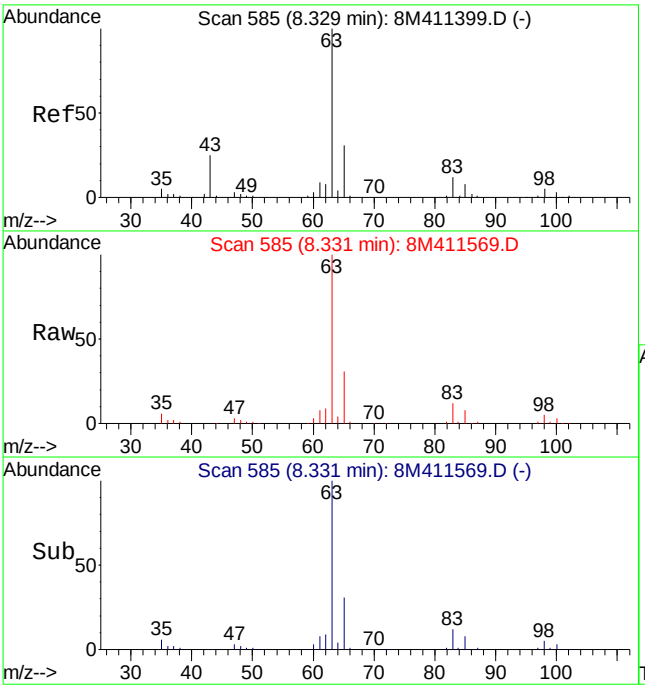


#23
trans-1,2-Dichloroethene
Concen: 0.52 ug/L
RT: 7.71 min Scan# 525
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 61 Resp: 5722

Ion	Ratio	Lower	Upper
61	100		
96	53.3	38.6	90.2

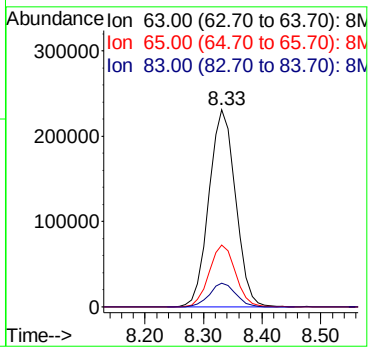


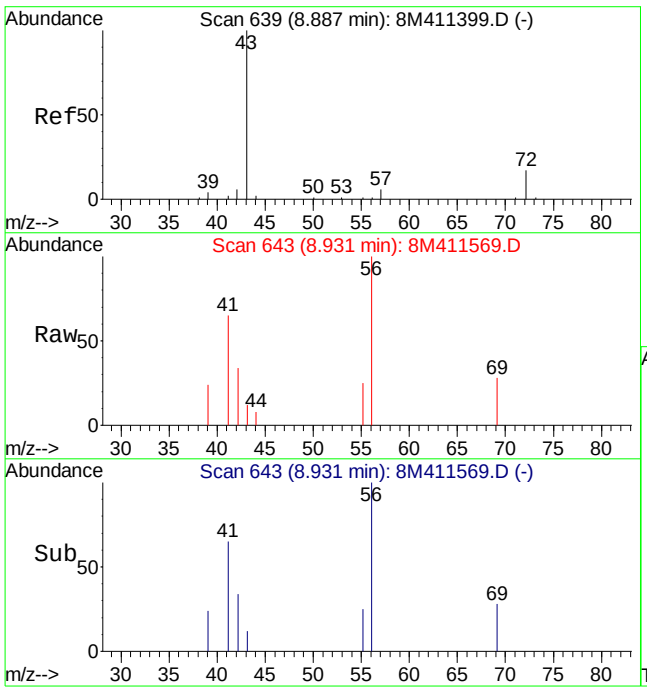


#27
1,1-Dichloroethane
Concen: 52.20 ug/L
RT: 8.33 min Scan# 585
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 63 Resp: 726681

Ion	Ratio	Lower	Upper
63	100		
65	31.0	19.1	44.5
83	11.7	7.7	18.1

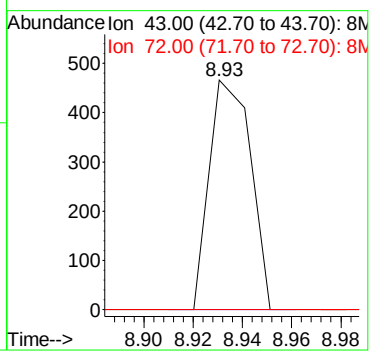


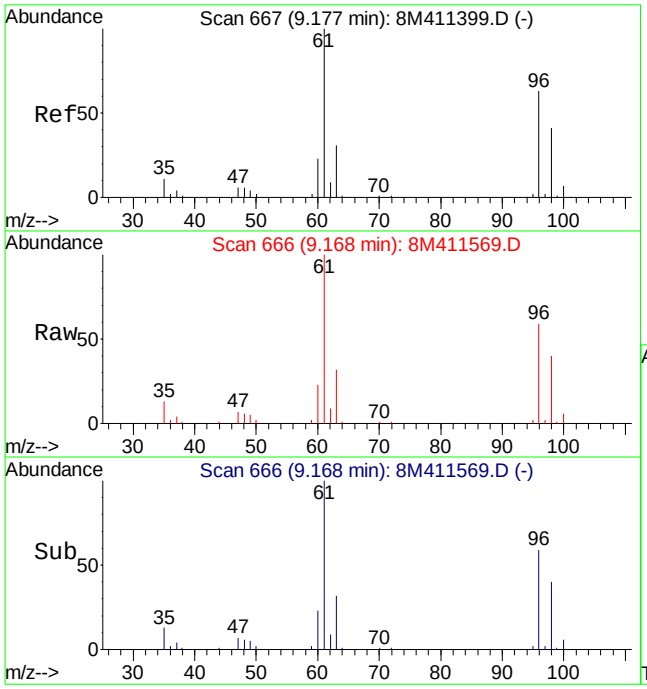


#29
2-Butanone
Concen: 0.28 ug/L
RT: 8.93 min Scan# 643
Delta R.T. 0.04 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 43 Resp: 543

Ion	Ratio	Lower	Upper
43	100		
72	0.0	11.6	27.2#

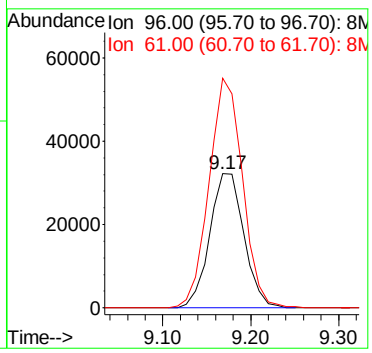


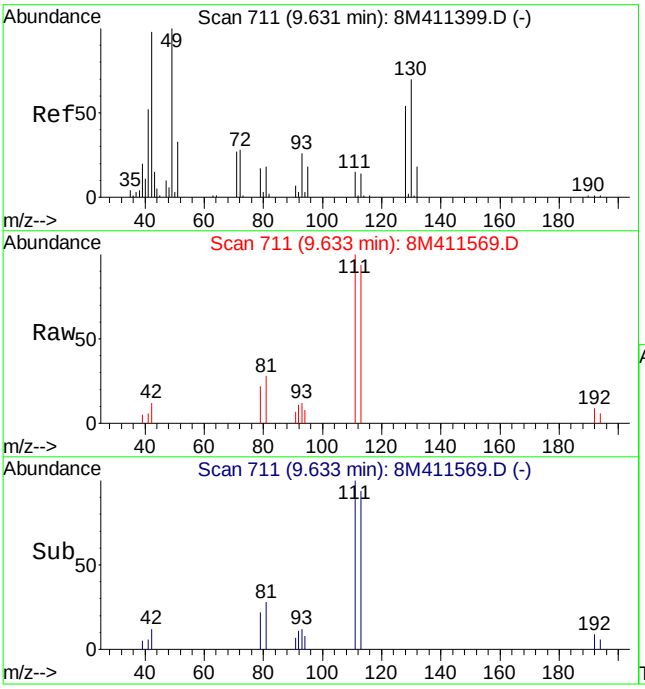


#32
cis-1,2-Dichloroethene
Concen: 12.60 ug/L
RT: 9.17 min Scan# 666
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 96 Resp: 87265

Ion	Ratio	Lower	Upper
96	100		
61	167.7	98.9	230.7

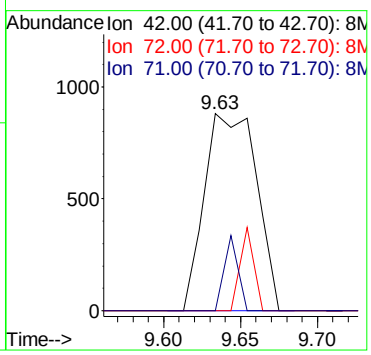


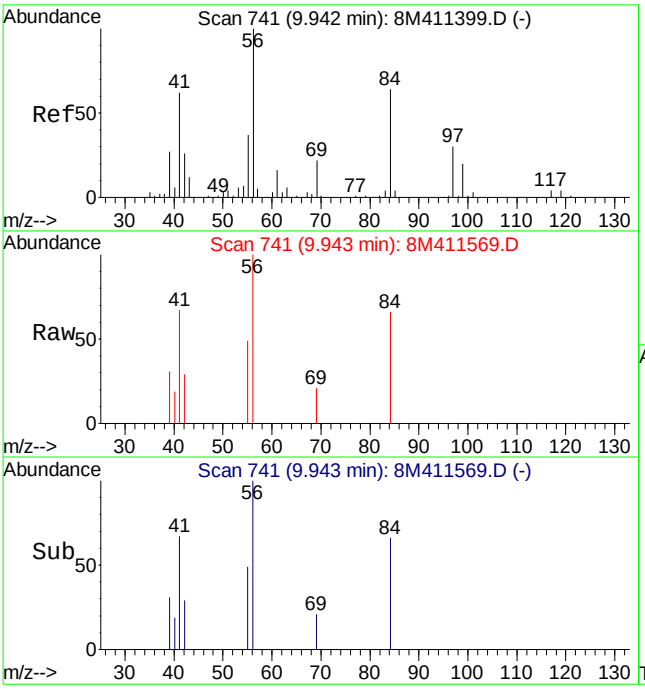


#36
Tetrahydrofuran
Concen: 1.45 ug/L
RT: 9.63 min Scan# 711
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 42 Resp: 2073

Ion	Ratio	Lower	Upper
42	100		
72	11.1	20.8	48.6#
71	10.1	19.0	44.4#

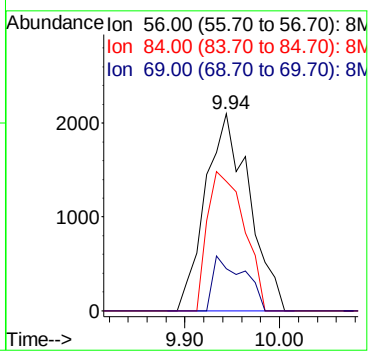


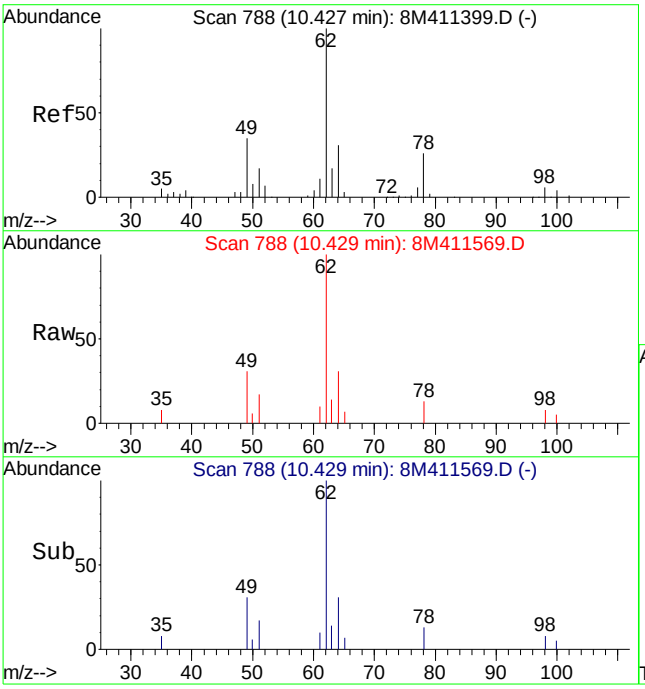


#39
Cyclohexane
Concen: 0.48 ug/L
RT: 9.94 min Scan# 741
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 56 Resp: 6812

Ion	Ratio	Lower	Upper
56	100		
84	59.2	44.3	103.5
69	19.5	15.5	36.1

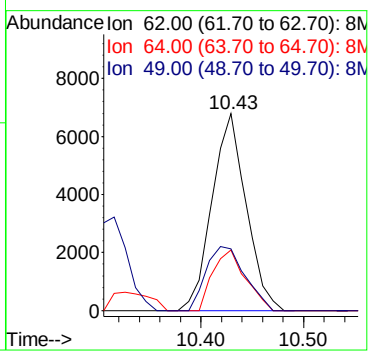


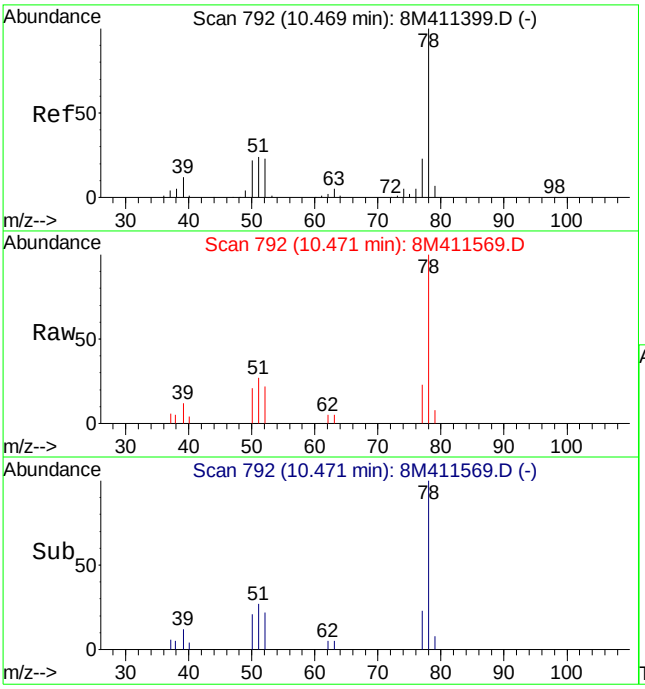


#45
1,2-Dichloroethane
Concen: 1.77 ug/L
RT: 10.43 min Scan# 788
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 62 Resp: 15732

Ion	Ratio	Lower	Upper
62	100		
64	29.6	19.1	44.7
49	37.0	25.4	59.4

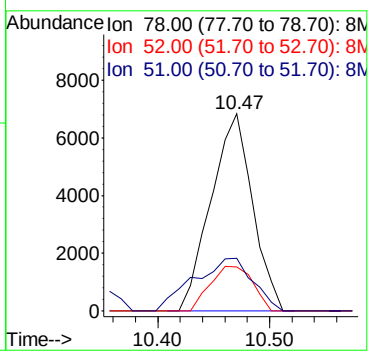


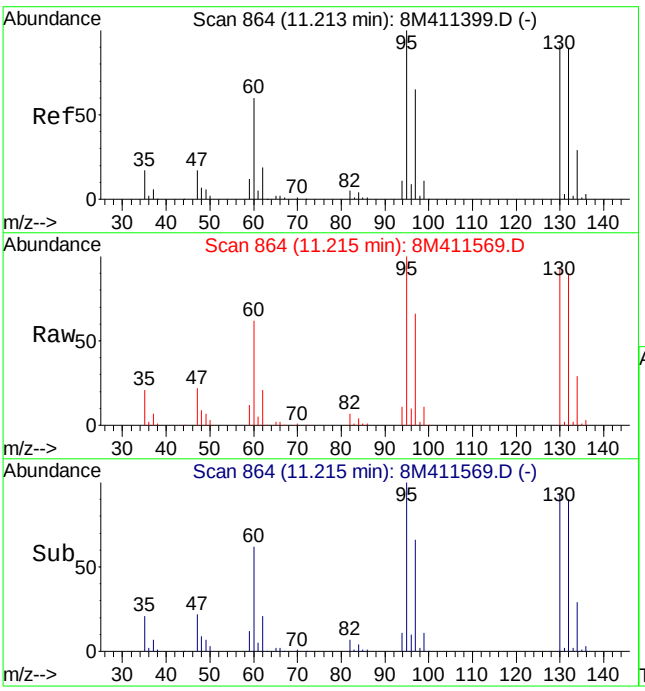


#46
Benzene
Concen: 0.71 ug/L
RT: 10.47 min Scan# 792
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 78 Resp: 17623

Ion	Ratio	Lower	Upper
78	100		
52	23.1	12.2	28.4
51	37.8	14.9	34.9#

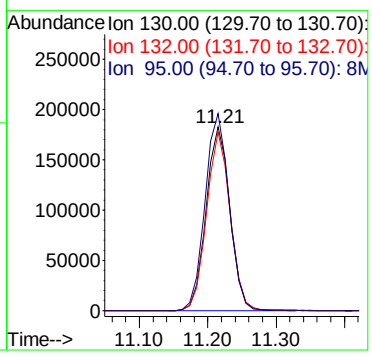


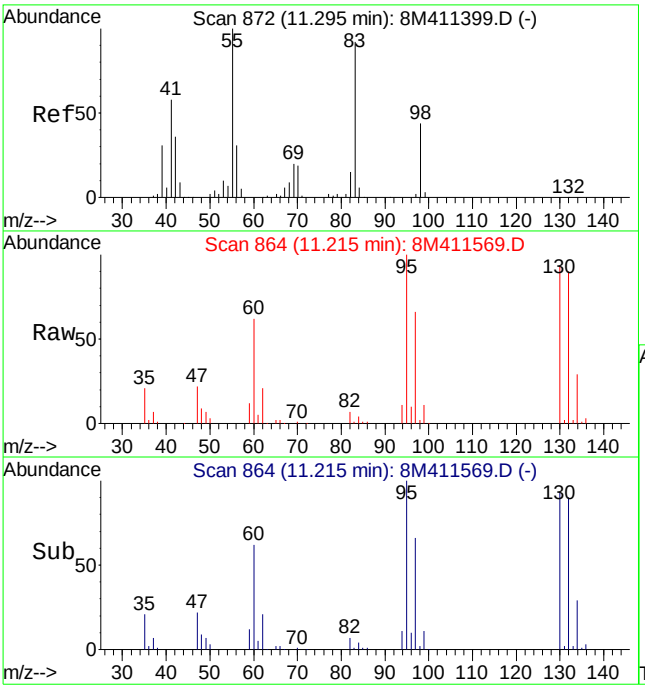


#47
Trichloroethene
Concen: 70.66 ug/L
RT: 11.21 min Scan# 864
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion:130 Resp: 442467

Ion	Ratio	Lower	Upper
130	100		
132	95.5	59.9	139.7
95	108.4	62.3	145.5

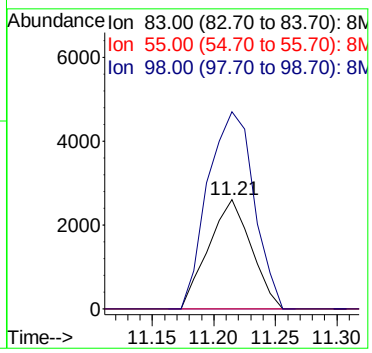


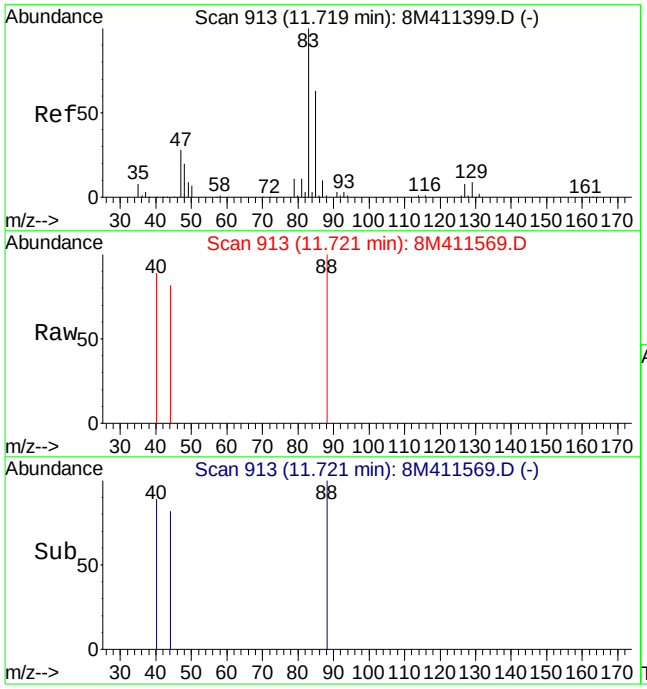


#48
Methylcyclohexane
Concen: 0.63 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.08 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 83 Resp: 6273

Ion	Ratio	Lower	Upper
83	100		
55	0.0	55.6	129.8#
98	195.5	28.3	66.1#

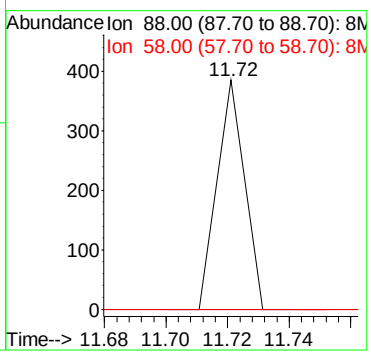


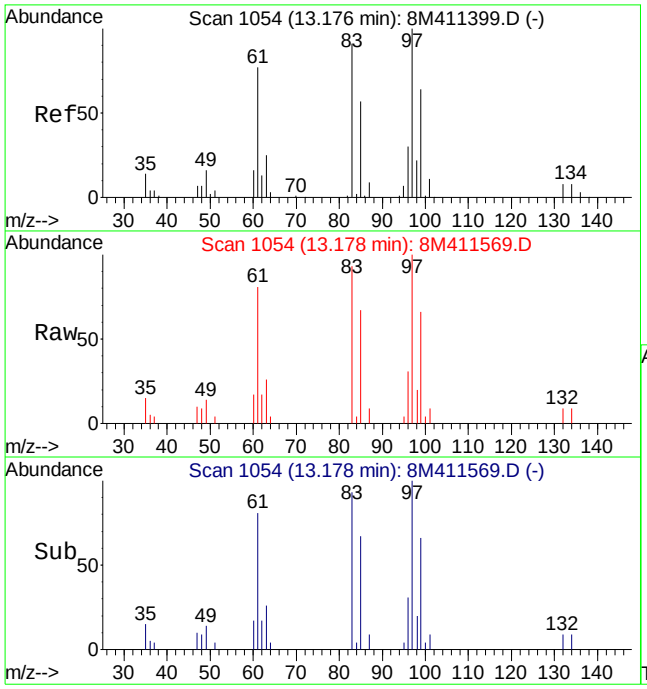


#51
1,4-Dioxane
Concen: 9.24 ug/L
RT: 11.72 min Scan# 913
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 88 Resp: 239

Ion	Ratio	Lower	Upper
88	100		
58	0.0	45.3	105.7#

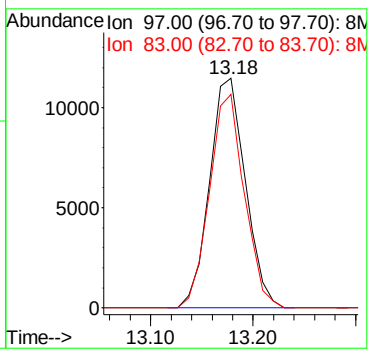


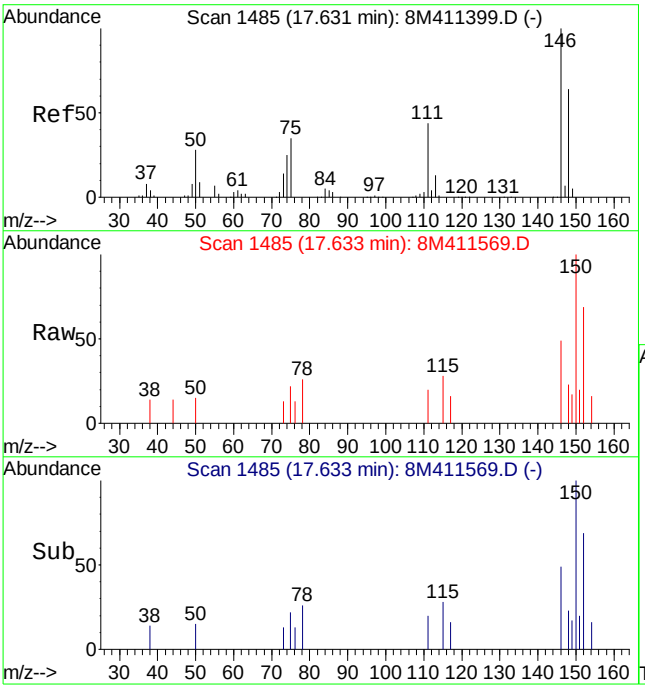


#63
1,1,2-Trichloroethane
Concen: 6.70 ug/L
RT: 13.18 min Scan# 1054
Delta R.T. 0.00 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion: 97 Resp: 27860

Ion	Ratio	Lower	Upper
97	100		
83	90.3	52.2	121.8

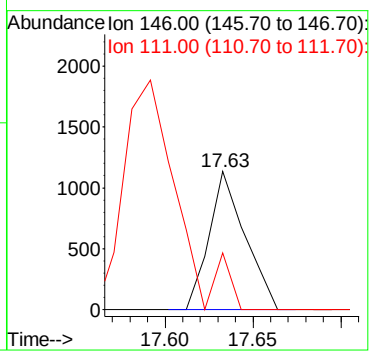


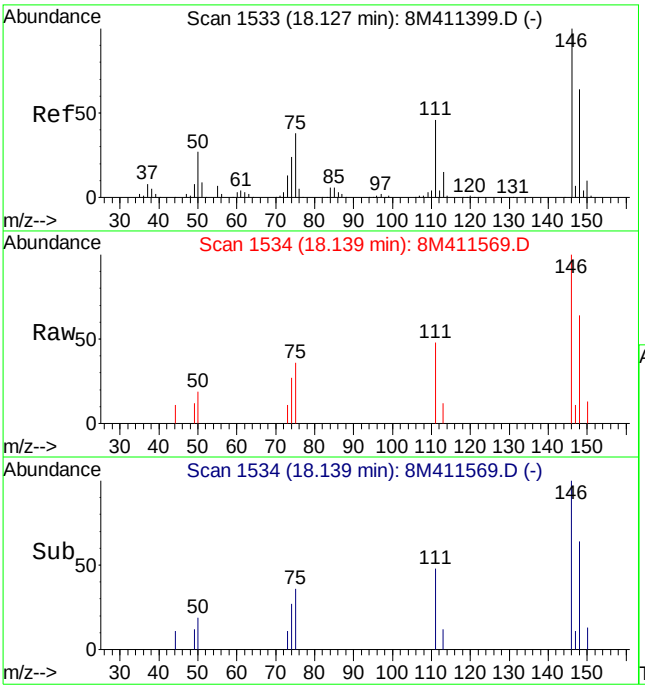


#94
1,4-Dichlorobenzene
Concen: 0.12 ug/L
RT: 17.63 min Scan# 1485
Delta R.T. -0.01 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion:146 Resp: 1612

Ion	Ratio	Lower	Upper
146	100		
111	244.0	23.4	54.6#

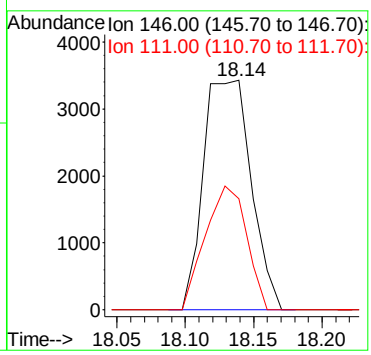




#96
1,2-Dichlorobenzene
Concen: 0.73 ug/L
RT: 18.14 min Scan# 1534
Delta R.T. 0.01 min
Lab File: 8M411569.D
Acq: 20 Apr 2016 2:02

Tgt Ion:146 Resp: 8313

Ion	Ratio	Lower	Upper
146	100		
111	46.6	24.5	57.1



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411617.D Vial: 10
Acq On : 21 Apr 2016 16:57 Operator: TMB
Sample : L16040858-27 B 20X 826-LOW D1 Inst : HPMS8
Misc : 1,20 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 09:35:53 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

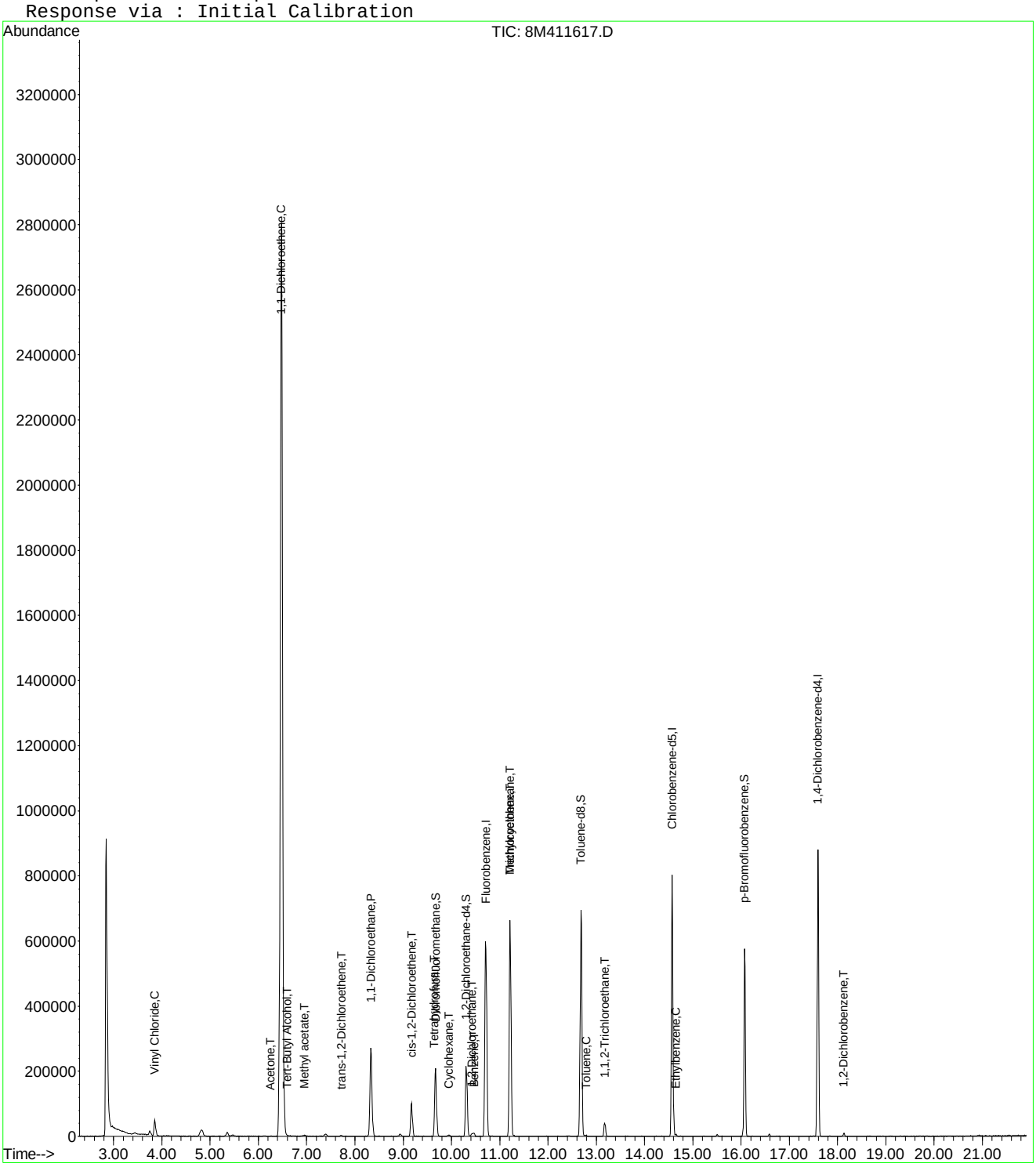
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	679481	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	504281	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	264408	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	177709	25.5791	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.32%			
43) 1,2-Dichloroethane-d4	10.30	65	204042	27.9732	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.88%			
58) Toluene-d8	12.68	98	584940	23.1795	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 92.72%			
80) p-Bromofluorobenzene	16.07	95	242283	23.4534	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 93.80%			
Target Compounds						Qvalue
4) Vinyl Chloride	3.85	62	68361	6.7970	ug/L	94
13) Acetone	6.25	43	944	0.7308	ug/L #	48
14) 1,1-Dichloroethene	6.48	61	3512675	273.1856	ug/L	88
15) Tert-Butyl Alcohol	6.59	59	233	0.7723	ug/L #	55
18) Methyl acetate	6.95	43	7632	1.6770	ug/L #	66
23) trans-1,2-Dichloroethene	7.72	61	3419	0.2788	ug/L	72
27) 1,1-Dichloroethane	8.33	63	414563	26.9264	ug/L	97
32) cis-1,2-Dichloroethene	9.18	96	49804	6.5047	ug/L	97
36) Tetrahydrofuran	9.65	42	832	0.5263	ug/L #	41
39) Cyclohexane	9.95	56	3510	0.2219	ug/L #	84
45) 1,2-Dichloroethane	10.43	62	9179	0.9343	ug/L	93
46) Benzene	10.47	78	10267	0.3733	ug/L #	76
47) Trichloroethene	11.21	130	263309	38.0223	ug/L	98
48) Methylcyclohexane	11.21	83	2712	0.2464	ug/L #	1
59) Toluene	12.79	91	4187	0.1412	ug/L	100
63) 1,1,2-Trichloroethane	13.18	97	15903	3.3524	ug/L	94
72) Ethylbenzene	14.65	106	2740	0.2472	ug/L	68
96) 1,2-Dichlorobenzene	18.13	146	6670	0.4702	ug/L	91

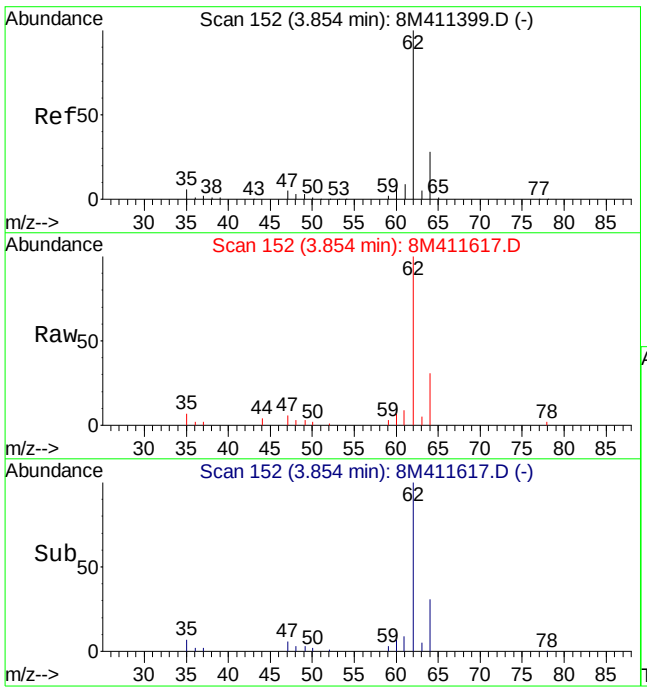
(#) = qualifier out of range (m) = manual integration
8M411617.D 8260WT.M Fri Apr 22 09:35:53 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411617.D Vial: 10
Acq On : 21 Apr 2016 16:57 Operator: TMB
Sample : L16040858-27 B 20X 826-LOW D1 Inst : HPMS8
Misc : 1,20 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 9:35 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

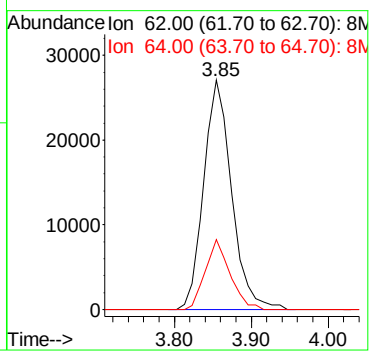


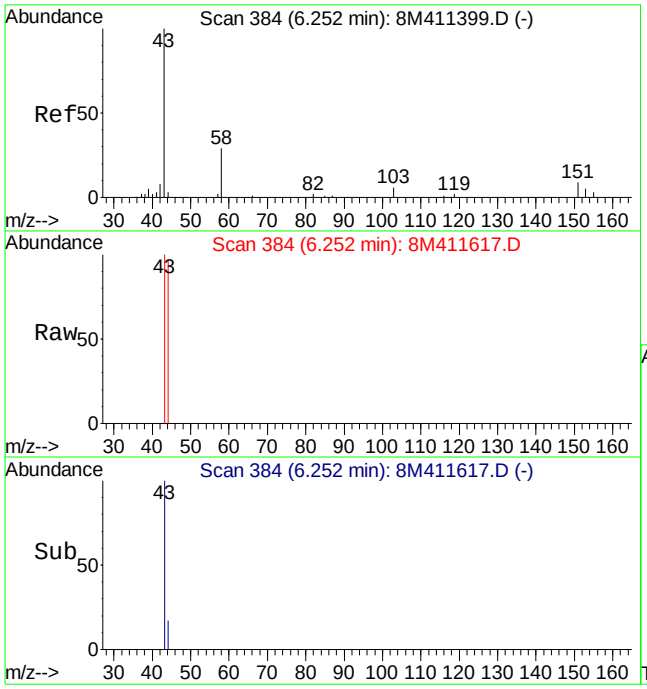


#4
Vinyl Chloride
Concen: 6.80 ug/L
RT: 3.85 min Scan# 152
Delta R.T. 0.01 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 62 Resp: 68361

Ion	Ratio	Lower	Upper
62	100		
64	27.1	18.1	42.1

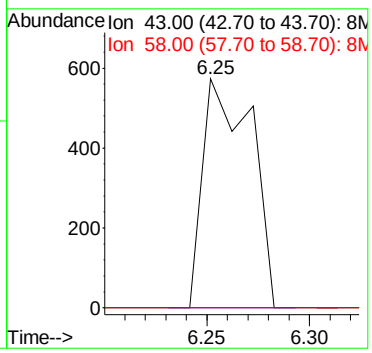


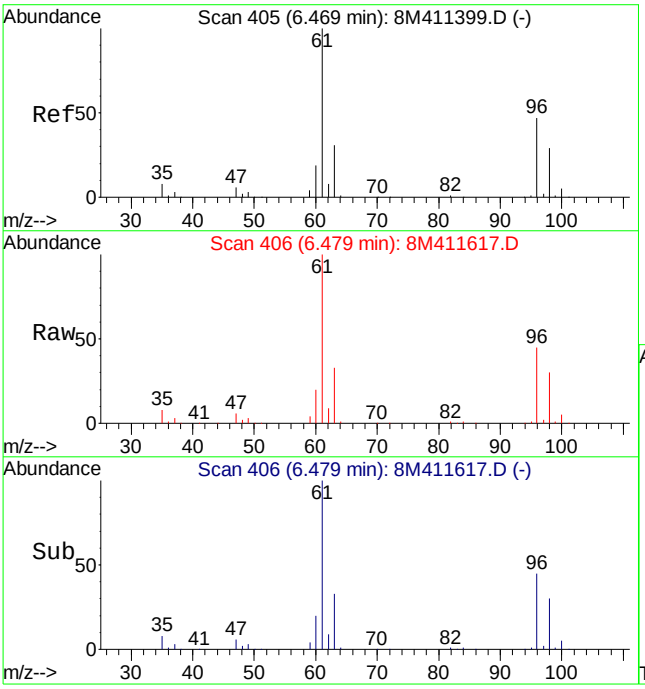


#13
Acetone
Concen: 0.73 ug/L
RT: 6.25 min Scan# 384
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 43 Resp: 944

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

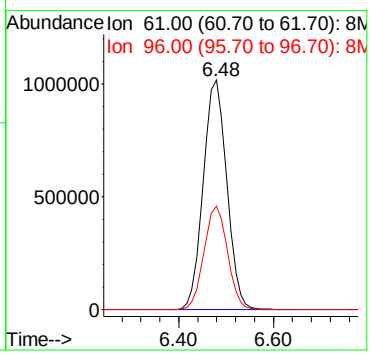


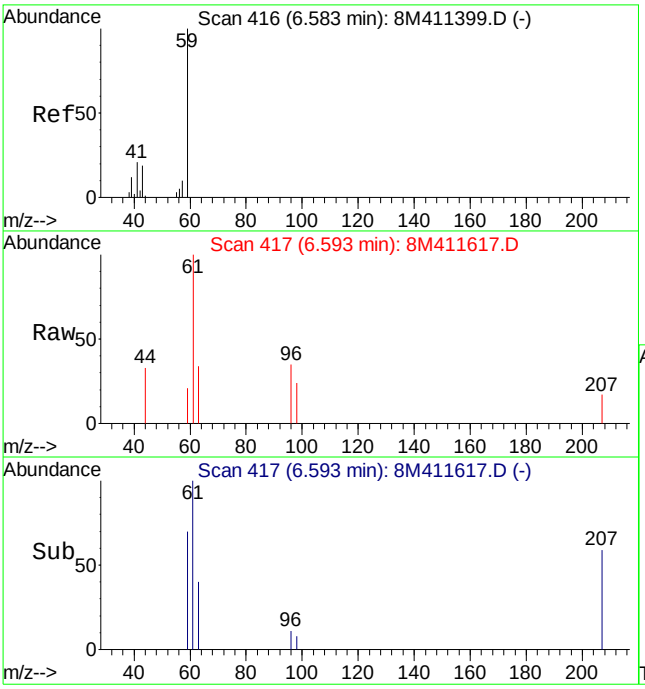


#14
1,1-Dichloroethene
Concen: 273.19 ug/L
RT: 6.48 min Scan# 406
Delta R.T. 0.01 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 61 Resp: 3512675

Ion	Ratio	Lower	Upper
61	100		
96	44.9	31.9	74.5

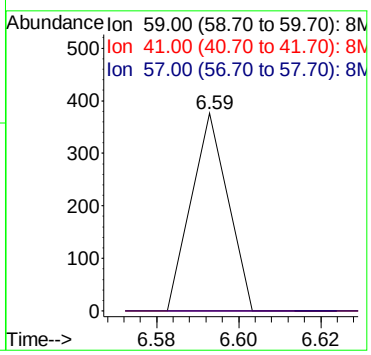


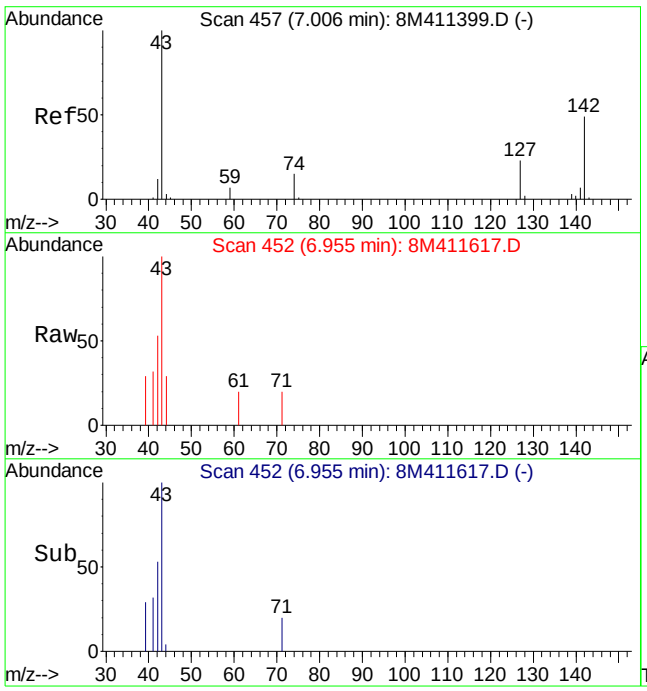


#15
Tert-Butyl Alcohol
Concen: 0.77 ug/L
RT: 6.59 min Scan# 417
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 59 Resp: 233

Ion	Ratio	Lower	Upper
59	100		
41	0.0	16.0	37.4#
57	0.0	6.1	14.1#

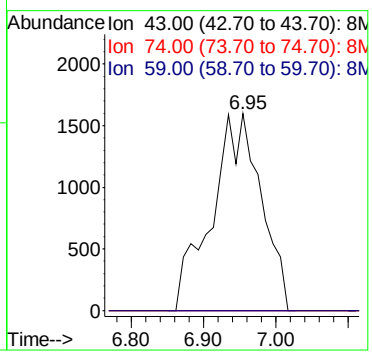


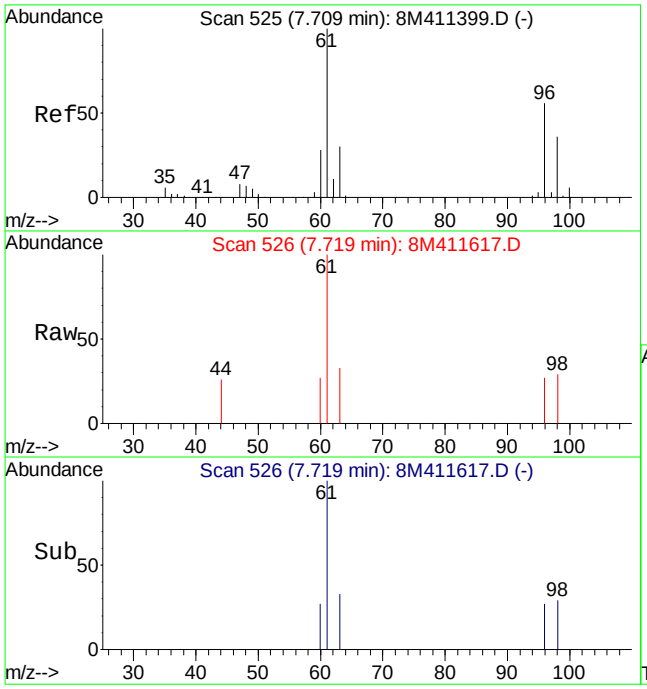


#18
Methyl acetate
Concen: 1.68 ug/L
RT: 6.95 min Scan# 452
Delta R.T. -0.05 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 43 Resp: 7632

Ion	Ratio	Lower	Upper
43	100		
74	0.0	10.4	24.4#
59	0.0	4.5	10.5#

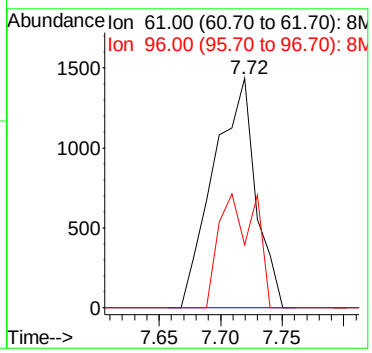


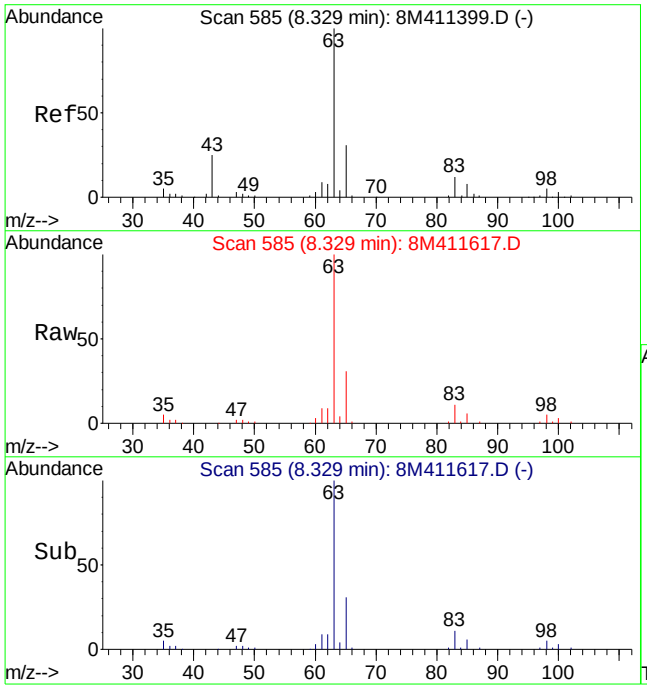


#23
trans-1,2-Dichloroethene
Concen: 0.28 ug/L
RT: 7.72 min Scan# 526
Delta R.T. 0.01 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 61 Resp: 3419

Ion	Ratio	Lower	Upper
61	100		
96	42.5	38.6	90.2

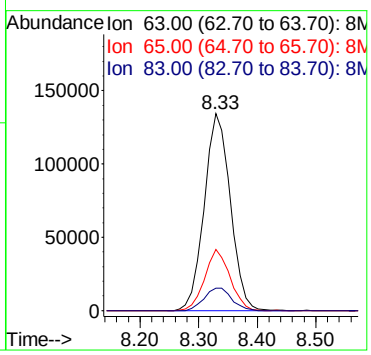


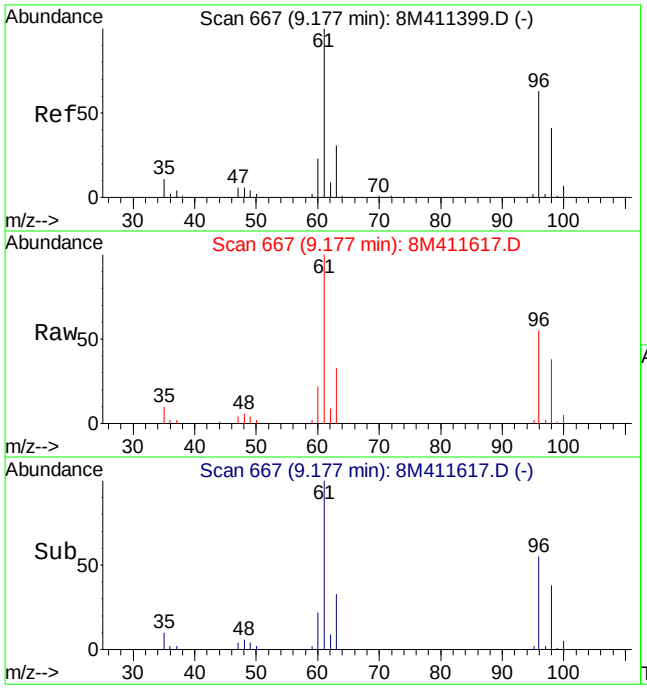


#27
1,1-Dichloroethane
Concen: 26.93 ug/L
RT: 8.33 min Scan# 585
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 63 Resp: 414563

Ion	Ratio	Lower	Upper
63	100		
65	30.0	19.1	44.5
83	11.9	7.7	18.1

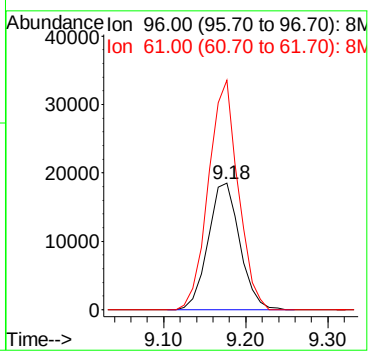


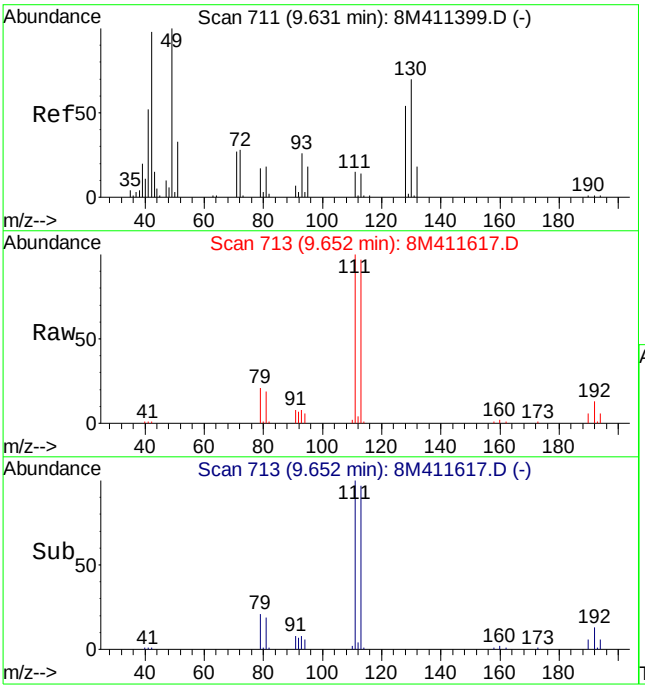


#32
cis-1,2-Dichloroethene
Concen: 6.50 ug/L
RT: 9.18 min Scan# 667
Delta R.T. 0.01 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 96 Resp: 49804

Ion	Ratio	Lower	Upper
96	100		
61	169.2	98.9	230.7

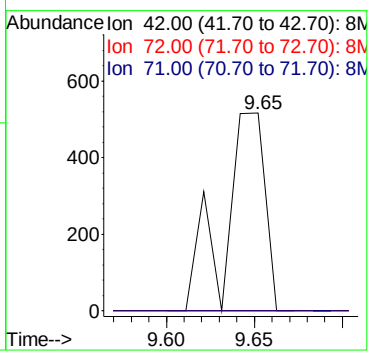


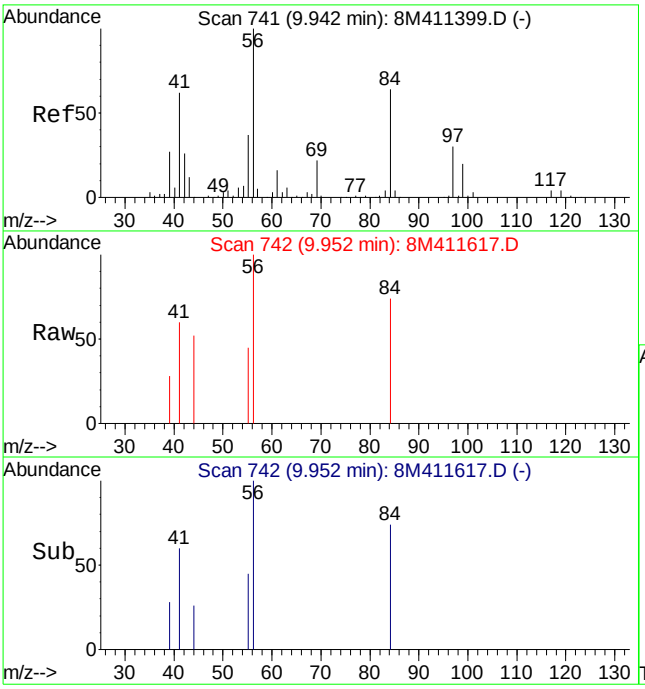


#36
Tetrahydrofuran
Concen: 0.53 ug/L
RT: 9.65 min Scan# 713
Delta R.T. 0.02 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 42 Resp: 832

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

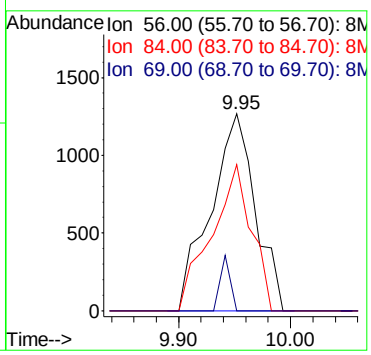


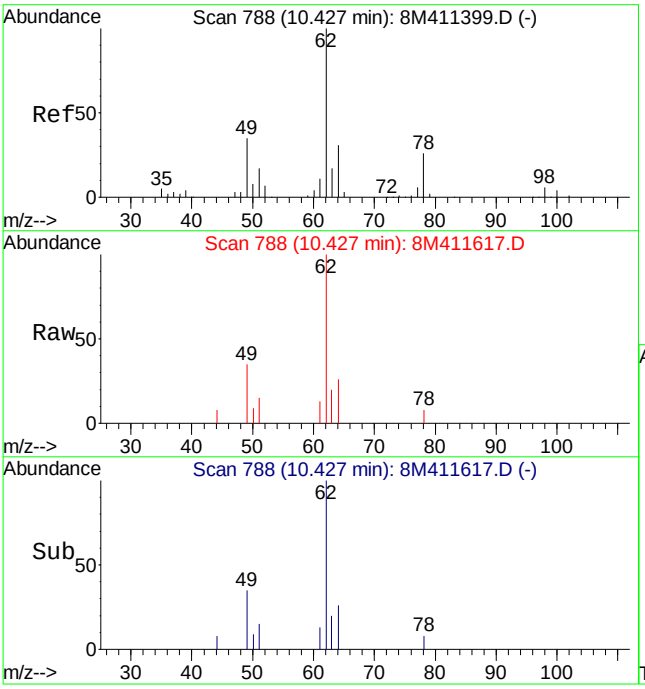


#39
Cyclohexane
Concen: 0.22 ug/L
RT: 9.95 min Scan# 742
Delta R.T. 0.01 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 56 Resp: 3510

Ion	Ratio	Lower	Upper
56	100		
84	66.5	44.3	103.5
69	6.3	15.5	36.1#

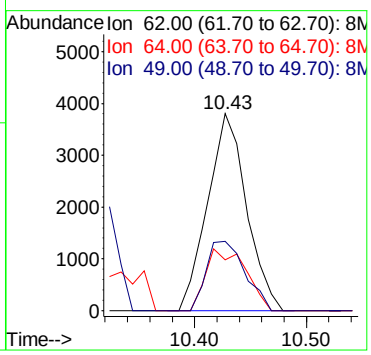


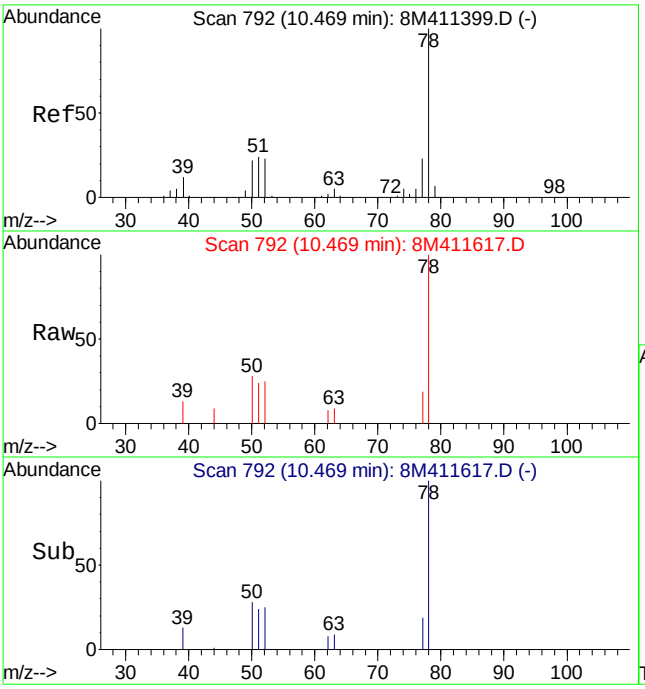


#45
1,2-Dichloroethane
Concen: 0.93 ug/L
RT: 10.43 min Scan# 788
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 62 Resp: 9179

Ion	Ratio	Lower	Upper
62	100		
64	32.2	19.1	44.7
49	34.9	25.4	59.4

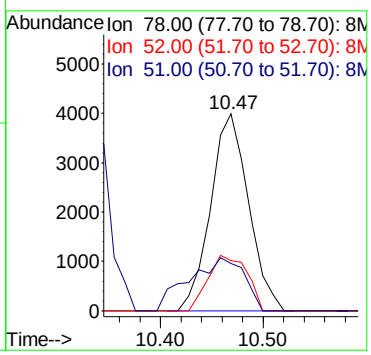


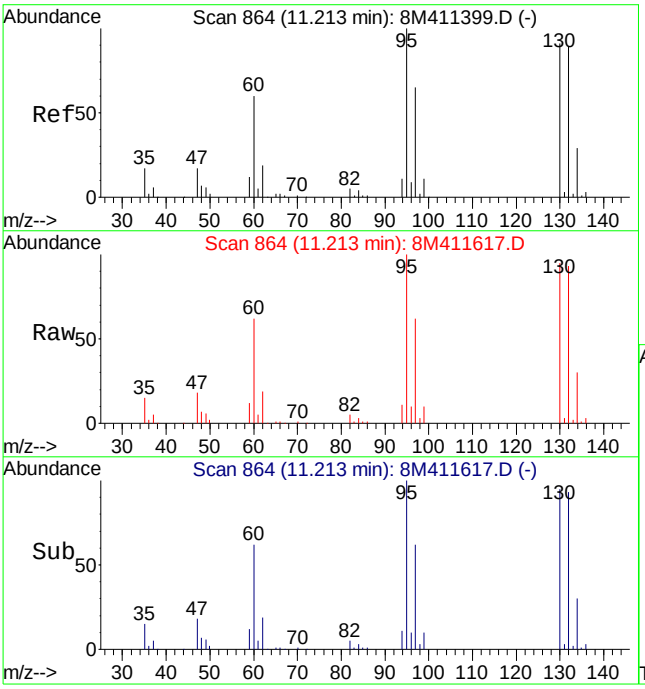


#46
Benzene
Concen: 0.37 ug/L
RT: 10.47 min Scan# 792
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 78 Resp: 10267

Ion	Ratio	Lower	Upper
78	100		
52	28.7	12.2	28.4#
51	39.1	14.9	34.9#

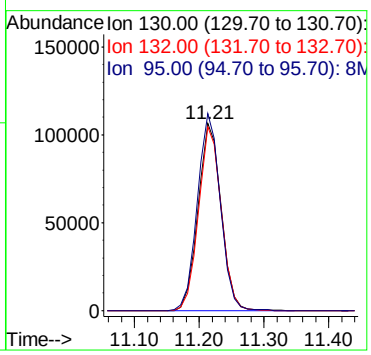


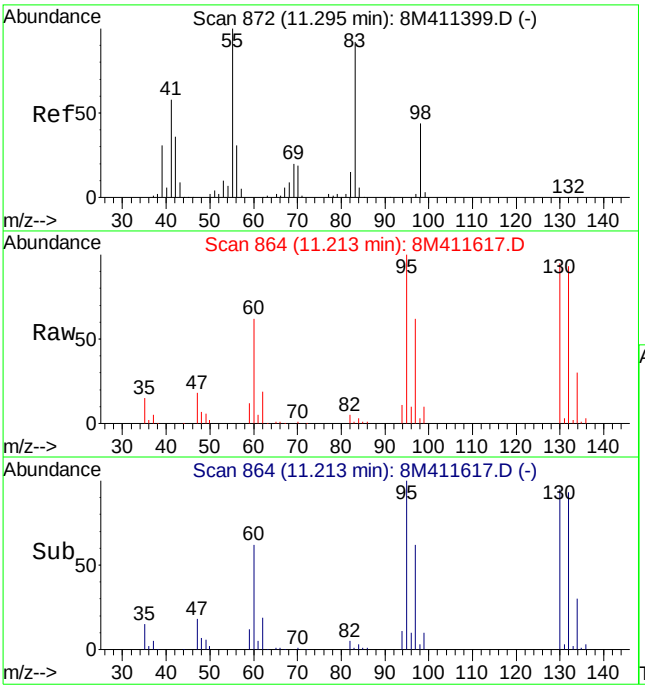


#47
Trichloroethene
Concen: 38.02 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion:130 Resp: 263309

Ion	Ratio	Lower	Upper
130	100		
132	96.3	59.9	139.7
95	104.7	62.3	145.5

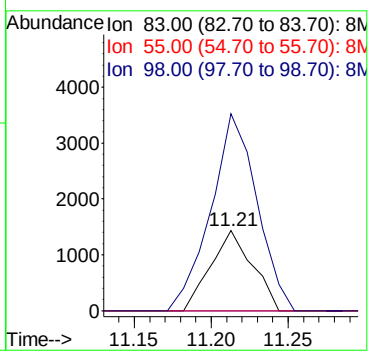


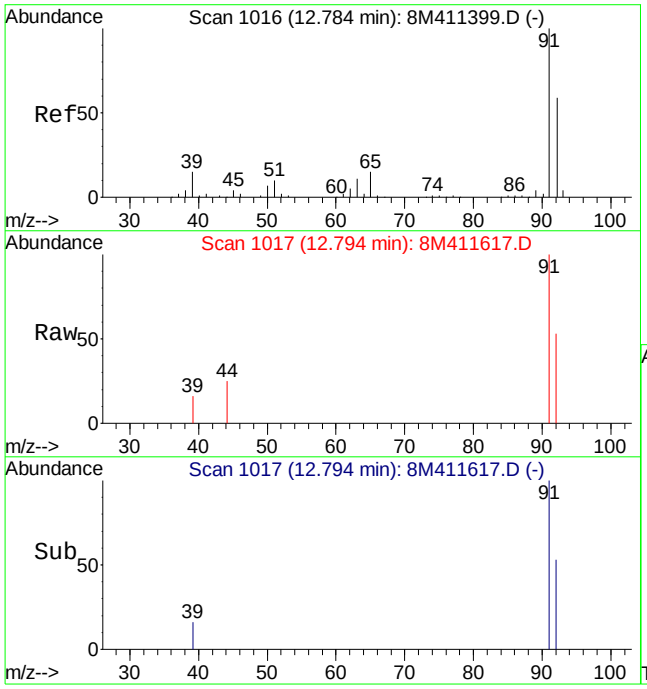


#48
Methylcyclohexane
Concen: 0.25 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.08 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 83 Resp: 2712

Ion	Ratio	Lower	Upper
83	100		
55	0.0	55.6	129.8#
98	271.1	28.3	66.1#

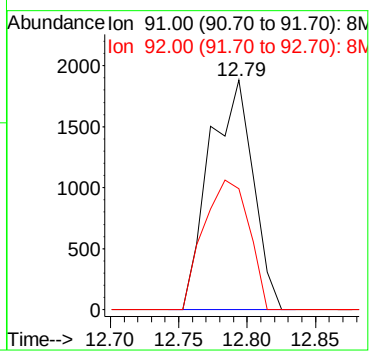


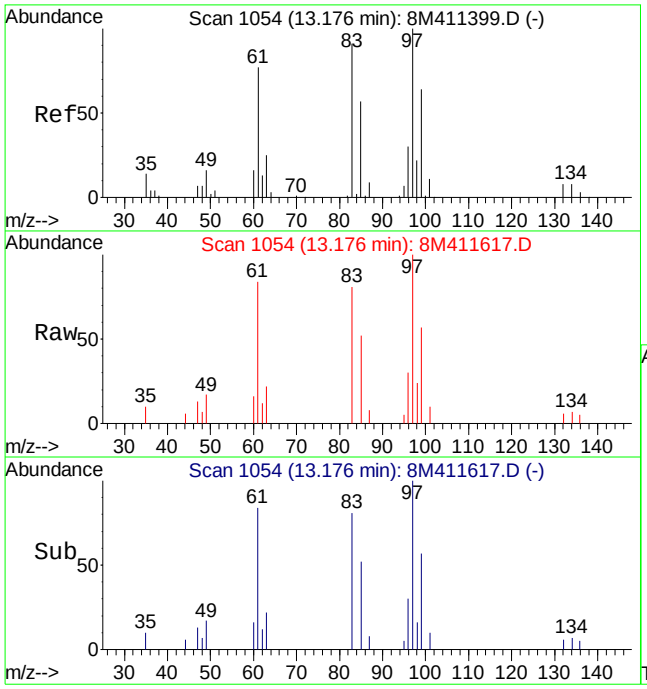


#59
Toluene
Concen: 0.14 ug/L
RT: 12.79 min Scan# 1017
Delta R.T. 0.01 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 91 Resp: 4187

Ion	Ratio	Lower	Upper
91	100		
92	58.8	35.5	82.7

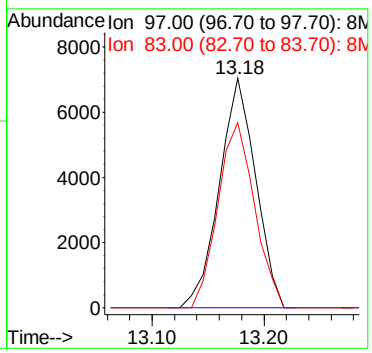


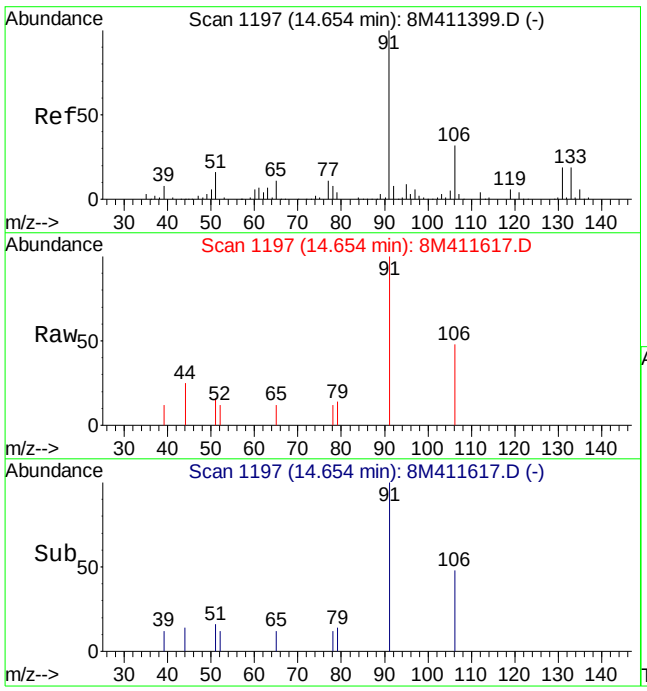


#63
1,1,2-Trichloroethane
Concen: 3.35 ug/L
RT: 13.18 min Scan# 1054
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion: 97 Resp: 15903

Ion	Ratio	Lower	Upper
97	100		
83	81.2	52.2	121.8

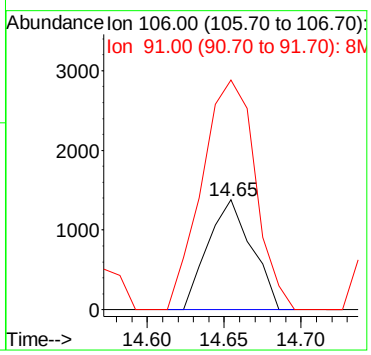


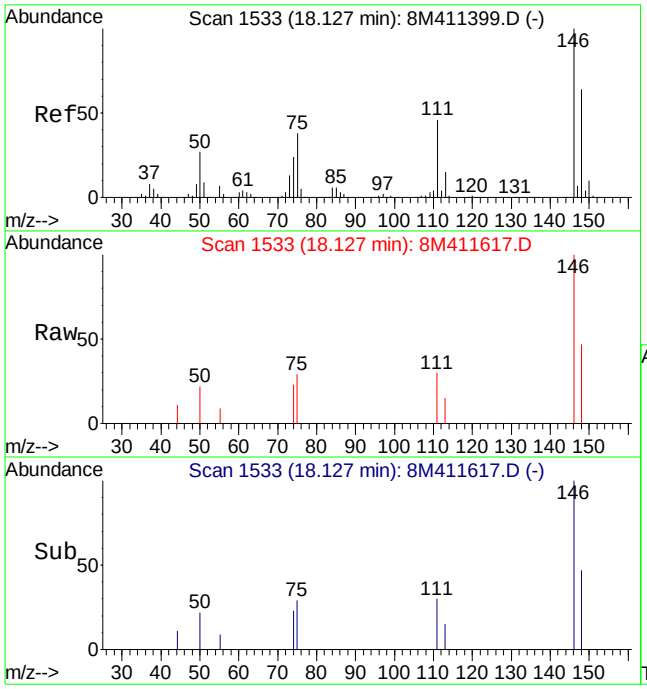


#72
Ethylbenzene
Concen: 0.25 ug/L
RT: 14.65 min Scan# 1197
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion:106 Resp: 2740

Ion	Ratio	Lower	Upper
106	100		
91	254.7	192.4	449.0

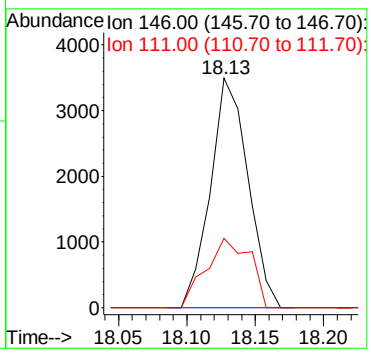




#96
1,2-Dichlorobenzene
Concen: 0.47 ug/L
RT: 18.13 min Scan# 1533
Delta R.T. -0.00 min
Lab File: 8M411617.D
Acq: 21 Apr 2016 16:57

Tgt Ion:146 Resp: 6670

Ion	Ratio	Lower	Upper
146	100		
111	35.3	24.5	57.1



Data File : C:\MSDCHEM\2\DATA\041916\8M411558.D Vial: 15
Acq On : 19 Apr 2016 21:11 Operator: TMB
Sample : L16040858-28 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:31 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

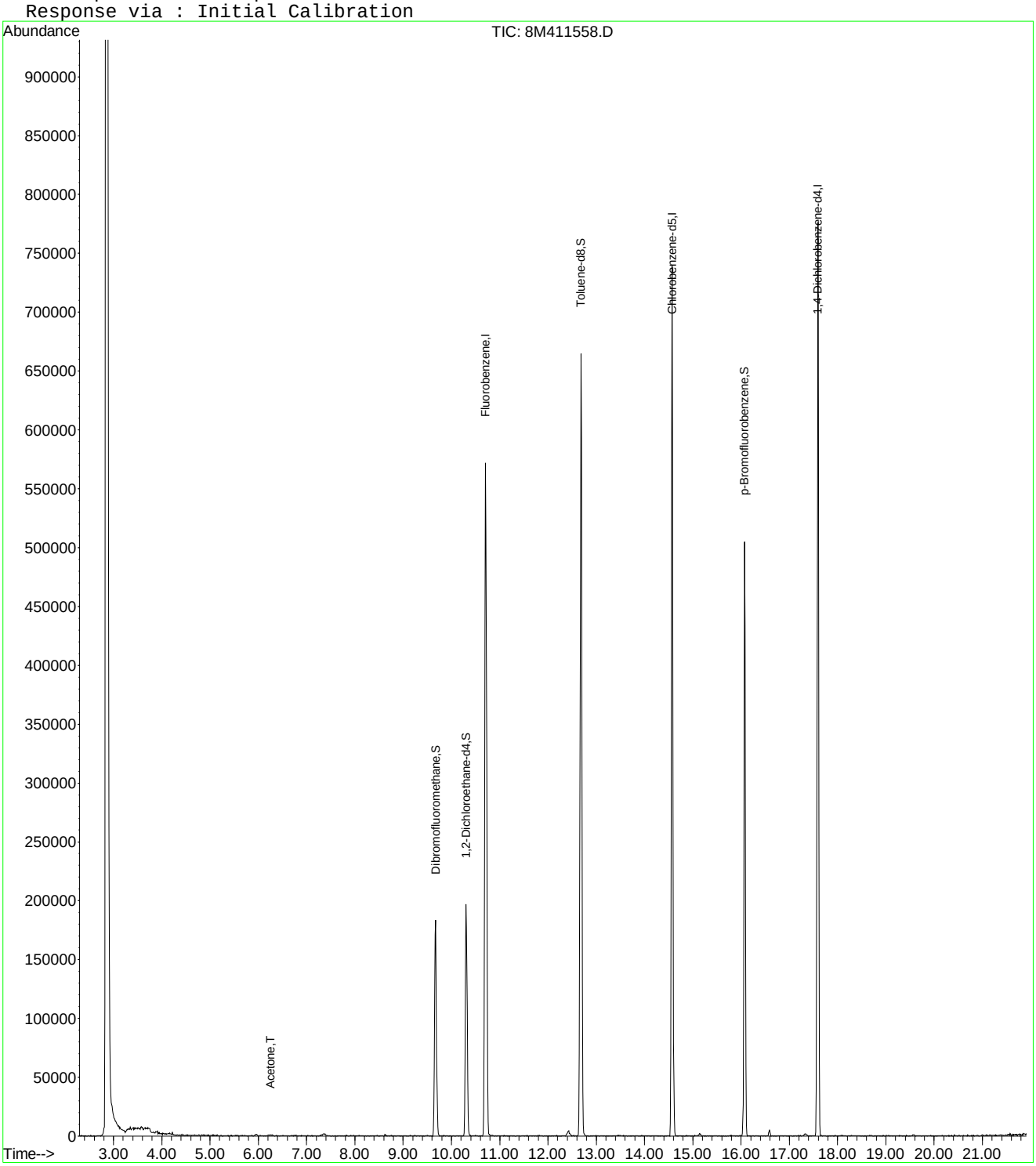
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	636472	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	456044	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	221194	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	156681	24.0764	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.32%			
43) 1,2-Dichloroethane-d4	10.30	65	168749	24.6980	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.80%			
58) Toluene-d8	12.68	98	550910	24.1401	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.56%			
80) p-Bromofluorobenzene	16.07	95	207841	24.0500	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.20%			
Target Compounds						Qvalue
13) Acetone	6.25	43	2389	1.9744	ug/L #	48

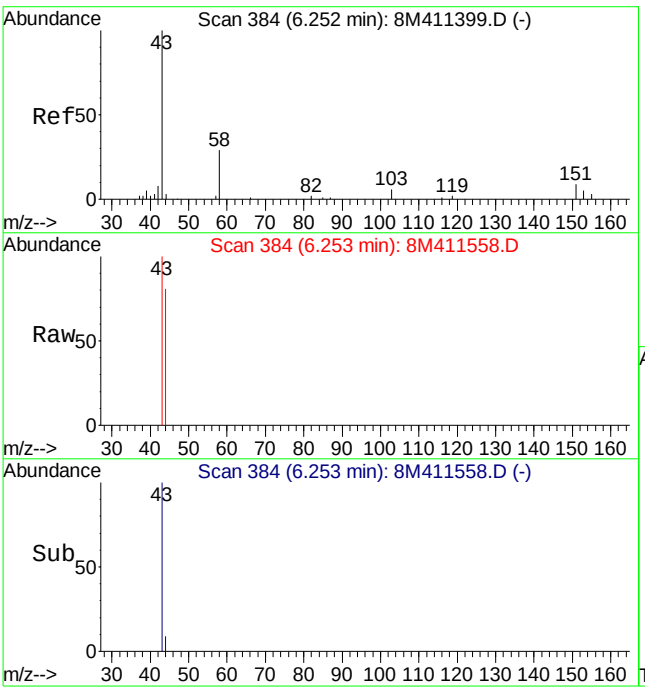
(#) = qualifier out of range (m) = manual integration
8M411558.D 8260WT.M Wed Apr 20 08:38:32 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411558.D Vial: 15
Acq On : 19 Apr 2016 21:11 Operator: TMB
Sample : L16040858-28 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

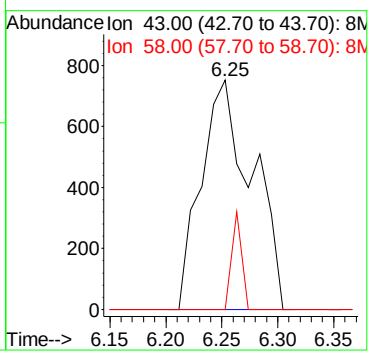




#13
Acetone
Concen: 1.97 ug/L
RT: 6.25 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411558.D
Acq: 19 Apr 2016 21:11

Tgt Ion: 43 Resp: 2389

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411559.D Vial: 16
Acq On : 19 Apr 2016 21:40 Operator: TMB
Sample : L16040858-29 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:32 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

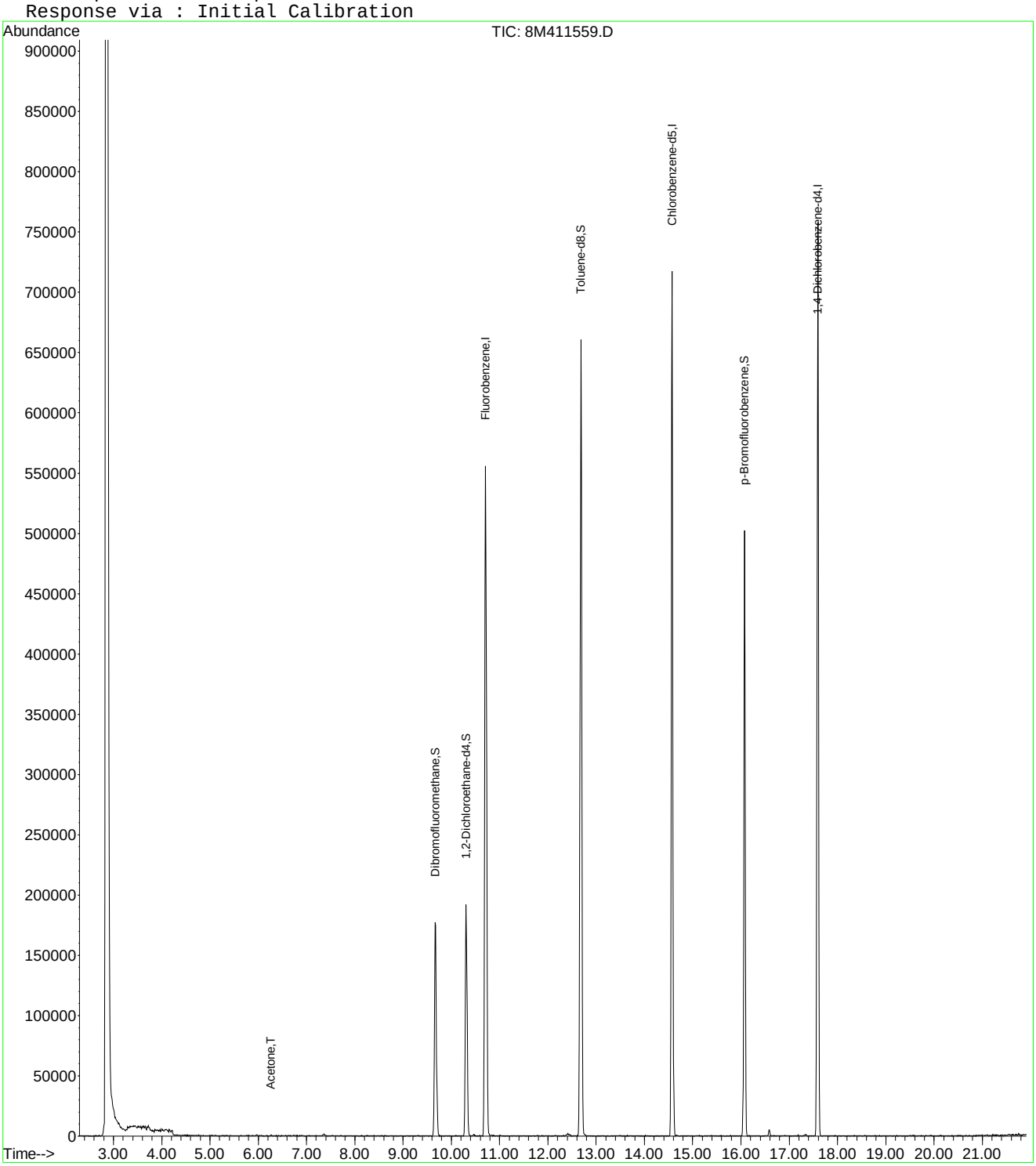
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	615035	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	447325	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	212447	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	150046	23.8604	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.44%			
43) 1,2-Dichloroethane-d4	10.31	65	159799	24.2033	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.80%			
58) Toluene-d8	12.68	98	538307	24.0476	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.20%			
80) p-Bromofluorobenzene	16.07	95	203825	24.5563	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.24%			
Target Compounds						Qvalue
13) Acetone	6.27	43	912	0.7800	ug/L #	48

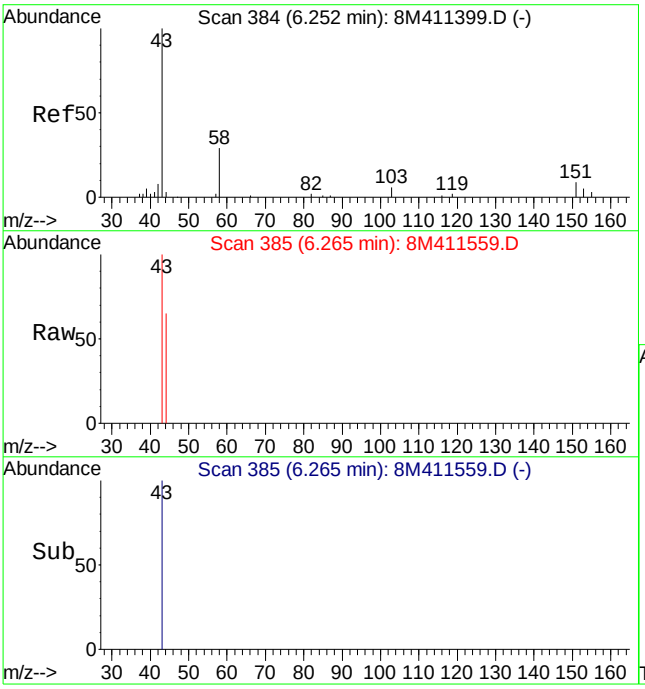
(#) = qualifier out of range (m) = manual integration
8M411559.D 8260WT.M Wed Apr 20 08:38:33 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411559.D Vial: 16
Acq On : 19 Apr 2016 21:40 Operator: TMB
Sample : L16040858-29 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

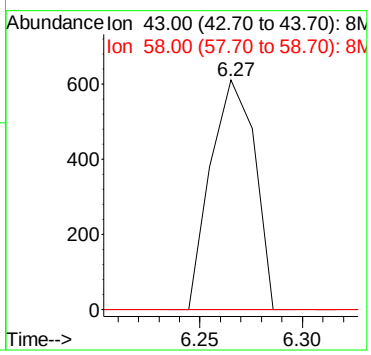




#13
Acetone
Concen: 0.78 ug/L
RT: 6.27 min Scan# 385
Delta R.T. 0.01 min
Lab File: 8M411559.D
Acq: 19 Apr 2016 21:40

Tgt Ion: 43 Resp: 912

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#



Data File : C:\MSDCHEM\2\DATA\041916\8M411568.D Vial: 24
Acq On : 20 Apr 2016 1:32 Operator: TMB
Sample : L16040858-30 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:46 2016 Quant Results File: 8260WT.RES

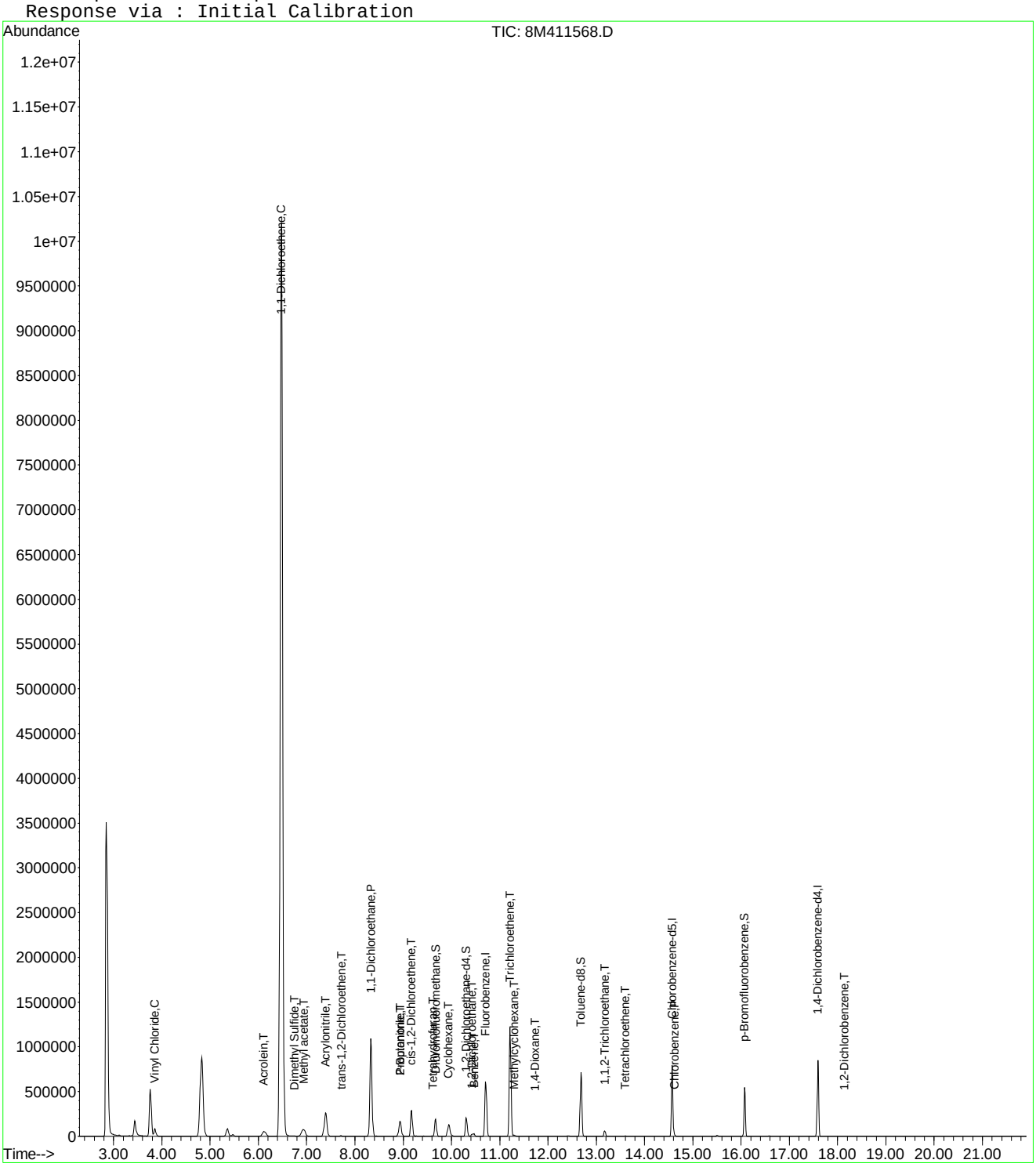
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

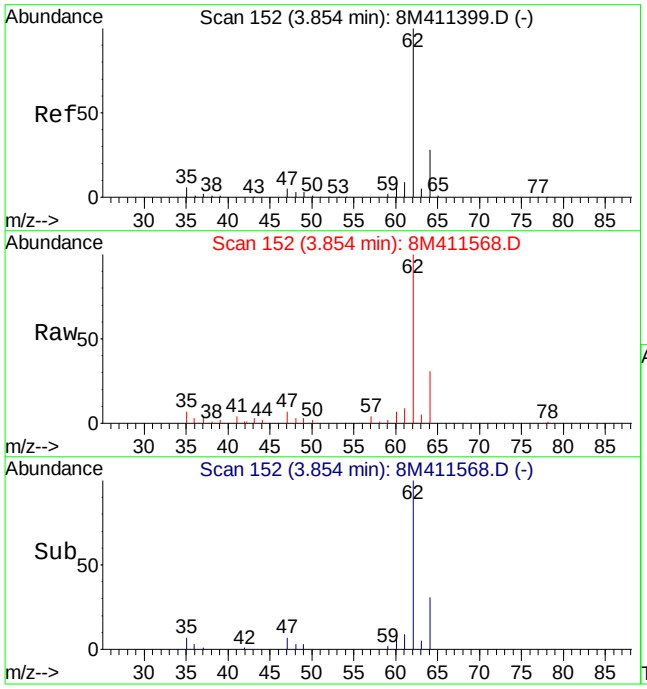
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	698770	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	510523	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	251117	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	169898	23.7798 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.12%		
43) 1,2-Dichloroethane-d4	10.30	65	176514	23.5312 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.12%		
58) Toluene-d8	12.68	98	606191	23.7279 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.92%		
80) p-Bromofluorobenzene	16.07	95	234007	23.8512 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.40%		
Target Compounds					Qvalue
4) Vinyl Chloride	3.85	62	111778	10.8072 ug/L	99
11) Acrolein	6.11	56	23182	40.1254 ug/L	77
14) 1,1-Dichloroethene	6.48	61	12369393	935.4299 ug/L	95
16) Dimethyl Sulfide	6.75	62	899	0.1494 ug/L	61
18) Methyl acetate	6.94	43	153962	32.8971 ug/L #	66
21) Acrylonitrile	7.40	53	11151	5.5638 ug/L #	24
23) trans-1,2-Dichloroethene	7.72	61	8593	0.6814 ug/L	88
27) 1,1-Dichloroethane	8.33	63	1678285	105.9977 ug/L	98
29) 2-Butanone	8.94	43	18270	8.2933 ug/L #	57
30) Propionitrile	8.94	54	7807	12.1964 ug/L	92
32) cis-1,2-Dichloroethene	9.17	96	154651	19.6408 ug/L	98
36) Tetrahydrofuran	9.62	42	481	0.2959 ug/L #	41
39) Cyclohexane	9.94	56	118070	7.2581 ug/L	85
45) 1,2-Dichloroethane	10.43	62	22513	2.2283 ug/L	98
46) Benzene	10.47	78	30792	1.0886 ug/L #	86
47) Trichloroethene	11.21	130	480408	67.4568 ug/L	97
48) Methylcyclohexane	11.30	83	6597	0.5829 ug/L	78
51) 1,4-Dioxane	11.73	88	1387	47.1339 ug/L	99
63) 1,1,2-Trichloroethane	13.18	97	23816	4.9591 ug/L	96
66) Tetrachloroethene	13.60	164	2286	0.3975 ug/L	90
70) Chlorobenzene	14.62	112	8187	0.4041 ug/L	72
96) 1,2-Dichlorobenzene	18.14	146	1914	0.1421 ug/L #	54

(#) = qualifier out of range (m) = manual integration
8M411568.D 8260WT.M Wed Apr 20 08:38:47 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041916\8M411568.D Vial: 24
Acq On : 20 Apr 2016 1:32 Operator: TMB
Sample : L16040858-30 A 826-LOW Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

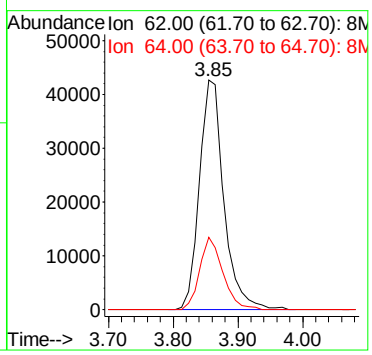


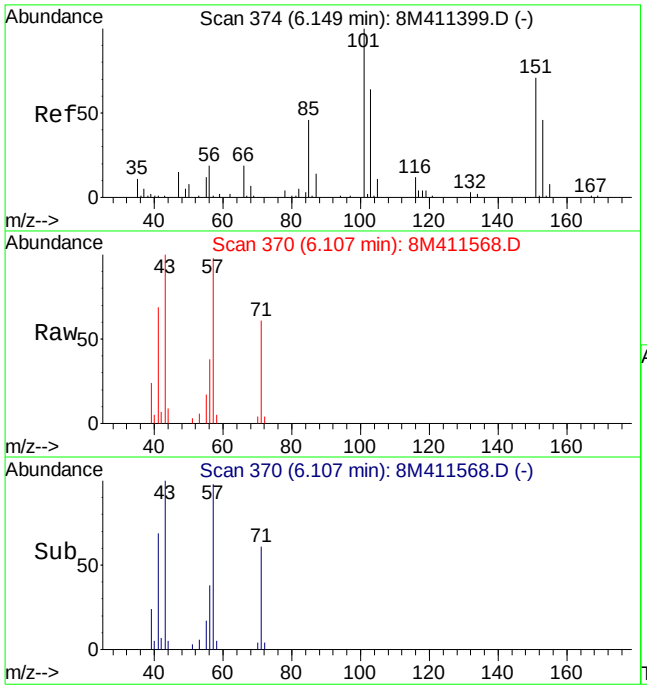


#4
Vinyl Chloride
Concen: 10.81 ug/L
RT: 3.85 min Scan# 152
Delta R.T. 0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 62 Resp: 111778

Ion	Ratio	Lower	Upper
62	100		
64	29.8	18.1	42.1

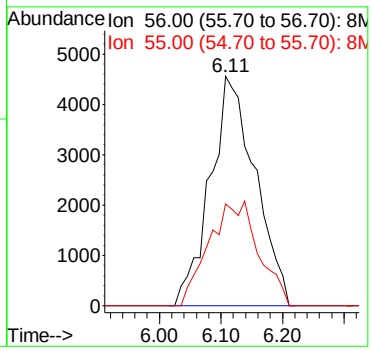


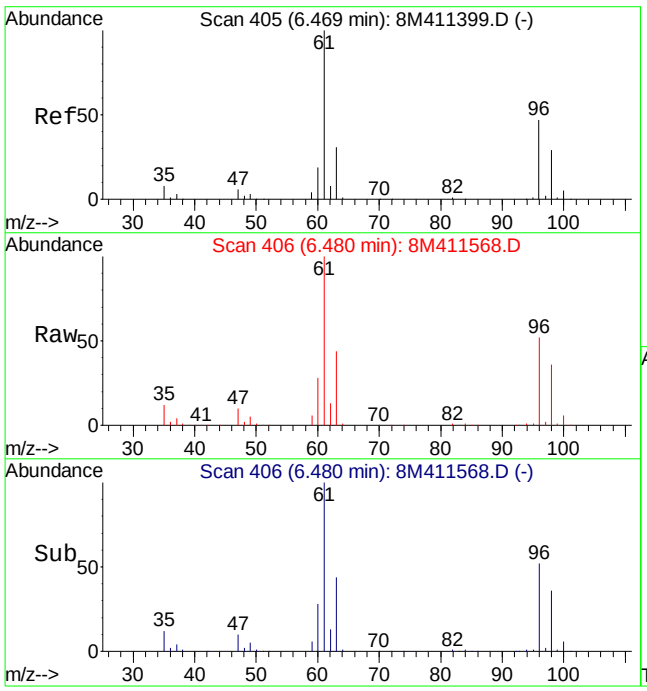


#11
Acrolein
Concen: 40.13 ug/L
RT: 6.11 min Scan# 370
Delta R.T. -0.04 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 56 Resp: 23182

Ion	Ratio	Lower	Upper
56	100		
55	50.1	41.6	97.0

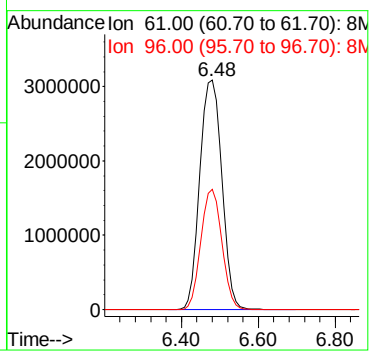


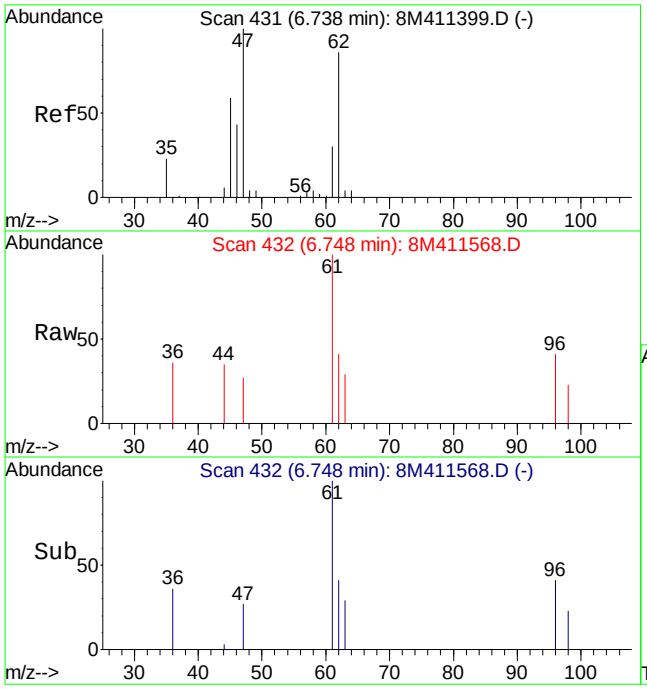


#14
1,1-Dichloroethene
Concen: 935.43 ug/L
RT: 6.48 min Scan# 406
Delta R.T. 0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 61 Resp:12369393

Ion	Ratio	Lower	Upper
61	100		
96	49.8	31.9	74.5

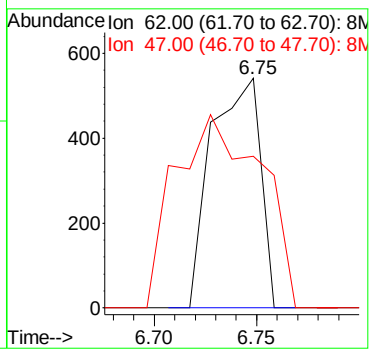


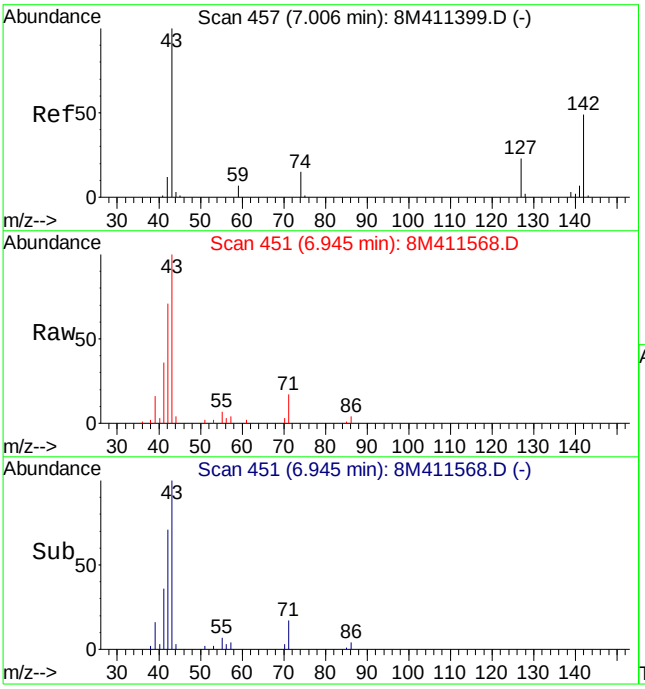


#16
Dimethyl Sulfide
Concen: 0.15 ug/L
RT: 6.75 min Scan# 432
Delta R.T. 0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 62 Resp: 899

Ion	Ratio	Lower	Upper
62	100		
47	147.4	64.2	149.8

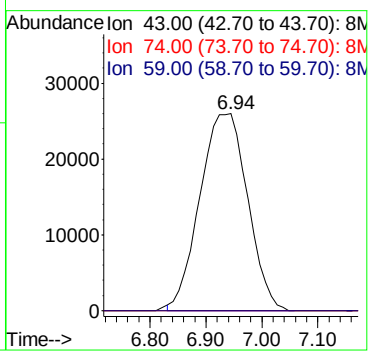


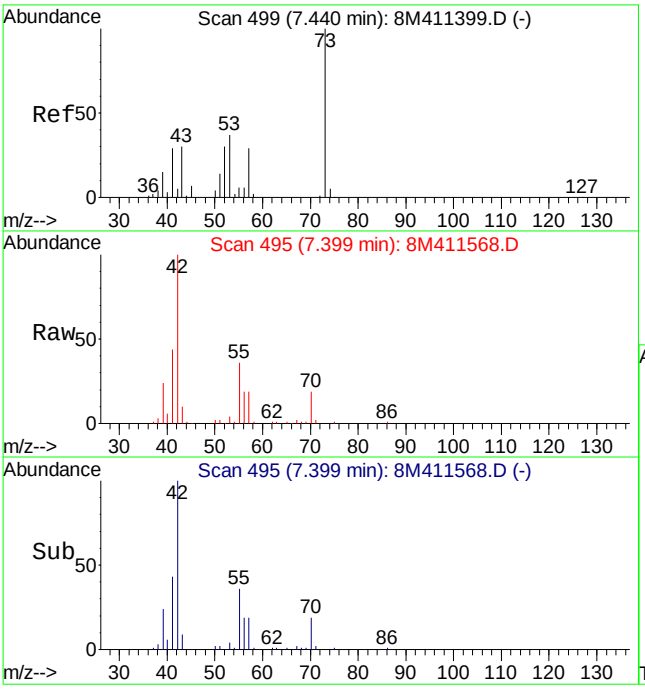


#18
Methyl acetate
Concen: 32.90 ug/L
RT: 6.94 min Scan# 451
Delta R.T. -0.06 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 43 Resp: 153962

Ion	Ratio	Lower	Upper
43	100		
74	0.0	10.4	24.4#
59	0.0	4.5	10.5#

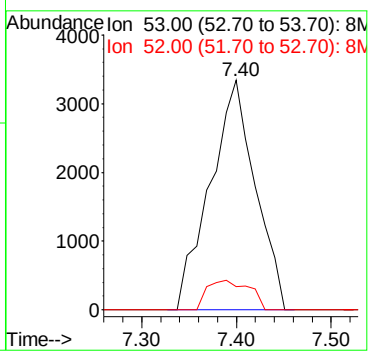


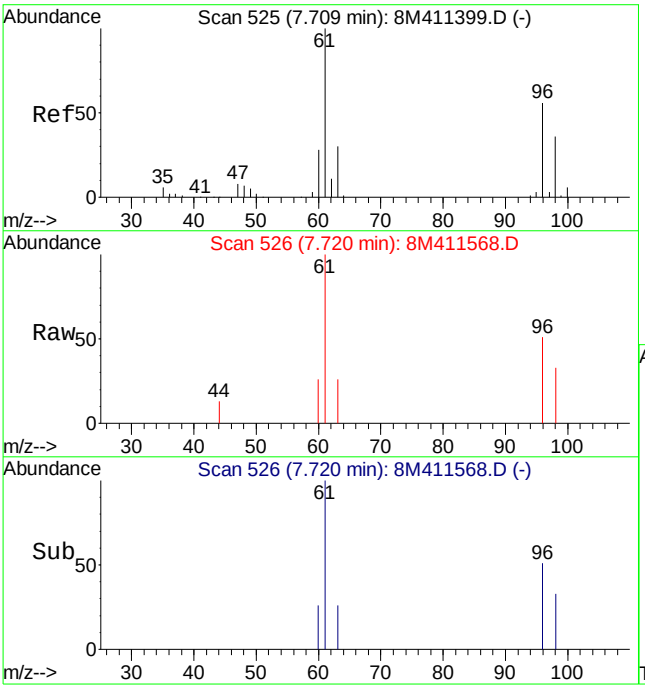


#21
Acrylonitrile
Concen: 5.56 ug/L
RT: 7.40 min Scan# 495
Delta R.T. -0.04 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 53 Resp: 11151

Ion	Ratio	Lower	Upper
53	100		
52	12.0	46.7	108.9#

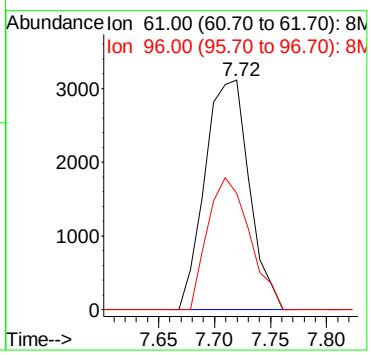


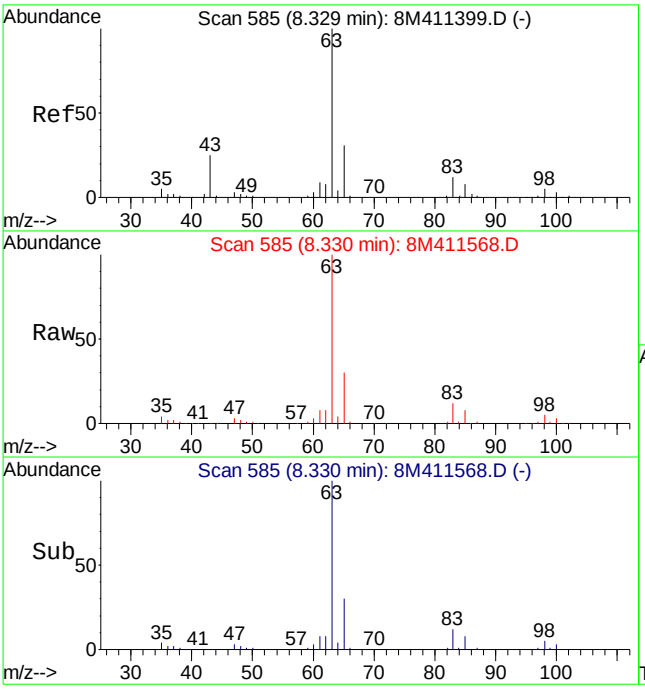


#23
trans-1,2-Dichloroethene
Concen: 0.68 ug/L
RT: 7.72 min Scan# 526
Delta R.T. 0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 61 Resp: 8593

Ion	Ratio	Lower	Upper
61	100		
96	54.7	38.6	90.2

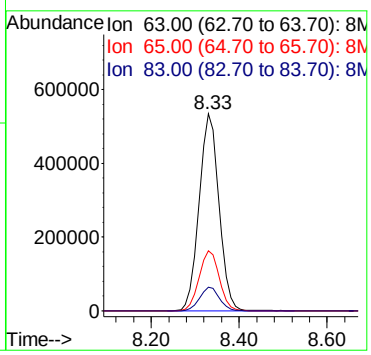


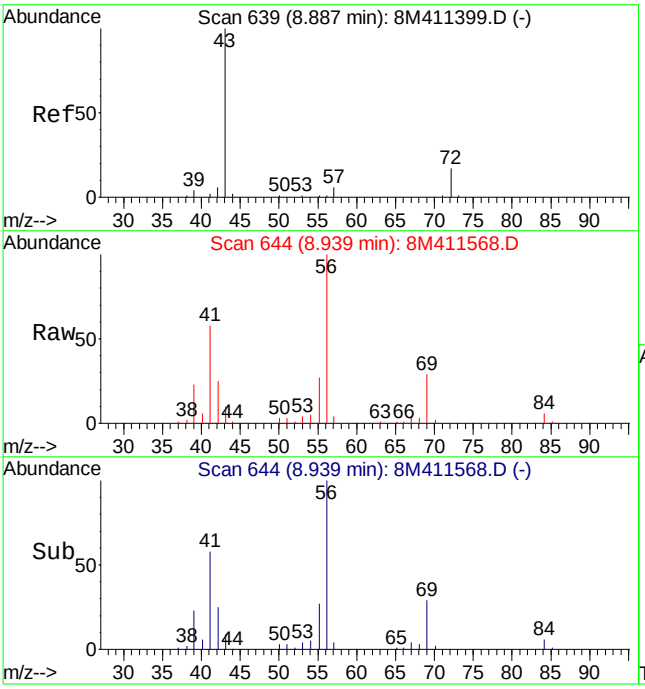


#27
1,1-Dichloroethane
Concen: 106.00 ug/L
RT: 8.33 min Scan# 585
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 63 Resp: 1678285

Ion	Ratio	Lower	Upper
63	100		
65	30.8	19.1	44.5
83	11.8	7.7	18.1

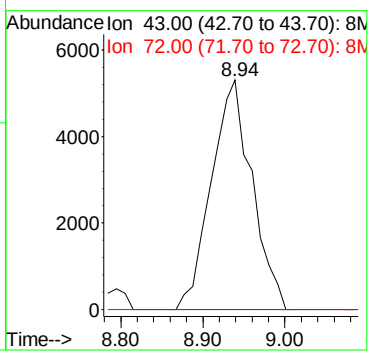


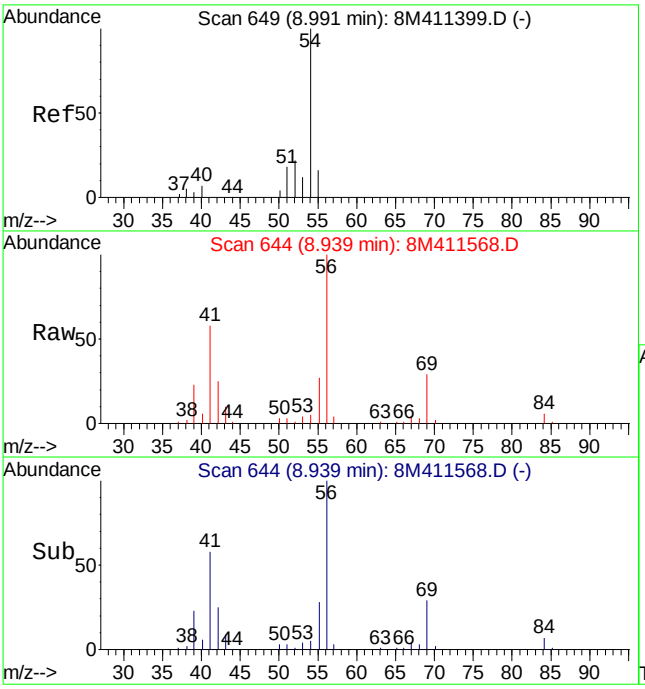


#29
2-Butanone
Concen: 8.29 ug/L
RT: 8.94 min Scan# 644
Delta R.T. 0.05 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 43 Resp: 18270

Ion	Ratio	Lower	Upper
43	100		
72	0.0	11.6	27.2#

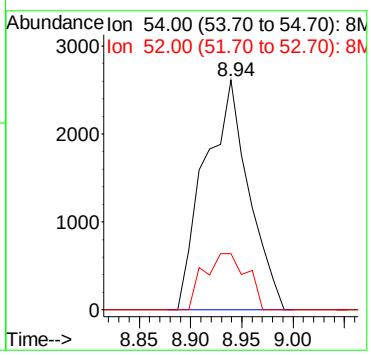


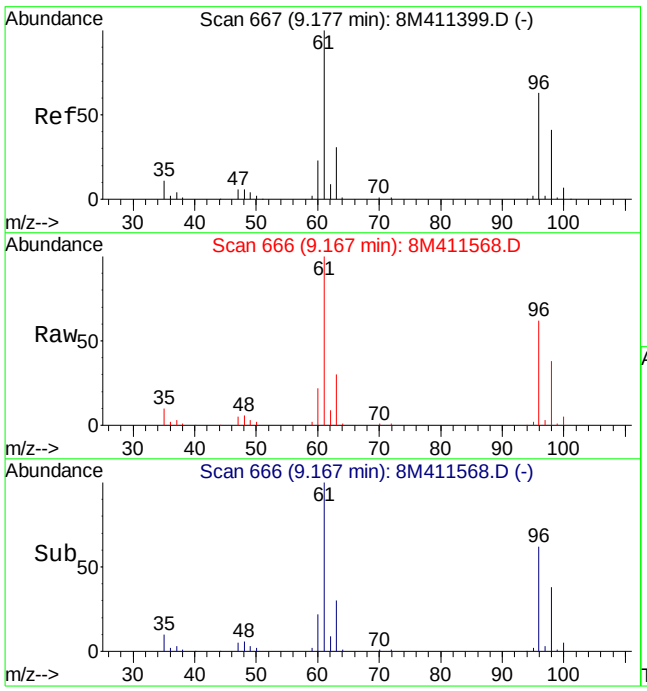


#30
Propionitrile
Concen: 12.20 ug/L
RT: 8.94 min Scan# 644
Delta R.T. -0.05 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 54 Resp: 7807

Ion	Ratio	Lower	Upper
54	100		
52	23.8	12.1	28.3

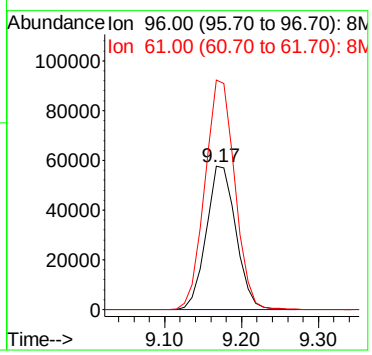


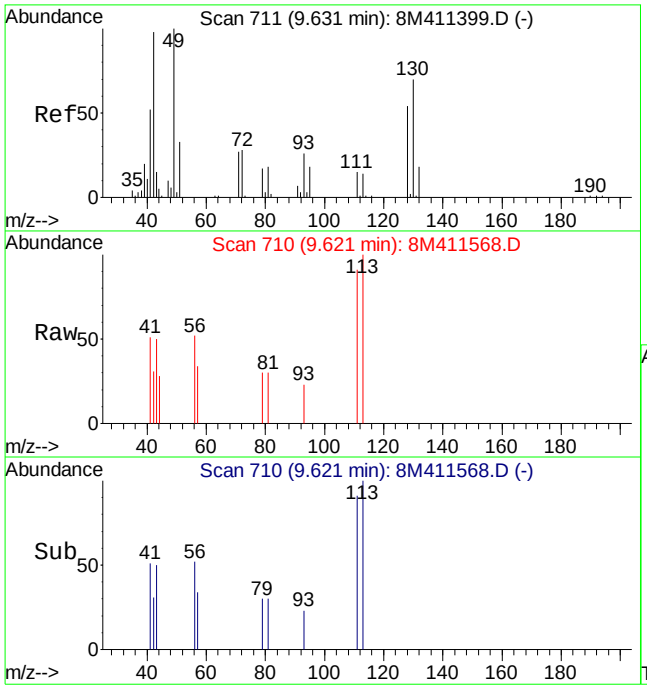


#32
cis-1,2-Dichloroethene
Concen: 19.64 ug/L
RT: 9.17 min Scan# 666
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 96 Resp: 154651

Ion	Ratio	Lower	Upper
96	100		
61	161.5	98.9	230.7

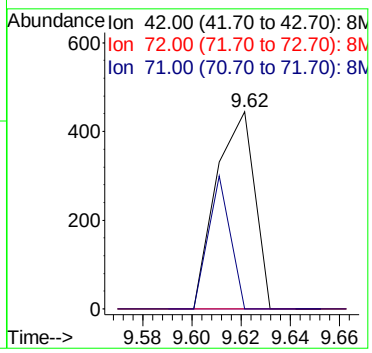


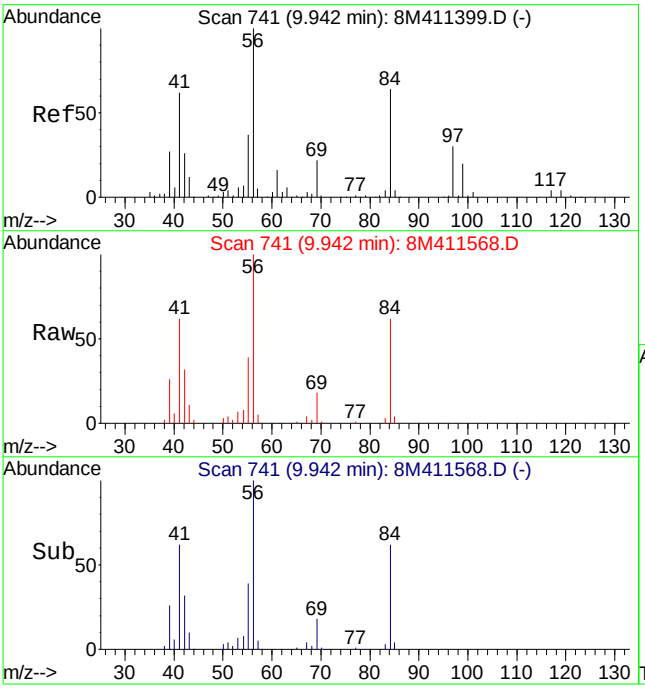


#36
Tetrahydrofuran
Concen: 0.30 ug/L
RT: 9.62 min Scan# 710
Delta R.T. -0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 42 Resp: 481

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

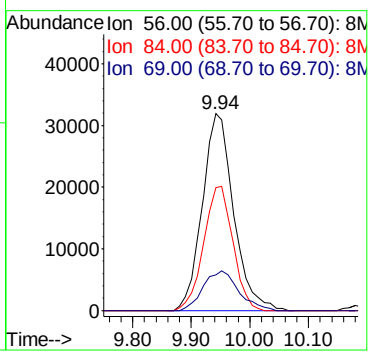


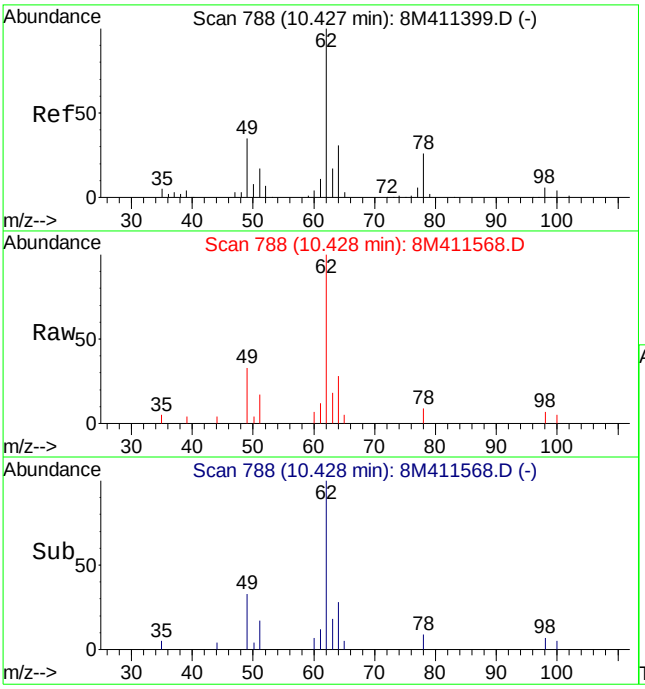


#39
Cyclohexane
Concen: 7.26 ug/L
RT: 9.94 min Scan# 741
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 56 Resp: 118070

Ion	Ratio	Lower	Upper
56	100		
84	58.8	44.3	103.5
69	22.9	15.5	36.1

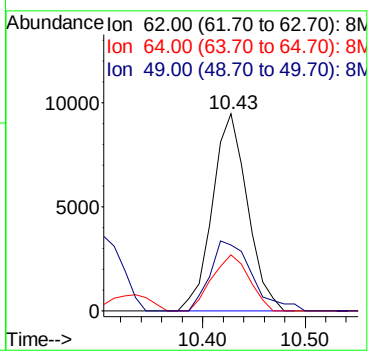


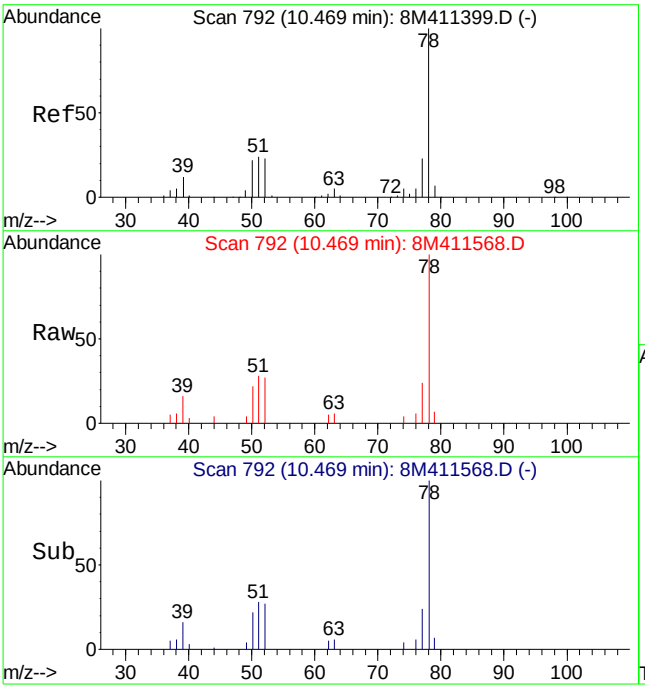


#45
1,2-Dichloroethane
Concen: 2.23 ug/L
RT: 10.43 min Scan# 788
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 62 Resp: 22513

Ion	Ratio	Lower	Upper
62	100		
64	30.0	19.1	44.7
49	42.1	25.4	59.4

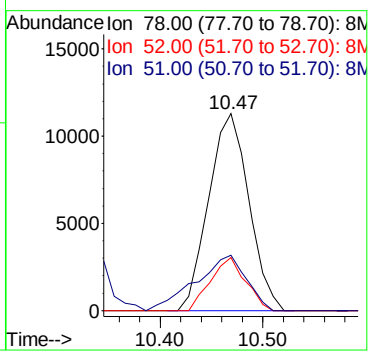


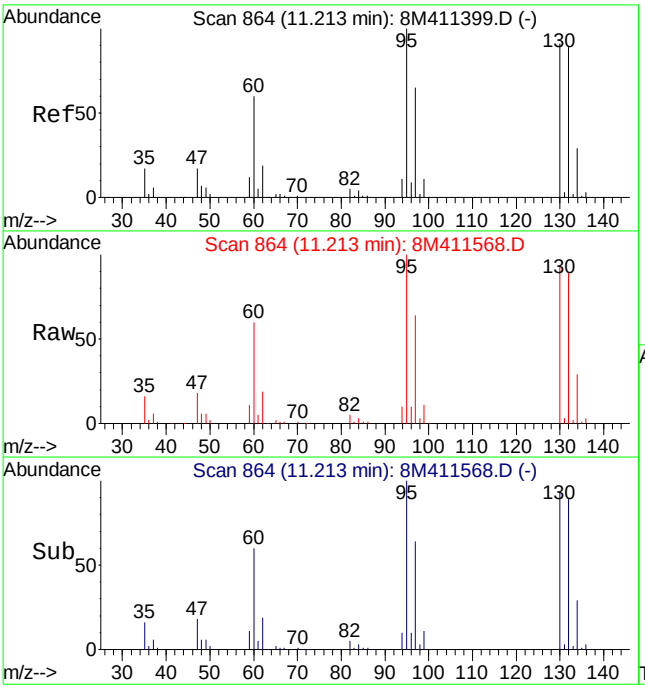


#46
Benzene
Concen: 1.09 ug/L
RT: 10.47 min Scan# 792
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 78 Resp: 30792

Ion	Ratio	Lower	Upper
78	100		
52	23.5	12.2	28.4
51	35.2	14.9	34.9#

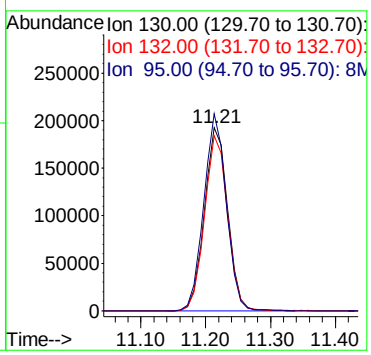


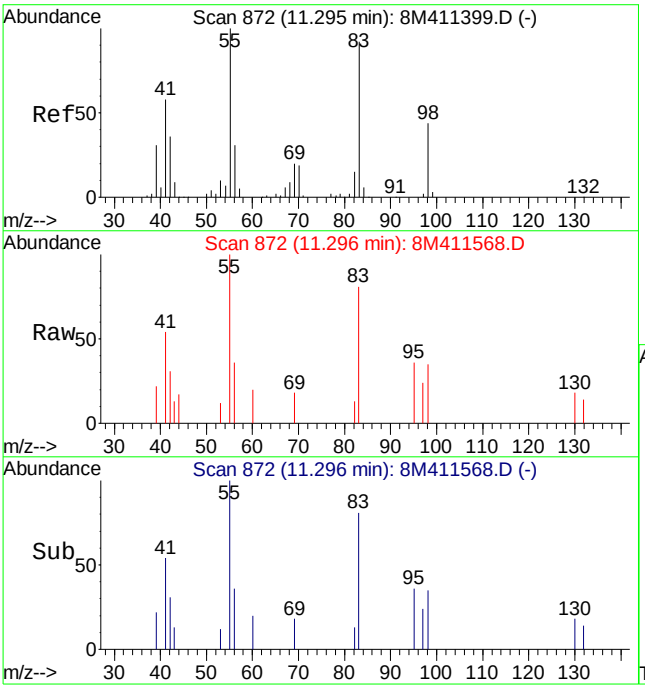


#47
Trichloroethene
Concen: 67.46 ug/L
RT: 11.21 min Scan# 864
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion:130 Resp: 480408

Ion	Ratio	Lower	Upper
130	100		
132	94.8	59.9	139.7
95	104.6	62.3	145.5

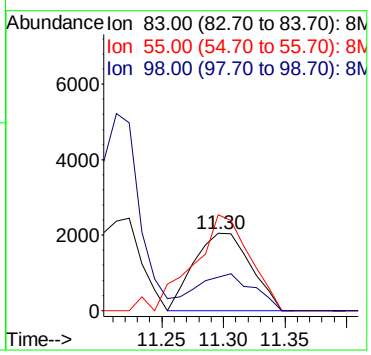


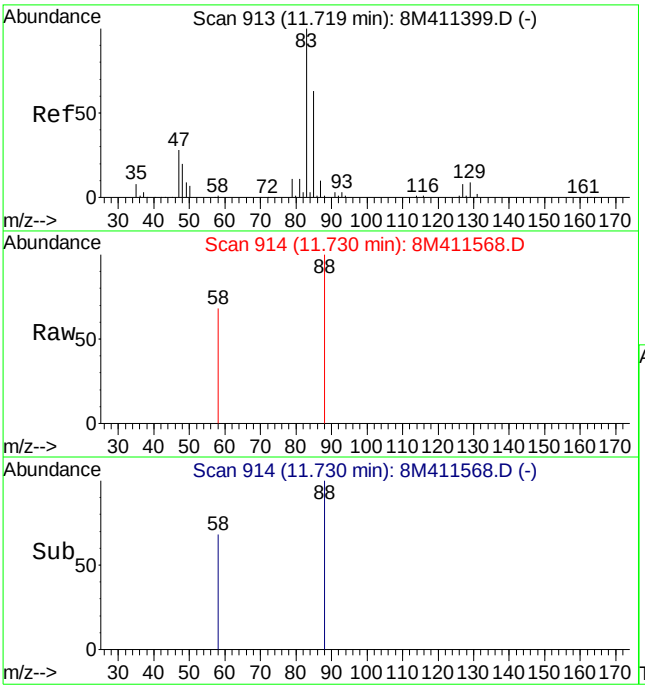


#48
Methylcyclohexane
Concen: 0.58 ug/L
RT: 11.30 min Scan# 872
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 83 Resp: 6597

Ion	Ratio	Lower	Upper
83	100		
55	122.5	55.6	129.8
98	44.9	28.3	66.1

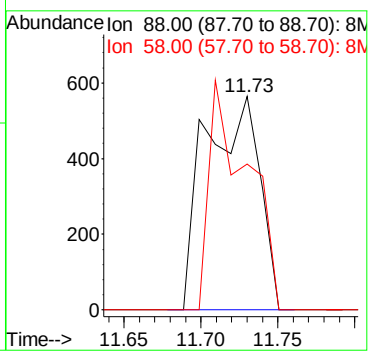


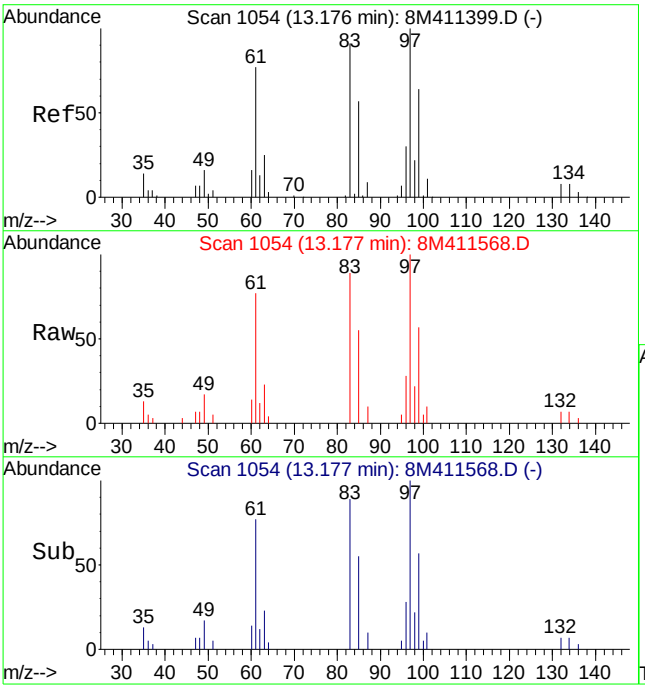


#51
1,4-Dioxane
Concen: 47.13 ug/L
RT: 11.73 min Scan# 914
Delta R.T. 0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 88 Resp: 1387

Ion	Ratio	Lower	Upper
88	100		
58	76.1	45.3	105.7

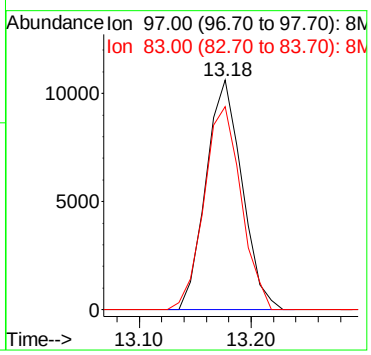


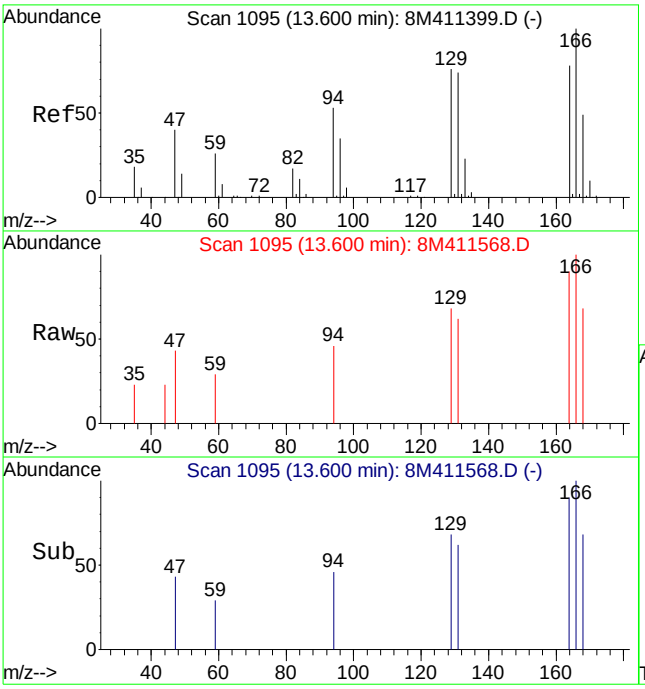


#63
1,1,2-Trichloroethane
Concen: 4.96 ug/L
RT: 13.18 min Scan# 1054
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion: 97 Resp: 23816

Ion	Ratio	Lower	Upper
97	100		
83	90.8	52.2	121.8

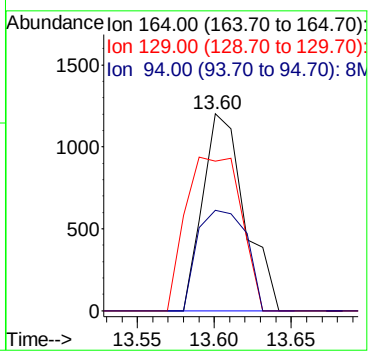


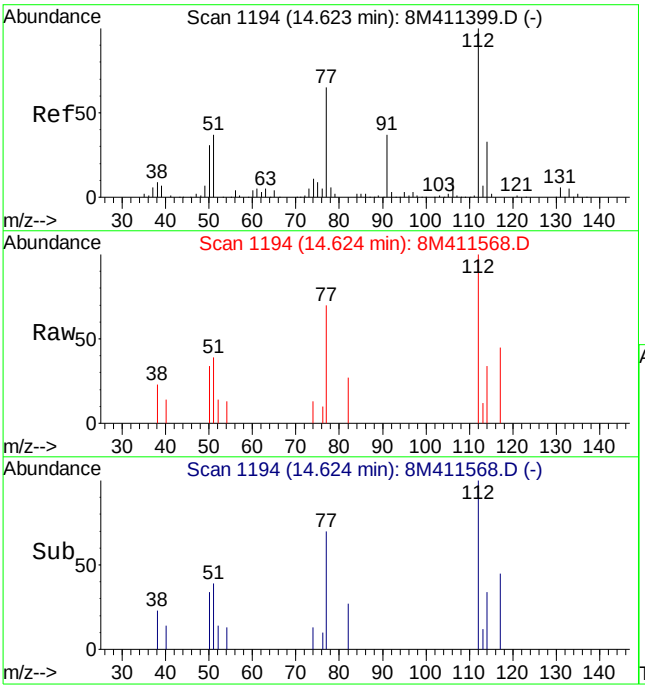


#66
Tetrachloroethene
Concen: 0.40 ug/L
RT: 13.60 min Scan# 1095
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion:164 Resp: 2286

Ion	Ratio	Lower	Upper
164	100		
129	102.9	54.1	126.3
94	59.3	37.6	87.6

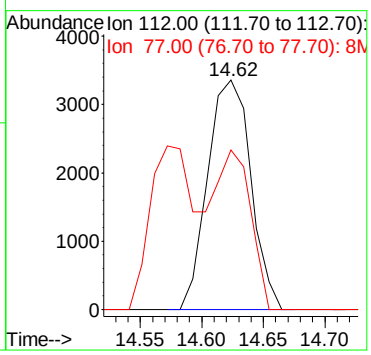


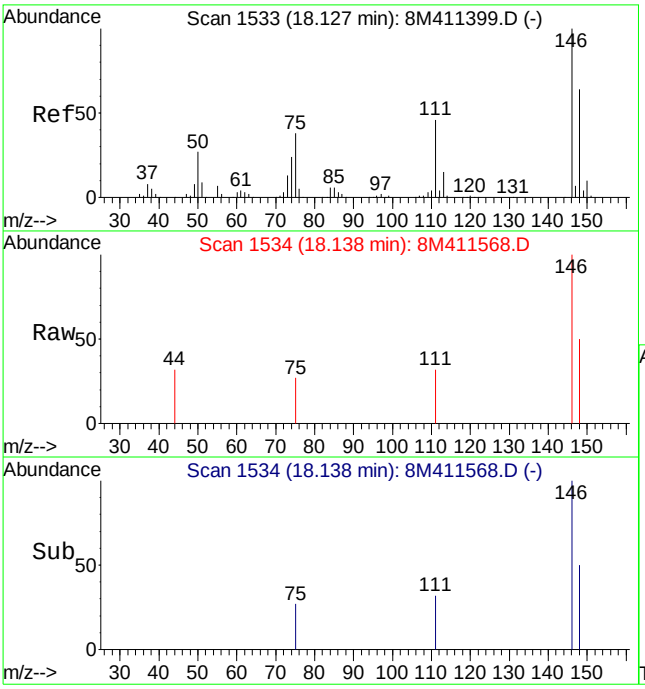


#70
Chlorobenzene
Concen: 0.40 ug/L
RT: 14.62 min Scan# 1194
Delta R.T. -0.00 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion:112 Resp: 8187

Ion	Ratio	Lower	Upper
112	100		
77	55.0	47.7	111.3

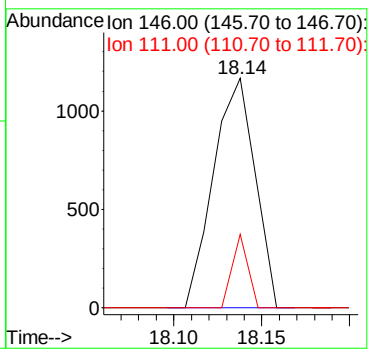




#96
1,2-Dichlorobenzene
Concen: 0.14 ug/L
RT: 18.14 min Scan# 1534
Delta R.T. 0.01 min
Lab File: 8M411568.D
Acq: 20 Apr 2016 1:32

Tgt Ion:146 Resp: 1914

Ion	Ratio	Lower	Upper
146	100		
111	12.1	24.5	57.1#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411618.D Vial: 11
Acq On : 21 Apr 2016 17:25 Operator: TMB
Sample : L16040858-30 B 100X 826-LOW D1 Inst : HPMS8
Misc : 1,100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 09:35:55 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

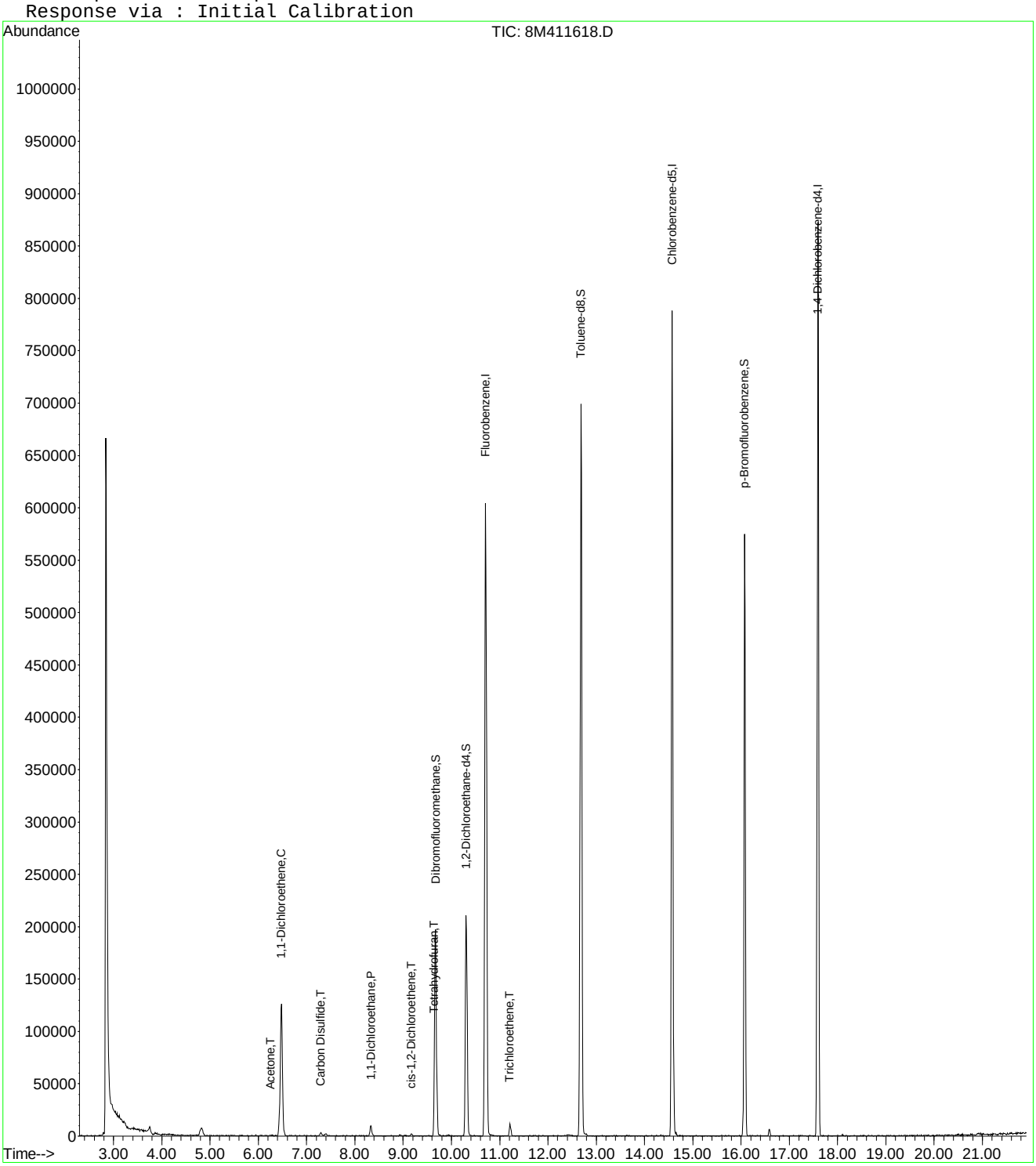
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	668496	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	502048	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	261683	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	175756	25.7137	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.84%			
43) 1,2-Dichloroethane-d4	10.30	65	198932	27.7208	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 110.88%			
58) Toluene-d8	12.68	98	585440	23.3025	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 93.20%			
80) p-Bromofluorobenzene	16.07	95	241496	23.6206	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 94.48%			
Target Compounds						Qvalue
13) Acetone	6.25	43	398	0.3132	ug/L #	48
14) 1,1-Dichloroethene	6.48	61	158657	12.5417	ug/L	88
20) Carbon Disulfide	7.30	76	6454	0.2782	ug/L	91
27) 1,1-Dichloroethane	8.33	63	17038	1.1248	ug/L	90
32) cis-1,2-Dichloroethene	9.17	96	1115	0.1480	ug/L	94
36) Tetrahydrofuran	9.64	42	1375	0.8841	ug/L #	41
47) Trichloroethene	11.20	130	4763	0.6991	ug/L	95

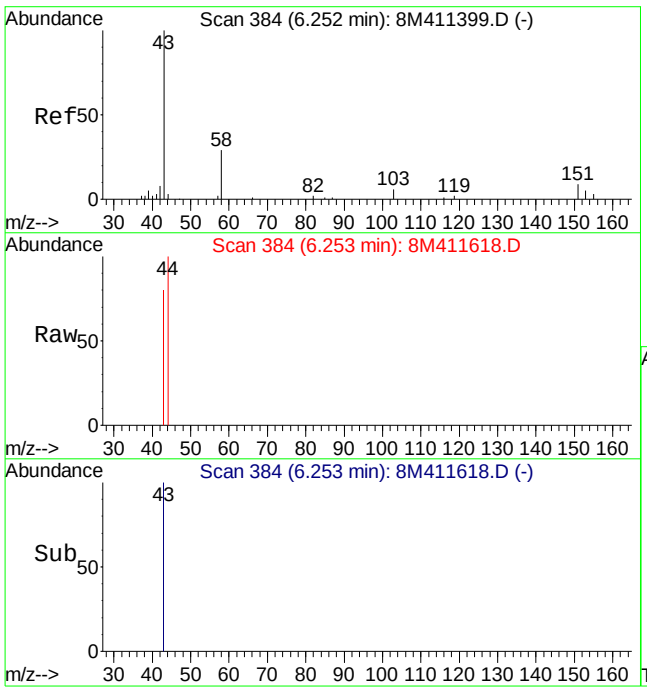
(#) = qualifier out of range (m) = manual integration
8M411618.D 8260WT.M Fri Apr 22 09:35:56 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411618.D Vial: 11
Acq On : 21 Apr 2016 17:25 Operator: TMB
Sample : L16040858-30 B 100X 826-LOW D1 Inst : HPMS8
Misc : 1,100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 9:35 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

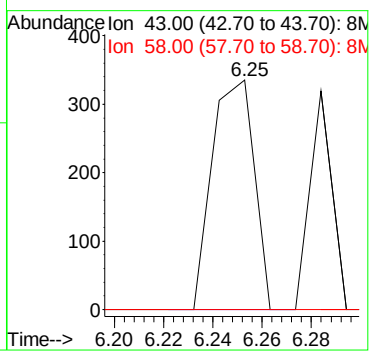


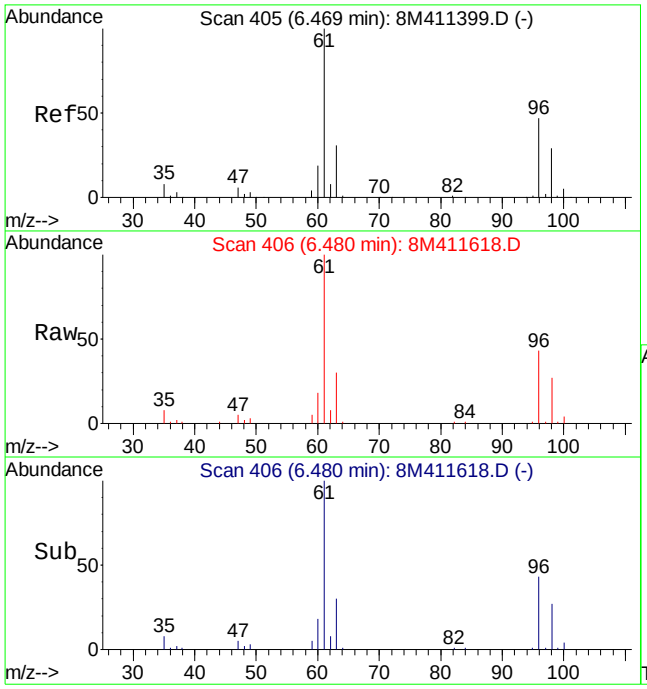


#13
Acetone
Concen: 0.31 ug/L
RT: 6.25 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion: 43 Resp: 398

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

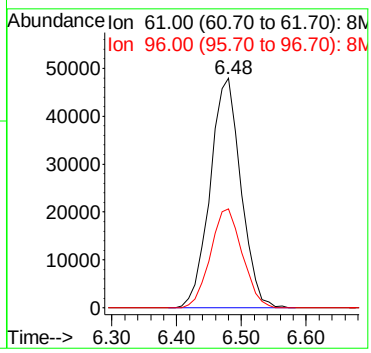


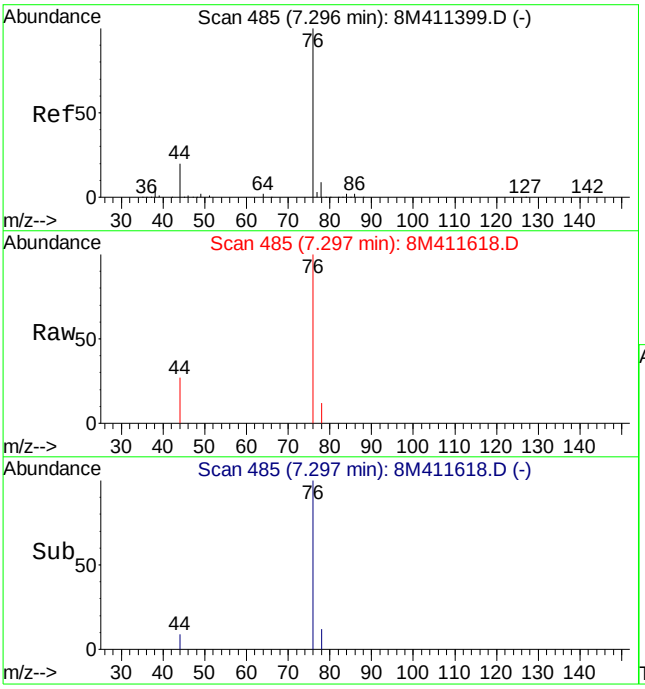


#14
1,1-Dichloroethene
Concen: 12.54 ug/L
RT: 6.48 min Scan# 406
Delta R.T. 0.01 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion: 61 Resp: 158657

Ion	Ratio	Lower	Upper
61	100		
96	44.5	31.9	74.5

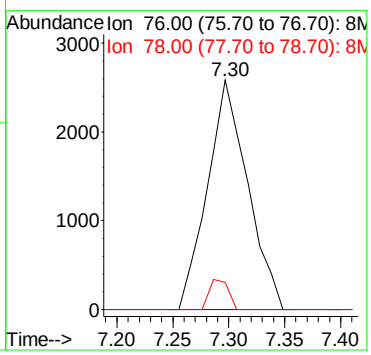


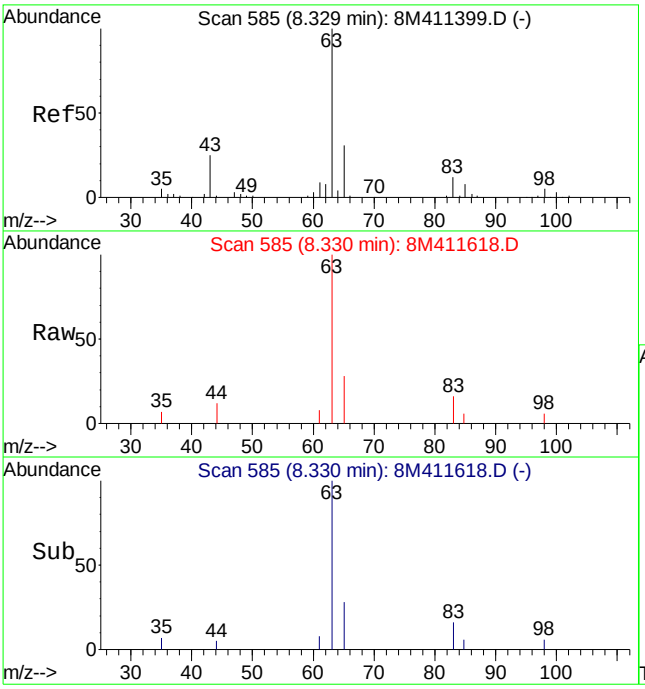


#20
Carbon Disulfide
Concen: 0.28 ug/L
RT: 7.30 min Scan# 485
Delta R.T. 0.00 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion: 76 Resp: 6454

Ion	Ratio	Lower	Upper
76	100		
78	6.2	5.8	13.4

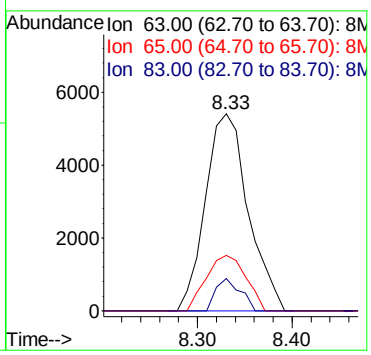


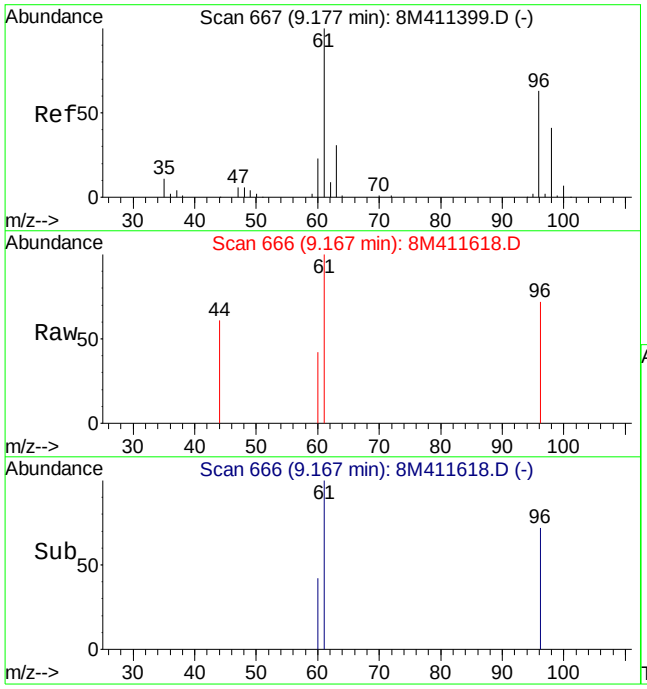


#27
1,1-Dichloroethane
Concen: 1.12 ug/L
RT: 8.33 min Scan# 585
Delta R.T. 0.00 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion: 63 Resp: 17038

Ion	Ratio	Lower	Upper
63	100		
65	26.0	19.1	44.5
83	9.4	7.7	18.1

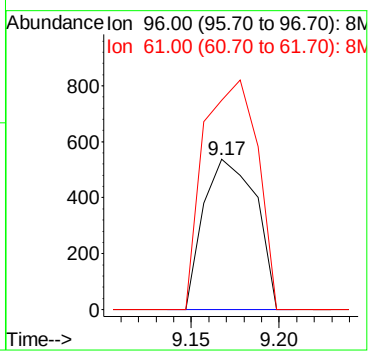


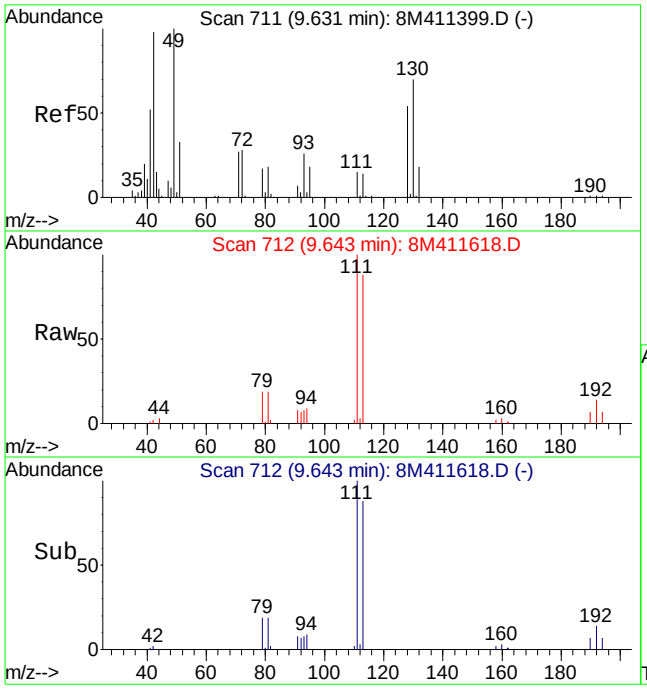


#32
cis-1,2-Dichloroethene
Concen: 0.15 ug/L
RT: 9.17 min Scan# 666
Delta R.T. 0.00 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion: 96 Resp: 1115

Ion	Ratio	Lower	Upper
96	100		
61	157.0	98.9	230.7

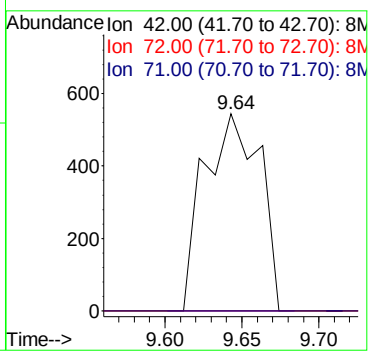


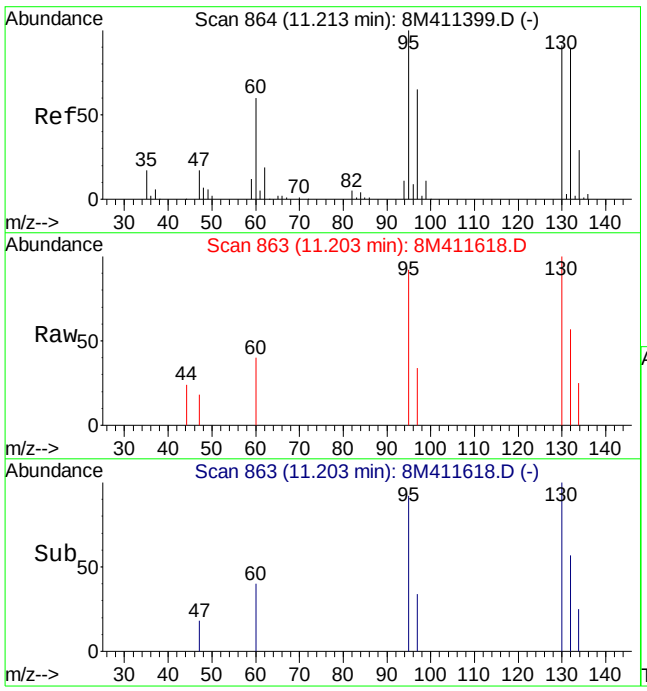


#36
Tetrahydrofuran
Concen: 0.88 ug/L
RT: 9.64 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion: 42 Resp: 1375

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	0.0	19.0	44.4#

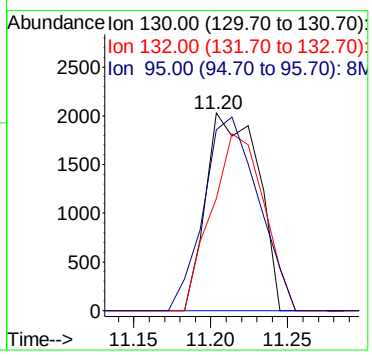




#47
Trichloroethene
Concen: 0.70 ug/L
RT: 11.20 min Scan# 863
Delta R.T. -0.01 min
Lab File: 8M411618.D
Acq: 21 Apr 2016 17:25

Tgt Ion:130 Resp: 4763

Ion	Ratio	Lower	Upper
130	100		
132	90.1	59.9	139.7
95	103.0	62.3	145.5



Data File : C:\MSDCHEM\1\DATA\042016\6M138669.D Vial: 15
Acq On : 20 Apr 2016 18:50 Operator: TMB
Sample : L16040858-31 TB B 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 09:22:01 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

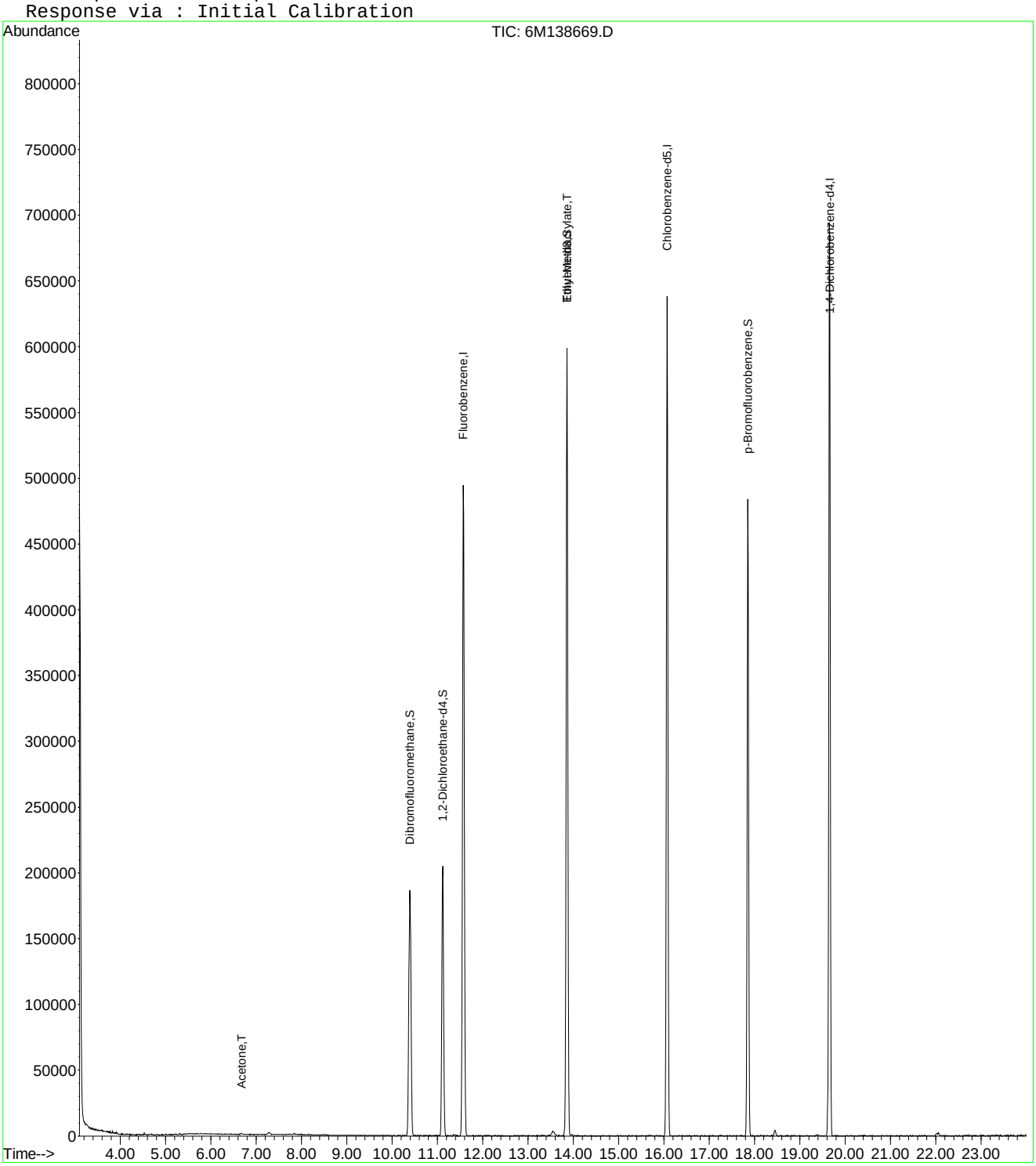
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	611363	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	462489	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	251675	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	169090	27.0061	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.04%			
43) 1,2-Dichloroethane-d4	11.12	65	208291	27.4105	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 109.64%			
58) Toluene-d8	13.86	98	541115	25.9885	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.96%			
80) p-Bromofluorobenzene	17.85	95	224568	26.7267	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.92%			
Target Compounds						Qvalue
13) Acetone	6.68	43	1467	0.7738	ug/L #	46
60) Ethyl Methacrylate	13.86	69	1558	0.2252	ug/L	93

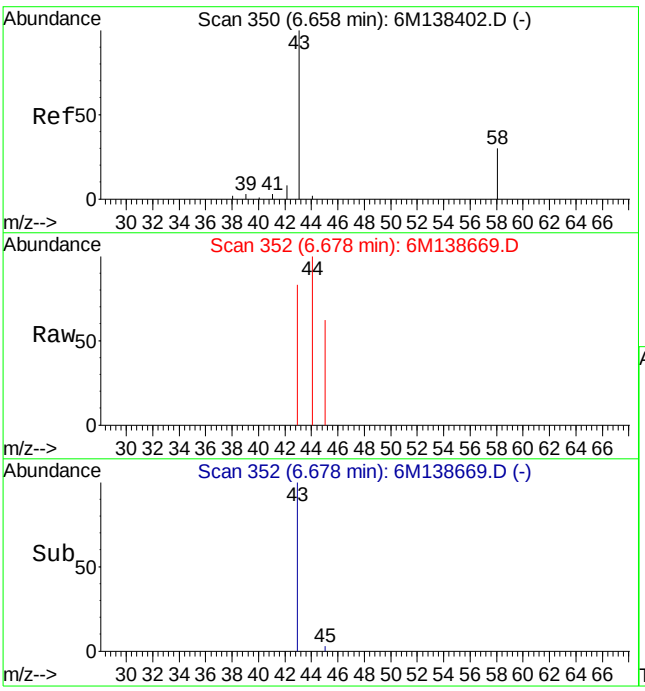
(#) = qualifier out of range (m) = manual integration
6M138669.D 8260WTR.M Thu Apr 21 09:22:01 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042016\6M138669.D Vial: 15
Acq On : 20 Apr 2016 18:50 Operator: TMB
Sample : L16040858-31 TB B 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

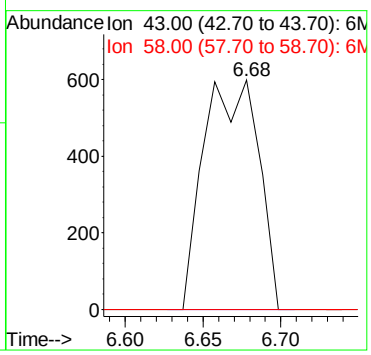


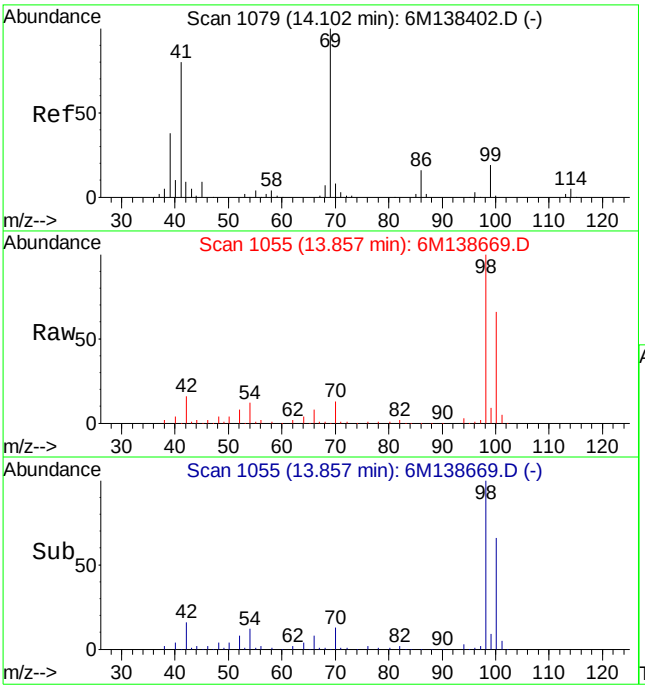


#13
Acetone
Concen: 0.77 ug/L
RT: 6.68 min Scan# 352
Delta R.T. 0.01 min
Lab File: 6M138669.D
Acq: 20 Apr 2016 18:50

Tgt Ion: 43 Resp: 1467

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

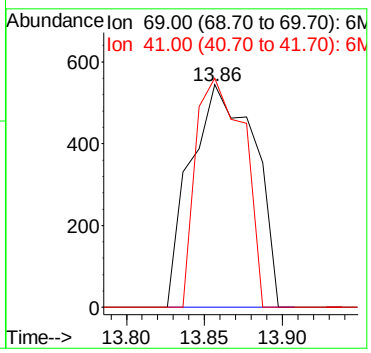




#60
Ethyl Methacrylate
Concen: 0.23 ug/L
RT: 13.86 min Scan# 1055
Delta R.T. -0.24 min
Lab File: 6M138669.D
Acq: 20 Apr 2016 18:50

Tgt Ion: 69 Resp: 1558

Ion	Ratio	Lower	Upper
69	100		
41	77.0	42.9	100.1



2.1.1.4 Standards Data

Data File : C:\MSDchem\1\data\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 11:38:33 2015 Quant Results File: 8260WT.RES

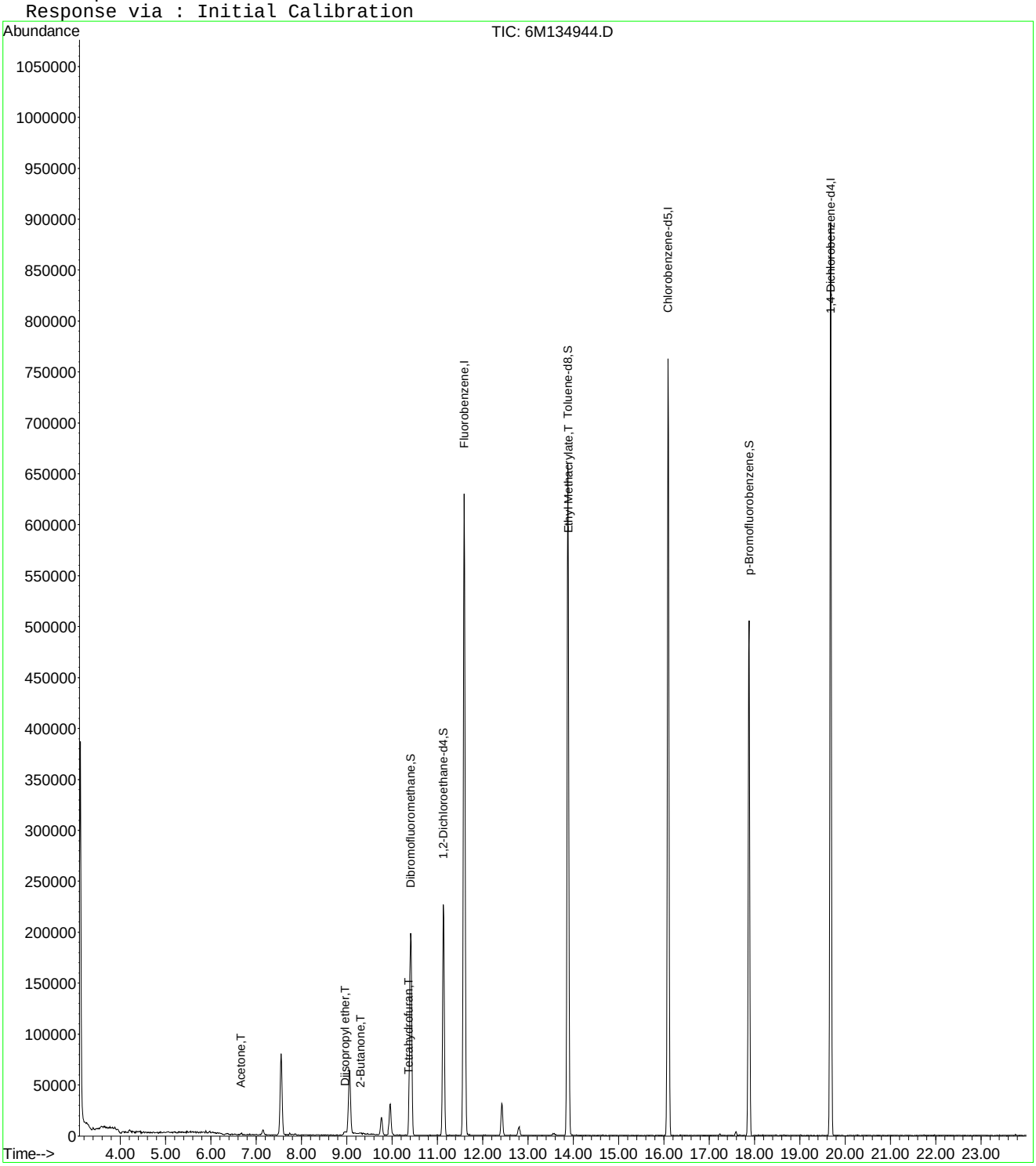
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.59	96	748562	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.10	117	539579	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	293209	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.41	111	178812	23.0408	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 92.16%			
43) 1,2-Dichloroethane-d4	11.13	65	211621	23.5842	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.32%			
58) Toluene-d8	13.88	98	575617	23.7243	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.88%			
80) p-Bromofluorobenzene	17.88	95	220021	24.5236	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.08%			
Target Compounds						Qvalue
13) Acetone	6.66	43	3536	1.4212	ug/L #	58
25) Diisopropyl ether	8.96	45	8273	0.2278	ug/L #	36
29) 2-Butanone	9.31	43	942	0.2597	ug/L #	52
36) Tetrahydrofuran	10.37	42	406	0.1857	ug/L #	34
60) Ethyl Methacrylate	13.89	69	2256	0.8215	ug/L #	51

(#) = qualifier out of range (m) = manual integration
6M134944.D 8260WT.M Tue Oct 06 11:38:34 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 11:38 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:48:55 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

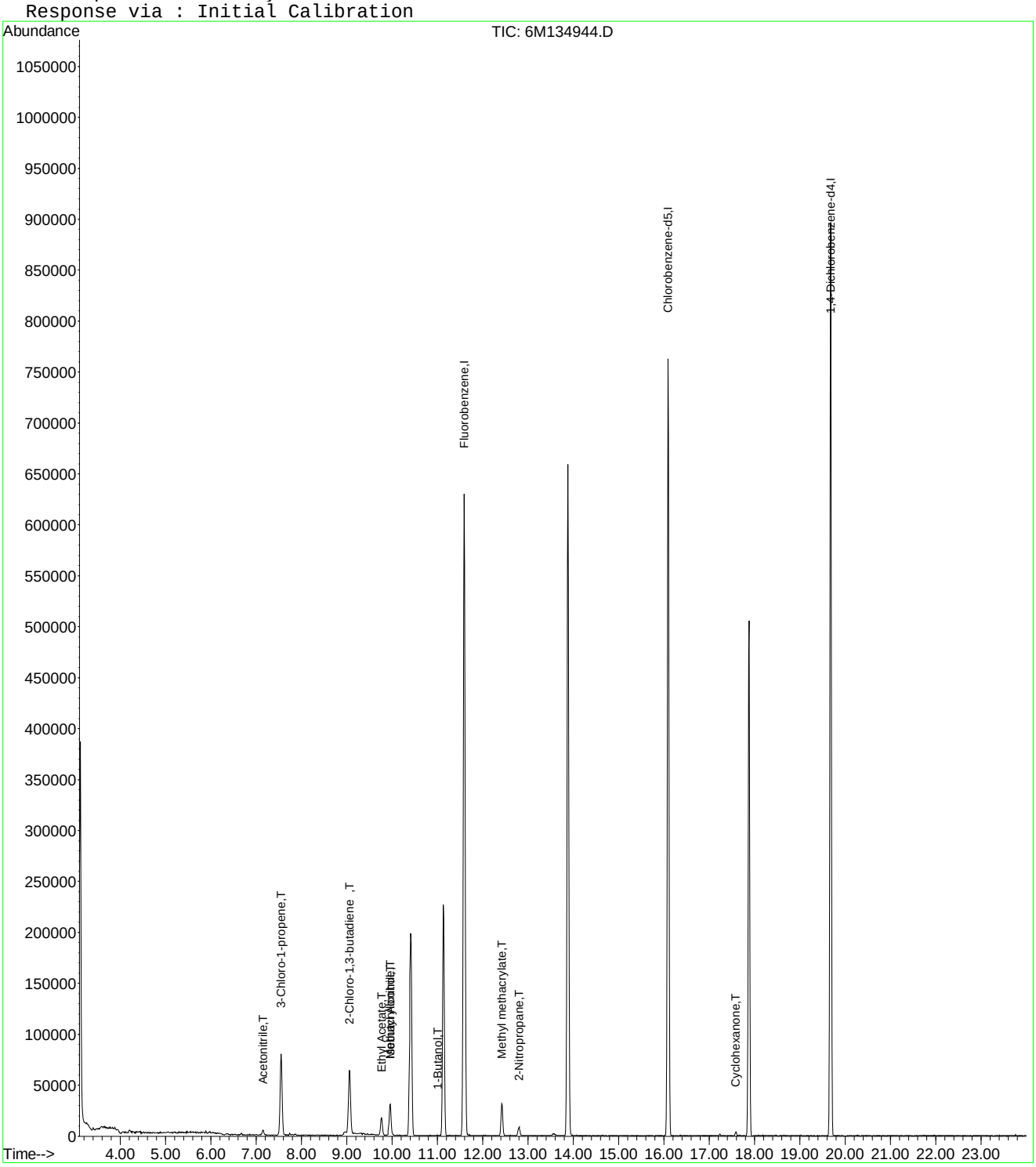
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	748562	25.00	ug/L		0.02
11) Chlorobenzene-d5	16.10	117	539579	25.00	ug/L		0.02
12) 1,4-Dichlorobenzene-d4	19.68	152	293209	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	6723	7.4239	ug/L		87
3) 3-Chloro-1-propene	7.55	41	93526	8.2869	ug/L		93
4) 2-Chloro-1,3-butadiene	9.06	53	66982	5.9773	ug/L		83
5) Ethyl Acetate	9.78	43	34563	7.9874	ug/L	#	89
6) Methacrylonitrile	9.96	67	11753	5.1978	ug/L	#	43
7) Isobutyl Alcohol	9.96	43	2910	13.5867	ug/L	#	85
8) 1-Butanol	11.01	41	244	2.4441	ug/L	#	1
9) Methyl methacrylate	12.42	41	27827	5.7235	ug/L		75
10) 2-Nitropropane	12.81	43	7910	6.9993	ug/L	#	83
13) Cyclohexanone	17.59	55	2642	4.7004	ug/L	#	63

(#) = qualifier out of range (m) = manual integration
6M134944.D A9FOOWT.M Wed Oct 07 12:48:55 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:48 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:41 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

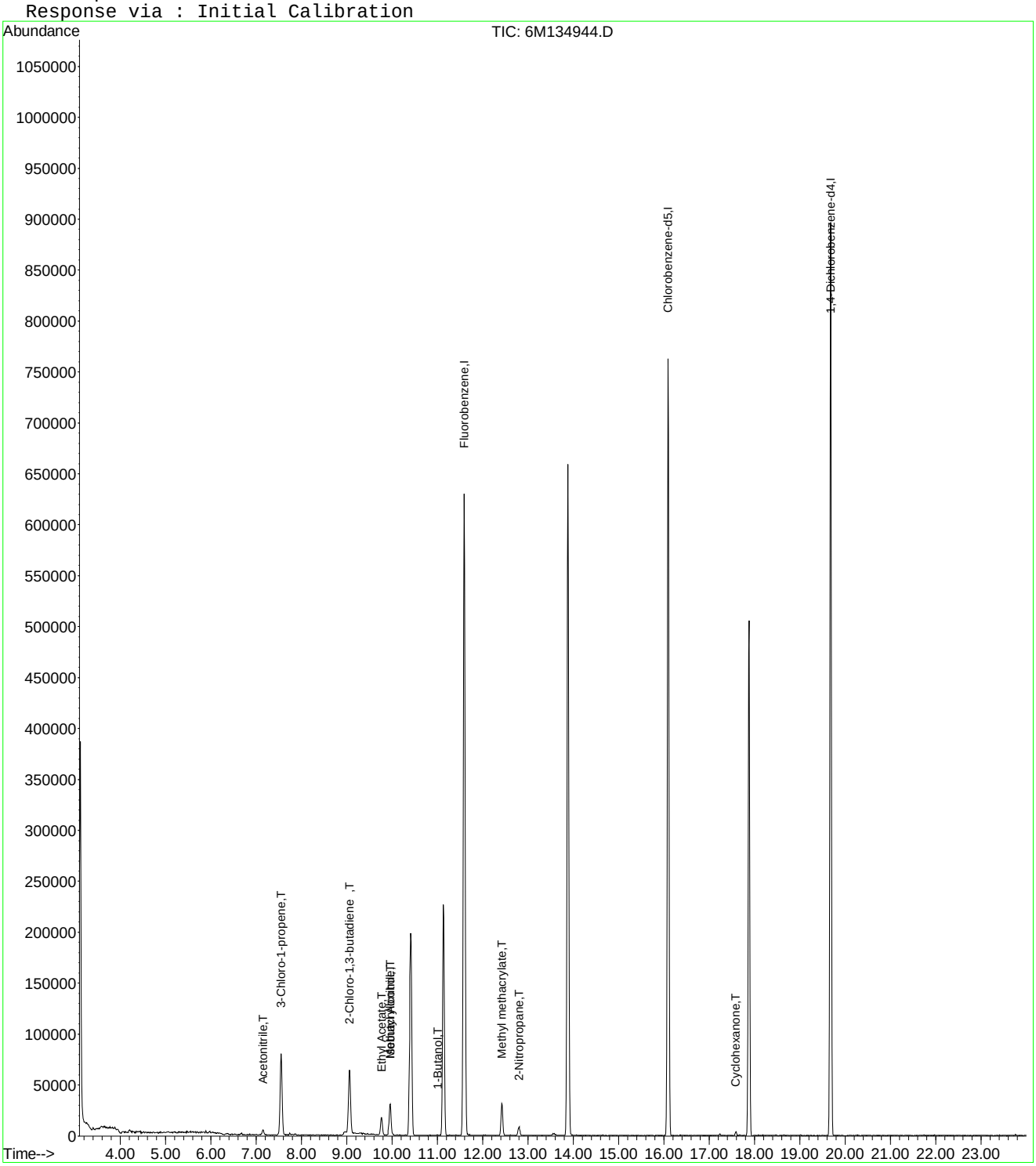
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	748562	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	539579	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	293209	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	6723	4.6538	ug/L		87
3) 3-Chloro-1-propene	7.55	41	93526	4.6628	ug/L		93
4) 2-Chloro-1,3-butadiene	9.06	53	66982	3.8791	ug/L		83
5) Ethyl Acetate	9.78	43	34563	4.3770	ug/L	#	89
6) Methacrylonitrile	9.96	67	11753	3.8698	ug/L	#	43
7) Isobutyl Alcohol	9.96	43	2910	6.6988	ug/L	#	85
8) 1-Butanol	11.01	41	244	1.3056	ug/L	#	1
9) Methyl methacrylate	12.42	41	27827	3.5391	ug/L		75
10) 2-Nitropropane	12.81	43	7910	3.4124	ug/L	#	83
13) Cyclohexanone	17.59	55	2642	2.6385	ug/L	#	63

(#) = qualifier out of range (m) = manual integration
6M134944.D A9FOOWT.M Wed Oct 07 13:37:41 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:41 2015 Quant Results File: A9FOOWT.RES

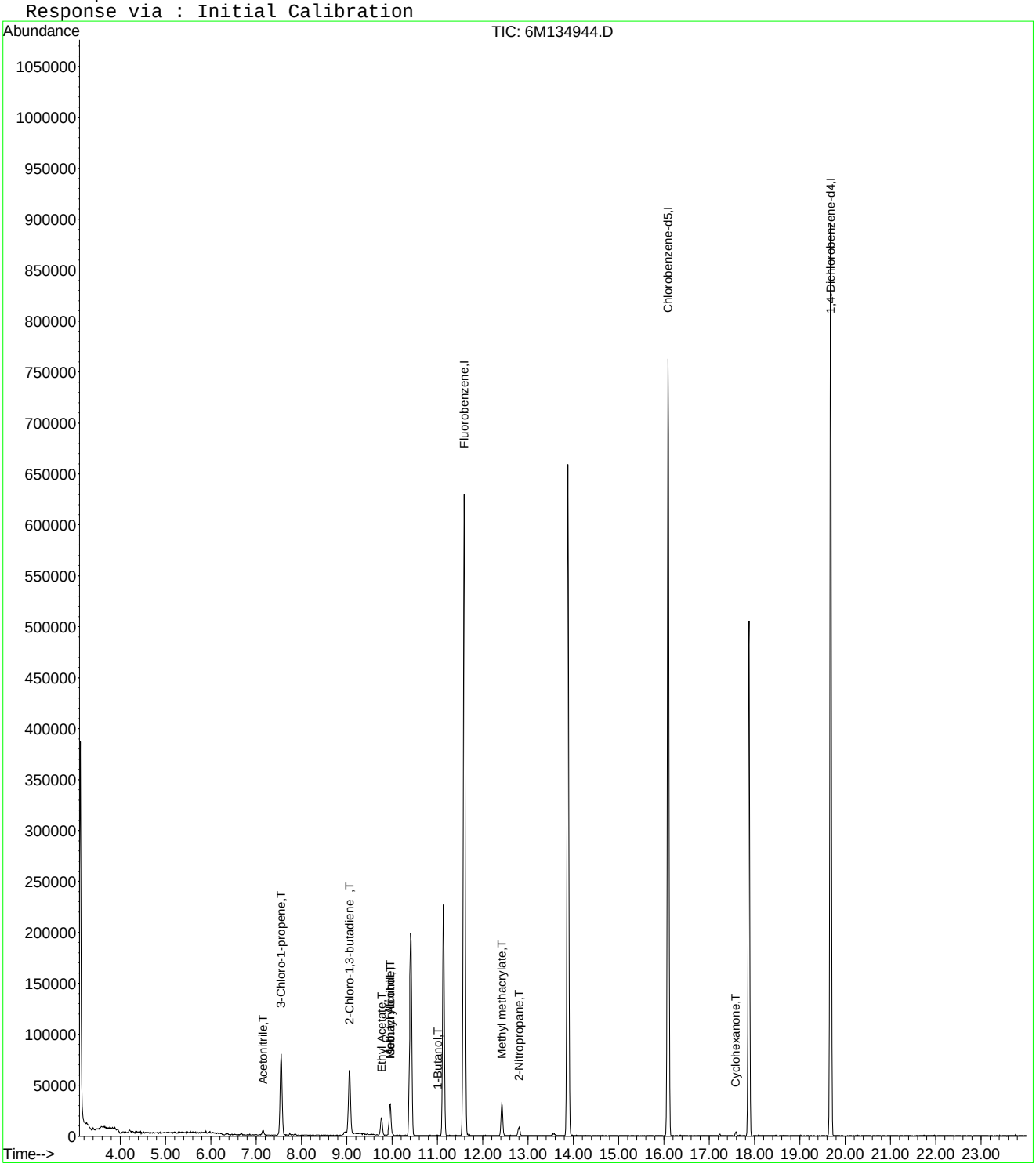
Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	748562	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	539579	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	293209	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	6723	4.6776	ug/L		87
3) 3-Chloro-1-propene	7.55	41	93526	4.6628	ug/L		93
4) 2-Chloro-1,3-butadiene	9.06	53	66982	3.8791	ug/L		83
5) Ethyl Acetate	9.78	43	34563	4.3770	ug/L	#	89
6) Methacrylonitrile	9.96	67	11753	3.8698	ug/L	#	43
7) Isobutyl Alcohol	9.96	43	2910	6.6988	ug/L	#	85
8) 1-Butanol	11.01	41	244	1.3056	ug/L	#	1
9) Methyl methacrylate	12.42	41	27827	3.5391	ug/L		75
10) 2-Nitropropane	12.81	43	7910	3.4124	ug/L	#	83
13) Cyclohexanone	17.59	55	2642	2.6385	ug/L	#	63

(#) = qualifier out of range (m) = manual integration
6M134944.D A9FOOWT.M Wed Oct 07 14:04:41 2015 Page 1

Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\100615\6M134944.D Vial: 3
Acq On : 6 Oct 2015 11:14 Operator: TMB
Sample : WG541654-02 5ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	5.0000	4.6776	6.4	100	0.00
3	T	3-Chloro-1-propene	5.0000	4.6628	6.7	100	0.00
4	T	2-Chloro-1,3-butadiene	5.0000	3.8790	22.4	100	0.00
5	T	Ethyl Acetate	5.0000	4.3770	12.5	100	0.00
6	T	Methacrylonitrile	5.0000	3.8698	22.6	100	0.00
7	T	Isobutyl Alcohol	-1.0000	6.6988	0.0	100	0.00
8	T	1-Butanol	-1.0000	1.3056	0.0	100	0.00
9	T	Methyl methacrylate	5.0000	3.5391	29.2	100	0.00
10	T	2-Nitropropane	-1.0000	3.4124	0.0	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	2.6385	0.0	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M134944.D A9FOOWT.M Wed Oct 07 14:04:58 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 12:10:44 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

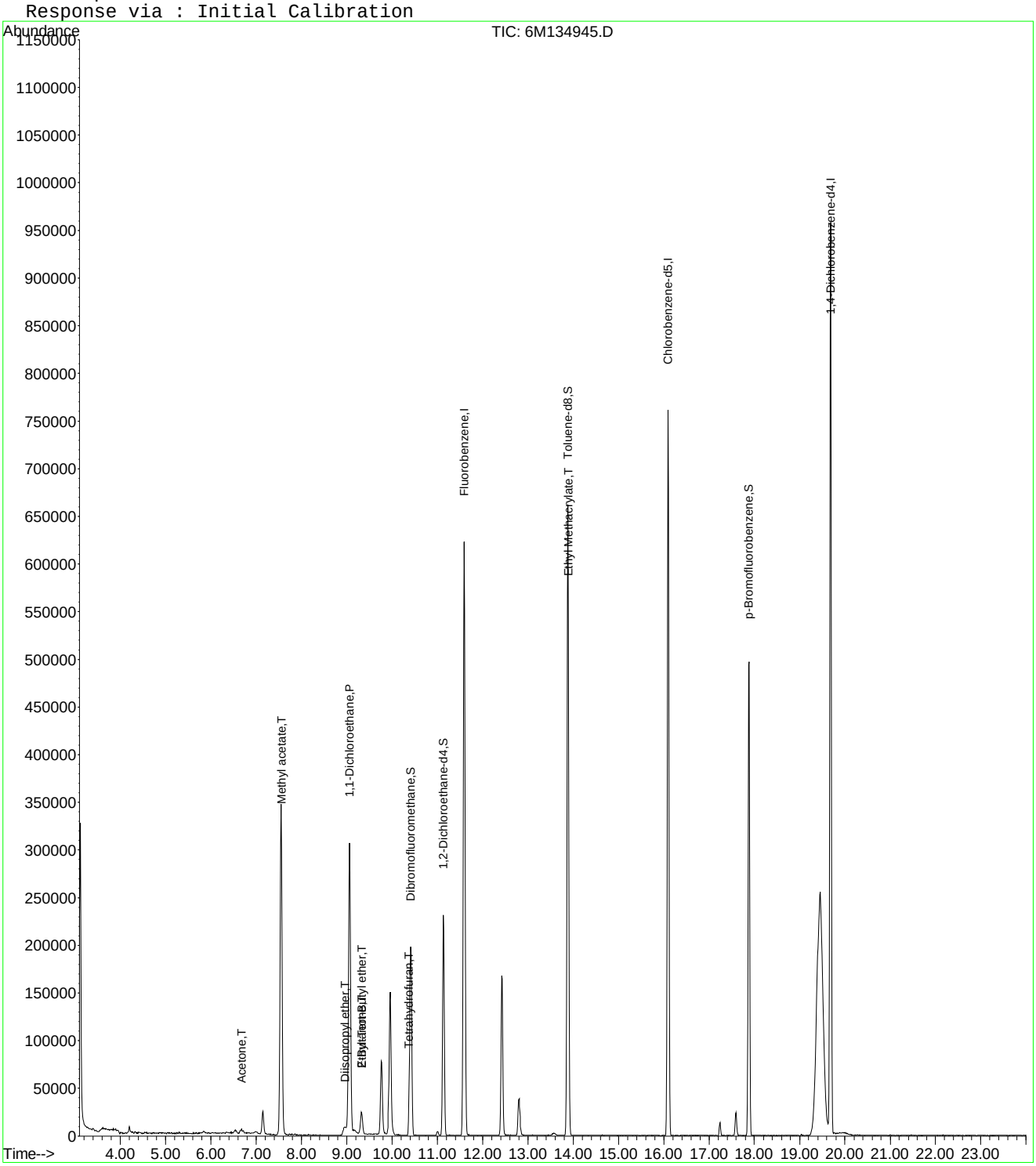
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.59	96	741480	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.10	117	533271	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	324581	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.41	111	179745	23.3823	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 93.52%			
43) 1,2-Dichloroethane-d4	11.13	65	210384	23.6702	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.68%			
58) Toluene-d8	13.88	98	577871	24.0989	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.40%			
80) p-Bromofluorobenzene	17.87	95	223753	22.5291	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 90.12%			
Target Compounds						Qvalue
13) Acetone	6.68	43	8533	3.4624	ug/L	87
18) Methyl acetate	7.56	43	1176	0.1381	ug/L #	60
25) Diisopropyl ether	8.96	45	39235	1.0905	ug/L #	37
27) 1,1-Dichloroethane	9.06	63	4773	0.2759	ug/L #	42
28) Ethyl-Tert-Butyl ether	9.34	59	3961	0.1414	ug/L #	41
29) 2-Butanone	9.34	43	7595	2.1142	ug/L #	1
36) Tetrahydrofuran	10.38	42	436	0.2014	ug/L #	34
60) Ethyl Methacrylate	13.89	69	2268	0.8256	ug/L #	25

(#) = qualifier out of range (m) = manual integration
6M134945.D 8260WT.M Tue Oct 06 12:10:44 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 12:10 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:48:57 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

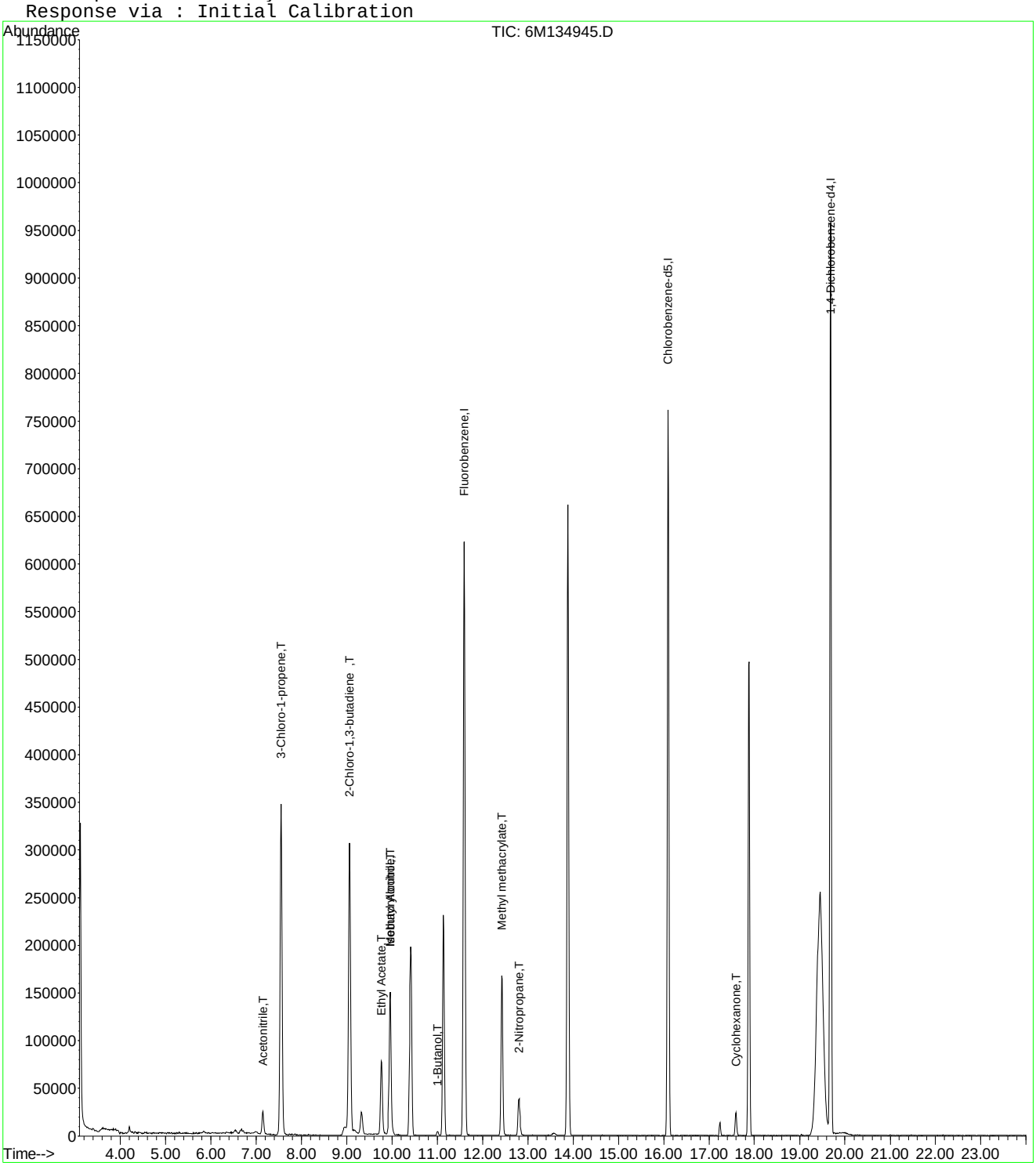
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	741480	25.00	ug/L		0.02
11) Chlorobenzene-d5	16.10	117	533271	25.00	ug/L		0.02
12) 1,4-Dichlorobenzene-d4	19.68	152	324581	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	33423	51.3221	ug/L		97
3) 3-Chloro-1-propene	7.55	41	398427	35.6401	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	309391	27.8730	ug/L		85
5) Ethyl Acetate	9.77	43	150614	35.1390	ug/L		91
6) Methacrylonitrile	9.96	67	57450	25.6502	ug/L	#	52
7) Isobutyl Alcohol	9.96	43	15030	70.8451	ug/L	#	90
8) 1-Butanol	11.00	41	3062	30.9650	ug/L		64
9) Methyl methacrylate	12.42	41	140724	29.2206	ug/L		76
10) 2-Nitropropane	12.81	43	39526	35.3091	ug/L		91
13) Cyclohexanone	17.60	55	14324	23.0210	ug/L		78

(#) = qualifier out of range (m) = manual integration
6M134945.D A9FOOWT.M Wed Oct 07 12:48:58 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:48 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:43 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

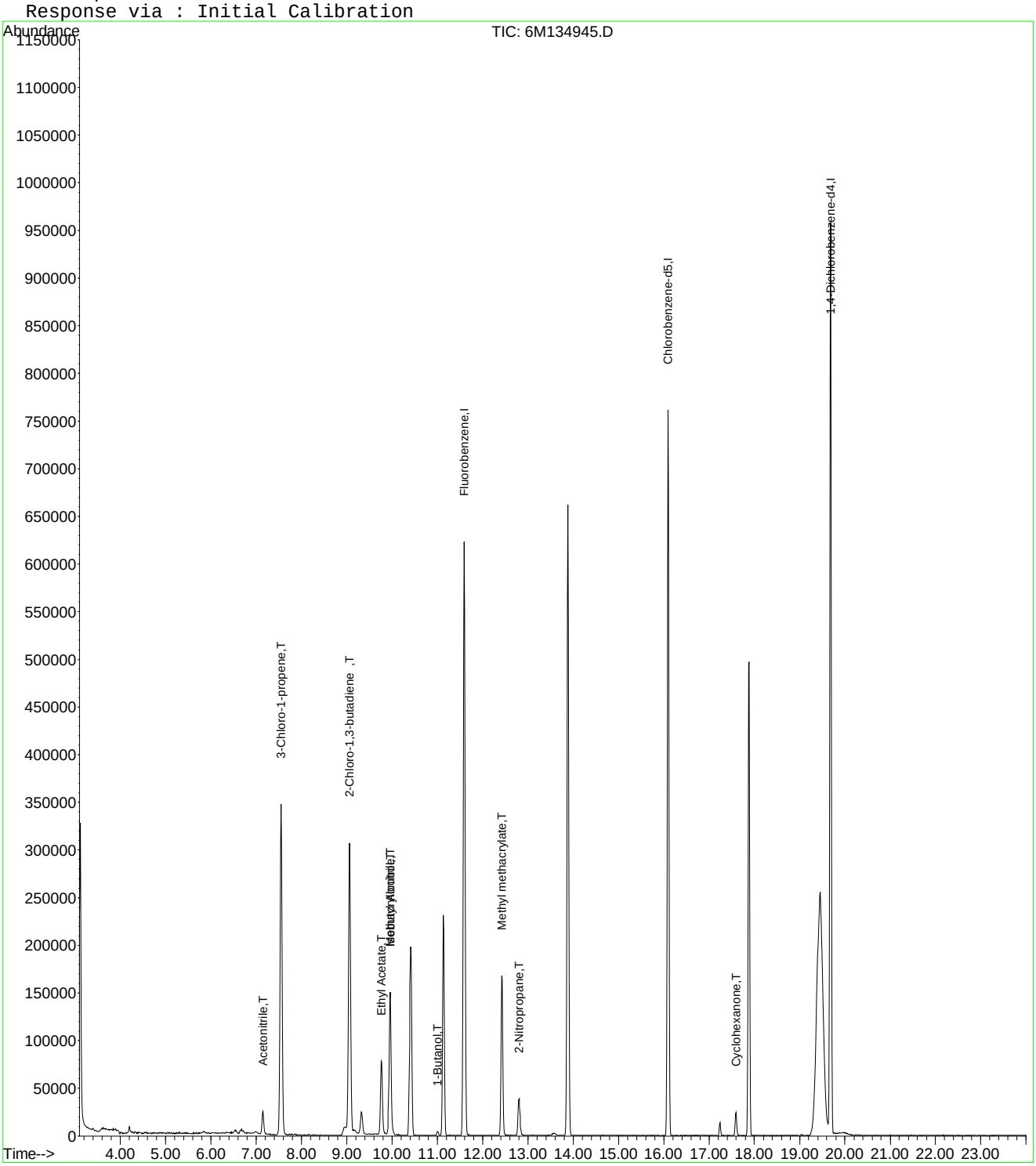
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	741480	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	533271	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	324581	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	33423	23.3570	ug/L		97
3) 3-Chloro-1-propene	7.55	41	398427	20.0535	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	309391	18.0885	ug/L		85
5) Ethyl Acetate	9.77	43	150614	19.2558	ug/L		91
6) Methacrylonitrile	9.96	67	57450	19.0967	ug/L	#	52
7) Isobutyl Alcohol	9.96	43	15030	34.9292	ug/L	#	90
8) 1-Butanol	11.00	41	3062	16.5411	ug/L		64
9) Methyl methacrylate	12.42	41	140724	18.0687	ug/L		76
10) 2-Nitropropane	12.81	43	39526	17.2145	ug/L		91
13) Cyclohexanone	17.60	55	14324	12.9223	ug/L		78

(#) = qualifier out of range (m) = manual integration
6M134945.D A9FOOWT.M Wed Oct 07 13:37:43 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:43 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

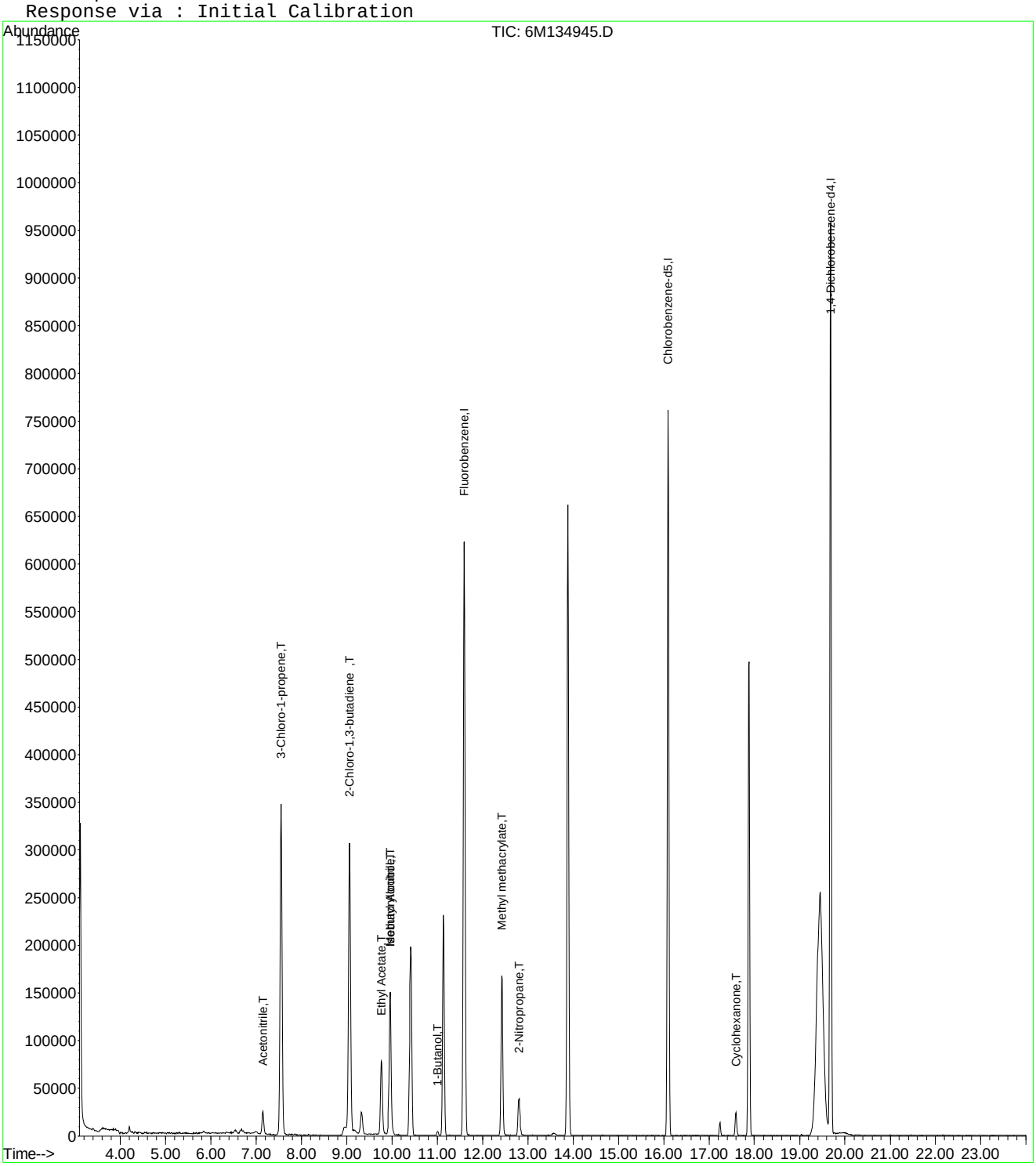
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	741480	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	533271	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	324581	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	33423	23.4763	ug/L		97
3) 3-Chloro-1-propene	7.55	41	398427	20.0535	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	309391	18.0885	ug/L		85
5) Ethyl Acetate	9.77	43	150614	19.2558	ug/L		91
6) Methacrylonitrile	9.96	67	57450	19.0967	ug/L	#	52
7) Isobutyl Alcohol	9.96	43	15030	34.9292	ug/L	#	90
8) 1-Butanol	11.00	41	3062	16.5411	ug/L		64
9) Methyl methacrylate	12.42	41	140724	18.0687	ug/L		76
10) 2-Nitropropane	12.81	43	39526	17.2145	ug/L		91
13) Cyclohexanone	17.60	55	14324	12.9223	ug/L		78

(#) = qualifier out of range (m) = manual integration
6M134945.D A9FOOWT.M Wed Oct 07 14:04:43 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\100615\6M134945.D Vial: 4
Acq On : 6 Oct 2015 11:46 Operator: TMB
Sample : WG541654-03 20ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	20.0000	23.4763	-17.4	100	0.00
3	T	3-Chloro-1-propene	20.0000	20.0535	-0.3	100	0.00
4	T	2-Chloro-1,3-butadiene	20.0000	18.0885	9.6	100	0.00
5	T	Ethyl Acetate	20.0000	19.2558	3.7	100	0.00
6	T	Methacrylonitrile	20.0000	19.0967	4.5	100	0.00
7	T	Isobutyl Alcohol	40.0000	34.9293	12.7	100	0.00
8	T	1-Butanol	-1.0000	16.5411	0.0	100	0.00
9	T	Methyl methacrylate	20.0000	18.0687	9.7	100	0.00
10	T	2-Nitropropane	-1.0000	17.2145	0.0	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	12.9223	0.0	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M134945.D A9FOOWT.M Wed Oct 07 14:05:08 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 12:42:49 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

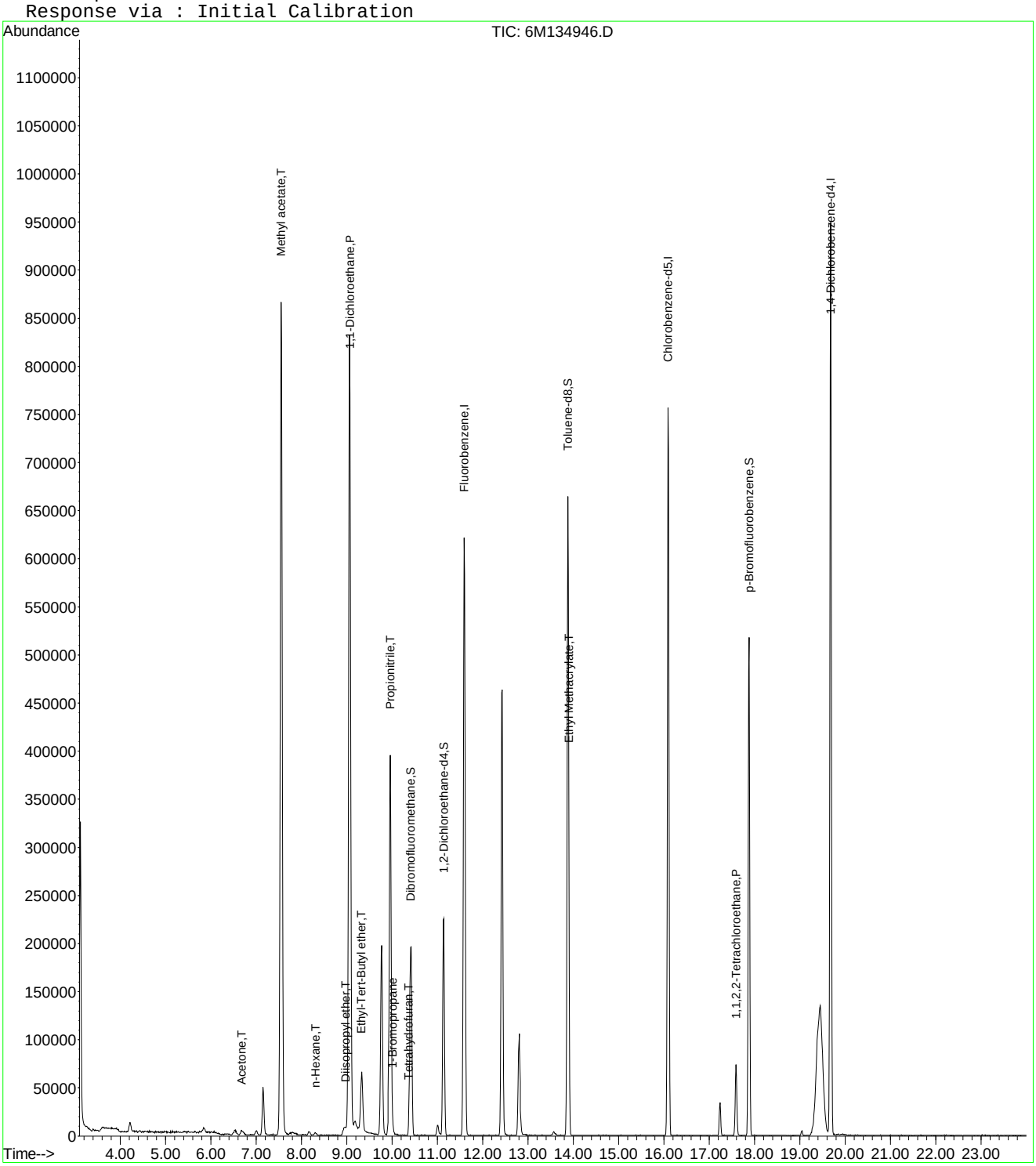
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.59	96	740038	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.10	117	535313	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	324250	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.41	111	181532	23.6608	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.64%			
43) 1,2-Dichloroethane-d4	11.14	65	211908	23.8882	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 95.56%			
58) Toluene-d8	13.88	98	584105	24.2660	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.08%			
80) p-Bromofluorobenzene	17.88	95	231623	23.3453	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 93.40%			
Target Compounds						Qvalue
13) Acetone	6.68	43	9809	3.9879	ug/L	84
18) Methyl acetate	7.55	43	1795	0.2112	ug/L #	1
24) n-Hexane	8.31	57	1734	0.1394	ug/L	70
25) Diisopropyl ether	8.97	45	26471	0.7372	ug/L #	38
27) 1,1-Dichloroethane	9.07	63	14047	0.8137	ug/L #	42
28) Ethyl-Tert-Butyl ether	9.33	59	9095	0.3253	ug/L #	37
30) Propionitrile	9.96	54	403	0.3971	ug/L #	1
34) 1-Bromopropane	10.01	122	420	0.8878	ug/L #	1
36) Tetrahydrofuran	10.37	42	1157	0.5354	ug/L #	34
60) Ethyl Methacrylate	13.90	69	2124	0.8093	ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.60	83	3194	0.4247	ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134946.D 8260WT.M Tue Oct 06 12:42:50 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 12:42 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:48:58 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

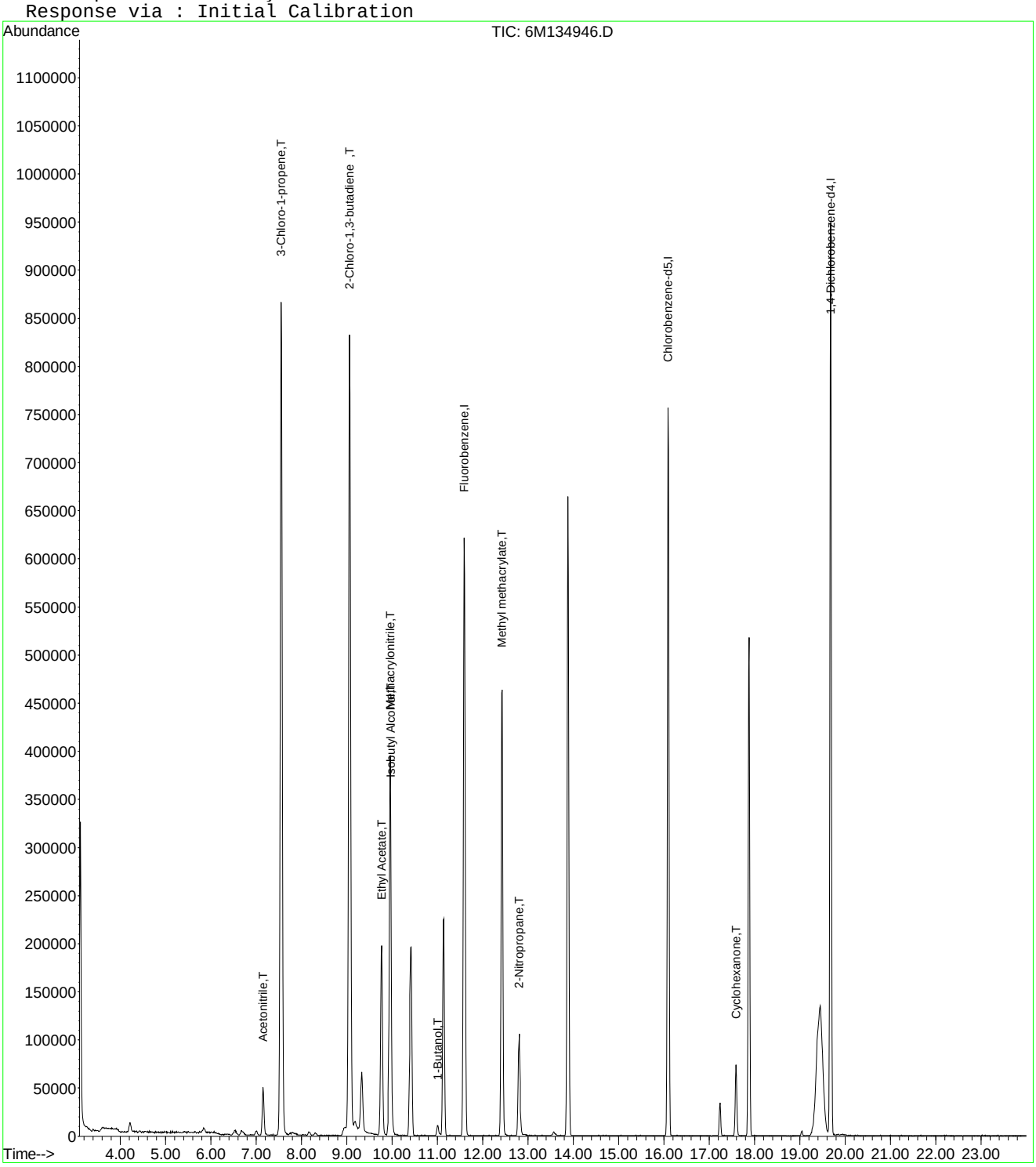
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	740038	25.00	ug/L		0.02
11) Chlorobenzene-d5	16.10	117	535313	25.00	ug/L		0.02
12) 1,4-Dichlorobenzene-d4	19.68	152	324250	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	71381	106.3037	ug/L		95
3) 3-Chloro-1-propene	7.55	41	1019129	91.3408	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	856132	77.2790	ug/L		84
5) Ethyl Acetate	9.77	43	381788	89.2466	ug/L		92
6) Methacrylonitrile	9.96	67	148641	66.4942	ug/L	#	50
7) Isobutyl Alcohol	9.97	43	37916	179.0683	ug/L	#	85
8) 1-Butanol	11.01	41	7634	77.3506	ug/L		67
9) Methyl methacrylate	12.42	41	383135	79.7111	ug/L		76
10) 2-Nitropropane	12.81	43	104884	93.8769	ug/L		94
13) Cyclohexanone	17.60	55	42732	68.7474	ug/L		82

(#) = qualifier out of range (m) = manual integration
6M134946.D A9FOOWT.M Wed Oct 07 12:48:58 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:48 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



6M134946.D A9FOOWT.M Wed Oct 07 12:48:58 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:44 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

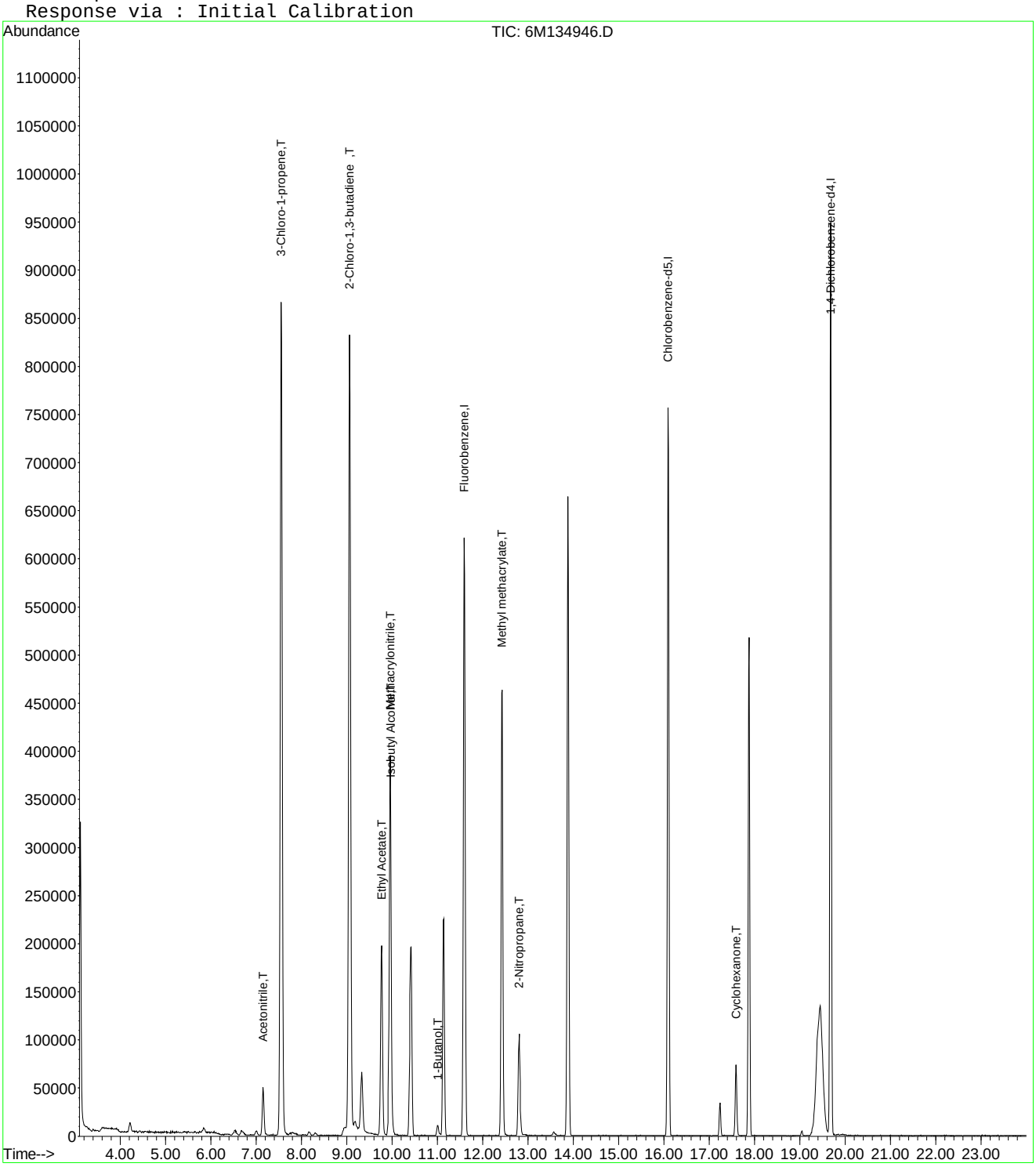
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	740038	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	535313	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	324250	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	71381	49.9805	ug/L		95
3) 3-Chloro-1-propene	7.55	41	1019129	51.3945	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	856132	50.1513	ug/L		84
5) Ethyl Acetate	9.77	43	381788	48.9061	ug/L		92
6) Methacrylonitrile	9.96	67	148641	49.5054	ug/L	#	50
7) Isobutyl Alcohol	9.97	43	37916	88.2873	ug/L	#	85
8) 1-Butanol	11.01	41	7634	41.3198	ug/L		67
9) Methyl methacrylate	12.42	41	383135	49.2897	ug/L		76
10) 2-Nitropropane	12.81	43	104884	45.7685	ug/L		94
13) Cyclohexanone	17.60	55	42732	38.5898	ug/L		82

(#) = qualifier out of range (m) = manual integration
6M134946.D A9FOOWT.M Wed Oct 07 13:37:44 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:43 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

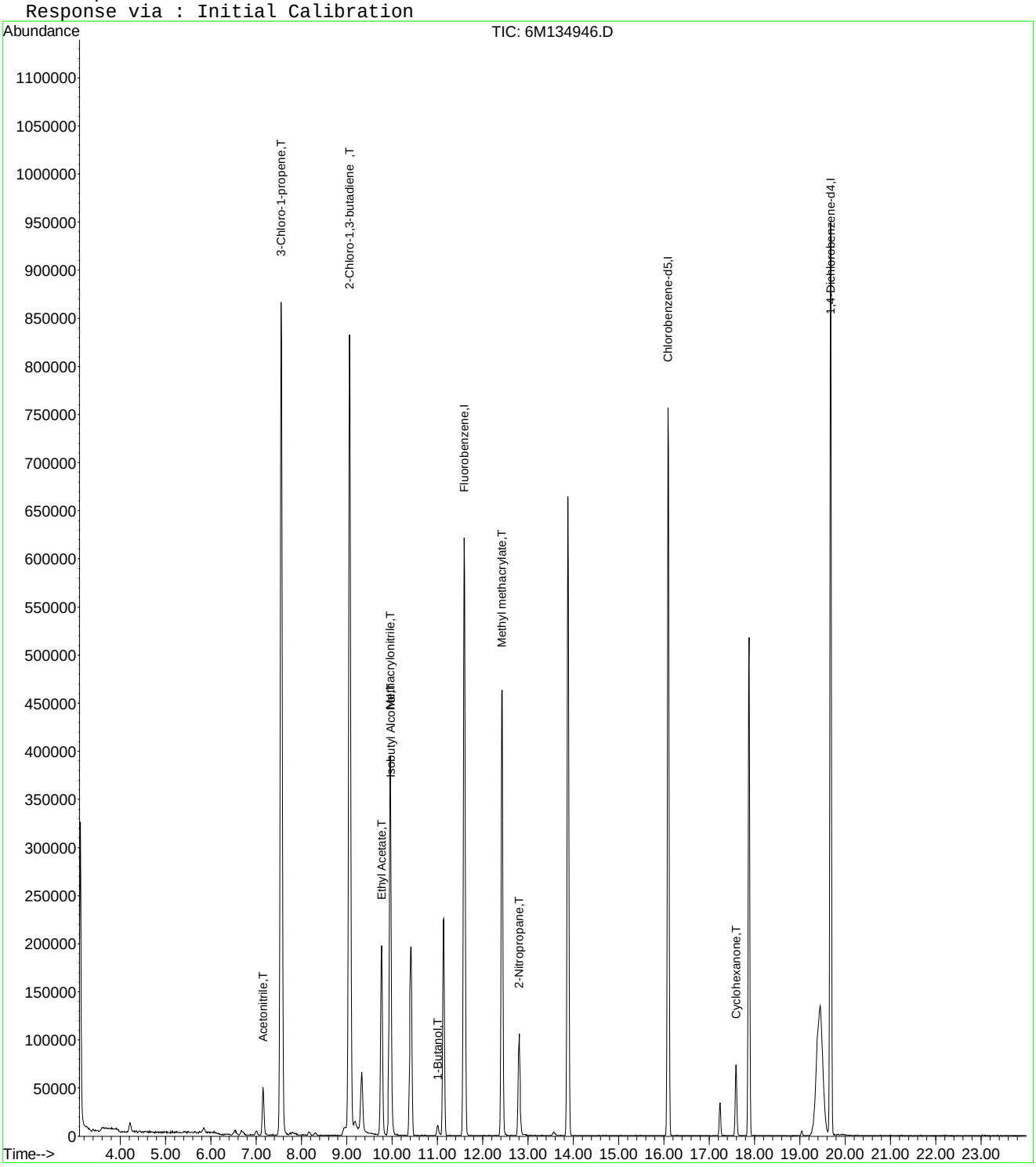
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	740038	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	535313	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	324250	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	71381	50.2357	ug/L		95
3) 3-Chloro-1-propene	7.55	41	1019129	51.3945	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	856132	50.1513	ug/L		84
5) Ethyl Acetate	9.77	43	381788	48.9061	ug/L		92
6) Methacrylonitrile	9.96	67	148641	49.5054	ug/L	#	50
7) Isobutyl Alcohol	9.97	43	37916	88.2873	ug/L	#	85
8) 1-Butanol	11.01	41	7634	41.3198	ug/L		67
9) Methyl methacrylate	12.42	41	383135	49.2897	ug/L		76
10) 2-Nitropropane	12.81	43	104884	45.7685	ug/L		94
13) Cyclohexanone	17.60	55	42732	38.5898	ug/L		82

(#) = qualifier out of range (m) = manual integration
6M134946.D A9FOOWT.M Wed Oct 07 14:04:43 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\100615\6M134946.D Vial: 5
Acq On : 6 Oct 2015 12:18 Operator: TMB
Sample : WG541654-04 50ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	50.0000	50.2357	-0.5	100	0.00
3	T	3-Chloro-1-propene	50.0000	51.3945	-2.8	100	0.00
4	T	2-Chloro-1,3-butadiene	50.0000	50.1512	-0.3	100	0.00
5	T	Ethyl Acetate	50.0000	48.9061	2.2	100	0.00
6	T	Methacrylonitrile	50.0000	49.5054	1.0	100	0.00
7	T	Isobutyl Alcohol	100.0000	88.2873	11.7	100	0.00
8	T	1-Butanol	-1.0000	41.3198	0.0	100	0.00
9	T	Methyl methacrylate	50.0000	49.2897	1.4	100	0.00
10	T	2-Nitropropane	50.0000	45.7685	8.5	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	50.0000	38.5898	22.8	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M134946.D A9FOOWT.M Wed Oct 07 14:05:17 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 13:14:55 2015 Quant Results File: 8260WT.RES

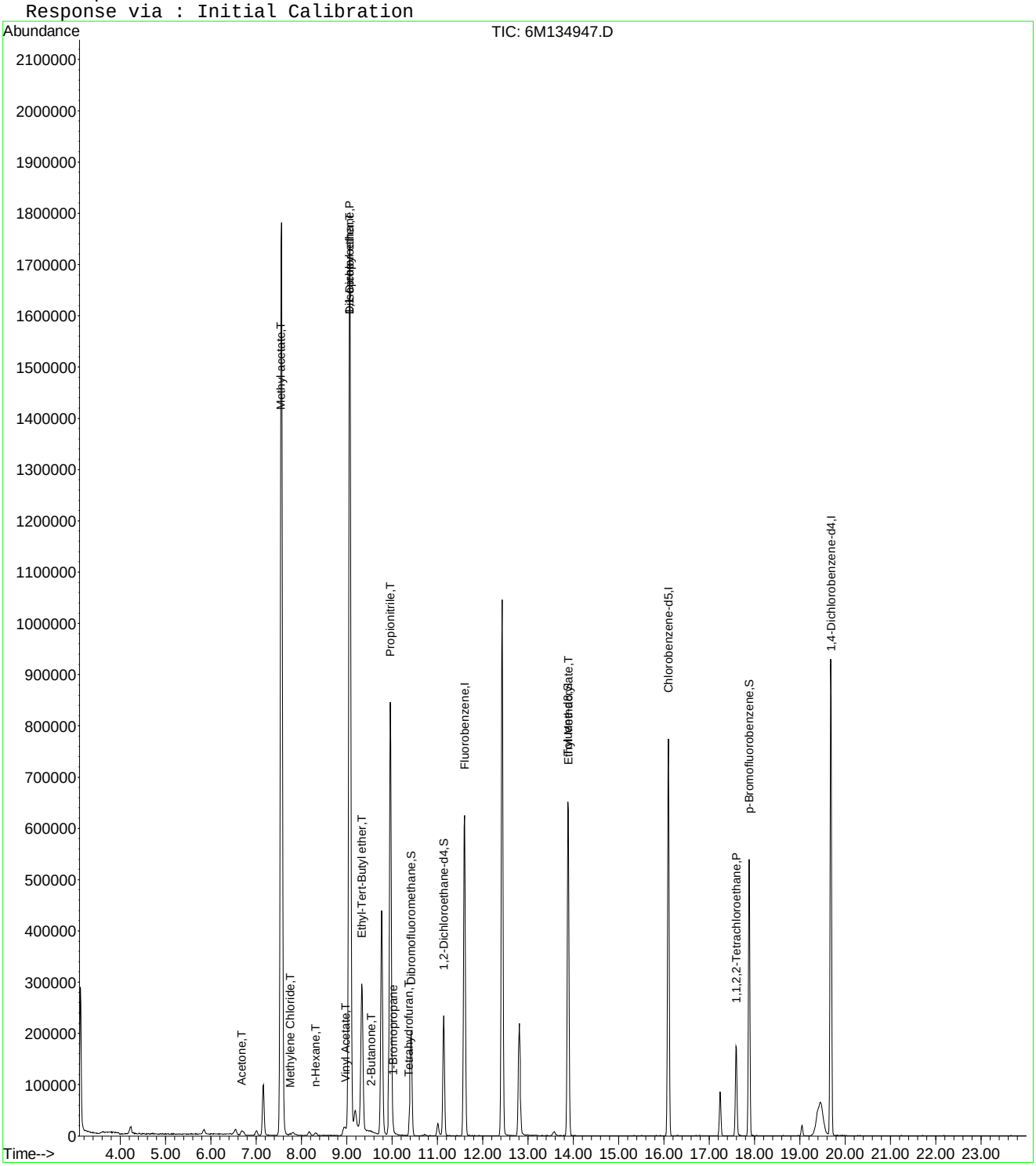
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.60	96	758736	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.10	117	548841	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.69	152	320652	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.41	111	182369	23.1841 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 92.72%		
43) 1,2-Dichloroethane-d4	11.14	65	214518	23.5864 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.36%		
58) Toluene-d8	13.88	98	588043	23.8274 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.32%		
80) p-Bromofluorobenzene	17.88	95	234438	23.8941 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.56%		
Target Compounds					Qvalue
13) Acetone	6.68	43	16097	6.3830 ug/L	91
18) Methyl acetate	7.53	43	3102	0.3561 ug/L #	1
19) Methylene Chloride	7.75	84	1138	0.1226 ug/L #	47
24) n-Hexane	8.31	57	3306	0.2593 ug/L #	47
25) Diisopropyl ether	9.06	45	10407	0.2827 ug/L #	1
26) Vinyl Acetate	8.96	43	1668	0.1581 ug/L #	74
27) 1,1-Dichloroethane	9.06	63	29278	1.6541 ug/L #	45
28) Ethyl-Tert-Butyl ether	9.33	59	45809	1.5980 ug/L #	40
29) 2-Butanone	9.54	43	3024	0.8226 ug/L #	52
30) Propionitrile	9.95	54	1294	1.2435 ug/L #	1
34) 1-Bromopropane	10.02	122	1119	1.3338 ug/L #	1
36) Tetrahydrofuran	10.37	42	1020	0.4604 ug/L #	34
60) Ethyl Methacrylate	13.89	69	2574	0.8505 ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.60	83	7781	1.0462 ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134947.D 8260WT.M Tue Oct 06 13:14:56 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 13:14 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:48:58 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

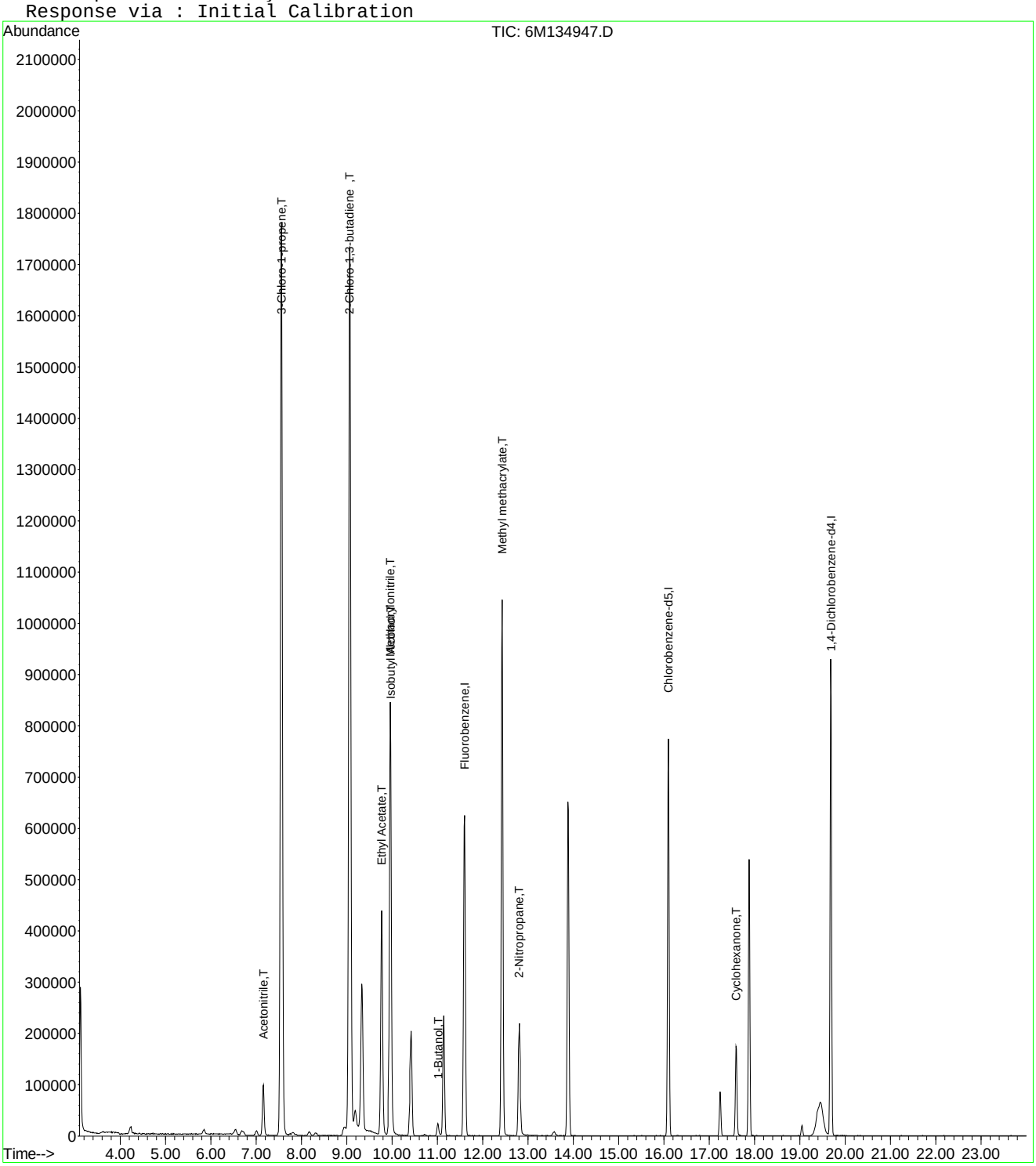
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	758736	25.00	ug/L		0.03
11) Chlorobenzene-d5	16.10	117	548841	25.00	ug/L		0.03
12) 1,4-Dichlorobenzene-d4	19.69	152	320652	25.00	ug/L		0.03
Target Compounds							Qvalue
2) Acetonitrile	7.16	41	145872	193.7032	ug/L		94
3) 3-Chloro-1-propene	7.56	41	2106064	184.1071	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1871112	164.7343	ug/L		84
5) Ethyl Acetate	9.77	43	823188	187.6860	ug/L		93
6) Methacrylonitrile	9.95	67	320626	139.8967	ug/L	#	50
7) Isobutyl Alcohol	9.97	43	88871	409.3735	ug/L	#	94
8) 1-Butanol	11.02	41	17192	169.9031	ug/L		70
9) Methyl methacrylate	12.43	41	836281	169.7002	ug/L		77
10) 2-Nitropropane	12.80	43	226764	197.9642	ug/L		94
13) Cyclohexanone	17.59	55	105327	171.3520	ug/L		82

(#) = qualifier out of range (m) = manual integration
6M134947.D A9FOOWT.M Wed Oct 07 12:48:59 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:48 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



6M134947.D A9FOOWT.M Wed Oct 07 12:48:59 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:44 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

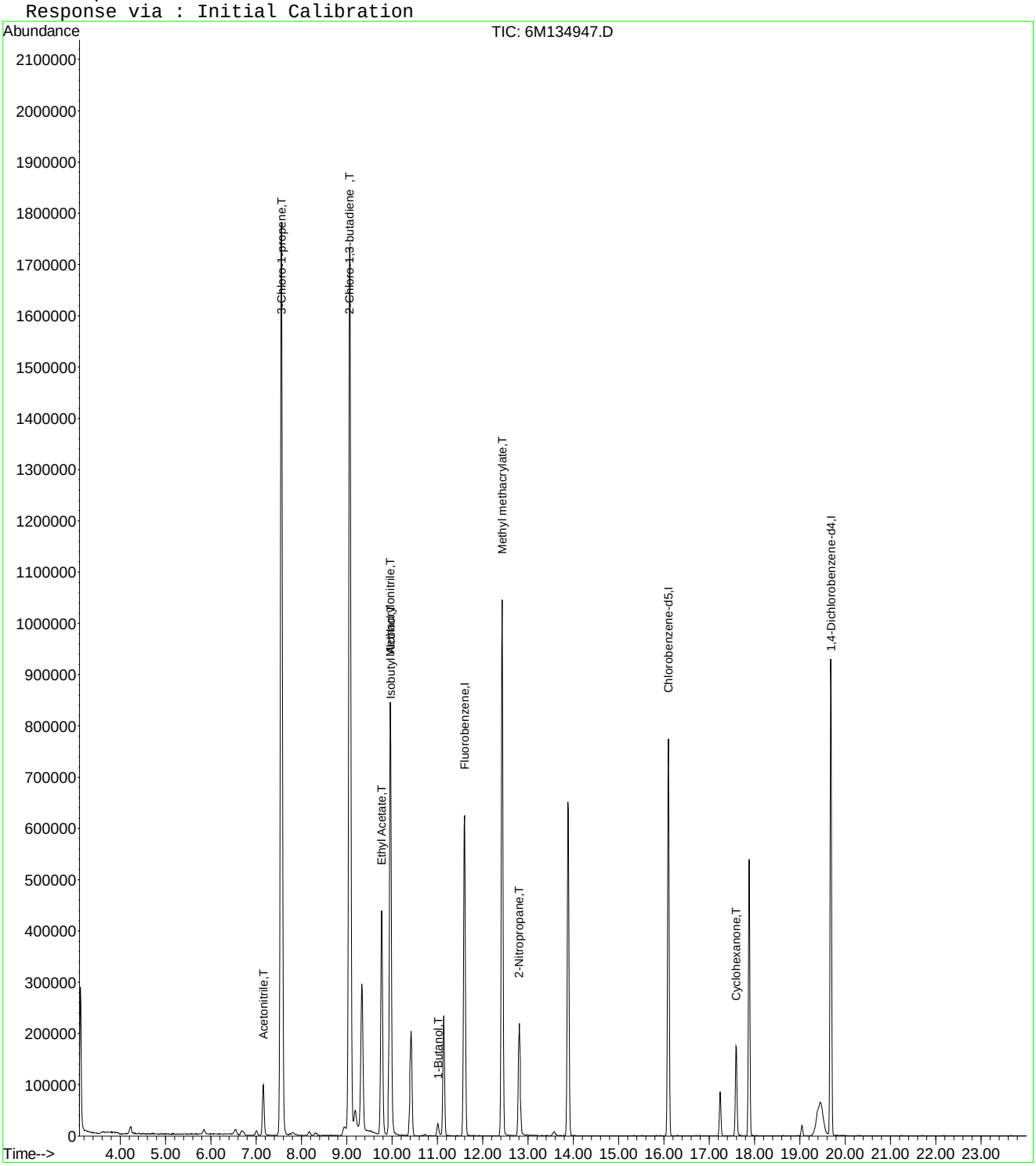
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	758736	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	548841	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.69	152	320652	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.16	41	145872	99.6215	ug/L		94
3) 3-Chloro-1-propene	7.56	41	2106064	103.5911	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1871112	106.9065	ug/L		84
5) Ethyl Acetate	9.77	43	823188	102.8497	ug/L		93
6) Methacrylonitrile	9.95	67	320626	104.1541	ug/L	#	50
7) Isobutyl Alcohol	9.97	43	88871	201.8362	ug/L	#	94
8) 1-Butanol	11.02	41	17192	90.7602	ug/L		70
9) Methyl methacrylate	12.43	41	836281	104.9350	ug/L		77
10) 2-Nitropropane	12.80	43	226764	96.5151	ug/L		94
13) Cyclohexanone	17.59	55	105327	96.1844	ug/L		82

(#) = qualifier out of range (m) = manual integration
6M134947.D A9FOOWT.M Wed Oct 07 13:37:44 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:44 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

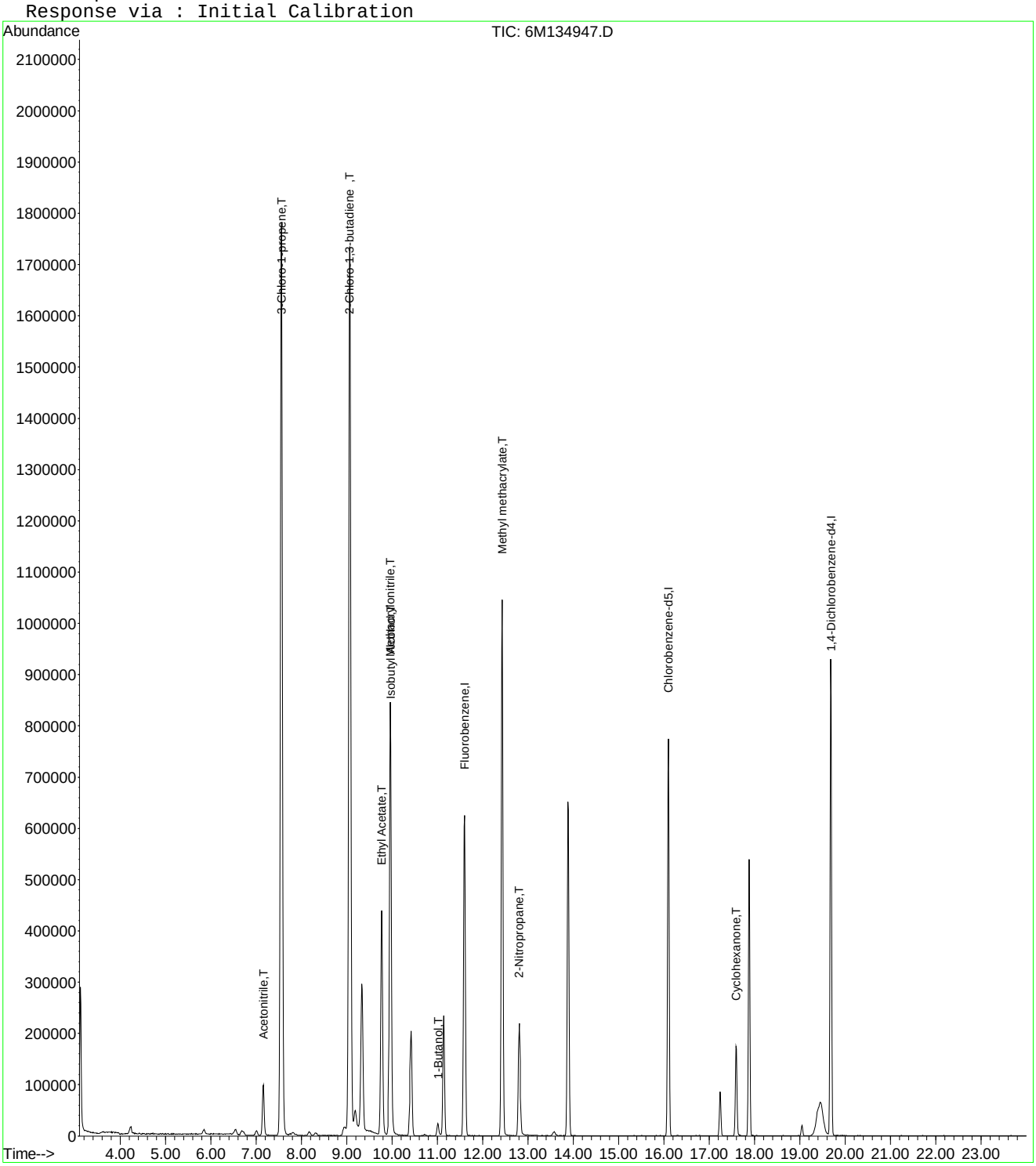
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	758736	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	548841	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.69	152	320652	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.16	41	145872	100.1302	ug/L		94
3) 3-Chloro-1-propene	7.56	41	2106064	103.5911	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1871112	106.9065	ug/L		84
5) Ethyl Acetate	9.77	43	823188	102.8497	ug/L		93
6) Methacrylonitrile	9.95	67	320626	104.1541	ug/L	#	50
7) Isobutyl Alcohol	9.97	43	88871	201.8362	ug/L	#	94
8) 1-Butanol	11.02	41	17192	90.7602	ug/L		70
9) Methyl methacrylate	12.43	41	836281	104.9350	ug/L		77
10) 2-Nitropropane	12.80	43	226764	96.5151	ug/L		94
13) Cyclohexanone	17.59	55	105327	96.1844	ug/L		82

(#) = qualifier out of range (m) = manual integration
6M134947.D A9FOOWT.M Wed Oct 07 14:04:44 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\100615\6M134947.D Vial: 6
Acq On : 6 Oct 2015 12:50 Operator: TMB
Sample : WG541654-05 100ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	100.0000	100.1302	-0.1	100	0.00
3	T	3-Chloro-1-propene	100.0000	103.5911	-3.6	100	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	106.9065	-6.9	100	0.00
5	T	Ethyl Acetate	100.0000	102.8498	-2.8	100	0.00
6	T	Methacrylonitrile	100.0000	104.1541	-4.2	100	0.00
7	T	Isobutyl Alcohol	200.0000	201.8362	-0.9	100	0.00
8	T	1-Butanol	100.0000	90.7602	9.2	100	0.00
9	T	Methyl methacrylate	100.0000	104.9350	-4.9	100	0.00
10	T	2-Nitropropane	100.0000	96.5151	3.5	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	100.0000	96.1844	3.8	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M134947.D A9FOOWT.M Wed Oct 07 14:05:27 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 13:46:54 2015 Quant Results File: 8260WT.RES

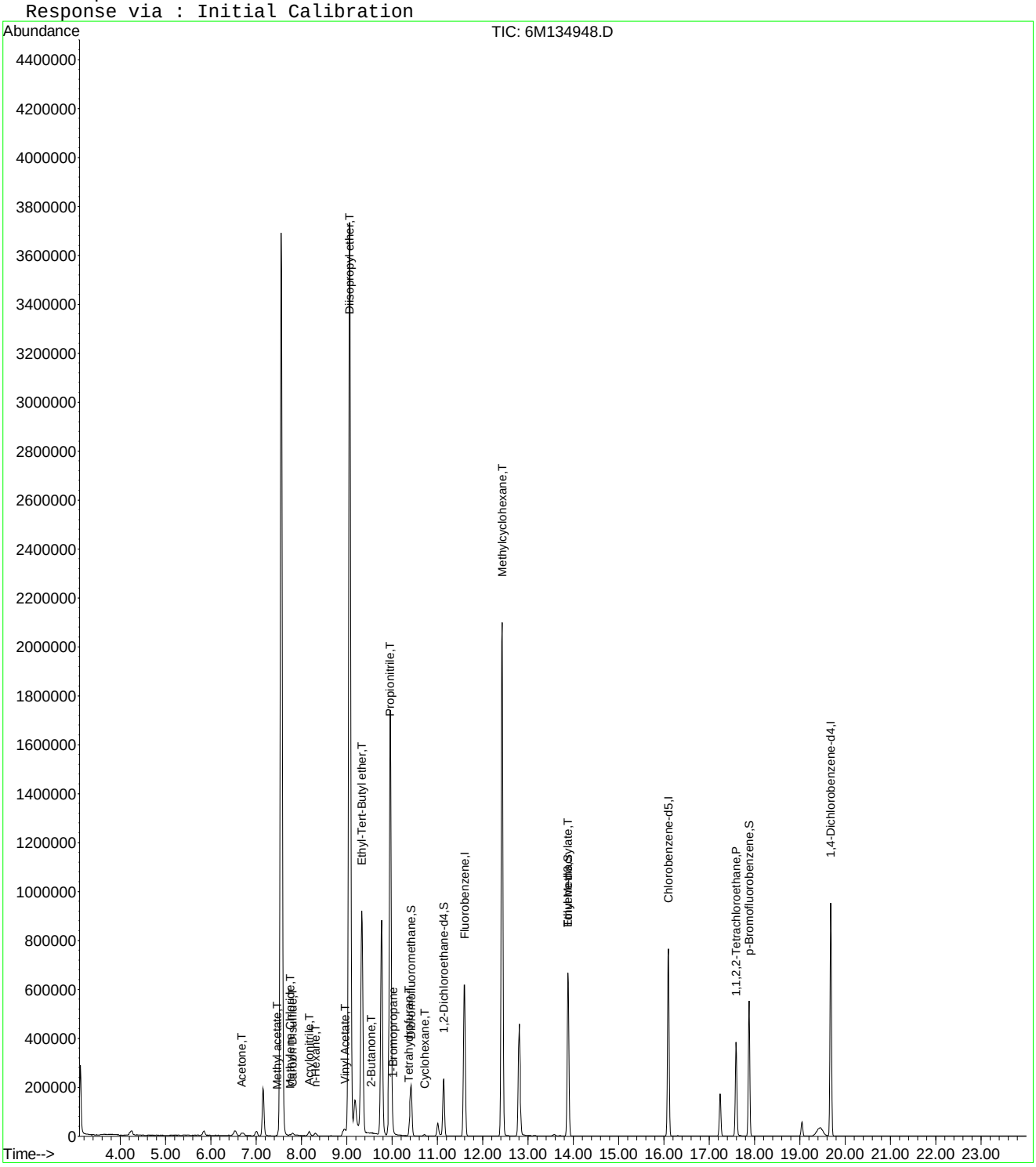
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.60	96	762503	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.10	117	550469	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	322383	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.42	111	189077	23.9181 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.68%		
43) 1,2-Dichloroethane-d4	11.14	65	219464	24.0110 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.04%		
58) Toluene-d8	13.88	98	595973	24.0773 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.32%		
80) p-Bromofluorobenzene	17.88	95	239917	24.3213 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.28%		
Target Compounds					Qvalue
13) Acetone	6.68	43	20063	7.9164 ug/L	96
18) Methyl acetate	7.46	43	1054	0.1204 ug/L #	60
19) Methylene Chloride	7.75	84	1276	0.1368 ug/L #	1
20) Carbon Disulfide	7.80	76	5160	0.1771 ug/L #	45
21) Acrylonitrile	8.17	53	1615	0.5114 ug/L #	28
24) n-Hexane	8.31	57	8718	0.6803 ug/L	85
25) Diisopropyl ether	9.06	45	78994	2.1350 ug/L #	54
26) Vinyl Acetate	8.96	43	3308	0.3121 ug/L #	74
28) Ethyl-Tert-Butyl ether	9.33	59	146388	5.0813 ug/L #	41
29) 2-Butanone	9.54	43	2402	0.6502 ug/L #	52
30) Propionitrile	9.95	54	2469	2.3609 ug/L #	1
34) 1-Bromopropane	10.02	122	2500	2.2206 ug/L #	1
36) Tetrahydrofuran	10.37	42	1631	0.7325 ug/L #	34
39) Cyclohexane	10.72	56	3797	0.2491 ug/L #	72
48) Methylcyclohexane	12.43	83	3699	0.3208 ug/L #	1
60) Ethyl Methacrylate	13.88	69	2067	0.7971 ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.59	83	17232	2.3045 ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134948.D 8260WT.M Tue Oct 06 13:46:54 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 13:46 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:48:59 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

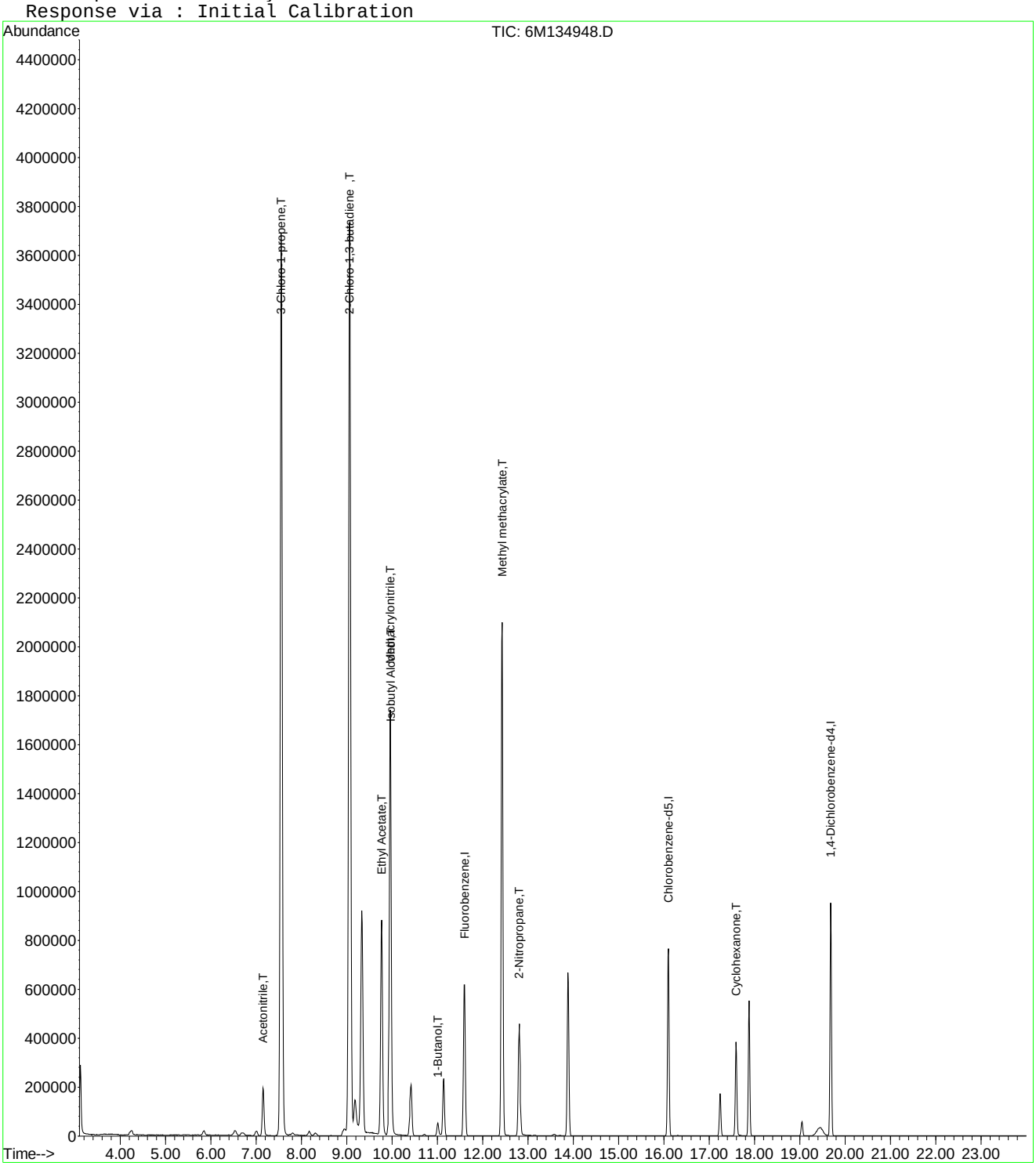
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	762503	25.00	ug/L		0.03
11) Chlorobenzene-d5	16.10	117	550469	25.00	ug/L		0.03
12) 1,4-Dichlorobenzene-d4	19.68	152	322383	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	289959	332.6568	ug/L		92
3) 3-Chloro-1-propene	7.55	41	4347373	378.1595	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	3899339	341.6051	ug/L		84
5) Ethyl Acetate	9.77	43	1690658	383.5640	ug/L		93
6) Methacrylonitrile	9.96	67	659186	286.1975	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	178160	816.6181	ug/L	#	93
8) 1-Butanol	11.01	41	36367	357.6280	ug/L		72
9) Methyl methacrylate	12.43	41	1716401	346.5757	ug/L		77
10) 2-Nitropropane	12.81	43	473849	411.6250	ug/L		95
13) Cyclohexanone	17.59	55	225646	365.1227	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134948.D A9FOOWT.M Wed Oct 07 12:48:59 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:48 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:44 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

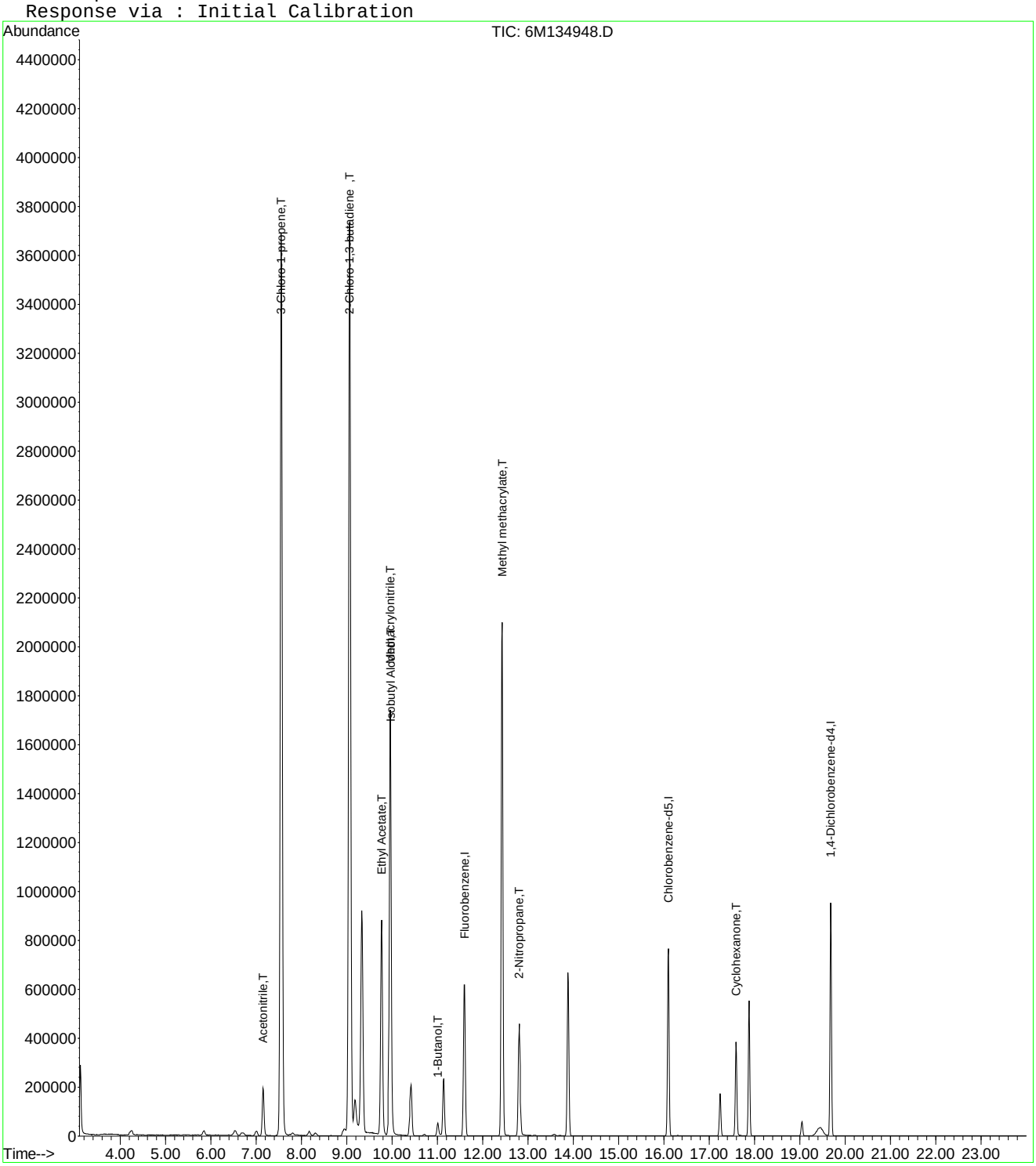
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	762503	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	550469	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	322383	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	289959	197.0457	ug/L		92
3) 3-Chloro-1-propene	7.55	41	4347373	212.7781	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	3899339	221.6892	ug/L		84
5) Ethyl Acetate	9.77	43	1690658	210.1886	ug/L		93
6) Methacrylonitrile	9.96	67	659186	213.0761	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	178160	402.6228	ug/L	#	93
8) 1-Butanol	11.01	41	36367	191.0407	ug/L		72
9) Methyl methacrylate	12.43	41	1716401	214.3068	ug/L		77
10) 2-Nitropropane	12.81	43	473849	200.6829	ug/L		95
13) Cyclohexanone	17.59	55	225646	204.9530	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134948.D A9FOOWT.M Wed Oct 07 13:37:45 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:44 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

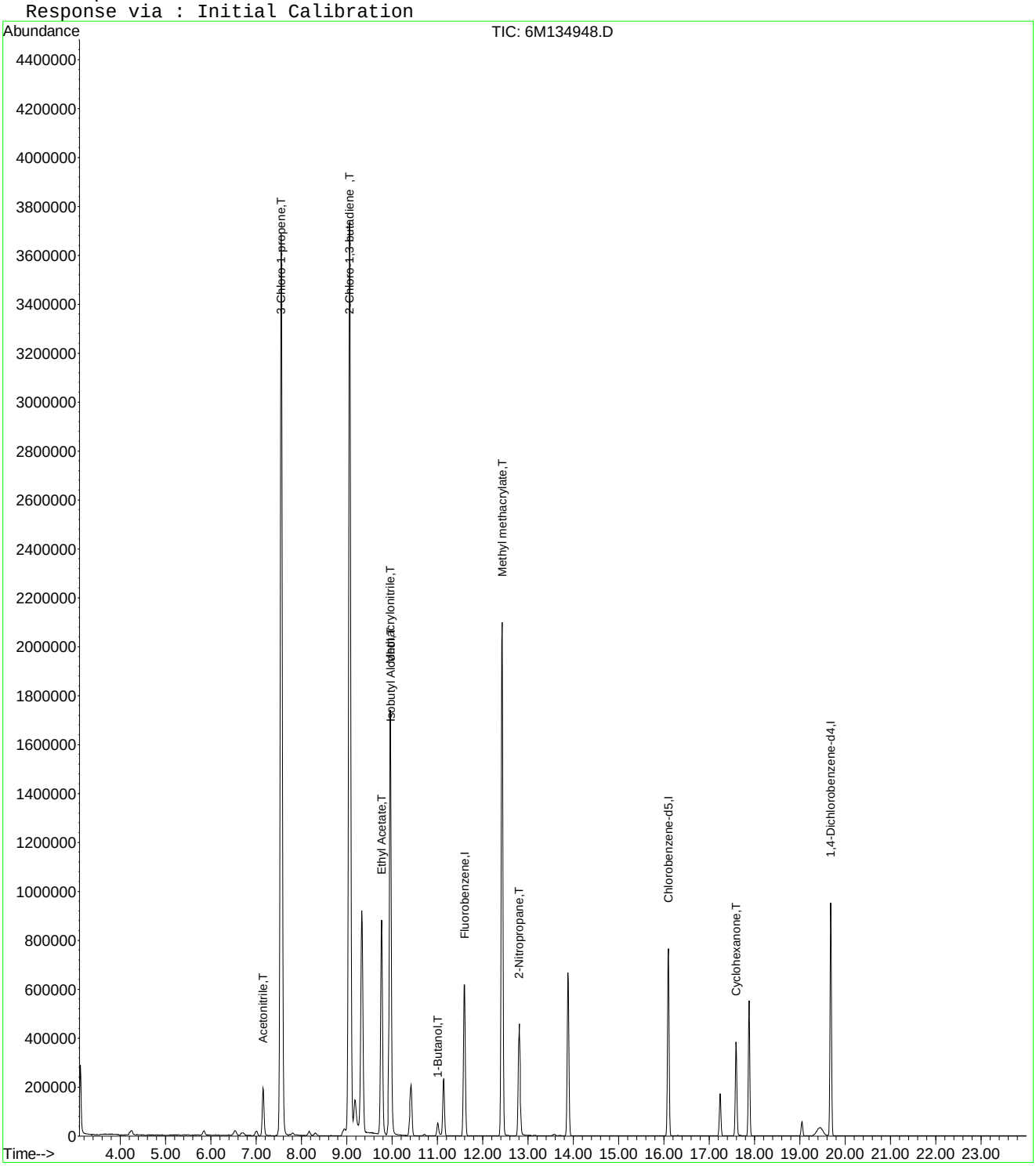
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	762503	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	550469	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	322383	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	289959	198.0519	ug/L		92
3) 3-Chloro-1-propene	7.55	41	4347373	212.7781	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	3899339	221.6892	ug/L		84
5) Ethyl Acetate	9.77	43	1690658	210.1886	ug/L		93
6) Methacrylonitrile	9.96	67	659186	213.0761	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	178160	402.6228	ug/L	#	93
8) 1-Butanol	11.01	41	36367	191.0407	ug/L		72
9) Methyl methacrylate	12.43	41	1716401	214.3068	ug/L		77
10) 2-Nitropropane	12.81	43	473849	200.6829	ug/L		95
13) Cyclohexanone	17.59	55	225646	204.9530	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134948.D A9FOOWT.M Wed Oct 07 14:04:44 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134948.D Vial: 7
Acq On : 6 Oct 2015 13:22 Operator: TMB
Sample : WG541654-06 200ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 14:19:12 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

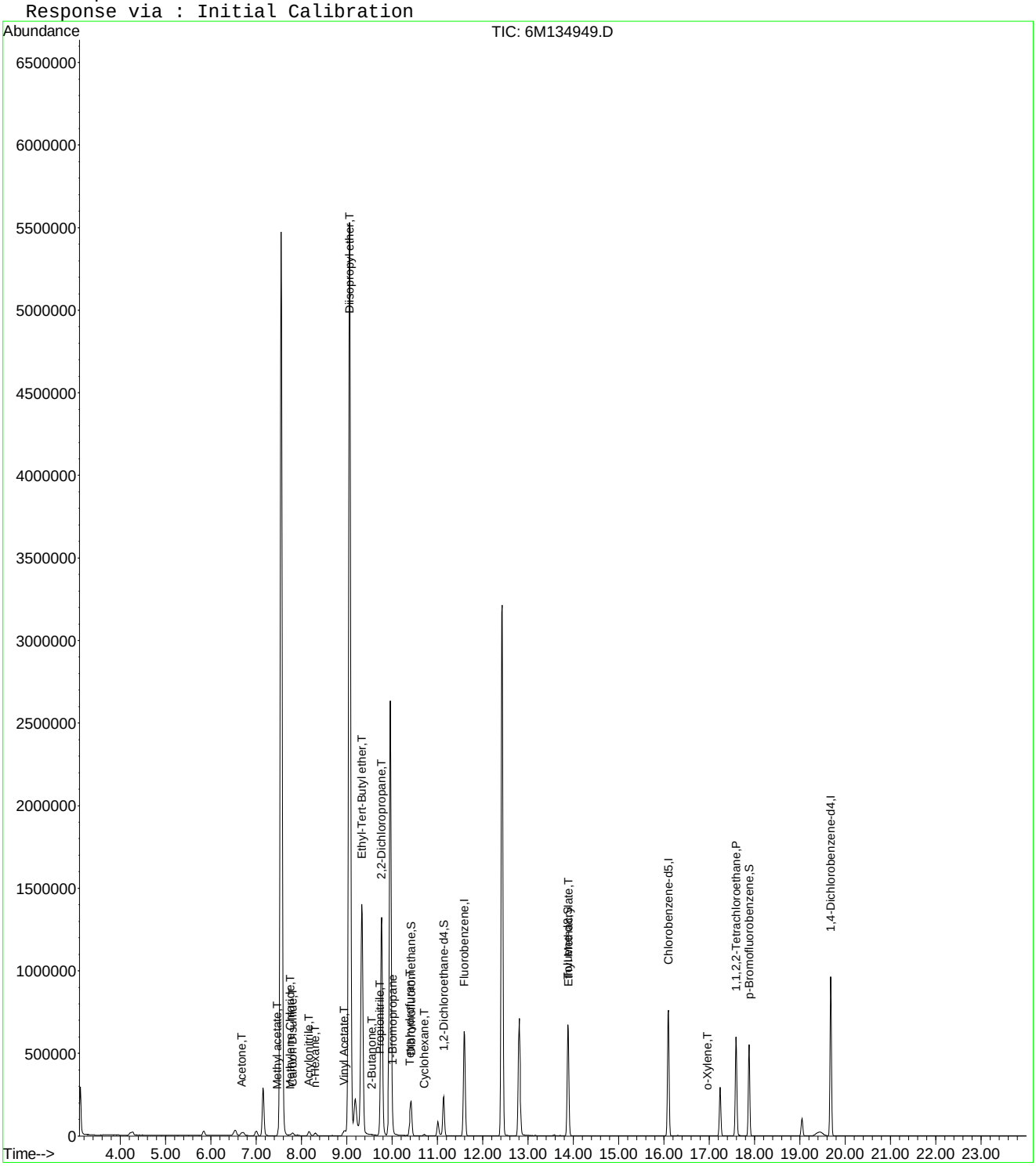
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.59	96	765763	25.00	ug/L	-0.01
57) Chlorobenzene-d5	16.10	117	555801	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	325744	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.42	111	189868	23.9159	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.68%			
43) 1,2-Dichloroethane-d4	11.14	65	219754	23.9404	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 95.76%			
58) Toluene-d8	13.88	98	599277	23.9786	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.92%			
80) p-Bromofluorobenzene	17.88	95	240269	24.1056	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.44%			
Target Compounds						Qvalue
13) Acetone	6.68	43	30159	11.8493	ug/L	92
18) Methyl acetate	7.46	43	1721	0.1957	ug/L #	60
19) Methylene Chloride	7.75	84	1956	0.2088	ug/L #	38
20) Carbon Disulfide	7.80	76	7612	0.2601	ug/L #	60
21) Acrylonitrile	8.16	53	2693	0.8491	ug/L #	29
24) n-Hexane	8.30	57	12109	0.9409	ug/L	80
25) Diisopropyl ether	9.06	45	106949	2.8783	ug/L #	52
26) Vinyl Acetate	8.95	43	3457	0.3248	ug/L #	74
28) Ethyl-Tert-Butyl ether	9.33	59	222311	7.6838	ug/L #	39
29) 2-Butanone	9.55	43	5281	1.4234	ug/L #	71
30) Propionitrile	9.73	54	605	0.5761	ug/L #	1
31) 2,2-Dichloropropane	9.76	77	2004	0.1583	ug/L #	1
34) 1-Bromopropane	10.01	122	2584	2.2677	ug/L #	1
36) Tetrahydrofuran	10.40	42	2115	0.9459	ug/L #	34
39) Cyclohexane	10.71	56	5733	0.3744	ug/L #	61
60) Ethyl Methacrylate	13.89	69	2302	0.8192	ug/L #	1
74) o-Xylene	16.96	106	243	0.4812	ug/L #	18
79) 1,1,2,2-Tetrachloroethane	17.59	83	27809	3.6807	ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134949.D 8260WT.M Tue Oct 06 14:19:12 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 14:19 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:48:59 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

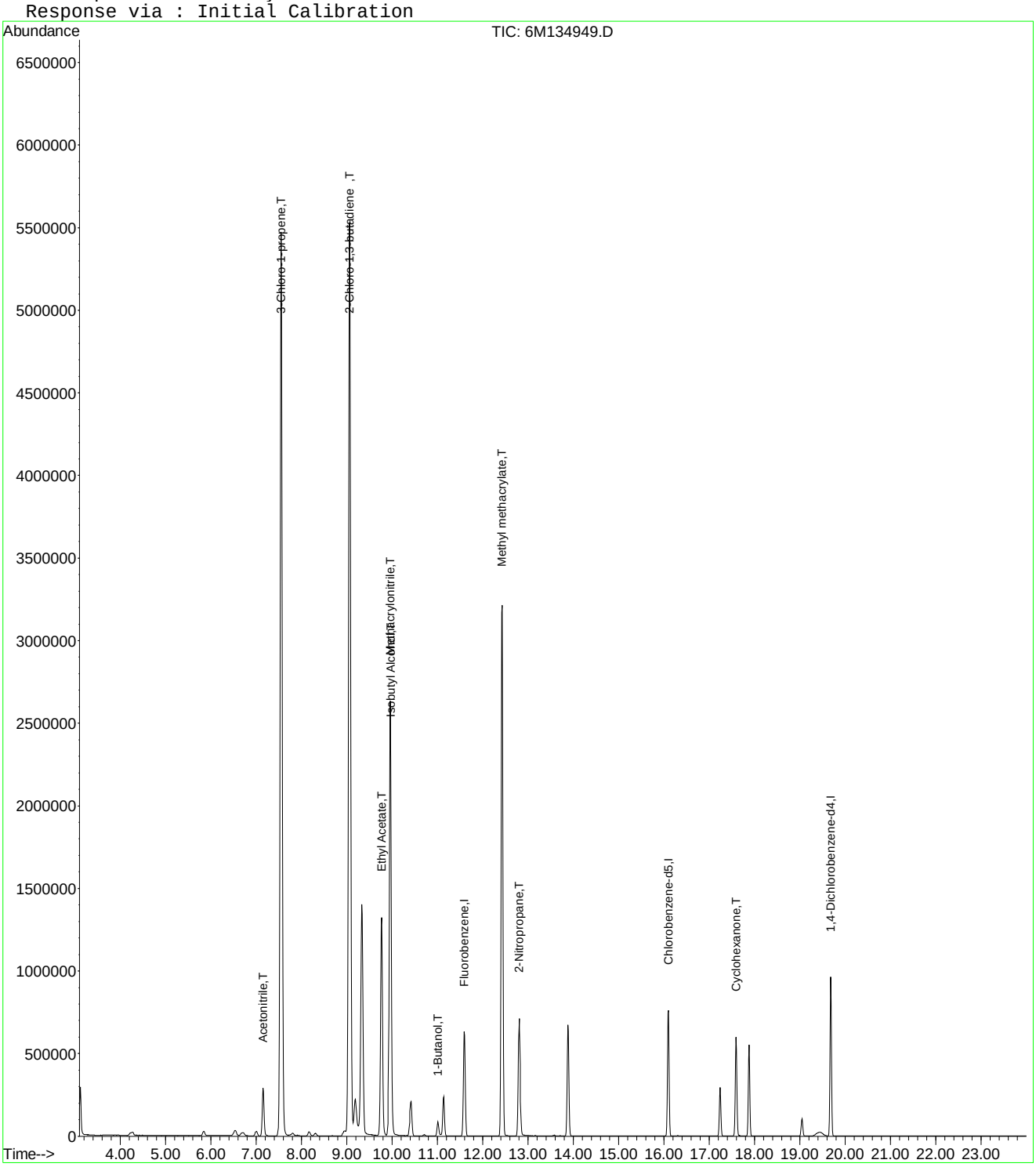
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	765763	25.00	ug/L		0.02
11) Chlorobenzene-d5	16.10	117	555801	25.00	ug/L		0.03
12) 1,4-Dichlorobenzene-d4	19.68	152	325744	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	432706	445.4153	ug/L		92
3) 3-Chloro-1-propene	7.55	41	6311899	546.7079	ug/L		93
4) 2-Chloro-1,3-butadiene	9.06	53	5701331	497.3439	ug/L		85
5) Ethyl Acetate	9.77	43	2542003	574.2557	ug/L		93
6) Methacrylonitrile	9.96	67	988716	427.4415	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	286580	1307.9822	ug/L	#	93
8) 1-Butanol	11.01	41	60398	591.4170	ug/L		70
9) Methyl methacrylate	12.42	41	2655401	533.8960	ug/L		77
10) 2-Nitropropane	12.81	43	740428	640.4597	ug/L		96
13) Cyclohexanone	17.59	55	360283	576.9666	ug/L		84

(#) = qualifier out of range (m) = manual integration
6M134949.D A9FOOWT.M Wed Oct 07 12:49:00 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:48 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:45 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

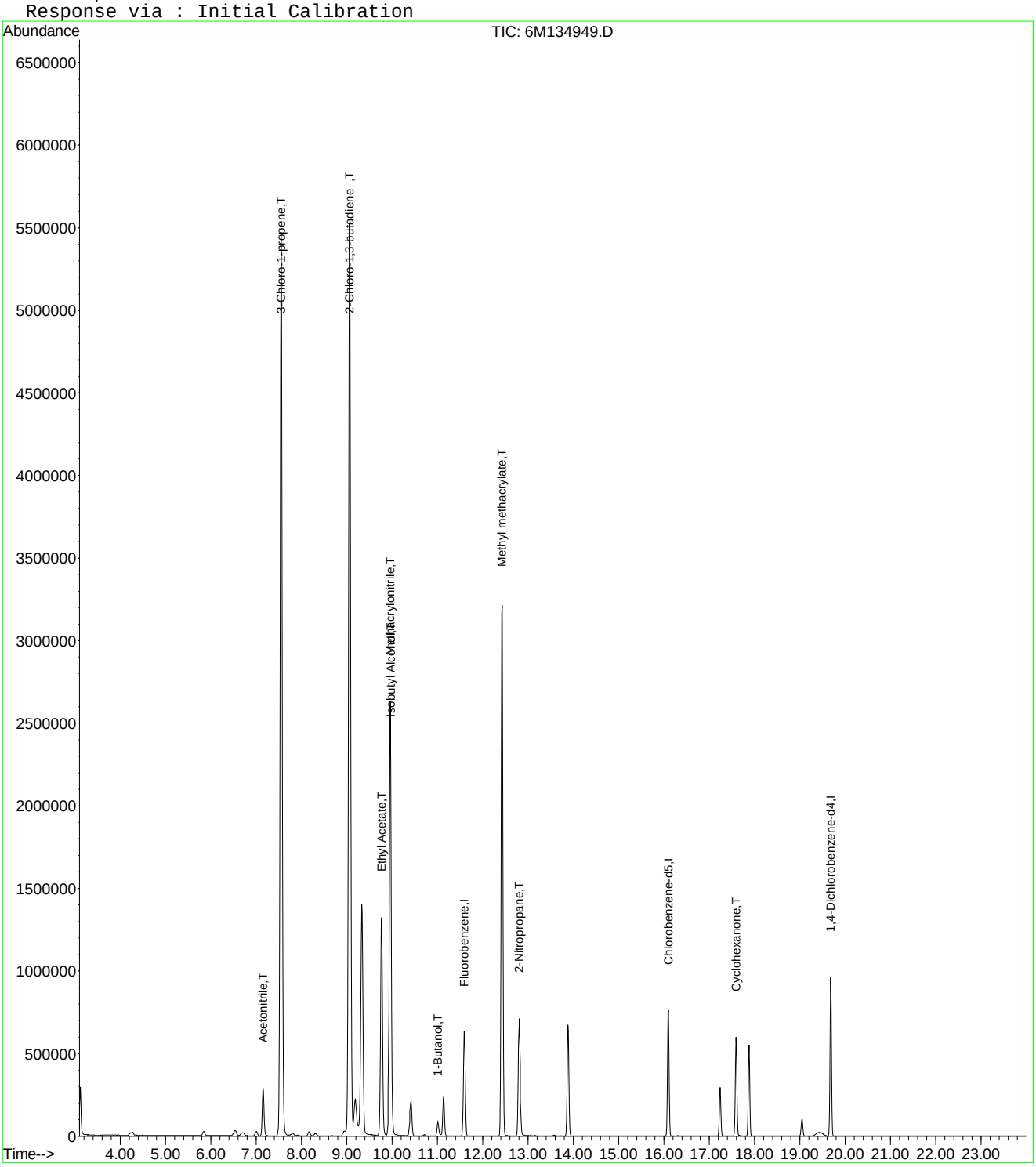
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	765763	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	555801	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	325744	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	432706	292.7996	ug/L		92
3) 3-Chloro-1-propene	7.55	41	6311899	307.6149	ug/L		93
4) 2-Chloro-1,3-butadiene	9.06	53	5701331	322.7580	ug/L		85
5) Ethyl Acetate	9.77	43	2542003	314.6854	ug/L		93
6) Methacrylonitrile	9.96	67	988716	318.2332	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	286580	644.8834	ug/L	#	93
8) 1-Butanol	11.01	41	60398	315.9280	ug/L		70
9) Methyl methacrylate	12.42	41	2655401	330.1372	ug/L		77
10) 2-Nitropropane	12.81	43	740428	312.2485	ug/L		96
13) Cyclohexanone	17.59	55	360283	323.8665	ug/L		84

(#) = qualifier out of range (m) = manual integration
6M134949.D A9FOOWT.M Wed Oct 07 13:37:45 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:45 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

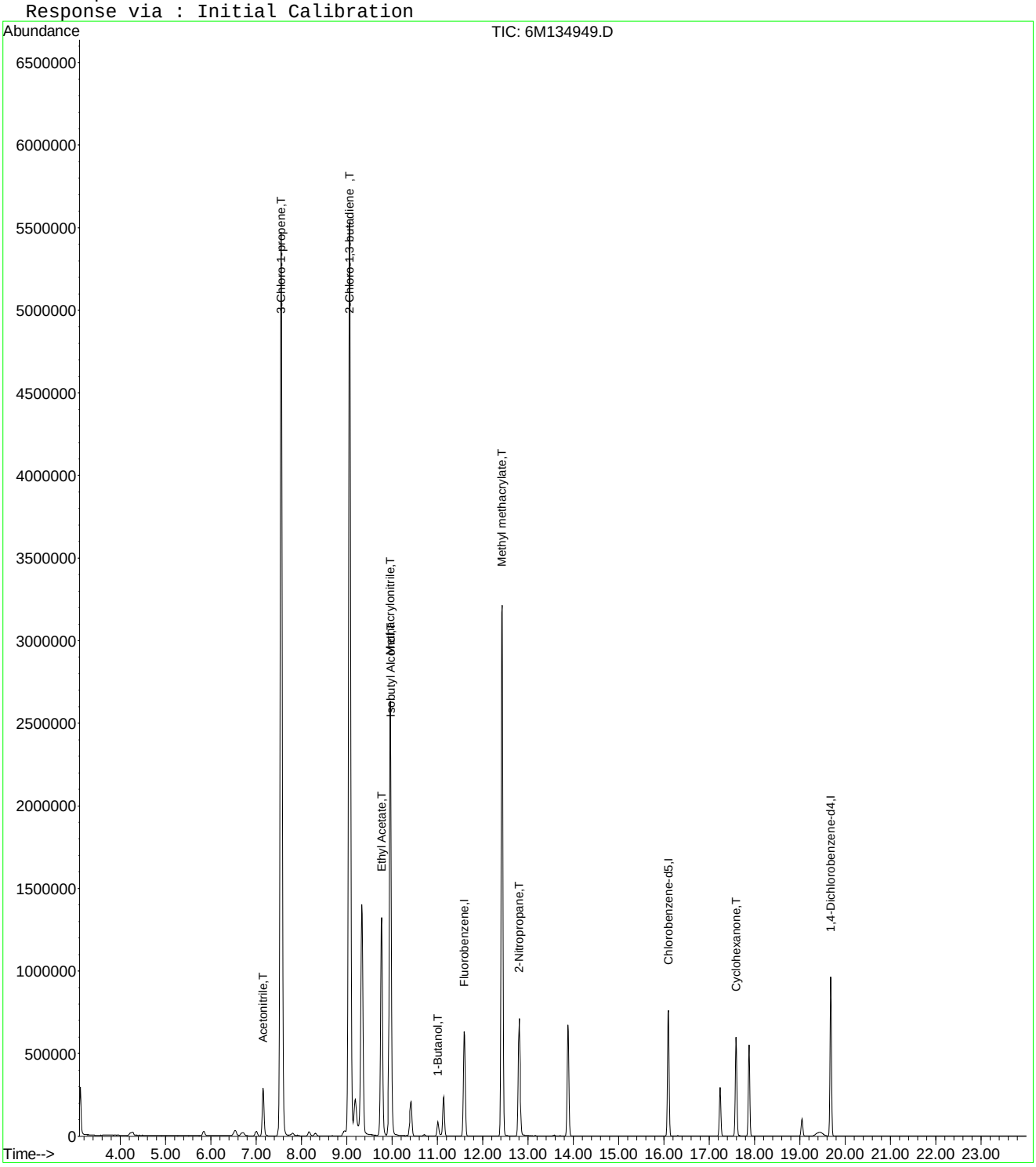
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	765763	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	555801	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	325744	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	432706	294.2947	ug/L		92
3) 3-Chloro-1-propene	7.55	41	6311899	307.6149	ug/L		93
4) 2-Chloro-1,3-butadiene	9.06	53	5701331	322.7580	ug/L		85
5) Ethyl Acetate	9.77	43	2542003	314.6854	ug/L		93
6) Methacrylonitrile	9.96	67	988716	318.2332	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	286580	644.8834	ug/L	#	93
8) 1-Butanol	11.01	41	60398	315.9280	ug/L		70
9) Methyl methacrylate	12.42	41	2655401	330.1372	ug/L		77
10) 2-Nitropropane	12.81	43	740428	312.2485	ug/L		96
13) Cyclohexanone	17.59	55	360283	323.8665	ug/L		84

(#) = qualifier out of range (m) = manual integration
6M134949.D A9FOOWT.M Wed Oct 07 14:04:45 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134949.D Vial: 8
Acq On : 6 Oct 2015 13:55 Operator: TMB
Sample : WG541654-07 300ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Data File : C:\MSDchem\1\data\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 14:51:24 2015 Quant Results File: 8260WT.RES

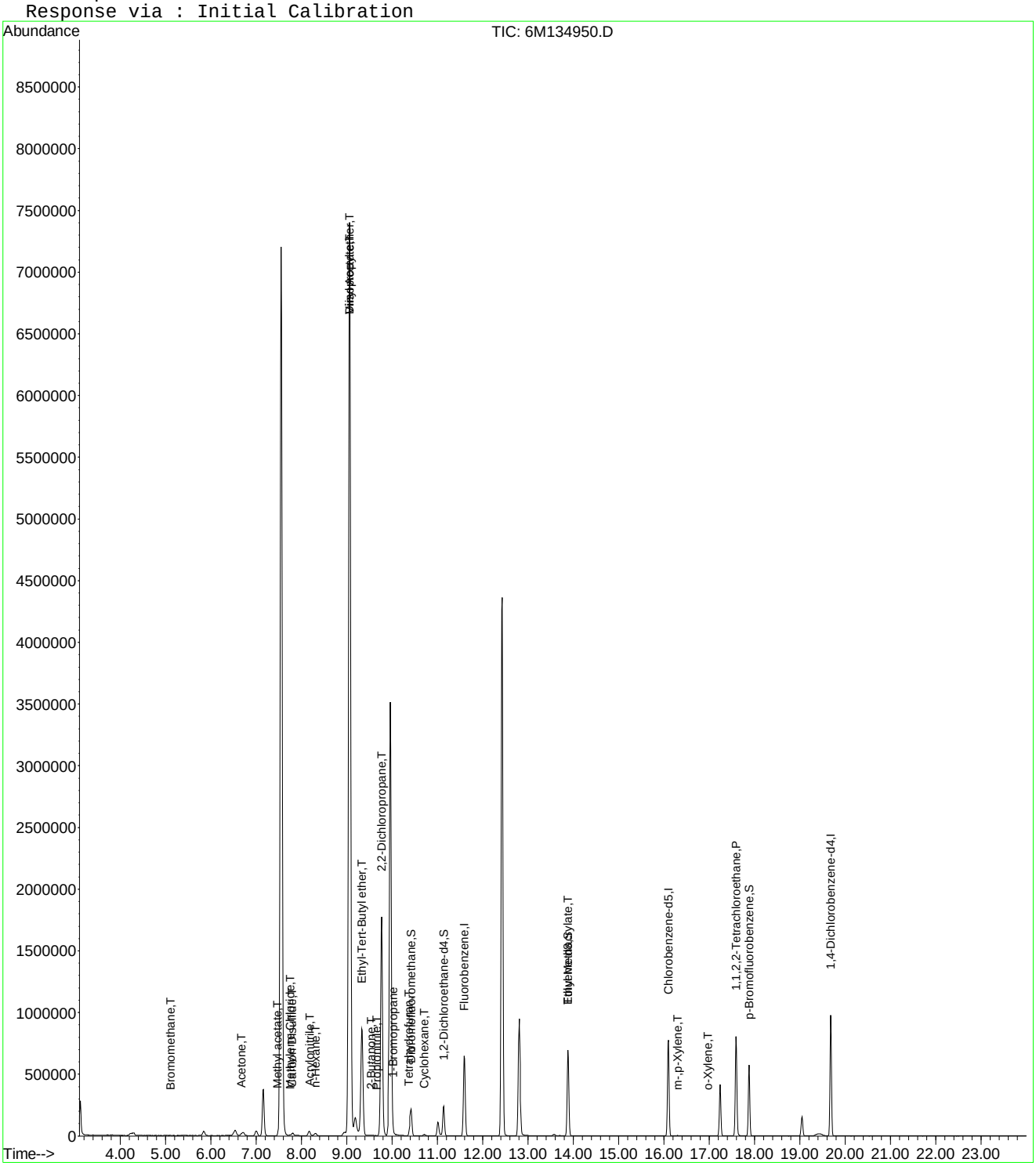
Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.59	96	789187	25.00 ug/L	-0.01
57) Chlorobenzene-d5	16.10	117	557720	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	330408	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.42	111	195338	23.8746 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.48%		
43) 1,2-Dichloroethane-d4	11.14	65	223170	23.5909 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.36%		
58) Toluene-d8	13.88	98	619097	24.6864 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.76%		
80) p-Bromofluorobenzene	17.88	95	251512	24.8774 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 99.52%		
Target Compounds					Qvalue
6) Bromomethane	5.11	94	1105	0.1513 ug/L	84
13) Acetone	6.67	43	35514	13.5391 ug/L	92
18) Methyl acetate	7.47	43	3541	0.3908 ug/L #	60
19) Methylene Chloride	7.75	84	2211	0.2290 ug/L #	29
20) Carbon Disulfide	7.79	76	10134	0.3361 ug/L #	64
21) Acrylonitrile	8.18	53	3538	1.0824 ug/L #	40
24) n-Hexane	8.31	57	15376	1.1593 ug/L	78
25) Diisopropyl ether	9.06	45	90317	2.3585 ug/L #	40
26) Vinyl Acetate	9.06	43	39370	3.5886 ug/L #	5
28) Ethyl-Tert-Butyl ether	9.33	59	139764	4.6873 ug/L #	40
29) 2-Butanone	9.54	43	5088	1.3307 ug/L #	69
30) Propionitrile	9.66	54	235	0.2171 ug/L #	57
31) 2,2-Dichloropropane	9.77	77	2517	0.1929 ug/L #	1
34) 1-Bromopropane	10.02	122	2817	2.3636 ug/L #	1
36) Tetrahydrofuran	10.37	42	2703	1.1730 ug/L #	34
39) Cyclohexane	10.71	56	7932	0.5027 ug/L #	63
60) Ethyl Methacrylate	13.88	69	2009	0.7884 ug/L #	1
73) m-,p-Xylene	16.30	106	2165	0.1572 ug/L	95
74) o-Xylene	16.97	106	405	0.4920 ug/L	70
79) 1,1,2,2-Tetrachloroethane	17.59	83	39539	5.1593 ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134950.D 8260WT.M Tue Oct 06 14:51:24 2015 Page 1

Data File : C:\MSDchem\1\data\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 14:51 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:49:00 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

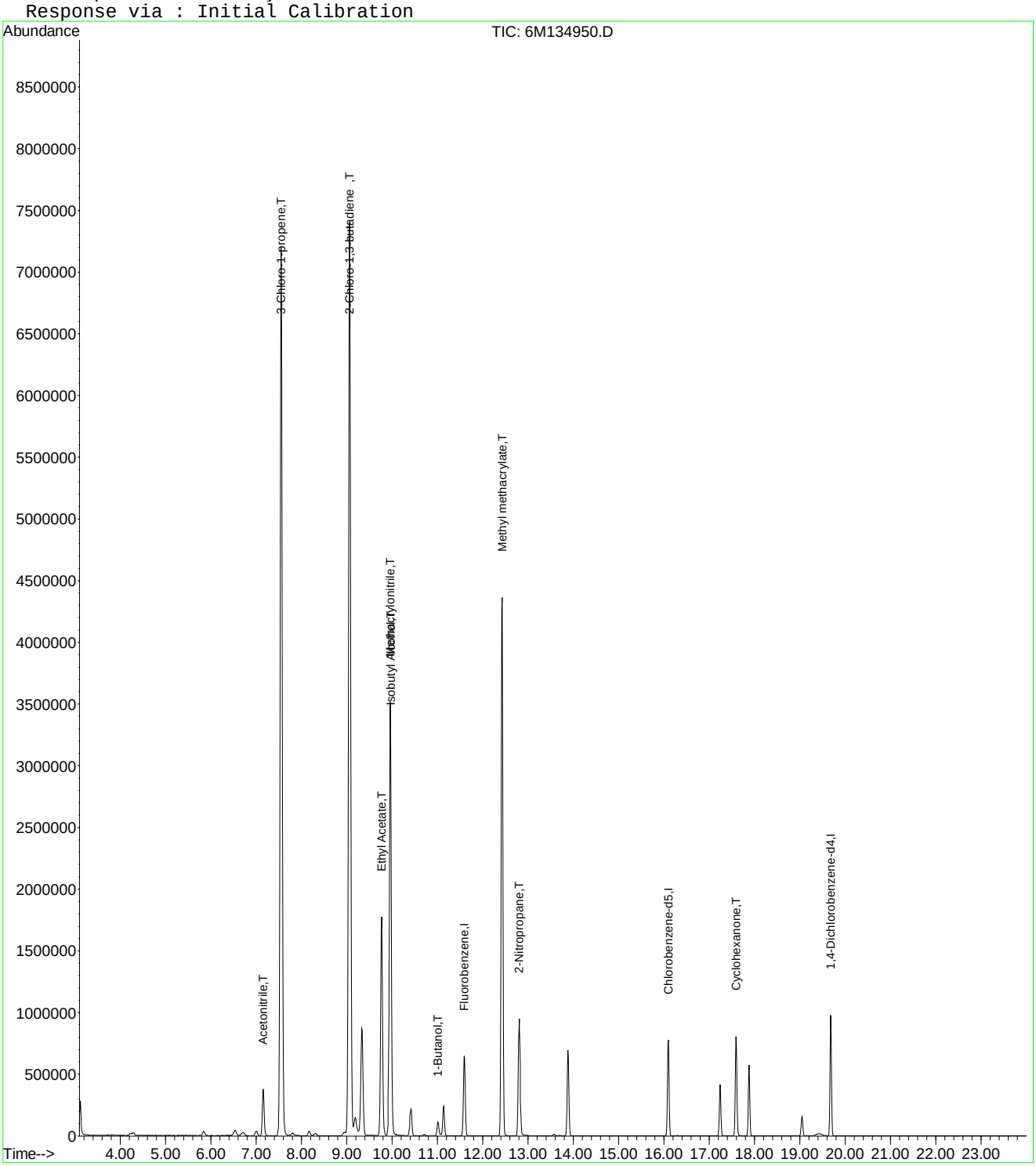
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	789187	25.00	ug/L		0.02
11) Chlorobenzene-d5	16.10	117	557720	25.00	ug/L		0.03
12) 1,4-Dichlorobenzene-d4	19.68	152	330408	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	575300	533.2321	ug/L		92
3) 3-Chloro-1-propene	7.55	41	8224027	691.1850	ug/L		94
4) 2-Chloro-1,3-butadiene	9.06	53	7548416	638.9264	ug/L		87
5) Ethyl Acetate	9.77	43	3372685	739.2979	ug/L		94
6) Methacrylonitrile	9.96	67	1328359	557.2307	ug/L	#	52
7) Isobutyl Alcohol	9.97	43	381913	1691.3553	ug/L	#	91
8) 1-Butanol	11.01	41	80252	762.5030	ug/L		73
9) Methyl methacrylate	12.43	41	3567215	695.9376	ug/L		78
10) 2-Nitropropane	12.81	43	998638	838.1688	ug/L		97
13) Cyclohexanone	17.59	55	484231	764.5138	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134950.D A9FOOWT.M Wed Oct 07 12:49:00 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:49 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:45 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

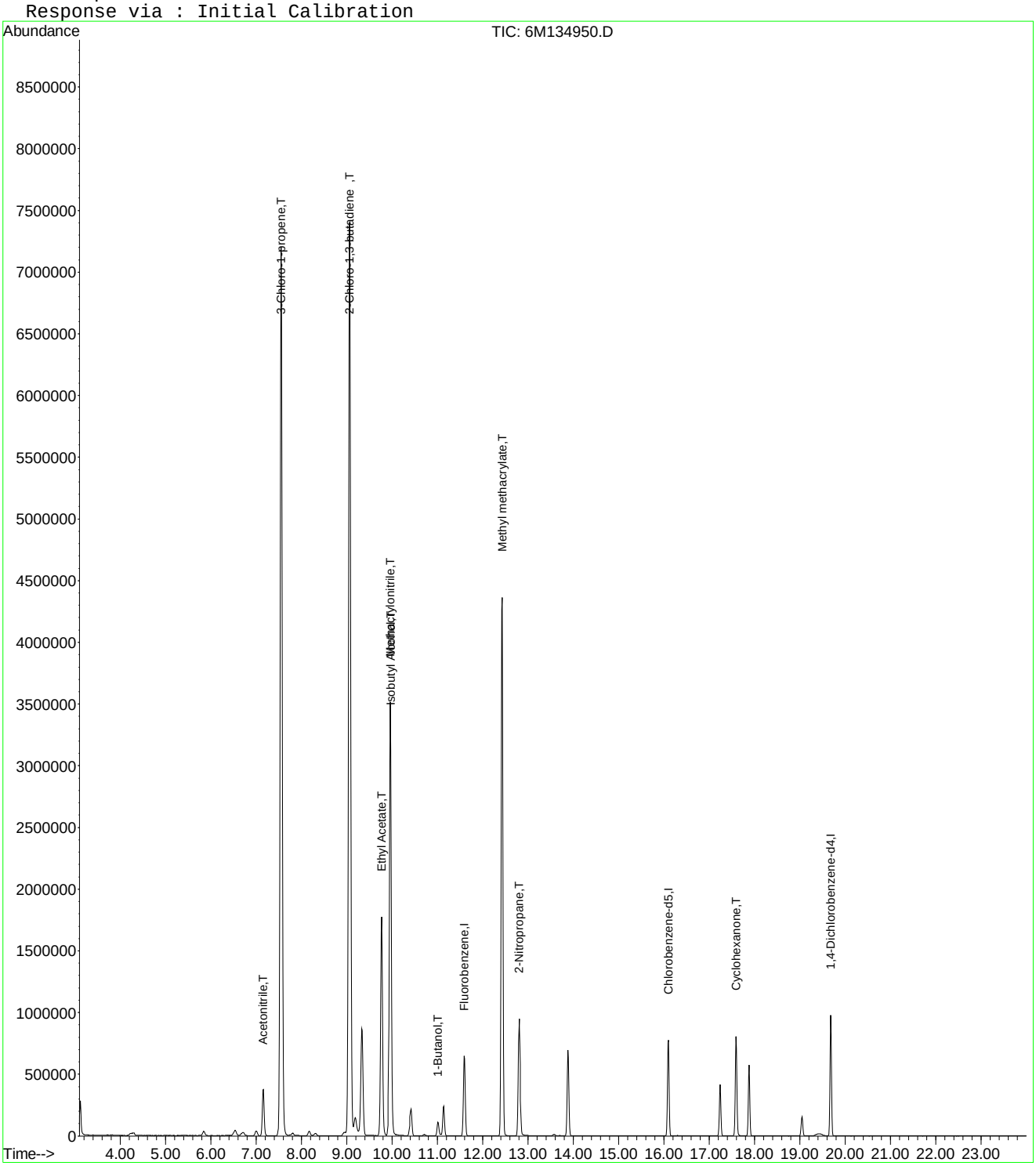
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	789187	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	557720	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	330408	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	575300	377.7343	ug/L		92
3) 3-Chloro-1-propene	7.55	41	8224027	388.9075	ug/L		94
4) 2-Chloro-1,3-butadiene	9.06	53	7548416	414.6398	ug/L		87
5) Ethyl Acetate	9.77	43	3372685	405.1266	ug/L		94
6) Methacrylonitrile	9.96	67	1328359	414.8622	ug/L	#	52
7) Isobutyl Alcohol	9.97	43	381913	833.9005	ug/L	#	91
8) 1-Butanol	11.01	41	80252	407.3201	ug/L		73
9) Methyl methacrylate	12.43	41	3567215	430.3364	ug/L		78
10) 2-Nitropropane	12.81	43	998638	408.6392	ug/L		97
13) Cyclohexanone	17.59	55	484231	429.1418	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134950.D A9FOOWT.M Wed Oct 07 13:37:46 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:45 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

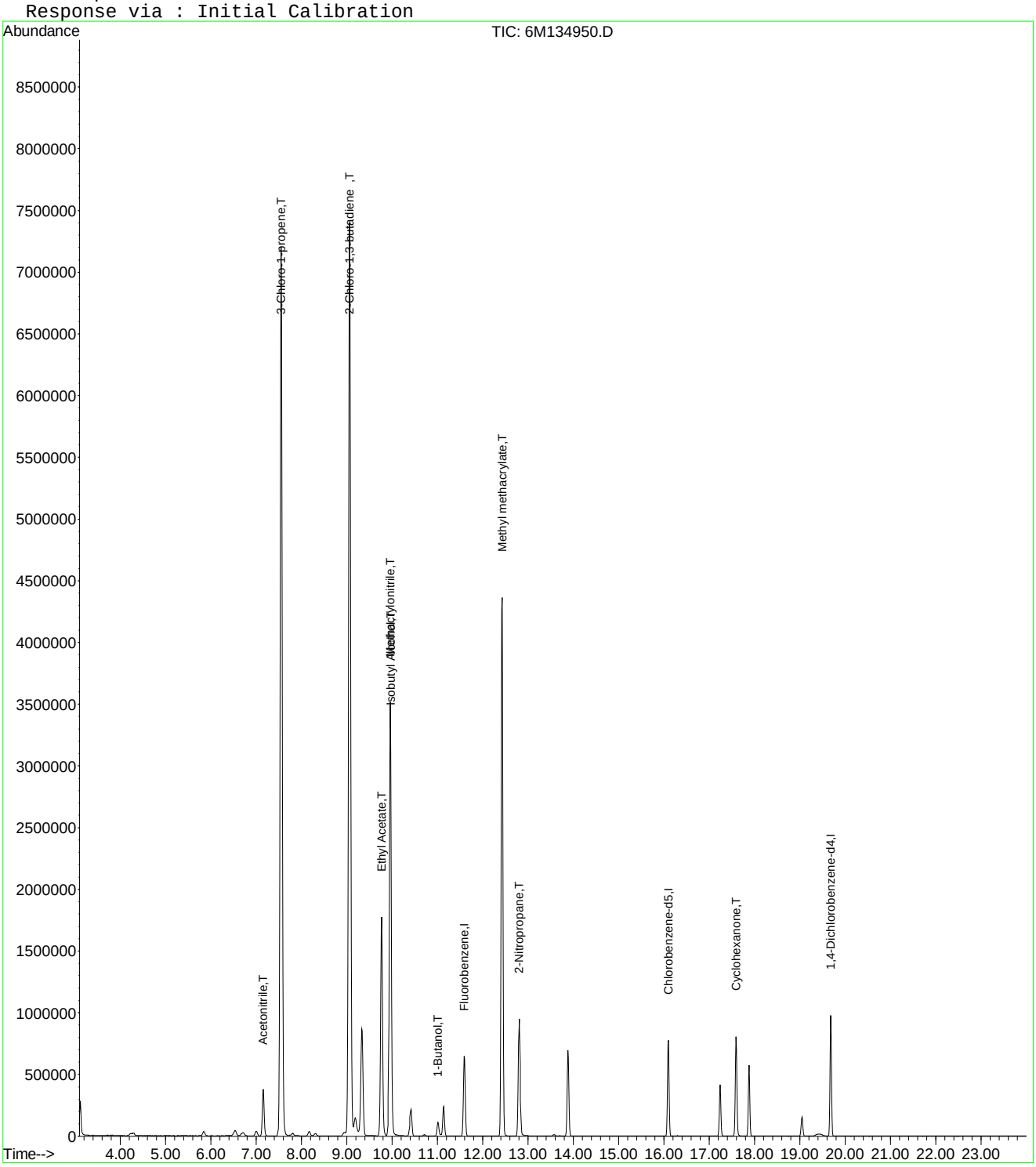
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	789187	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	557720	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	330408	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	575300	379.6631	ug/L		92
3) 3-Chloro-1-propene	7.55	41	8224027	388.9075	ug/L		94
4) 2-Chloro-1,3-butadiene	9.06	53	7548416	414.6398	ug/L		87
5) Ethyl Acetate	9.77	43	3372685	405.1266	ug/L		94
6) Methacrylonitrile	9.96	67	1328359	414.8622	ug/L	#	52
7) Isobutyl Alcohol	9.97	43	381913	833.9005	ug/L	#	91
8) 1-Butanol	11.01	41	80252	407.3201	ug/L		73
9) Methyl methacrylate	12.43	41	3567215	430.3364	ug/L		78
10) 2-Nitropropane	12.81	43	998638	408.6392	ug/L		97
13) Cyclohexanone	17.59	55	484231	429.1418	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134950.D A9FOOWT.M Wed Oct 07 14:04:45 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134950.D Vial: 9
Acq On : 6 Oct 2015 14:27 Operator: TMB
Sample : WG541654-08 400ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 15:23:41 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

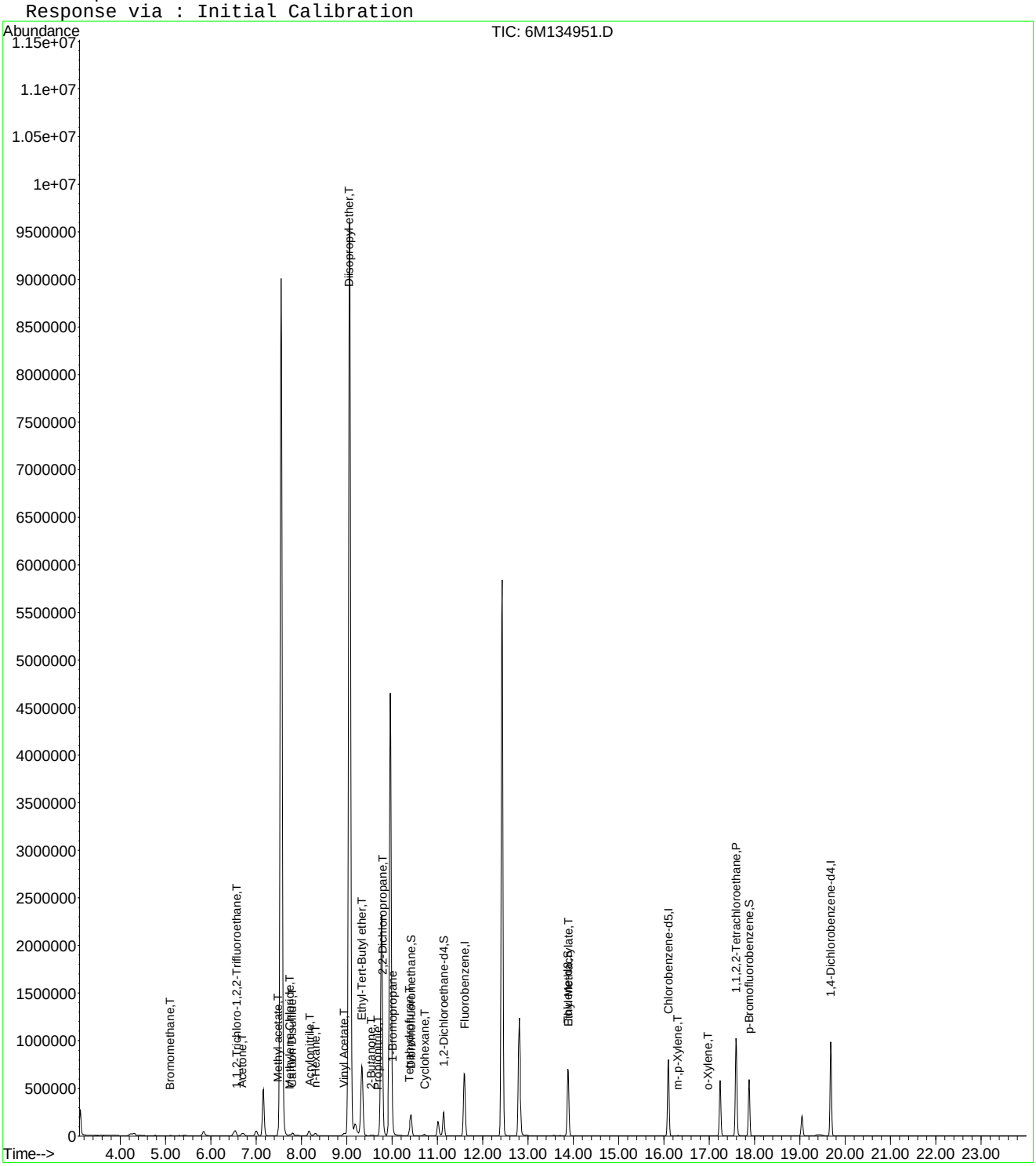
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.60	96	805961	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.10	117	571082	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	335061	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.41	111	199627	23.8910	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.56%			
43) 1,2-Dichloroethane-d4	11.14	65	227967	23.5965	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.40%			
58) Toluene-d8	13.88	98	631351	24.5860	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.36%			
80) p-Bromofluorobenzene	17.88	95	260576	25.4160	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 101.68%			
Target Compounds						Qvalue
6) Bromomethane	5.09	94	1423	0.1908	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.57	101	1169	0.1251	ug/L #	15
13) Acetone	6.69	43	32857	12.2655	ug/L	94
18) Methyl acetate	7.48	43	3279	0.3543	ug/L #	60
19) Methylene Chloride	7.74	84	2571	0.2607	ug/L #	25
20) Carbon Disulfide	7.79	76	13094	0.4252	ug/L #	71
21) Acrylonitrile	8.18	53	5267	1.5778	ug/L #	47
24) n-Hexane	8.31	57	20851	1.5394	ug/L	81
25) Diisopropyl ether	9.05	45	94151	2.4075	ug/L #	20
26) Vinyl Acetate	8.94	43	1811	0.1616	ug/L #	74
28) Ethyl-Tert-Butyl ether	9.33	59	121162	3.9789	ug/L #	41
29) 2-Butanone	9.54	43	7582	1.9417	ug/L #	71
30) Propionitrile	9.68	54	187	0.1692	ug/L #	57
31) 2,2-Dichloropropane	9.79	77	3536	0.2654	ug/L #	1
34) 1-Bromopropane	10.01	122	2730	2.2740	ug/L #	1
36) Tetrahydrofuran	10.38	42	2765	1.1749	ug/L #	34
39) Cyclohexane	10.72	56	9930	0.6162	ug/L #	67
60) Ethyl Methacrylate	13.89	69	2475	0.8302	ug/L #	1
73) m-,p-Xylene	16.30	106	2496	0.1769	ug/L	82
74) o-Xylene	16.97	106	235	0.4803	ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.59	83	50064	6.4420	ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134951.D 8260WT.M Tue Oct 06 15:23:41 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 15:23 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



6M134951.D 8260WT.M Tue Oct 06 15:23:41 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:49:00 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

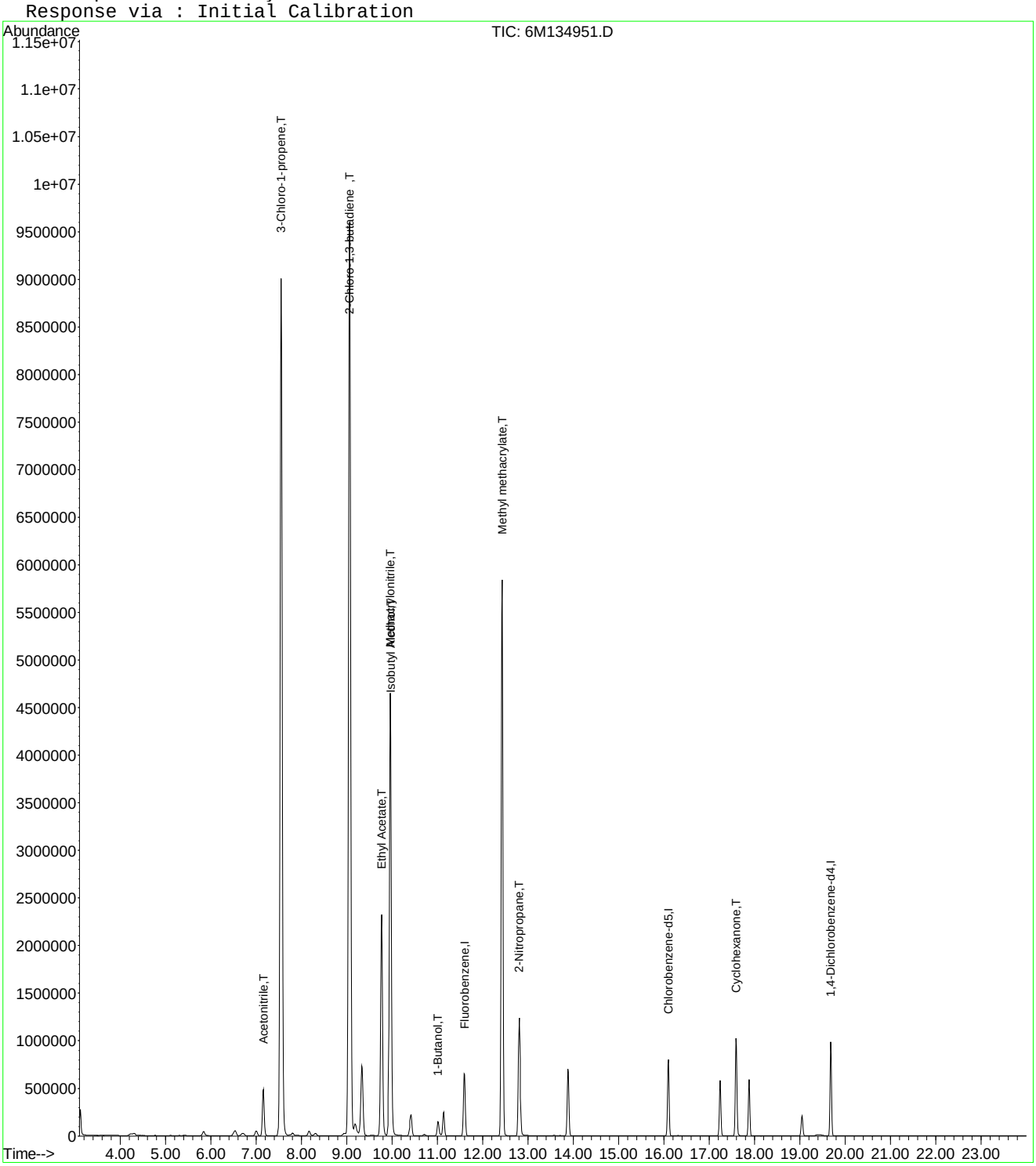
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	805961	25.00	ug/L		0.03
11) Chlorobenzene-d5	16.10	117	571082	25.00	ug/L		0.03
12) 1,4-Dichlorobenzene-d4	19.68	152	335061	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.16	41	746093	628.0964	ug/L		92
3) 3-Chloro-1-propene	7.55	41	10143840	834.7916	ug/L		96
4) 2-Chloro-1,3-butadiene	9.06	53	9544676	791.0831	ug/L		90
5) Ethyl Acetate	9.77	43	4431552	951.1859	ug/L		94
6) Methacrylonitrile	9.96	67	1759642	722.7861	ug/L	#	52
7) Isobutyl Alcohol	9.97	43	519624	2253.3337	ug/L	#	92
8) 1-Butanol	11.01	41	107226	997.5891	ug/L		73
9) Methyl methacrylate	12.43	41	4680432	894.1139	ug/L		78
10) 2-Nitropropane	12.80	43	1314811	1080.5694	ug/L		97
13) Cyclohexanone	17.59	55	623157	970.1903	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134951.D A9FOOWT.M Wed Oct 07 12:49:01 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:49 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



6M134951.D A9FOOWT.M Wed Oct 07 12:49:01 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:46 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

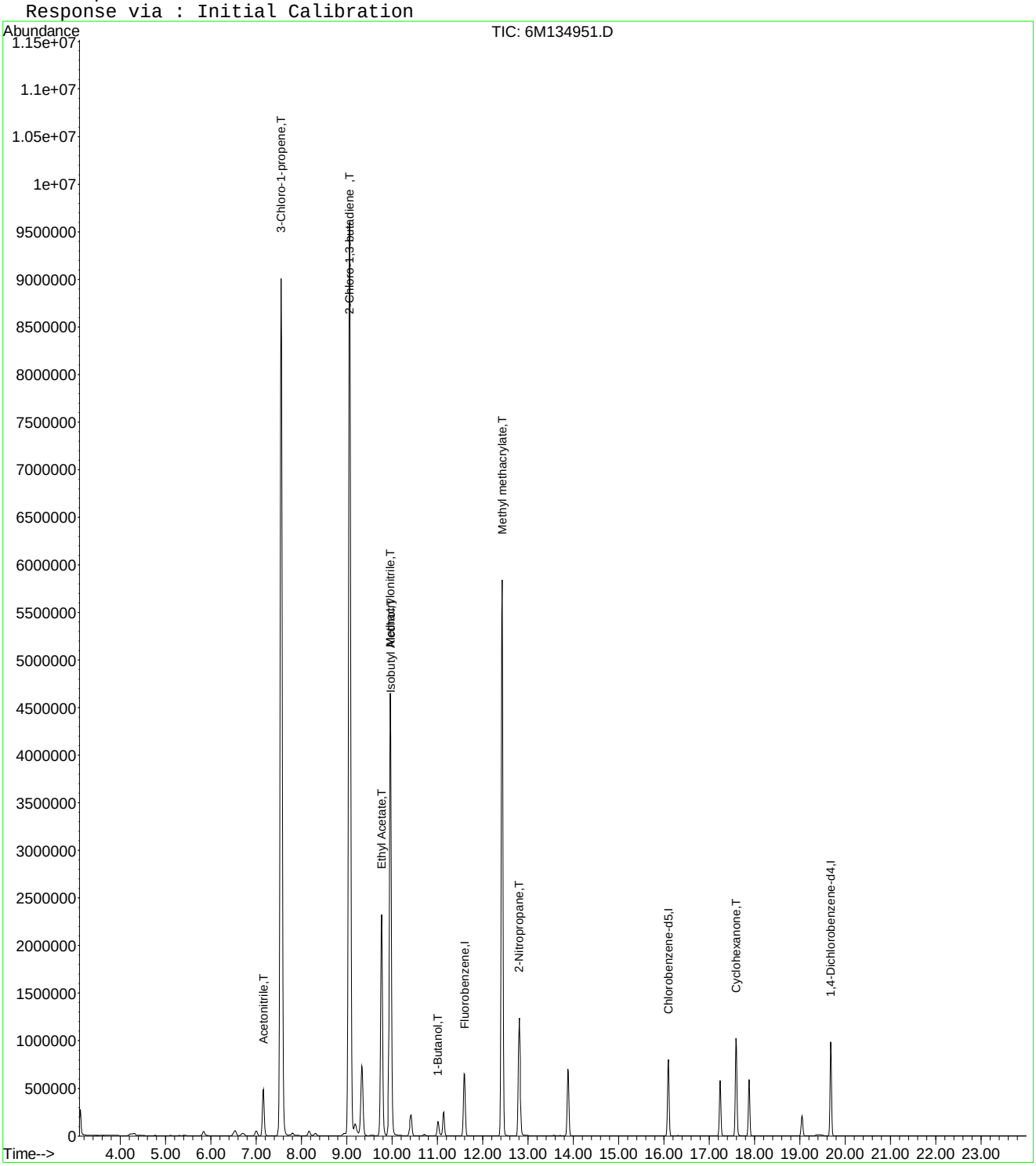
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	805961	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	571082	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	335061	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.16	41	746330	479.8316	ug/L		92
3) 3-Chloro-1-propene	7.55	41	10143840	469.7102	ug/L		96
4) 2-Chloro-1,3-butadiene	9.06	53	9544676	513.3839	ug/L		90
5) Ethyl Acetate	9.77	43	4431552	521.2388	ug/L		94
6) Methacrylonitrile	9.96	67	1759642	538.1194	ug/L	#	52
7) Isobutyl Alcohol	9.97	43	519624	1110.9765	ug/L	#	92
8) 1-Butanol	11.01	41	107226	532.9003	ug/L		73
9) Methyl methacrylate	12.43	41	4680432	552.8797	ug/L		78
10) 2-Nitropropane	12.80	43	1314811	526.8187	ug/L		97
13) Cyclohexanone	17.59	55	623157	544.5934	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134951.D A9FOOWT.M Wed Oct 07 13:37:46 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:46 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

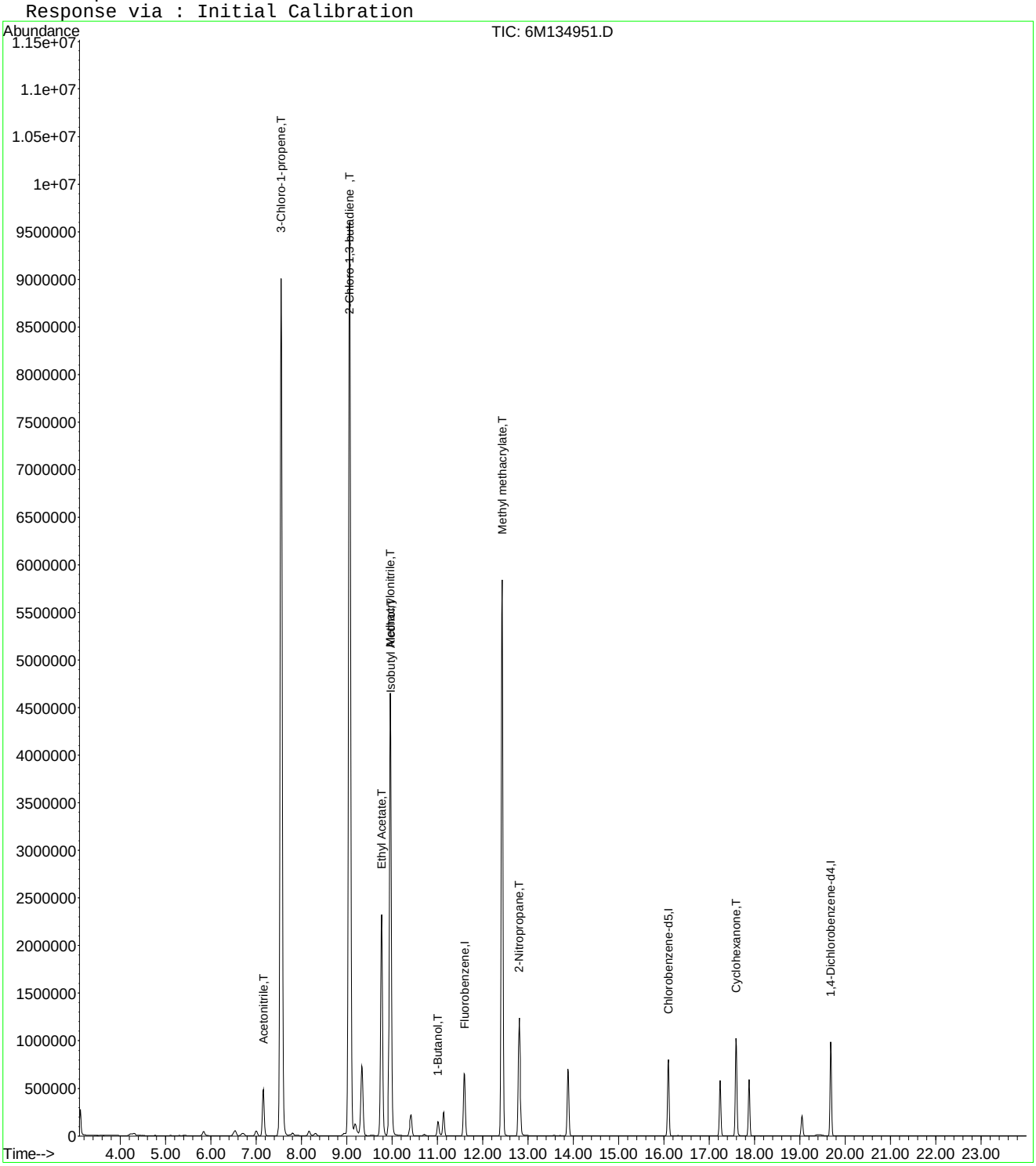
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.60	96	805961	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	571082	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	335061	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.16	41	746330	482.2817	ug/L		92
3) 3-Chloro-1-propene	7.55	41	10143840	469.7102	ug/L		96
4) 2-Chloro-1,3-butadiene	9.06	53	9544676	513.3839	ug/L		90
5) Ethyl Acetate	9.77	43	4431552	521.2388	ug/L		94
6) Methacrylonitrile	9.96	67	1759642	538.1194	ug/L	#	52
7) Isobutyl Alcohol	9.97	43	519624	1110.9765	ug/L	#	92
8) 1-Butanol	11.01	41	107226	532.9003	ug/L		73
9) Methyl methacrylate	12.43	41	4680432	552.8797	ug/L		78
10) 2-Nitropropane	12.80	43	1314811	526.8187	ug/L		97
13) Cyclohexanone	17.59	55	623157	544.5934	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134951.D A9FOOWT.M Wed Oct 07 14:04:46 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134951.D Vial: 10
Acq On : 6 Oct 2015 14:59 Operator: TMB
Sample : WG541654-09 500ug/L STD A9/FOO Inst : HPMS6
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Data File : C:\MSDchem\1\data\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 17:00:26 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

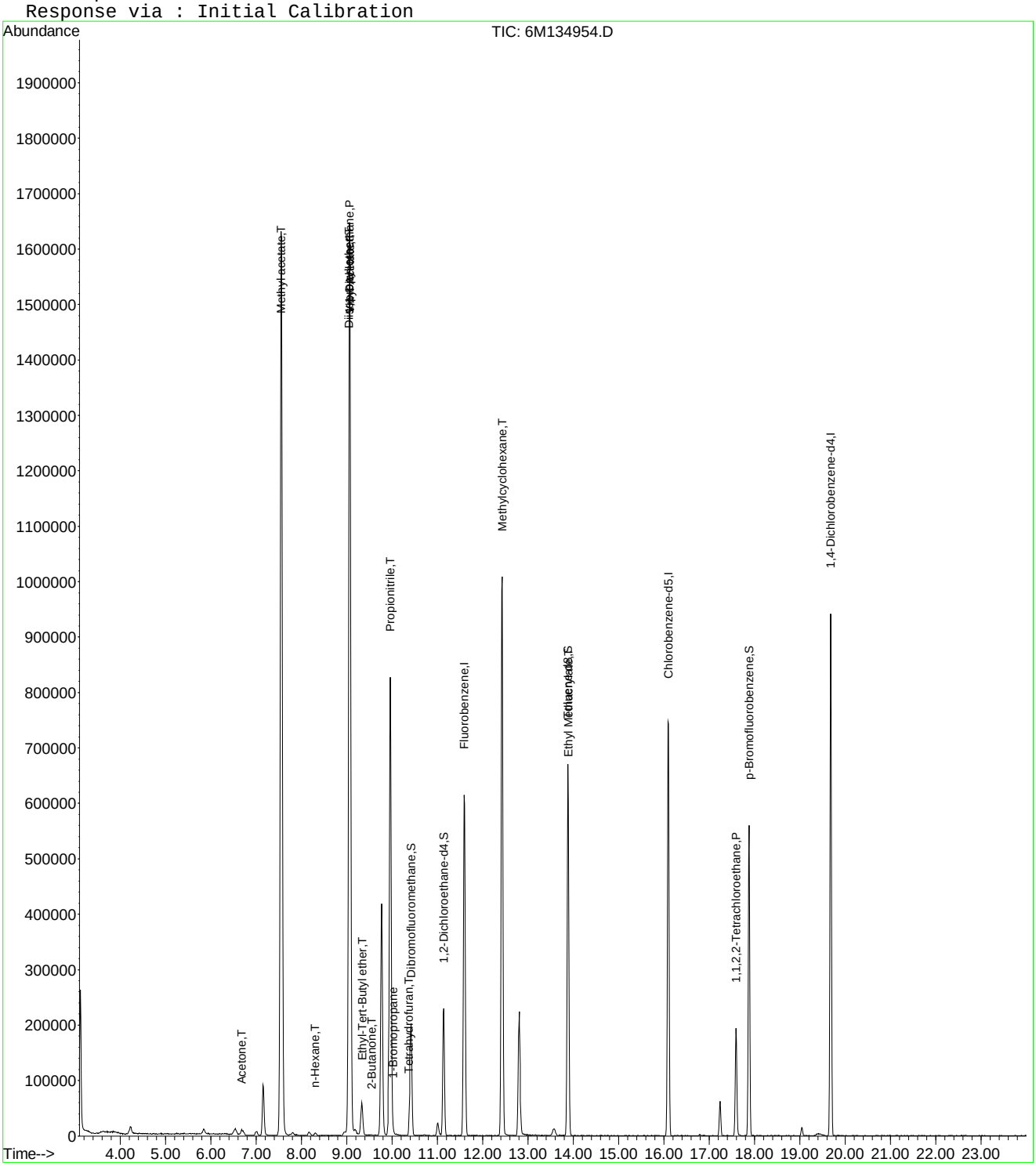
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.59	96	753994	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.10	117	551188	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.68	152	313043	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.42	111	182220	23.3108	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 93.24%			
43) 1,2-Dichloroethane-d4	11.14	65	214064	23.6845	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.72%			
58) Toluene-d8	13.88	98	585728	23.6326	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.52%			
80) p-Bromofluorobenzene	17.88	95	245951	25.6769	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.72%			
Target Compounds						Qvalue
13) Acetone	6.68	43	15004	5.9870	ug/L	91
18) Methyl acetate	7.55	43	1945	0.2247	ug/L #	1
24) n-Hexane	8.30	57	3167	0.2499	ug/L	93
25) Diisopropyl ether	9.05	45	10475	0.2863	ug/L #	1
26) Vinyl Acetate	9.07	43	7624	0.7274	ug/L #	1
27) 1,1-Dichloroethane	9.06	63	28238	1.6054	ug/L #	44
28) Ethyl-Tert-Butyl ether	9.34	59	8049	0.2825	ug/L #	32
29) 2-Butanone	9.55	43	1201	0.3288	ug/L #	52
30) Propionitrile	9.96	54	221	0.2137	ug/L #	1
34) 1-Bromopropane	10.02	122	444	0.8983	ug/L #	1
36) Tetrahydrofuran	10.38	42	534	0.2425	ug/L #	34
48) Methylcyclohexane	12.43	83	1725	0.1513	ug/L #	1
60) Ethyl Methacrylate	13.89	69	2477	0.8393	ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.60	83	8760	1.2065	ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M134954.D 8260WT.M Tue Oct 06 17:00:26 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 17:00 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-30-15 - HPMS6
Last Update : Thu Oct 01 10:30:23 2015
Response via : Initial Calibration



6M134954.D 8260WT.M Tue Oct 06 17:00:26 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 12:49:01 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

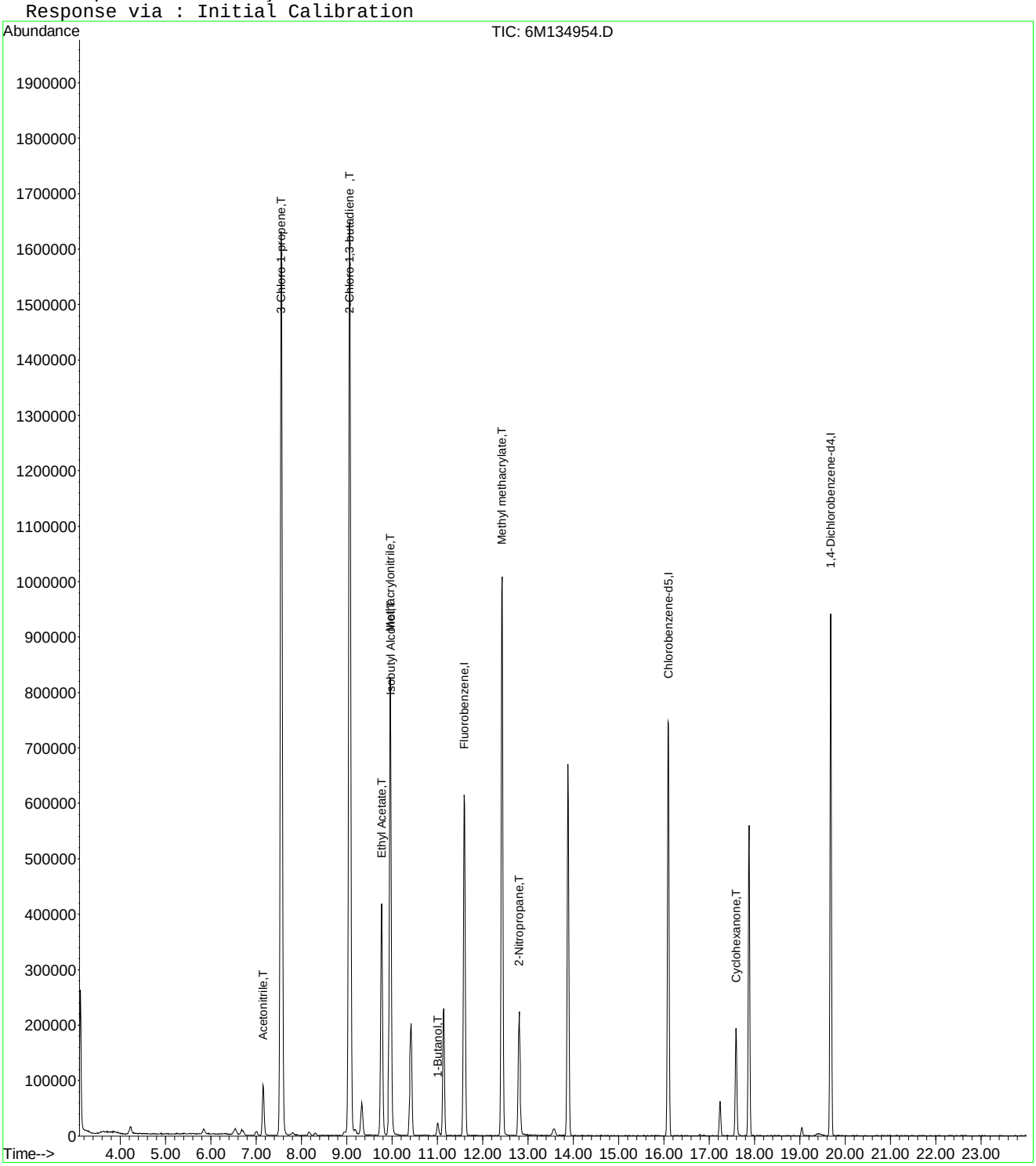
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	753994	25.00	ug/L		0.02
11) Chlorobenzene-d5	16.10	117	551188	25.00	ug/L		0.03
12) 1,4-Dichlorobenzene-d4	19.68	152	313043	25.00	ug/L		0.02
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	135581	183.1916	ug/L		93
3) 3-Chloro-1-propene	7.55	41	1908759	167.9086	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1731257	153.3800	ug/L		85
5) Ethyl Acetate	9.77	43	789916	181.2327	ug/L		92
6) Methacrylonitrile	9.96	67	310451	136.3090	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	84247	390.5143	ug/L	#	94
8) 1-Butanol	11.01	41	15938	158.5008	ug/L		68
9) Methyl methacrylate	12.42	41	818883	167.2149	ug/L		77
10) 2-Nitropropane	12.81	43	225834	198.3923	ug/L		95
13) Cyclohexanone	17.60	55	115360	192.2359	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134954.D A9FOOWT.M Wed Oct 07 12:49:01 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 12:49 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Mon May 18 14:14:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 13:37:46 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

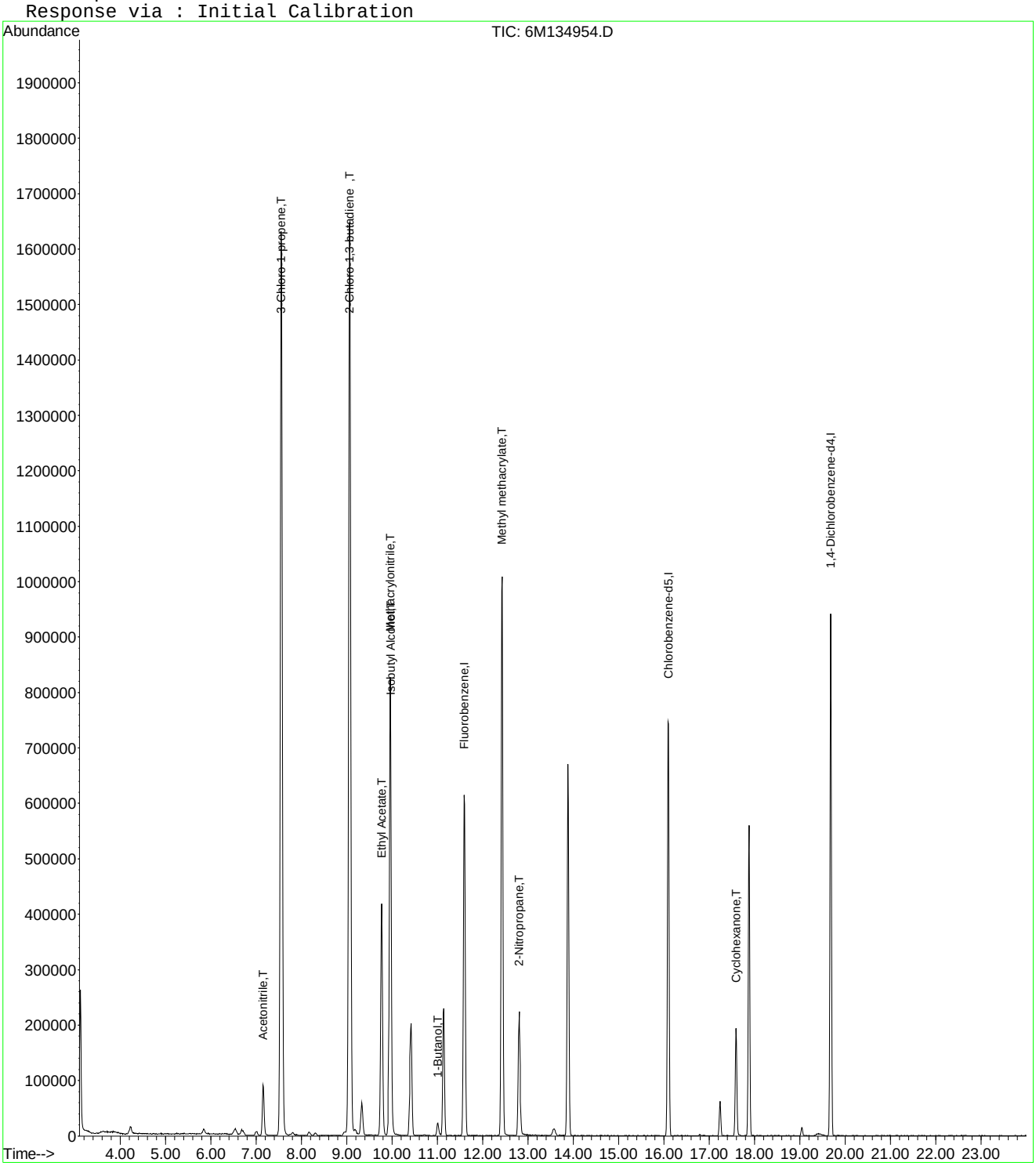
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	753994	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	551188	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	313043	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	135581	93.1758	ug/L		93
3) 3-Chloro-1-propene	7.55	41	1908759	94.4767	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1731257	99.5380	ug/L		85
5) Ethyl Acetate	9.77	43	789916	99.3134	ug/L		92
6) Methacrylonitrile	9.96	67	310451	101.4831	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	84247	192.5379	ug/L	#	94
8) 1-Butanol	11.01	41	15938	84.6693	ug/L		68
9) Methyl methacrylate	12.42	41	818883	103.3981	ug/L		77
10) 2-Nitropropane	12.81	43	225834	96.7238	ug/L		95
13) Cyclohexanone	17.60	55	115360	107.9071	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134954.D A9FOOWT.M Wed Oct 07 13:37:47 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 13:37 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 13:36:11 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 07 14:04:46 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

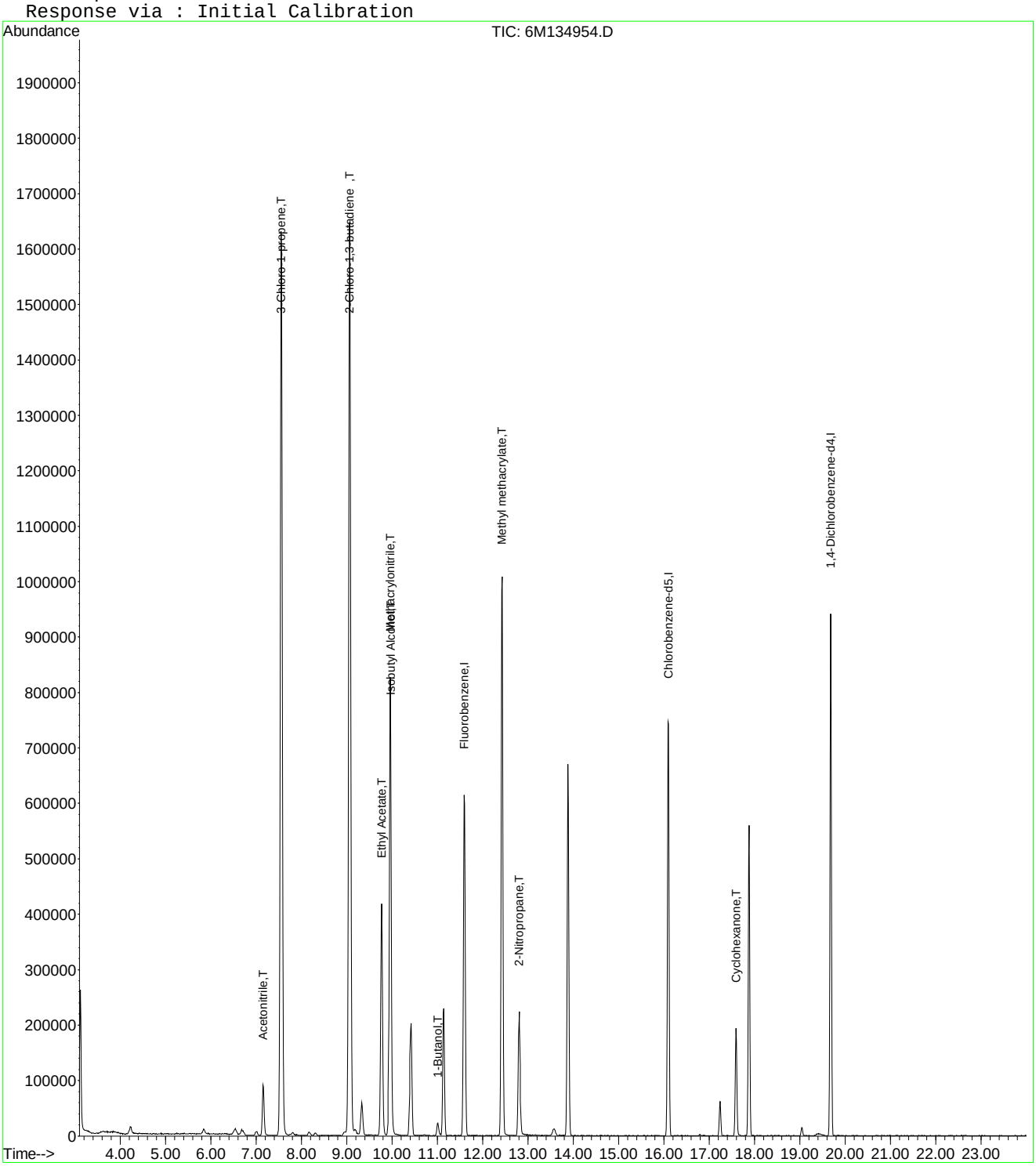
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	753994	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	551188	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	313043	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	135581	93.6515	ug/L		93
3) 3-Chloro-1-propene	7.55	41	1908759	94.4767	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1731257	99.5380	ug/L		85
5) Ethyl Acetate	9.77	43	789916	99.3134	ug/L		92
6) Methacrylonitrile	9.96	67	310451	101.4831	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	84247	192.5379	ug/L	#	94
8) 1-Butanol	11.01	41	15938	84.6693	ug/L		68
9) Methyl methacrylate	12.42	41	818883	103.3981	ug/L		77
10) 2-Nitropropane	12.81	43	225834	96.7238	ug/L		95
13) Cyclohexanone	17.60	55	115360	107.9071	ug/L		83

(#) = qualifier out of range (m) = manual integration
6M134954.D A9FOOWT.M Wed Oct 07 14:04:46 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 7 14:04 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 09 14:23:02 2015 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

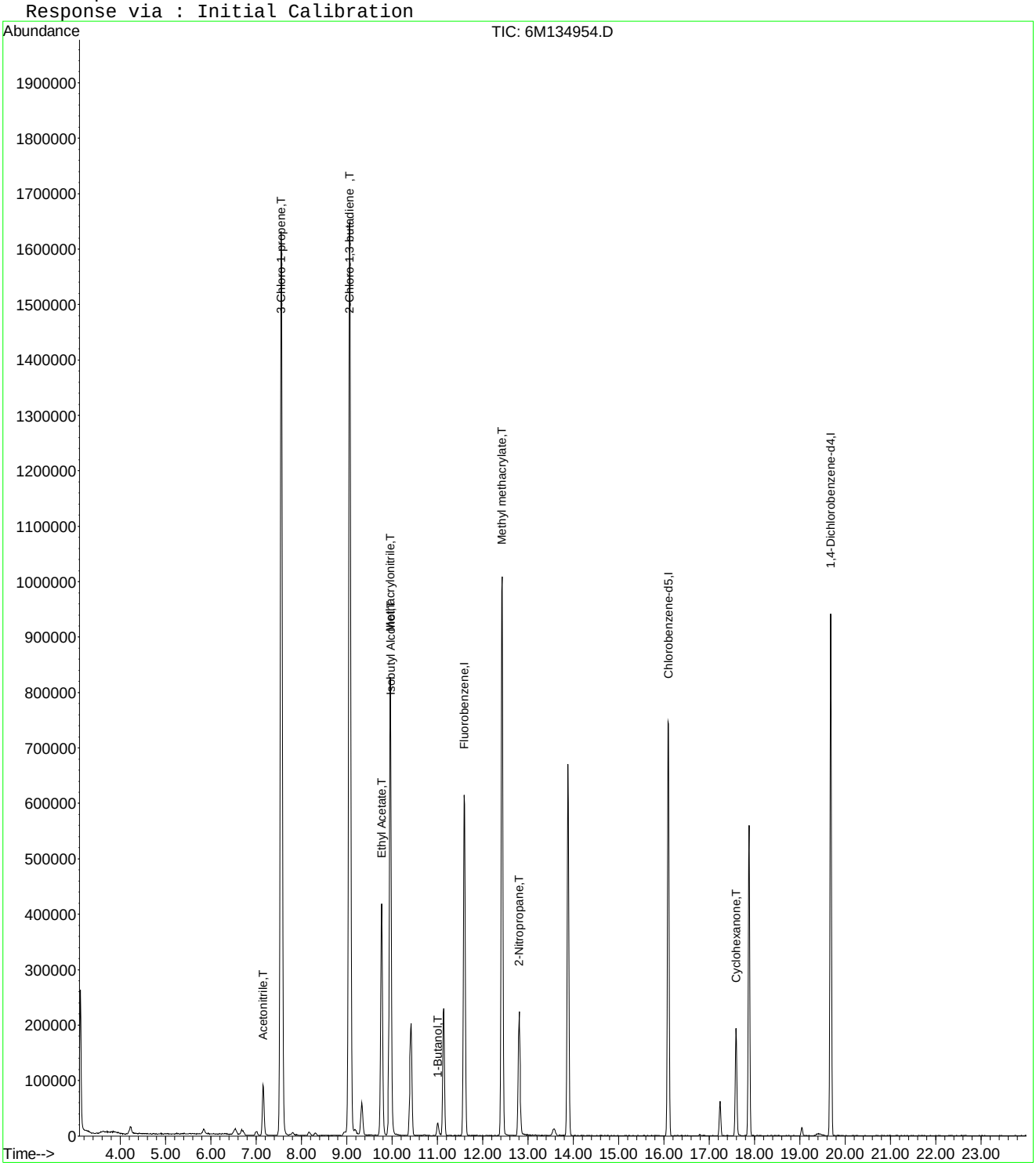
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.59	96	753994	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.10	117	551188	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.68	152	313043	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.15	41	135581	93.6515	ug/L		93
3) 3-Chloro-1-propene	7.55	41	1908759	94.4767	ug/L		92
4) 2-Chloro-1,3-butadiene	9.06	53	1731257	99.5380	ug/L		85
5) Ethyl Acetate	9.77	43	789916	99.3134	ug/L		92
6) Methacrylonitrile	9.96	67	310451	101.4831	ug/L	#	51
7) Isobutyl Alcohol	9.97	43	84247	192.5379	ug/L	#	94
8) 1-Butanol	11.01	41	15938	84.6693	ug/L		68
9) Methyl methacrylate	12.42	41	818883	103.3981	ug/L		77
10) 2-Nitropropane	12.81	43	225834	96.7238	ug/L		95
13) Cyclohexanone	17.60	55	115360	107.9071	ug/L		83

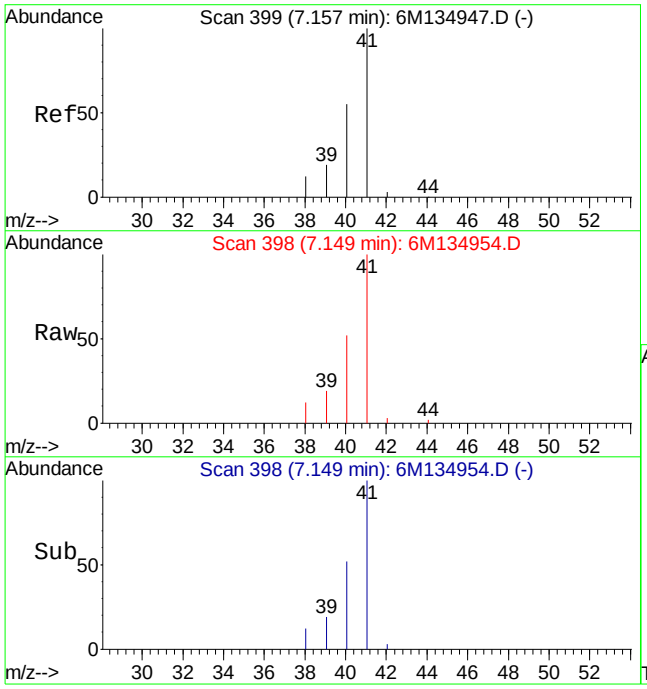
(#) = qualifier out of range (m) = manual integration
6M134954.D A9FOOWT.M Fri Oct 09 14:23:02 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 9 14:23 2015 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration

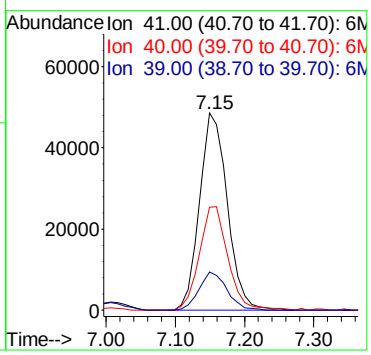


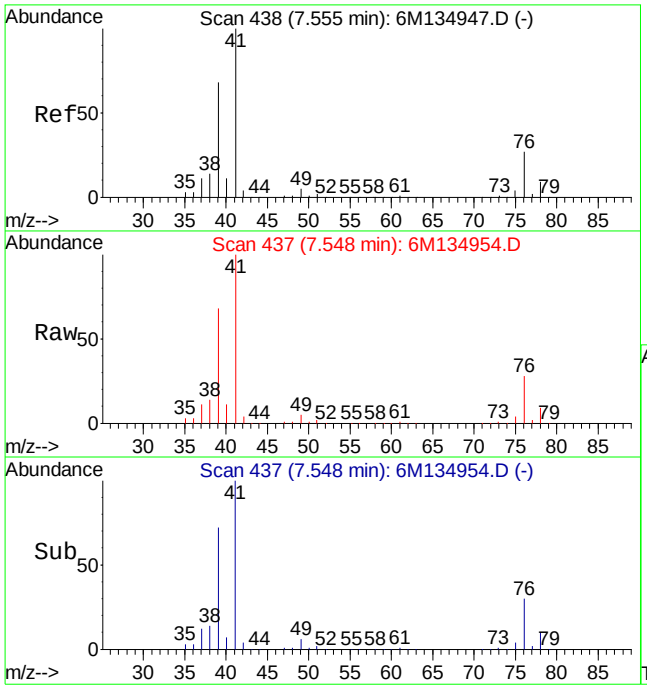


#2
Acetonitrile
Concen: 93.65 ug/L
RT: 7.15 min Scan# 398
Delta R.T. -0.01 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 41 Resp: 135581

Ion	Ratio	Lower	Upper
41	100		
40	54.0	19.8	99.8
39	19.5	0.0	57.7

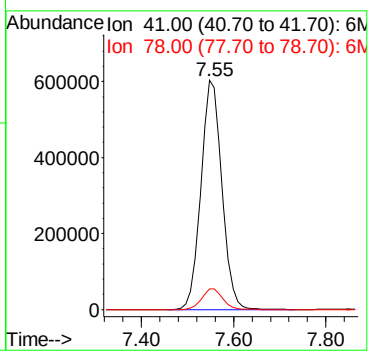


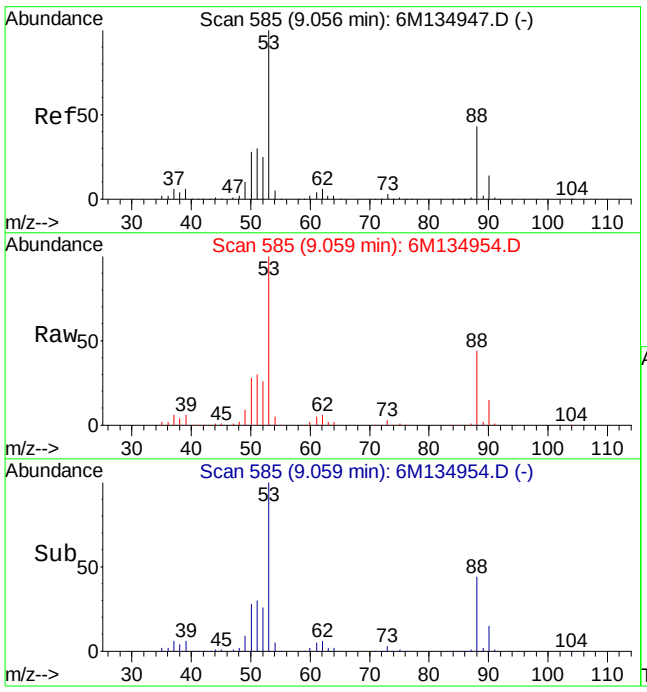


#3
3-Chloro-1-propene
Concen: 94.48 ug/L
RT: 7.55 min Scan# 437
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 41 Resp: 1908759

Ion	Ratio	Lower	Upper
41	100		
78	9.0	0.0	52.0

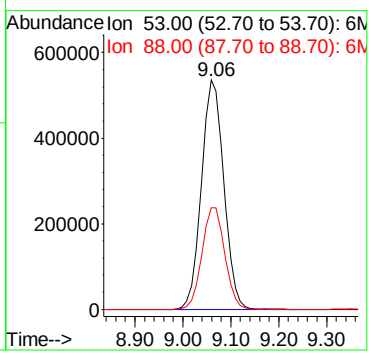


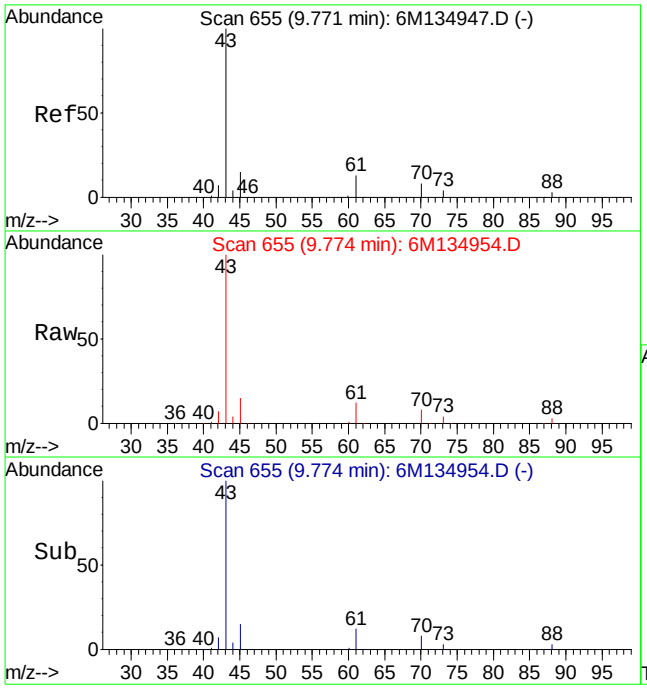


#4
2-Chloro-1,3-butadiene
Concen: 99.54 ug/L
RT: 9.06 min Scan# 585
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 53 Resp: 1731257

Ion	Ratio	Lower	Upper
53	100		
88	45.0	16.1	96.1

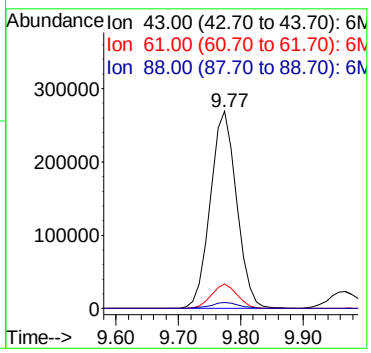


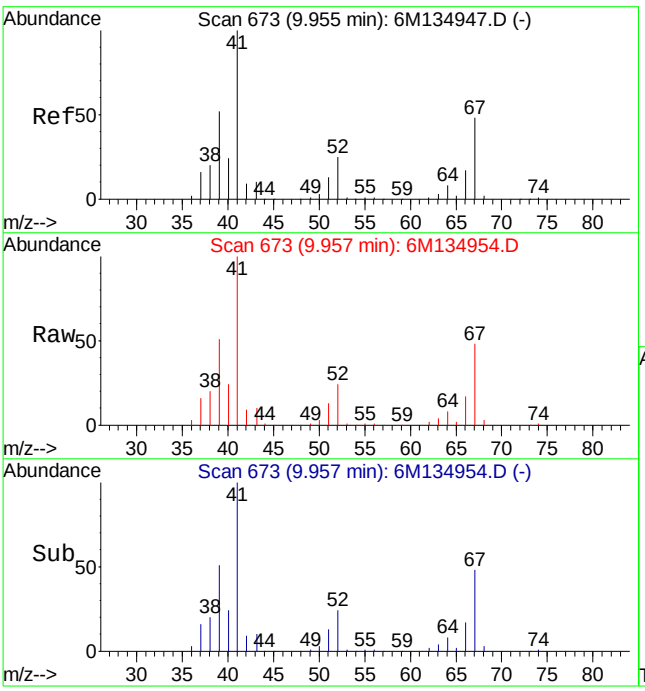


#5
Ethyl Acetate
Concen: 99.31 ug/L
RT: 9.77 min Scan# 655
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 43 Resp: 789916

Ion	Ratio	Lower	Upper
43	100		
61	12.1	9.5	22.1
88	3.4	2.8	6.4

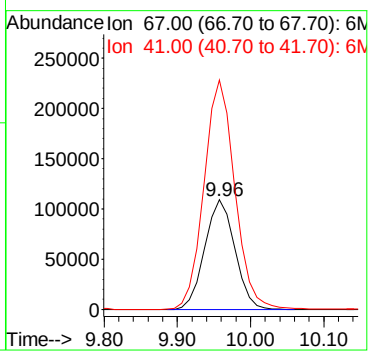


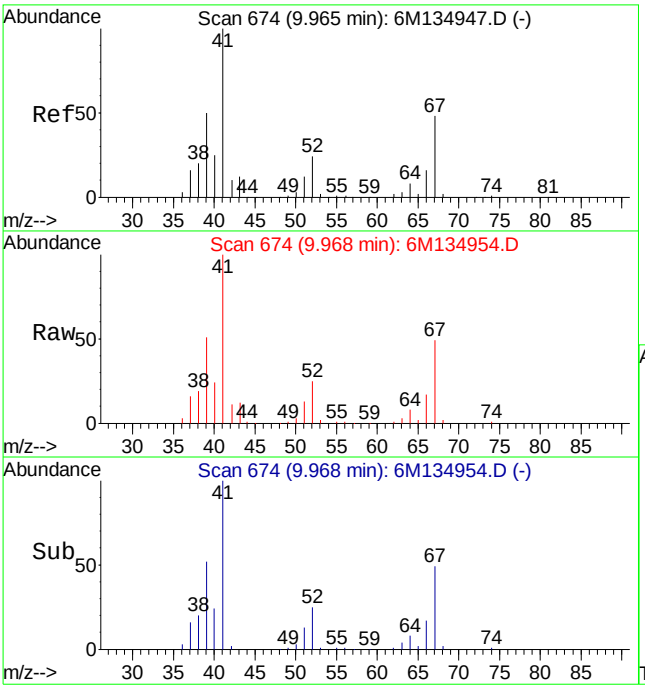


#6
Methacrylonitrile
Concen: 101.48 ug/L
RT: 9.96 min Scan# 673
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 67 Resp: 310451

Ion	Ratio	Lower	Upper
67	100		
41	214.7	112.0	192.0#

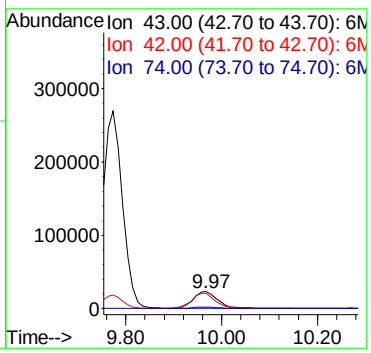


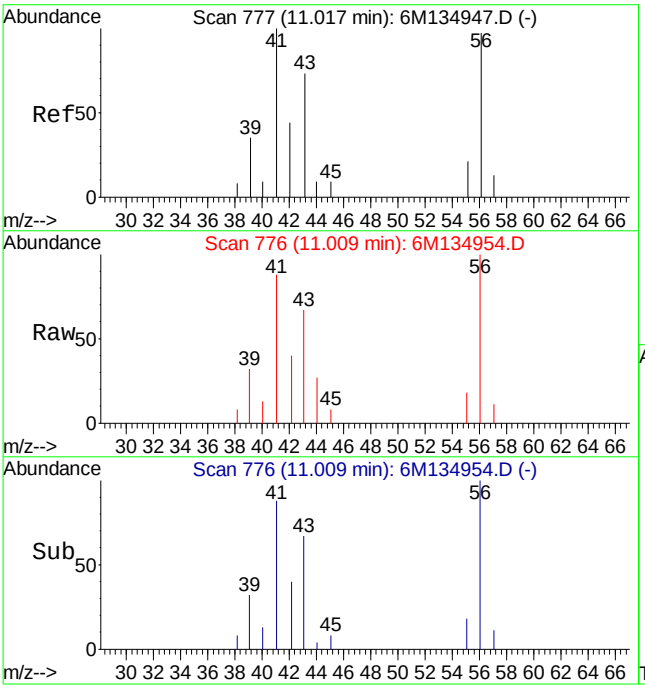


#7
Isobutyl Alcohol
Concen: 192.54 ug/L
RT: 9.97 min Scan# 674
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 43 Resp: 84247

Ion	Ratio	Lower	Upper
43	100		
42	83.2	0.0	40.0#
74	6.7	0.0	44.8

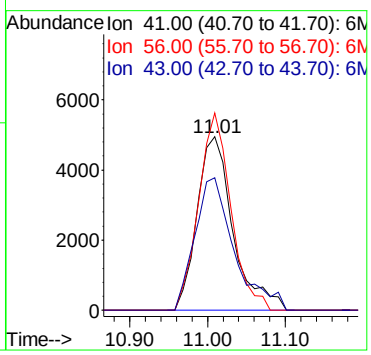


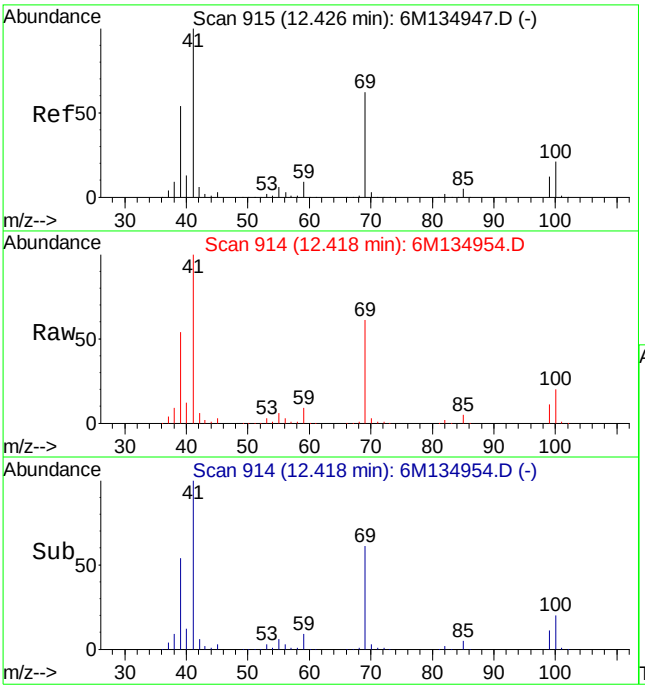


#8
1-Butanol
Concen: 84.67 ug/L
RT: 11.01 min Scan# 776
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 41 Resp: 15938

Ion	Ratio	Lower	Upper
41	100		
56	101.7	90.5	211.1
43	83.2	41.2	96.2

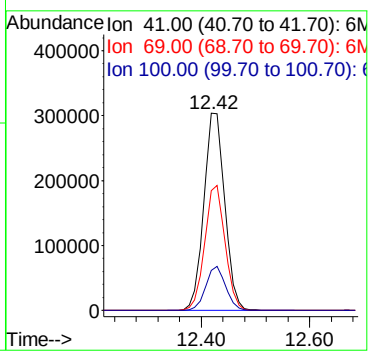


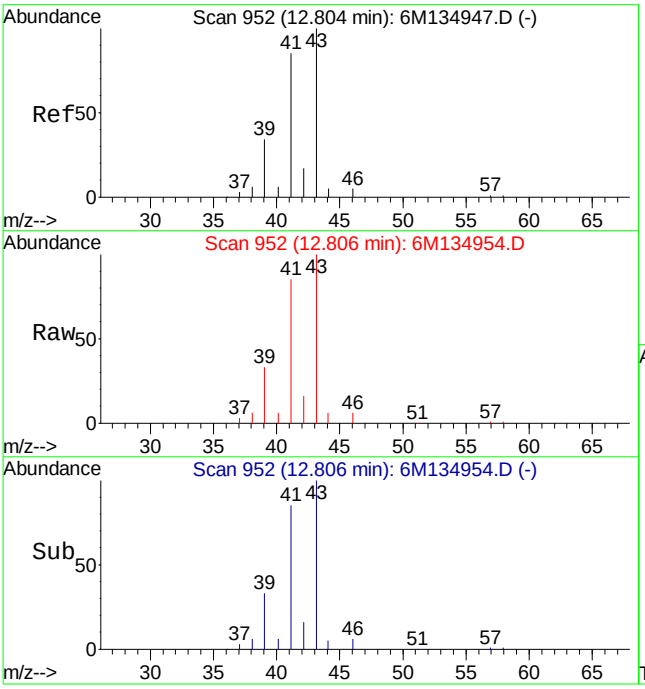


#9
Methyl methacrylate
Concen: 103.40 ug/L
RT: 12.42 min Scan# 914
Delta R.T. -0.01 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 41 Resp: 818883

Ion	Ratio	Lower	Upper
41	100		
69	61.6	42.7	122.7
100	21.4	0.0	73.7

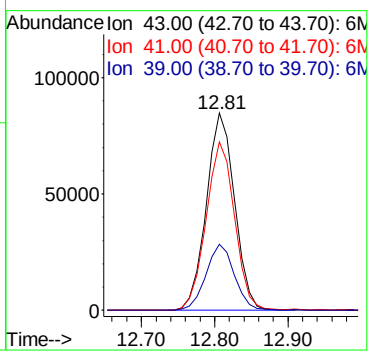


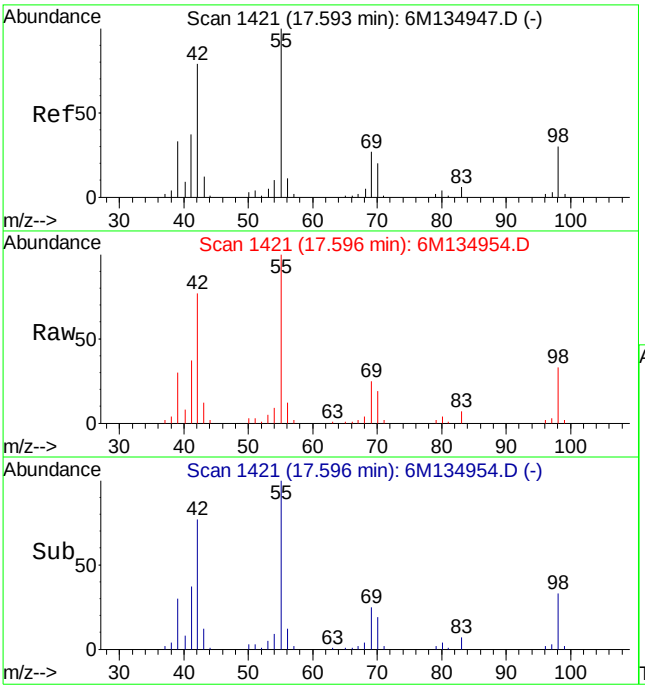


#10
2-Nitropropane
Concen: 96.72 ug/L
RT: 12.81 min Scan# 952
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 43 Resp: 225834

Ion	Ratio	Lower	Upper
43	100		
41	86.4	50.0	116.8
39	33.7	16.6	38.8

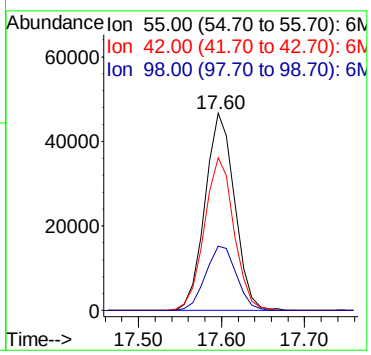




#13
Cyclohexanone
Concen: 107.91 ug/L
RT: 17.60 min Scan# 1421
Delta R.T. 0.00 min
Lab File: 6M134954.D
Acq: 6 Oct 2015 16:36

Tgt Ion: 55 Resp: 115360

Ion	Ratio	Lower	Upper
55	100		
42	77.5	37.1	86.7
98	34.0	25.3	58.9



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\100615\6M134954.D Vial: 13
Acq On : 6 Oct 2015 16:36 Operator: TMB
Sample : WG541654-10 100ug/L ALT SRC A9/FOO Inst : HPMS6
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:01:50 2015
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	25.0000	25.0000	0.0	99	0.00
2	T	Acetonitrile	100.0000	93.6515	6.3	93	0.00
3	T	3-Chloro-1-propene	100.0000	94.4767	5.5	91	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	99.5380	0.5	93	0.00
5	T	Ethyl Acetate	100.0000	99.3134	0.7	96	0.00
6	T	Methacrylonitrile	100.0000	101.4831	-1.5	97	0.00
7	T	Isobutyl Alcohol	200.0000	192.5379	3.7	95	0.00
8	T	1-Butanol	100.0000	84.6693	15.3	93	0.00
9	T	Methyl methacrylate	100.0000	103.3981	-3.4	98	0.00
10	T	2-Nitropropane	100.0000	96.7238	3.3	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	98	0.00
13	T	Cyclohexanone	100.0000	107.9071	-7.9	110	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M134954.D A9FOOWT.M Wed Oct 07 14:05:56 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138396.D Vial: 2
Acq On : 11 Apr 2016 15:32 Operator: TMB
Sample : WG564297-02 0.3ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:39 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	741127	25.00	ug/L		0.00
57) Chlorobenzene-d5	16.07	117	530518	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	292795	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	13.86	98	417	0.0166	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.08%#			
80) p-Bromofluorobenzene	17.85	95	202	0.0188	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	0.08%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.45	85	2840	0.2047	ug/L	#	68
3) Chloromethane	3.93	50	3522	0.2821	ug/L		79
4) Vinyl Chloride	4.18	62	2515	0.2809	ug/L	#	57
5) 1,3-Butadiene	4.24	54	1866	0.3084	ug/L	#	61
6) Bromomethane	5.09	94	1097	0.2753	ug/L		87
7) Chloroethane	5.26	64	996	0.1848	ug/L	#	46
8) Trichlorofluoromethane	5.75	101	3254	0.2107	ug/L	#	88
10) Isoprene	6.33	67	2488	0.2423	ug/L		89
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	1787	0.2236	ug/L	#	71
13) Acetone	6.66	43	1712	0.7860	ug/L	#	46
14) 1,1-Dichloroethene	6.88	61	4693	0.3484	ug/L		75
16) Dimethyl Sulfide	7.19	62	3202	0.4846	ug/L	#	41
18) Methyl acetate	7.44	43	1670	0.2423	ug/L	#	60
19) Methylene Chloride	7.73	84	2373	0.2899	ug/L		68
20) Carbon Disulfide	7.77	76	8263	0.3328	ug/L	#	89
22) Methyl Tert Butyl Ether	7.95	73	4753	0.2250	ug/L	#	71
23) trans-1,2-Dichloroethene	8.22	96	2187	0.2903	ug/L		71
24) n-Hexane	8.29	57	3133	0.2667	ug/L		81
26) Vinyl Acetate	8.86	43	2188	0.1544	ug/L	#	74
27) 1,1-Dichloroethane	8.89	63	4442	0.2781	ug/L		91
31) 2,2-Dichloropropane	9.76	77	3561	0.2851	ug/L		94
32) cis-1,2-Dichloroethene	9.83	96	2172	0.2616	ug/L		87
33) Chloroform	10.06	83	4294	0.2930	ug/L	#	92
35) Bromochloromethane	10.32	130	1292	0.2779	ug/L		92
36) Tetrahydrofuran	10.36	42	3428	1.4942	ug/L	#	54
38) 1,1,1-Trichloroethane	10.67	97	3814	0.2957	ug/L		90
39) Cyclohexane	10.69	56	3824	0.2601	ug/L		87
40) 1,1-Dichloropropene	10.89	75	2662	0.2445	ug/L	#	81
42) Carbon Tetrachloride	11.05	117	2983	0.2516	ug/L	#	89
45) 1,2-Dichloroethane	11.24	62	3430	0.2884	ug/L	#	73
46) Benzene	11.29	78	9409	0.3020	ug/L		95
47) Trichloroethene	12.16	130	2411	0.3196	ug/L		81
48) Methylcyclohexane	12.25	83	2354	0.2106	ug/L	#	55
49) 1,2-Dichloropropane	12.41	63	2111	0.2428	ug/L		93
51) Bromodichloromethane	12.75	83	3298	0.2972	ug/L		87
52) Dibromomethane	12.85	93	1091	0.2371	ug/L		81
55) cis-1,3-Dichloropropene	13.49	75	3096	0.2494	ug/L	#	72
59) Toluene	13.97	91	8598	0.2833	ug/L		95
60) Ethyl Methacrylate	14.10	69	1326	0.1528	ug/L		78
62) trans-1,3-Dichloropropene	14.18	75	2692	0.2366	ug/L	#	65

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

Data File : C:\MSDCHEM\1\DATA\041116\6M138396.D Vial: 2
Acq On : 11 Apr 2016 15:32 Operator: TMB
Sample : WG564297-02 0.3ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:39 2016 Quant Results File: 8260WTR.RES

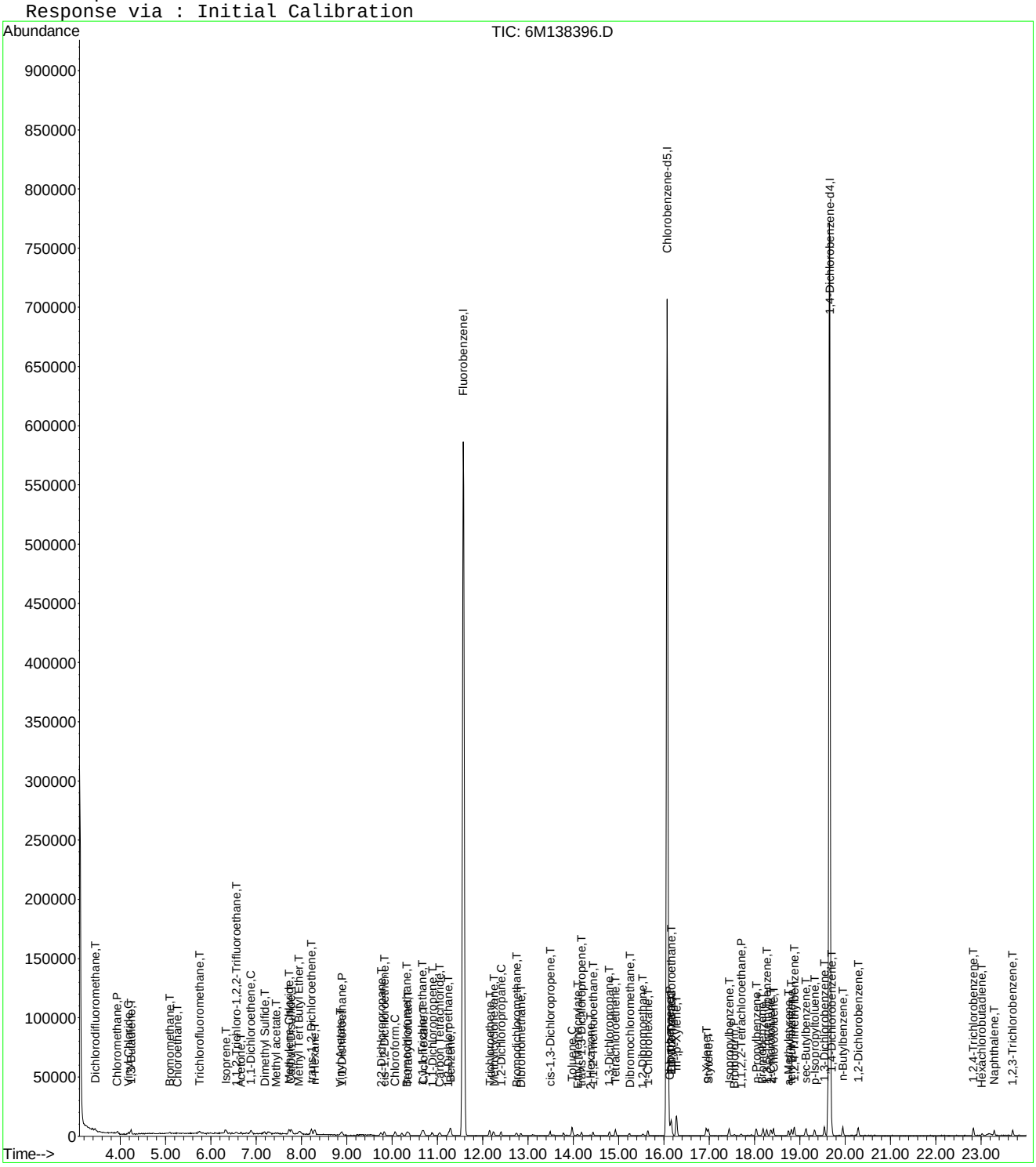
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
63)	1,1,2-Trichloroethane	14.44	97	1467	0.2463 ug/L	#	83
64)	2-Hexanone	14.38	43	671	0.1348 ug/L	#	26
65)	1,3-Dichloropropane	14.80	76	2653	0.2455 ug/L		90
66)	Tetrachloroethene	14.93	166	2344	0.3051 ug/L		94
67)	Dibromochloromethane	15.25	129	2239	0.2860 ug/L		78
68)	1,2-Dibromoethane	15.53	107	1510	0.2562 ug/L		100
69)	1-Chlorohexane	15.65	91	1884	0.2017 ug/L		79
70)	Chlorobenzene	16.13	112	6585	0.3238 ug/L		99
71)	1,1,1,2-Tetrachloroethane	16.17	131	2224	0.2807 ug/L	#	74
72)	Ethylbenzene	16.17	106	2929	0.2719 ug/L		66
73)	m-,p-Xylene	16.28	106	7855	0.6114 ug/L		91
74)	o-Xylene	16.94	106	3241	0.2579 ug/L		91
75)	Styrene	16.98	104	4726	0.2209 ug/L		98
76)	Bromoform	17.55	173	1150	0.2259 ug/L	#	53
77)	Isopropylbenzene	17.44	105	7641	0.2406 ug/L		95
79)	1,1,2,2-Tetrachloroethane	17.71	83	1621	0.2122 ug/L		96
83)	n-Propylbenzene	18.04	91	9461	0.2467 ug/L	#	93
84)	Bromobenzene	18.18	156	2464	0.2738 ug/L		97
85)	1,3,5-Trimethylbenzene	18.27	105	6087	0.2171 ug/L		98
86)	2-Chlorotoluene	18.36	91	6779	0.2530 ug/L		95
87)	4-Chlorotoluene	18.42	91	6498	0.2584 ug/L	#	94
88)	a-Methylstyrene	18.75	118	2173	0.1467 ug/L		83
89)	tert-Butylbenzene	18.81	134	740	0.1272 ug/L	#	1
90)	1,2,4-Trimethylbenzene	18.88	105	7511	0.2544 ug/L		99
91)	sec-Butylbenzene	19.14	105	8264	0.2454 ug/L		89
92)	p-Isopropyltoluene	19.33	119	6688	0.2328 ug/L		87
93)	1,3-Dichlorobenzene	19.55	146	5619	0.3238 ug/L		92
94)	1,4-Dichlorobenzene	19.70	146	5956	0.3313 ug/L	#	36
95)	n-Butylbenzene	19.95	91	7322	0.2649 ug/L		93
96)	1,2-Dichlorobenzene	20.29	146	5125	0.3160 ug/L		97
98)	1,2,4-Trichlorobenzene	22.83	180	3626	0.3018 ug/L		94
99)	Hexachlorobutadiene	23.02	225	1418	0.2984 ug/L	#	59
100)	Naphthalene	23.29	128	7042	0.2830 ug/L	#	74
101)	1,2,3-Trichlorobenzene	23.69	180	3082	0.2758 ug/L	#	90

(#) = qualifier out of range (m) = manual integration
6M138396.D 8260WTR.M Tue Apr 12 14:52:39 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138396.D Vial: 2
Acq On : 11 Apr 2016 15:32 Operator: TMB
Sample : WG564297-02 0.3ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138396.D Vial: 2
Acq On : 11 Apr 2016 15:32 Operator: TMB
Sample : WG564297-02 0.3ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	-1.0000	0.2230	0.0	100	0.01
3	P	Chloromethane	-1.0000	0.3953	0.0	100	0.00
4	C	Vinyl Chloride	-1.0000	0.3489	0.0	100	0.01
5	T	1,3-Butadiene	-1.0000	0.3807	0.0	100	0.04
6	T	Bromomethane	-1.0000	0.3109	0.0	100	0.02
7	T	Chloroethane	-1.0000	0.2384	0.0	100	0.03
8	T	Trichlorofluoromethane	-1.0000	0.2208	0.0	100	0.02
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-6.30#
10	T	Isoprene	-1.0000	0.2670	0.0	100	0.01
11	T	Acrolein	-1.0000	0.0000	0.0	0	-6.55#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.2259	0.0	100	0.01
13	T	Acetone	-1.0000	0.7449	0.0	100	0.00
14	C	1,1-Dichloroethene	-1.0000	0.3513	0.0	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-7.05#
16	T	Dimethyl Sulfide	-1.0000	0.5122	0.0	100	0.02
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-7.44#
18	T	Methyl acetate	-1.0000	0.2617	0.0	100	-0.02
19	T	Methylene Chloride	-1.0000	0.2919	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.3497	0.0	100	0.00
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.93#
22	T	Methyl Tert Butyl Ether	-1.0000	0.2368	0.0	100	-0.02
23	T	trans-1,2-Dichloroethene	-1.0000	0.2941	0.0	100	0.00
24	T	n-Hexane	-1.0000	0.2947	0.0	100	0.00
25	T	Diisopropyl ether	-1.0000	0.0341	0.0	100	0.05
26	T	Vinyl Acetate	-1.0000	0.1843	0.0	100	0.00
27	P	1,1-Dichloroethane	-1.0000	0.2829	0.0	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-9.31#
29	T	2-Butanone	-1.0000	0.0625	0.0	100	0.00
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-9.65#
31	T	2,2-Dichloropropane	-1.0000	0.2905	0.0	100	0.00
32	T	cis-1,2-Dichloroethene	-1.0000	0.2671	0.0	100	0.00
33	C	Chloroform	0.3000	0.2942	1.9	100	0.00
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-10.22#
35	T	Bromochloromethane	-1.0000	0.2650	0.0	100	0.00
36	T	Tetrahydrofuran	-1.0000	1.5512	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-10.39#
38	T	1,1,1-Trichloroethane	-1.0000	0.2837	0.0	100	0.01
39	T	Cyclohexane	-1.0000	0.2786	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.2510	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-11.01#
42	T	Carbon Tetrachloride	-1.0000	0.2363	0.0	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-11.12#
44		Heptane	-1.0000	0.0000	0.0	0	-11.01#
45	T	1,2-Dichloroethane	-1.0000	0.2944	0.0	100	0.00
46	T	Benzene	-1.0000	0.3056	0.0	100	0.00
47	T	Trichloroethene	-1.0000	0.2994	0.0	100	0.01
48	T	Methylcyclohexane	-1.0000	0.2189	0.0	100	0.01
49	C	1,2-Dichloropropane	-1.0000	0.2508	0.0	100	0.00
50	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-12.74#
51	T	Bromodichloromethane	-1.0000	0.2919	0.0	100	0.00
52	T	Dibromomethane	-1.0000	0.2429	0.0	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.1021	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-13.14#

(#) = Out of Range
6M138396.D 8260WTR.M Tue Apr 12 15:28:04 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138396.D Vial: 2
Acq On : 11 Apr 2016 15:32 Operator: TMB
Sample : WG564297-02 0.3ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	-1.0000	0.2596	0.0	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.1193	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0175	0.0	100	0.00
59	C	Toluene	-1.0000	0.2912	0.0	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.1671	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.98#
62	T	trans-1,3-Dichloropropene	-1.0000	0.2413	0.0	100	0.00
63	T	1,1,2-Trichloroethane	-1.0000	0.2493	0.0	100	0.00
64	T	2-Hexanone	-1.0000	0.1403	0.0	100	0.00
65	T	1,3-Dichloropropane	-1.0000	0.2536	0.0	100	0.00
66	T	Tetrachloroethene	-1.0000	0.2902	0.0	100	0.00
67	T	Dibromochloromethane	-1.0000	0.2819	0.0	100	0.00
68	T	1,2-Dibromoethane	-1.0000	0.2616	0.0	100	0.00
69	T	1-Chlorohexane	-1.0000	0.4433	0.0	0	0.00
70	P	Chlorobenzene	-1.0000	0.3252	0.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	-1.0000	0.2771	0.0	100	0.00
72	C	Ethylbenzene	-1.0000	0.2761	0.0	100	0.00
73	T	m-,p-Xylene	-1.0000	0.6241	0.0	100	0.00
74	T	o-Xylene	-1.0000	0.2664	0.0	100	0.00
75	T	Styrene	-1.0000	0.2315	0.0	100	0.00
76	P	Bromoform	-1.0000	0.2162	0.0	100	0.00
77	T	Isopropylbenzene	-1.0000	0.2495	0.0	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	-1.0000	0.2274	0.0	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.0207	0.0	100	0.00
81	T	1,2,3-Trichloropropane	-1.0000	0.0901	0.0	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.0000	0.0	0	-17.99#
83	T	n-Propylbenzene	-1.0000	0.2689	0.0	100	0.00
84	T	Bromobenzene	0.3000	0.2795	6.8	100	-0.02
85	T	1,3,5-Trimethylbenzene	-1.0000	0.2280	0.0	100	0.00
86	T	2-Chlorotoluene	-1.0000	0.2692	0.0	100	0.00
87	T	4-Chlorotoluene	-1.0000	0.2685	0.0	100	0.00
88	T	a-Methylstyrene	-1.0000	0.1608	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.1322	0.0	100	0.00
90	T	1,2,4-Trimethylbenzene	-1.0000	0.2640	0.0	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.2582	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.2461	0.0	100	0.00
93	T	1,3-Dichlorobenzene	-1.0000	0.3264	0.0	100	0.00
94	T	1,4-Dichlorobenzene	0.3000	0.3311	-10.4	100	0.00
95	T	n-Butylbenzene	-1.0000	0.2878	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.3000	0.3136	-4.5	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-21.47#
98	T	1,2,4-Trichlorobenzene	-1.0000	0.3141	0.0	100	0.00
99	T	Hexachlorobutadiene	-1.0000	0.3021	0.0	100	0.00
100	T	Naphthalene	-1.0000	0.3089	0.0	100	0.00
101	T	1,2,3-Trichlorobenzene	0.3000	0.2852	4.9	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138396.D 8260WTR.M Tue Apr 12 15:28:04 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138397.D Vial: 3
Acq On : 11 Apr 2016 16:04 Operator: TMB
Sample : WG564297-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:41 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	715485	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.08	117	513767	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	282598	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	3.45	85	4442	0.3317	ug/L #	68
3) Chloromethane	3.94	50	4075	0.3381	ug/L	92
4) Vinyl Chloride	4.17	62	2976	0.3444	ug/L #	69
5) 1,3-Butadiene	4.22	54	2223	0.3806	ug/L #	61
6) Bromomethane	5.09	94	1126	0.2927	ug/L	84
7) Chloroethane	5.24	64	1524	0.2929	ug/L #	46
8) Trichlorofluoromethane	5.75	101	5936	0.3982	ug/L #	89
10) Isoprene	6.34	67	2724	0.2748	ug/L	85
12) 1,1,2-Trichloro-1,2,2-Trif	6.54	101	2575	0.3337	ug/L	82
13) Acetone	6.66	43	1945	0.9249	ug/L #	46
14) 1,1-Dichloroethene	6.90	61	4895	0.3764	ug/L	88
16) Dimethyl Sulfide	7.17	62	3105	0.4868	ug/L #	58
18) Methyl acetate	7.47	43	2615	0.3930	ug/L #	60
19) Methylene Chloride	7.73	84	3050	0.3859	ug/L	56
20) Carbon Disulfide	7.77	76	10026	0.4183	ug/L #	89
22) Methyl Tert Butyl Ether	7.95	73	6509	0.3191	ug/L #	68
23) trans-1,2-Dichloroethene	8.22	96	2647	0.3639	ug/L	67
24) n-Hexane	8.30	57	3566	0.3145	ug/L	89
26) Vinyl Acetate	8.88	43	2476	0.1810	ug/L #	74
27) 1,1-Dichloroethane	8.90	63	6056	0.3927	ug/L	86
29) 2-Butanone	9.53	43	774	0.2358	ug/L #	52
31) 2,2-Dichloropropane	9.77	77	4519	0.3747	ug/L	100
32) cis-1,2-Dichloroethene	9.85	96	2744	0.3423	ug/L	98
33) Chloroform	10.07	83	5500	0.3887	ug/L	99
35) Bromochloromethane	10.33	130	1778	0.3962	ug/L	99
36) Tetrahydrofuran	10.36	42	3703	1.6719	ug/L #	73
38) 1,1,1-Trichloroethane	10.66	97	4928	0.3958	ug/L	98
39) Cyclohexane	10.68	56	4482	0.3158	ug/L	81
40) 1,1-Dichloropropene	10.89	75	3513	0.3342	ug/L	89
42) Carbon Tetrachloride	11.05	117	4480	0.3913	ug/L #	89
45) 1,2-Dichloroethane	11.26	62	3863	0.3365	ug/L #	82
46) Benzene	11.29	78	12079	0.4016	ug/L	97
47) Trichloroethene	12.15	130	3363	0.4618	ug/L	80
48) Methylcyclohexane	12.25	83	3355	0.3110	ug/L	75
49) 1,2-Dichloropropane	12.40	63	3124	0.3721	ug/L	89
51) Bromodichloromethane	12.75	83	4024	0.3756	ug/L	93
52) Dibromomethane	12.85	93	1518	0.3418	ug/L	96
53) 2-Chloroethyl Vinyl Ether	13.10	63	880	0.2158	ug/L #	42
55) cis-1,3-Dichloropropene	13.48	75	3900	0.3255	ug/L	91
56) Dimethyl Disulfide	13.79	79	1105	0.1724	ug/L #	52

(#) = qualifier out of range (m) = manual integration
6M138397.D 8260WTR.M Tue Apr 12 14:52:41 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138397.D Vial: 3
Acq On : 11 Apr 2016 16:04 Operator: TMB
Sample : WG564297-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:41 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

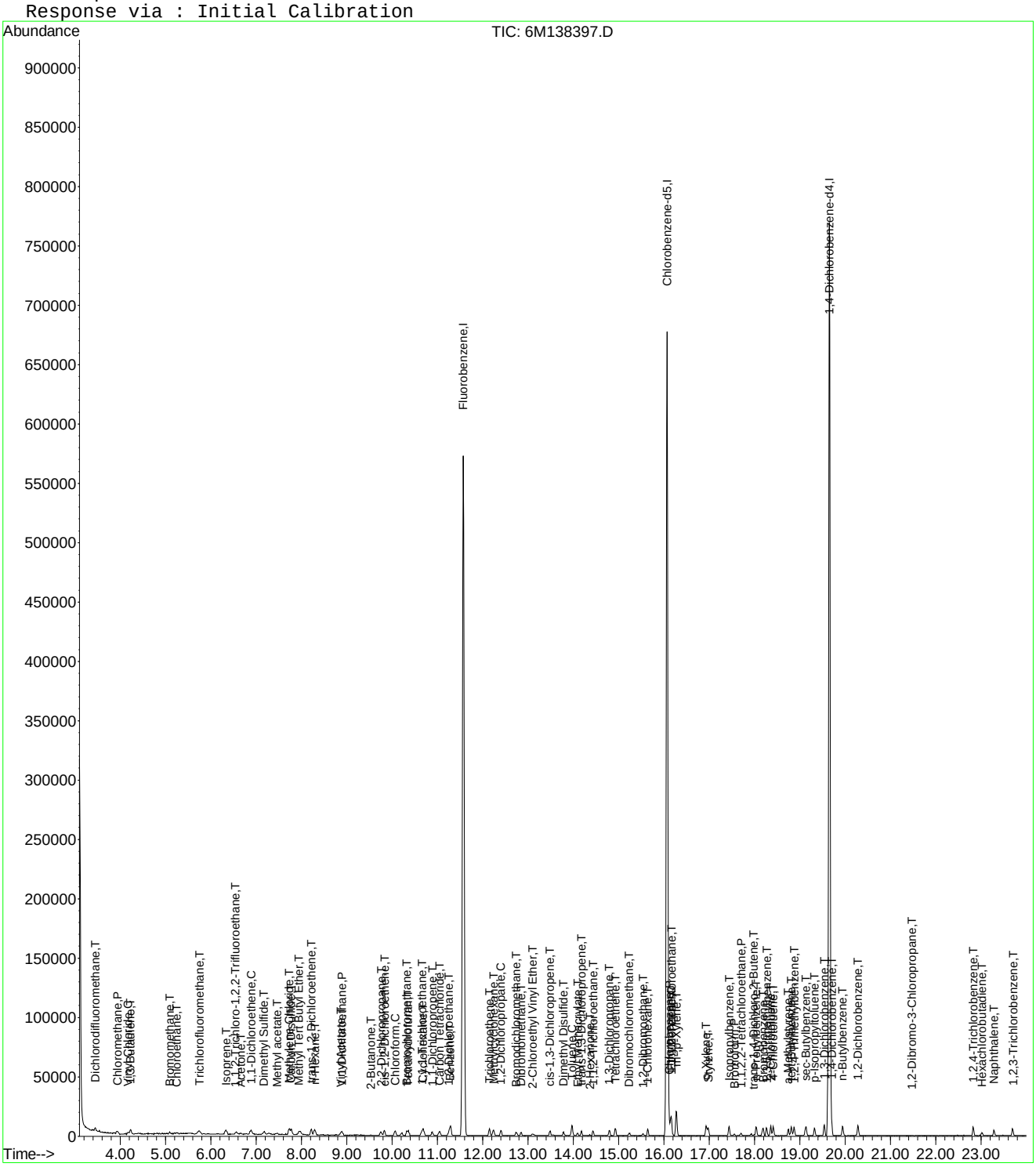
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Toluene	13.97	91	11157	0.3796	ug/L		90
60)	Ethyl Methacrylate	14.11	69	1918	0.2282	ug/L		97
62)	trans-1,3-Dichloropropene	14.19	75	3228	0.2929	ug/L	#	68
63)	1,1,2-Trichloroethane	14.44	97	1877	0.3254	ug/L		90
64)	2-Hexanone	14.37	43	857	0.1777	ug/L	#	68
65)	1,3-Dichloropropane	14.80	76	3924	0.3749	ug/L		82
66)	Tetrachloroethene	14.93	166	3113	0.4184	ug/L		94
67)	Dibromochloromethane	15.24	129	2571	0.3391	ug/L		96
68)	1,2-Dibromoethane	15.54	107	1598	0.2800	ug/L		88
69)	1-Chlorohexane	15.65	91	1801	0.1991	ug/L	#	38
70)	Chlorobenzene	16.13	112	7966	0.4045	ug/L		93
71)	1,1,1,2-Tetrachloroethane	16.18	131	2815	0.3669	ug/L		92
72)	Ethylbenzene	16.17	106	4071	0.3902	ug/L		92
73)	m-,p-Xylene	16.28	106	9013	0.7244	ug/L		87
74)	o-Xylene	16.93	106	3932	0.3230	ug/L		89
75)	Styrene	16.98	104	5907	0.2851	ug/L		92
76)	Bromoform	17.57	173	1806	0.3663	ug/L	#	66
77)	Isopropylbenzene	17.44	105	9808	0.3188	ug/L		90
79)	1,1,2,2-Tetrachloroethane	17.71	83	2657	0.3604	ug/L		81
82)	trans-1,4-Dichloro-2-Buten	17.99	53	398	0.6899	ug/L	#	40
83)	n-Propylbenzene	18.04	91	11381	0.3075	ug/L	#	94
84)	Bromobenzene	18.19	156	3185	0.3666	ug/L		95
85)	1,3,5-Trimethylbenzene	18.27	105	7285	0.2692	ug/L		99
86)	2-Chlorotoluene	18.36	91	8329	0.3220	ug/L		97
87)	4-Chlorotoluene	18.41	91	8874	0.3657	ug/L		89
88)	a-Methylstyrene	18.74	118	3239	0.2266	ug/L		86
89)	tert-Butylbenzene	18.81	134	1322	0.2354	ug/L		42
90)	1,2,4-Trimethylbenzene	18.88	105	8099	0.2842	ug/L		98
91)	sec-Butylbenzene	19.13	105	9723	0.2991	ug/L		94
92)	p-Isopropyltoluene	19.32	119	7656	0.2762	ug/L		87
93)	1,3-Dichlorobenzene	19.55	146	6560	0.3916	ug/L		93
94)	1,4-Dichlorobenzene	19.71	146	7368	0.4246	ug/L		92
95)	n-Butylbenzene	19.95	91	8691	0.3258	ug/L		89
96)	1,2-Dichlorobenzene	20.28	146	6181	0.3949	ug/L		99
97)	1,2-Dibromo-3-Chloropropan	21.48	75	227	0.1537	ug/L	#	1
98)	1,2,4-Trichlorobenzene	22.84	180	4344	0.3746	ug/L		95
99)	Hexachlorobutadiene	23.03	225	1575	0.3434	ug/L		93
100)	Naphthalene	23.29	128	7711	0.3210	ug/L	#	84
101)	1,2,3-Trichlorobenzene	23.71	180	3917	0.3632	ug/L		94

(#) = qualifier out of range (m) = manual integration
6M138397.D 8260WTR.M Tue Apr 12 14:52:41 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138397.D Vial: 3
Acq On : 11 Apr 2016 16:04 Operator: TMB
Sample : WG564297-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138397.D Vial: 3
Acq On : 11 Apr 2016 16:04 Operator: TMB
Sample : WG564297-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	-1.0000	0.3613	0.0	100	0.01
3	P	Chloromethane	-1.0000	0.4737	0.0	100	0.01
4	C	Vinyl Chloride	0.4000	0.4276	-6.9	100	0.00
5	T	1,3-Butadiene	-1.0000	0.4698	0.0	100	0.02
6	T	Bromomethane	-1.0000	0.3306	0.0	100	0.02
7	T	Chloroethane	-1.0000	0.3778	0.0	100	0.01
8	T	Trichlorofluoromethane	0.4000	0.4172	-4.3	100	0.02
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-6.30#
10	T	Isoprene	-1.0000	0.3028	0.0	100	0.02
11	T	Acrolein	-1.0000	0.0000	0.0	0	-6.55#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.3371	0.0	100	0.00
13	T	Acetone	-1.0000	0.8767	0.0	100	0.00
14	C	1,1-Dichloroethene	0.4000	0.3795	5.1	100	0.01
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-7.05#
16	T	Dimethyl Sulfide	-1.0000	0.5145	0.0	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-7.44#
18	T	Methyl acetate	-1.0000	0.4244	0.0	100	0.00
19	T	Methylene Chloride	-1.0000	0.3887	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.4395	0.0	100	0.00
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.93#
22	T	Methyl Tert Butyl Ether	-1.0000	0.3359	0.0	100	-0.02
23	T	trans-1,2-Dichloroethene	0.4000	0.3687	7.8	100	0.00
24	T	n-Hexane	-1.0000	0.3474	0.0	100	0.01
25	T	Diisopropyl ether	-1.0000	0.0519	0.0	100	-0.02
26	T	Vinyl Acetate	-1.0000	0.2160	0.0	100	0.01
27	P	1,1-Dichloroethane	0.4000	0.3995	0.1	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-9.31#
29	T	2-Butanone	-1.0000	0.2364	0.0	100	0.00
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-9.65#
31	T	2,2-Dichloropropane	0.4000	0.3818	4.5	100	0.00
32	T	cis-1,2-Dichloroethene	0.4000	0.3495	12.6	100	0.01
33	C	Chloroform	0.4000	0.3903	2.4	100	0.00
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-10.22#
35	T	Bromochloromethane	0.4000	0.3777	5.6	100	0.00
36	T	Tetrahydrofuran	-1.0000	1.7357	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-10.39#
38	T	1,1,1-Trichloroethane	0.4000	0.3797	5.1	100	0.00
39	T	Cyclohexane	-1.0000	0.3383	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.3431	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-11.01#
42	T	Carbon Tetrachloride	0.4000	0.3676	8.1	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-11.12#
44		Heptane	-1.0000	0.0000	0.0	0	-11.01#
45	T	1,2-Dichloroethane	0.4000	0.3434	14.1	100	0.00
46	T	Benzene	0.4000	0.4064	-1.6	100	0.00
47	T	Trichloroethene	0.4000	0.4325	-8.1	100	0.00
48	T	Methylcyclohexane	-1.0000	0.3232	0.0	100	0.00
49	C	1,2-Dichloropropane	0.4000	0.3844	3.9	100	0.00
50	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-12.74#
51	T	Bromodichloromethane	0.4000	0.3690	7.8	100	0.00
52	T	Dibromomethane	0.4000	0.3501	12.5	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.2333	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-13.14#

(#) = Out of Range
6M138397.D 8260WTR.M Tue Apr 12 15:28:14 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138397.D Vial: 3
Acq On : 11 Apr 2016 16:04 Operator: TMB
Sample : WG564297-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	0.4000	0.3388	15.3	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.1830	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0000	0.0	0	-13.86#
59	C	Toluene	0.4000	0.3902	2.5	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.2495	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.98#
62	T	trans-1,3-Dichloropropene	-1.0000	0.2988	0.0	100	0.00
63	T	1,1,2-Trichloroethane	0.4000	0.3293	17.7	100	0.00
64	T	2-Hexanone	-1.0000	0.1850	0.0	100	0.00
65	T	1,3-Dichloropropane	0.4000	0.3874	3.2	100	0.00
66	T	Tetrachloroethene	0.4000	0.3979	0.5	100	0.00
67	T	Dibromochloromethane	0.4000	0.3342	16.4	100	0.00
68	T	1,2-Dibromoethane	0.4000	0.2858	28.5#	100	0.00
69	T	1-Chlorohexane	0.4000	0.4407	-10.2	100	0.00
70	P	Chlorobenzene	0.4000	0.4063	-1.6	100	0.00
71	T	1,1,1,2-Tetrachloroethane	0.4000	0.3621	9.5	100	0.00
72	C	Ethylbenzene	0.4000	0.3963	0.9	100	0.00
73	T	m-,p-Xylene	0.8000	0.7395	7.6	100	0.00
74	T	o-Xylene	-1.0000	0.3337	0.0	100	0.00
75	T	Styrene	0.4000	0.2988	25.3#	100	0.00
76	P	Bromoform	-1.0000	0.3506	0.0	100	0.00
77	T	Isopropylbenzene	0.4000	0.3307	17.3	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	0.4000	0.3861	3.5	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.0000	0.0	0	-17.86#
81	T	1,2,3-Trichloropropane	-1.0000	0.1041	0.0	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.6860	0.0	100	0.00
83	T	n-Propylbenzene	0.4000	0.3352	16.2	100	0.00
84	T	Bromobenzene	0.4000	0.3744	6.4	100	0.00
85	T	1,3,5-Trimethylbenzene	-1.0000	0.2827	0.0	100	0.00
86	T	2-Chlorotoluene	0.4000	0.3427	14.3	100	0.00
87	T	4-Chlorotoluene	0.4000	0.3799	5.0	100	0.00
88	T	a-Methylstyrene	-1.0000	0.2483	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.2447	0.0	100	0.00
90	T	1,2,4-Trimethylbenzene	-1.0000	0.2949	0.0	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.3147	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.2919	0.0	100	0.00
93	T	1,3-Dichlorobenzene	0.4000	0.3947	1.3	100	0.00
94	T	1,4-Dichlorobenzene	0.4000	0.4244	-6.1	100	0.00
95	T	n-Butylbenzene	-1.0000	0.3540	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.4000	0.3919	2.0	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.1627	0.0	100	0.00
98	T	1,2,4-Trichlorobenzene	0.4000	0.3899	2.5	100	0.00
99	T	Hexachlorobutadiene	0.4000	0.3477	13.1	100	0.00
100	T	Naphthalene	0.4000	0.3504	12.4	100	0.00
101	T	1,2,3-Trichlorobenzene	0.4000	0.3756	6.1	100	0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138397.D 8260WTR.M Tue Apr 12 15:28:14 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138398.D Vial: 4
Acq On : 11 Apr 2016 16:37 Operator: TMB
Sample : WG564297-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:42 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.58	96	720440	25.00	ug/L		0.00
57) Chlorobenzene-d5	16.07	117	514298	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	283146	25.00	ug/L		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	10.41	111	3552	0.4609	ug/L		0.02
Spiked Amount 25.000	Range 86 - 118		Recovery =	1.84%#			
43) 1,2-Dichloroethane-d4	11.11	65	4682	0.5036	ug/L		0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	2.00%#			
58) Toluene-d8	13.86	98	11655	0.4779	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	1.92%#			
80) p-Bromofluorobenzene	17.85	95	4661	0.4483	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	1.80%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.45	85	11964	0.8873	ug/L		90
3) Chloromethane	3.94	50	9400	0.7745	ug/L		94
4) Vinyl Chloride	4.18	62	7369	0.8468	ug/L		97
5) 1,3-Butadiene	4.23	54	5903	1.0036	ug/L		75
6) Bromomethane	5.10	94	3221	0.8315	ug/L		90
7) Chloroethane	5.25	64	4090	0.7806	ug/L		98
8) Trichlorofluoromethane	5.74	101	15926	1.0610	ug/L		99
9) Diethyl ether	6.30	59	32080	8.6664	ug/L		92
10) Isoprene	6.33	67	8872	0.8888	ug/L		94
11) Acrolein	6.56	56	2534	3.5234	ug/L		100
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	8111	1.0438	ug/L		98
13) Acetone	6.67	43	3815	1.8017	ug/L	#	59
14) 1,1-Dichloroethene	6.89	61	13700	1.0462	ug/L		90
15) Tert-Butyl Alcohol	7.01	59	5683	7.3353	ug/L	#	89
16) Dimethyl Sulfide	7.18	62	6756	1.0519	ug/L		84
18) Methyl acetate	7.46	43	6973	1.0409	ug/L	#	68
19) Methylene Chloride	7.73	84	8963	1.1263	ug/L		76
20) Carbon Disulfide	7.78	76	25561	1.0591	ug/L		96
21) Acrylonitrile	7.93	53	5860	2.2433	ug/L		86
22) Methyl Tert Butyl Ether	7.96	73	17474	0.8508	ug/L		96
23) trans-1,2-Dichloroethene	8.22	96	7882	1.0762	ug/L		82
24) n-Hexane	8.29	57	9979	0.8740	ug/L		95
25) Diisopropyl ether	8.68	45	153923	5.3427	ug/L		95
26) Vinyl Acetate	8.86	43	9930	0.7210	ug/L	#	74
27) 1,1-Dichloroethane	8.89	63	16390	1.0556	ug/L		97
28) Ethyl-Tert-Butyl ether	9.31	59	119617	5.0506	ug/L		97
29) 2-Butanone	9.53	43	3477	1.0520	ug/L	#	52
30) Propionitrile	9.64	54	4603	4.6659	ug/L		84
31) 2,2-Dichloropropane	9.76	77	12720	1.0475	ug/L		88
32) cis-1,2-Dichloroethene	9.83	96	8157	1.0105	ug/L		95
33) Chloroform	10.07	83	15232	1.0690	ug/L		97
34) 1-Bromopropane	10.23	122	892	1.1663	ug/L		100
35) Bromochloromethane	10.32	130	4414	0.9768	ug/L		84
36) Tetrahydrofuran	10.36	42	12670	5.6811	ug/L		82
38) 1,1,1-Trichloroethane	10.67	97	13608	1.0854	ug/L		97
39) Cyclohexane	10.70	56	12940	0.9055	ug/L		85
40) 1,1-Dichloropropene	10.89	75	10107	0.9550	ug/L		95
41) Tert-Amyl-Methyl ether	11.01	73	89182	4.5659	ug/L	#	86
42) Carbon Tetrachloride	11.06	117	12485	1.0831	ug/L		95
45) 1,2-Dichloroethane	11.25	62	12335	1.0671	ug/L	#	92

(#) = qualifier out of range (m) = manual integration
6M138398.D 8260WTR.M Tue Apr 12 14:52:42 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138398.D Vial: 4
Acq On : 11 Apr 2016 16:37 Operator: TMB
Sample : WG564297-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:42 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

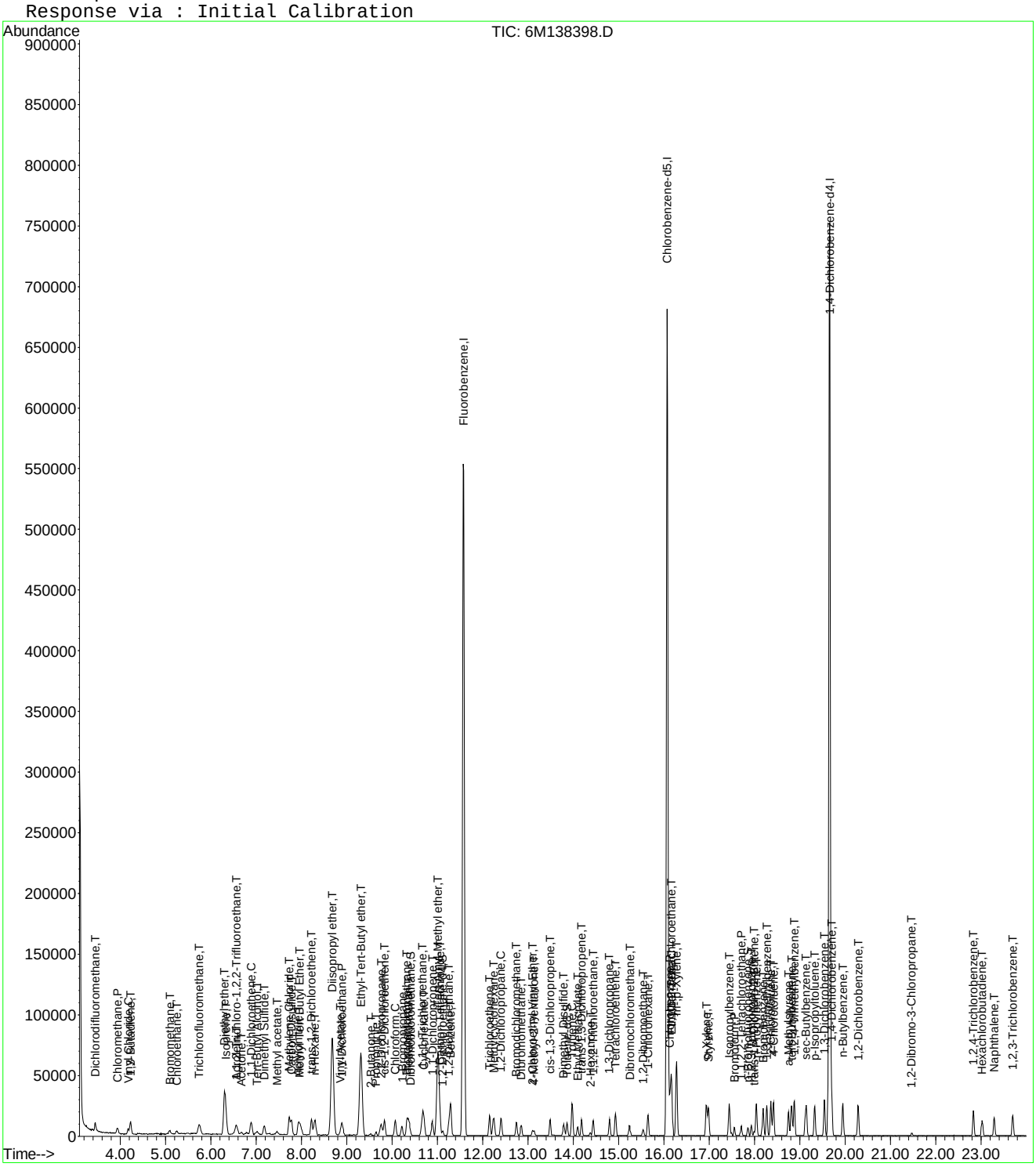
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	Benzene	11.29	78	33471	1.1051 ug/L		95
47)	Trichloroethene	12.15	130	8234	1.1228 ug/L		100
48)	Methylcyclohexane	12.24	83	9660	0.8893 ug/L		84
49)	1,2-Dichloropropane	12.40	63	8428	0.9970 ug/L		97
51)	Bromodichloromethane	12.74	83	11016	1.0212 ug/L		98
52)	Dibromomethane	12.85	93	4237	0.9474 ug/L		92
53)	2-Chloroethyl Vinyl Ether	13.10	63	2659	0.6477 ug/L	#	68
54)	4-Methyl-2-Pentanone	13.13	58	1659	0.6630 ug/L	#	55
55)	cis-1,3-Dichloropropene	13.49	75	10407	0.8625 ug/L		97
56)	Dimethyl Disulfide	13.79	79	4050	0.6276 ug/L	#	77
59)	Toluene	13.97	91	30333	1.0310 ug/L		95
60)	Ethyl Methacrylate	14.10	69	6272	0.7456 ug/L		87
62)	trans-1,3-Dichloropropene	14.18	75	10530	0.9546 ug/L		89
63)	1,1,2-Trichloroethane	14.44	97	6411	1.1101 ug/L		91
64)	2-Hexanone	14.38	43	3568	0.7392 ug/L		82
65)	1,3-Dichloropropane	14.80	76	10161	0.9698 ug/L		75
66)	Tetrachloroethene	14.93	166	8403	1.1282 ug/L		97
67)	Dibromochloromethane	15.25	129	7655	1.0087 ug/L		98
68)	1,2-Dibromoethane	15.54	107	5805	1.0162 ug/L		99
69)	1-Chlorohexane	15.65	91	7405	0.8177 ug/L		72
70)	Chlorobenzene	16.13	112	22649	1.1490 ug/L		97
71)	1,1,1,2-Tetrachloroethane	16.16	131	8357	1.0880 ug/L		93
72)	Ethylbenzene	16.17	106	10699	1.0244 ug/L		94
73)	m-,p-Xylene	16.28	106	25467	2.0448 ug/L		89
74)	o-Xylene	16.94	106	11208	0.9199 ug/L		95
75)	Styrene	16.98	104	17798	0.8582 ug/L		98
76)	Bromoform	17.56	173	4503	0.9124 ug/L		98
77)	Isopropylbenzene	17.44	105	27814	0.9032 ug/L		98
79)	1,1,2,2-Tetrachloroethane	17.71	83	7238	0.9798 ug/L		96
81)	1,2,3-Trichloropropane	17.93	110	2075	0.9193 ug/L		84
82)	trans-1,4-Dichloro-2-Buten	17.99	53	1754	1.1443 ug/L		71
83)	n-Propylbenzene	18.04	91	32054	0.8645 ug/L		97
84)	Bromobenzene	18.19	156	9060	1.0409 ug/L		98
85)	1,3,5-Trimethylbenzene	18.27	105	23324	0.8601 ug/L		97
86)	2-Chlorotoluene	18.36	91	26454	1.0208 ug/L		93
87)	4-Chlorotoluene	18.42	91	24020	0.9879 ug/L		98
88)	a-Methylstyrene	18.75	118	9581	0.6691 ug/L		98
89)	tert-Butylbenzene	18.82	134	4528	0.8047 ug/L		54
90)	1,2,4-Trimethylbenzene	18.88	105	25863	0.9058 ug/L		99
91)	sec-Butylbenzene	19.14	105	29899	0.9180 ug/L		98
92)	p-Isopropyltoluene	19.33	119	23325	0.8397 ug/L		95
93)	1,3-Dichlorobenzene	19.54	146	18500	1.1023 ug/L		97
94)	1,4-Dichlorobenzene	19.70	146	19610	1.1279 ug/L		91
95)	n-Butylbenzene	19.95	91	23193	0.8678 ug/L		96
96)	1,2-Dichlorobenzene	20.29	146	17212	1.0975 ug/L		94
97)	1,2-Dibromo-3-Chloropropan	21.46	75	1446	0.9774 ug/L		72
98)	1,2,4-Trichlorobenzene	22.83	180	10844	0.9333 ug/L		98
99)	Hexachlorobutadiene	23.03	225	4623	1.0061 ug/L		93
100)	Naphthalene	23.29	128	19835	0.8241 ug/L		97
101)	1,2,3-Trichlorobenzene	23.70	180	10050	0.9301 ug/L		96

(#) = qualifier out of range (m) = manual integration
6M138398.D 8260WTR.M Tue Apr 12 14:52:42 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138398.D Vial: 4
Acq On : 11 Apr 2016 16:37 Operator: TMB
Sample : WG564297-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



6M138398.D 8260WTR.M Tue Apr 12 14:52:42 2016 Page 3

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\041116\6M138398.D Vial: 4
Acq On : 11 Apr 2016 16:37 Operator: TMB
Sample : WG564297-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	1.0000	0.9664	3.4	100	0.01
3	P	Chloromethane	1.0000	1.0852	-8.5	100	0.01
4	C	Vinyl Chloride	1.0000	1.0516	-5.2	100	0.01
5	T	1,3-Butadiene	-1.0000	1.2389	0.0	100	0.03
6	T	Bromomethane	1.0000	0.9392	6.1	100	0.03
7	T	Chloroethane	1.0000	1.0070	-0.7	100	0.02
8	T	Trichlorofluoromethane	1.0000	1.1117	-11.2	100	0.01
9	T	Diethyl ether	5.0000	5.0733	-1.5	100	0.00
10	T	Isoprene	-1.0000	0.9793	0.0	100	0.01
11	T	Acrolein	-1.0000	2.2670	0.0	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	1.0000	1.0547	-5.5	100	0.01
13	T	Acetone	-1.0000	1.7077	0.0	100	0.00
14	C	1,1-Dichloroethene	1.0000	1.0548	-5.5	100	0.01
15	T	Tert-Butyl Alcohol	10.0000	8.8550	11.4	100	-0.04
16	T	Dimethyl Sulfide	-1.0000	1.1118	0.0	100	0.01
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-7.44#
18	T	Methyl acetate	-1.0000	1.1240	0.0	100	0.00
19	T	Methylene Chloride	1.0000	1.1343	-13.4	100	0.00
20	T	Carbon Disulfide	1.0000	1.1128	-11.3	100	0.01
21	T	Acrylonitrile	2.5000	2.2334	10.7	100	0.00
22	T	Methyl Tert Butyl Ether	1.0000	0.8956	10.4	100	0.00
23	T	trans-1,2-Dichloroethene	1.0000	1.0902	-9.0	100	0.00
24	T	n-Hexane	-1.0000	0.9655	0.0	100	0.00
25	T	Diisopropyl ether	5.0000	5.1929	-3.9	100	0.00
26	T	Vinyl Acetate	-1.0000	0.8603	0.0	100	0.00
27	P	1,1-Dichloroethane	1.0000	1.0739	-7.4	100	0.00
28	T	Ethyl-Tert-Butyl ether	5.0000	4.8293	3.4	100	0.00
29	T	2-Butanone	-1.0000	1.0545	0.0	100	0.00
30	T	Propionitrile	5.0000	4.8591	2.8	100	0.00
31	T	2,2-Dichloropropane	1.0000	1.0674	-6.7	100	0.00
32	T	cis-1,2-Dichloroethene	1.0000	1.0318	-3.2	100	0.00
33	C	Chloroform	1.0000	1.0735	-7.3	100	0.00
34		1-Bromopropane	1.0000	0.7204	28.0#	100	0.01
35	T	Bromochloromethane	1.0000	0.9312	6.9	100	0.00
36	T	Tetrahydrofuran	5.0000	5.8979	-18.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.4814	0.0	100	0.01
38	T	1,1,1-Trichloroethane	1.0000	1.0414	-4.1	100	0.01
39	T	Cyclohexane	1.0000	0.9699	3.0	100	0.01
40	T	1,1-Dichloropropene	1.0000	0.9804	2.0	100	0.00
41	T	Tert-Amyl-Methyl ether	5.0000	4.6707	6.6	100	0.00
42	T	Carbon Tetrachloride	1.0000	1.0173	-1.7	100	0.01
43	S	1,2-Dichloroethane-d4	-1.0000	0.5229	0.0	100	0.00
44		Heptane	-1.0000	0.0000	0.0	100	0.00
45	T	1,2-Dichloroethane	1.0000	1.0891	-8.9	100	0.00
46	T	Benzene	1.0000	1.1184	-11.8	100	0.00
47	T	Trichloroethene	1.0000	1.0518	-5.2	100	0.00
48	T	Methylcyclohexane	-1.0000	0.9241	0.0	100	0.00
49	C	1,2-Dichloropropane	1.0000	1.0298	-3.0	100	0.00
50	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-12.74#
51	T	Bromodichloromethane	1.0000	1.0031	-0.3	100	0.00
52	T	Dibromomethane	1.0000	0.9705	2.9	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.7000	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.6558	0.0	100	0.00

(#) = Out of Range
6M138398.D 8260WTR.M Tue Apr 12 15:28:24 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138398.D Vial: 4
Acq On : 11 Apr 2016 16:37 Operator: TMB
Sample : WG564297-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	1.0000	0.8978	10.2	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.6662	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.5034	0.0	100	0.00
59	C	Toluene	1.0000	1.0597	-6.0	100	0.00
60	T	Ethyl Methacrylate	1.0000	0.8152	18.5	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	100	0.00
62	T	trans-1,3-Dichloropropene	1.0000	0.9738	2.6	100	0.00
63	T	1,1,2-Trichloroethane	1.0000	1.1237	-12.4	100	0.00
64	T	2-Hexanone	-1.0000	0.7693	0.0	100	0.00
65	T	1,3-Dichloropropane	1.0000	1.0021	-0.2	100	0.00
66	T	Tetrachloroethene	1.0000	1.0730	-7.3	100	0.00
67	T	Dibromochloromethane	1.0000	0.9941	0.6	100	0.00
68	T	1,2-Dibromoethane	1.0000	1.0373	-3.7	100	0.00
69	T	1-Chlorohexane	1.0000	1.0542	-5.4	100	0.00
70	P	Chlorobenzene	1.0000	1.1539	-15.4	100	0.00
71	T	1,1,1,2-Tetrachloroethane	1.0000	1.0739	-7.4	100	0.00
72	C	Ethylbenzene	1.0000	1.0404	-4.0	100	0.00
73	T	m-,p-Xylene	2.0000	2.0873	-4.4	100	0.00
74	T	o-Xylene	1.0000	0.9503	5.0	100	0.00
75	T	Styrene	1.0000	0.8993	10.1	100	0.00
76	P	Bromoform	1.0000	0.8733	12.7	100	0.00
77	T	Isopropylbenzene	1.0000	0.9369	6.3	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	1.0000	1.0498	-5.0	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.4931	0.0	100	0.00
81	T	1,2,3-Trichloropropane	1.0000	0.9622	3.8	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	1.0000	1.2290	-22.9#	100	0.00
83	T	n-Propylbenzene	1.0000	0.9421	5.8	100	0.00
84	T	Bromobenzene	1.0000	1.0629	-6.3	100	0.00
85	T	1,3,5-Trimethylbenzene	1.0000	0.9034	9.7	100	0.00
86	T	2-Chlorotoluene	1.0000	1.0865	-8.6	100	0.00
87	T	4-Chlorotoluene	1.0000	1.0264	-2.6	100	0.00
88	T	a-Methylstyrene	-1.0000	0.7331	0.0	100	0.00
89	T	tert-Butylbenzene	1.0000	0.8364	16.4	100	0.00
90	T	1,2,4-Trimethylbenzene	1.0000	0.9398	6.0	100	0.00
91	T	sec-Butylbenzene	1.0000	0.9660	3.4	100	0.00
92	T	p-Isopropyltoluene	1.0000	0.8876	11.2	100	0.00
93	T	1,3-Dichlorobenzene	1.0000	1.1111	-11.1	100	0.00
94	T	1,4-Dichlorobenzene	1.0000	1.1274	-12.7	100	0.00
95	T	n-Butylbenzene	1.0000	0.9428	5.7	100	0.00
96	T	1,2-Dichlorobenzene	1.0000	1.0892	-8.9	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	1.0343	0.0	100	0.00
98	T	1,2,4-Trichlorobenzene	1.0000	0.9714	2.9	100	0.00
99	T	Hexachlorobutadiene	1.0000	1.0185	-1.8	100	0.00
100	T	Naphthalene	1.0000	0.8996	10.0	100	0.00
101	T	1,2,3-Trichlorobenzene	1.0000	0.9617	3.8	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138398.D 8260WTR.M Tue Apr 12 15:28:24 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138399.D Vial: 5
Acq On : 11 Apr 2016 17:09 Operator: TMB
Sample : WG564297-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:42 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	722841	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	524705	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	289671	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	7802	1.0090	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	4.04%#		
43) 1,2-Dichloroethane-d4	11.11	65	9748	1.0449	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	4.16%#		
58) Toluene-d8	13.86	98	25373	1.0198	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	4.08%#		
80) p-Bromofluorobenzene	17.85	95	9747	0.9164	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	3.68%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.45	85	24702	1.8259	ug/L	95
3) Chloromethane	3.93	50	18803	1.5440	ug/L	94
4) Vinyl Chloride	4.17	62	14985	1.7163	ug/L	93
5) 1,3-Butadiene	4.22	54	11913	2.0186	ug/L	84
6) Bromomethane	5.09	94	7044	1.8124	ug/L	89
7) Chloroethane	5.24	64	8600	1.6359	ug/L	94
8) Trichlorofluoromethane	5.74	101	31447	2.0881	ug/L	99
9) Diethyl ether	6.30	59	168992	45.5015	ug/L	92
10) Isoprene	6.33	67	19403	1.9373	ug/L	95
11) Acrolein	6.56	56	13712	19.0023	ug/L	97
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	16703	2.1424	ug/L	96
13) Acetone	6.67	43	6398	3.0115	ug/L	83
14) 1,1-Dichloroethene	6.88	61	27170	2.0680	ug/L	95
15) Tert-Butyl Alcohol	7.02	59	30936	39.7979	ug/L	92
16) Dimethyl Sulfide	7.18	62	12211	1.8950	ug/L	97
17) Iodomethane	7.45	142	2051	1.7756	ug/L	80
18) Methyl acetate	7.45	43	14478	2.1540	ug/L #	82
19) Methylene Chloride	7.73	84	17490	2.1904	ug/L	70
20) Carbon Disulfide	7.78	76	49411	2.0405	ug/L	99
21) Acrylonitrile	7.93	53	31729	12.1063	ug/L	94
22) Methyl Tert Butyl Ether	7.97	73	37136	1.8021	ug/L	97
23) trans-1,2-Dichloroethene	8.22	96	14722	2.0035	ug/L	75
24) n-Hexane	8.29	57	21314	1.8606	ug/L	91
25) Diisopropyl ether	8.68	45	805805	27.8770	ug/L	96
26) Vinyl Acetate	8.86	43	21404	1.5490	ug/L #	88
27) 1,1-Dichloroethane	8.90	63	33562	2.1544	ug/L	97
28) Ethyl-Tert-Butyl ether	9.31	59	655751	27.5957	ug/L	97
29) 2-Butanone	9.53	43	6625	1.9978	ug/L #	81
30) Propionitrile	9.64	54	24343	24.5936	ug/L	99
31) 2,2-Dichloropropane	9.75	77	25978	2.1322	ug/L	91
32) cis-1,2-Dichloroethene	9.83	96	17072	2.1079	ug/L	99
33) Chloroform	10.07	83	29786	2.0835	ug/L	95
34) 1-Bromopropane	10.22	122	2263	2.3604	ug/L	91
35) Bromochloromethane	10.32	130	10071	2.2213	ug/L	95
36) Tetrahydrofuran	10.37	42	52720	23.5605	ug/L	85
38) 1,1,1-Trichloroethane	10.66	97	27722	2.2038	ug/L	98
39) Cyclohexane	10.69	56	27064	1.8876	ug/L	86
40) 1,1-Dichloropropene	10.89	75	20267	1.9087	ug/L	91
41) Tert-Amyl-Methyl ether	11.01	73	499317	25.4791	ug/L	90
42) Carbon Tetrachloride	11.05	117	25404	2.1966	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138399.D 8260WTR.M Tue Apr 12 14:52:43 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138399.D Vial: 5
Acq On : 11 Apr 2016 17:09 Operator: TMB
Sample : WG564297-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:42 2016 Quant Results File: 8260WTR.RES

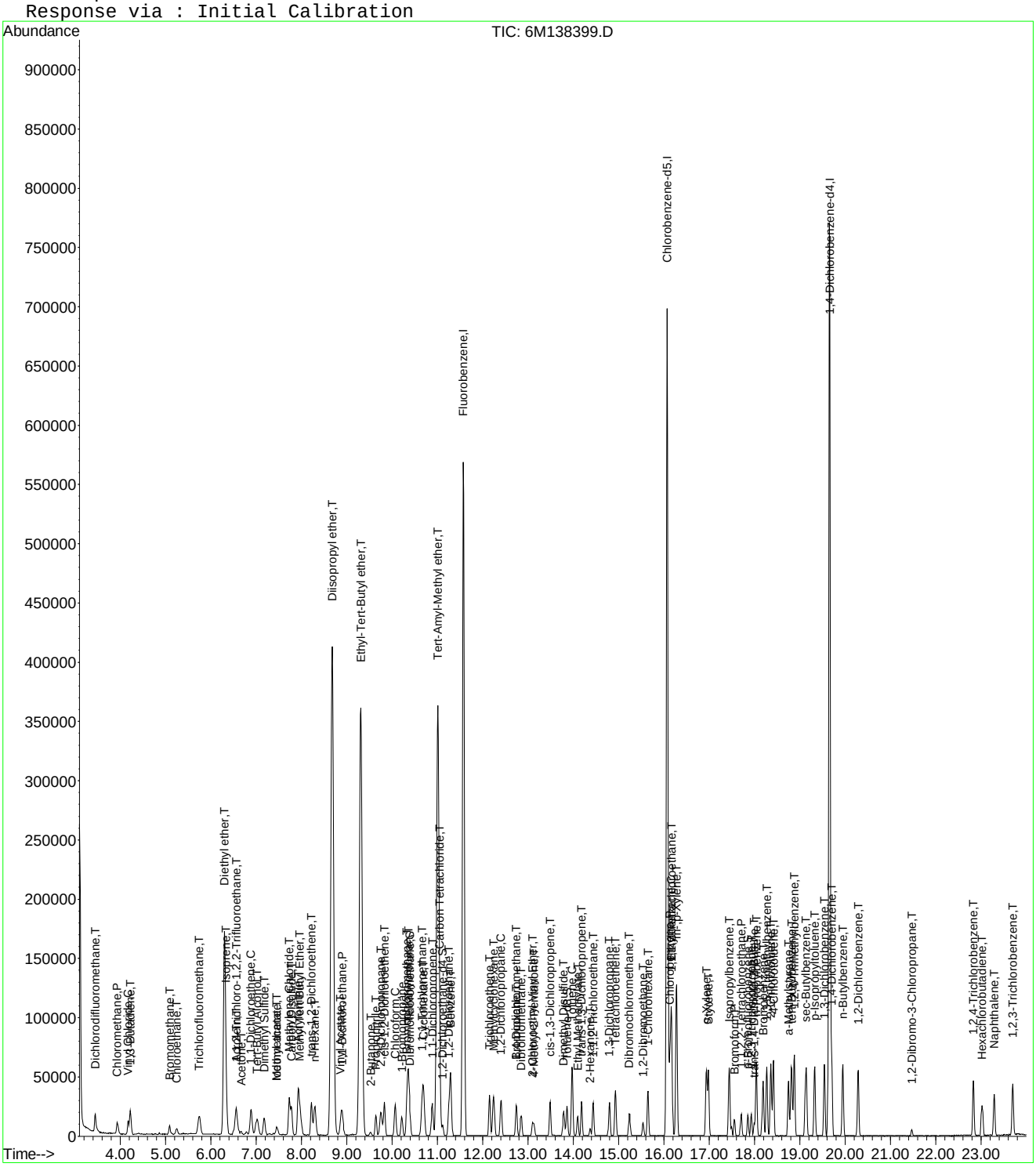
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	23976	2.0672	ug/L	99
46)	Benzene	11.29	78	66234	2.1796	ug/L	94
47)	Trichloroethene	12.15	130	15810	2.1487	ug/L	96
48)	Methylcyclohexane	12.24	83	19649	1.8028	ug/L	82
49)	1,2-Dichloropropane	12.40	63	17296	2.0393	ug/L	99
50)	1,4-Dioxane	12.74	88	2203	30.6308	ug/L	73
51)	Bromodichloromethane	12.74	83	23124	2.1365	ug/L	96
52)	Dibromomethane	12.85	93	9121	2.0327	ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.10	63	5941	1.4423	ug/L	95
54)	4-Methyl-2-Pentanone	13.13	58	3468	1.3814	ug/L	84
55)	cis-1,3-Dichloropropene	13.49	75	22876	1.8896	ug/L	96
56)	Dimethyl Disulfide	13.79	79	8305	1.2828	ug/L	98
59)	Toluene	13.97	91	62526	2.0830	ug/L	98
60)	Ethyl Methacrylate	14.10	69	13171	1.5347	ug/L	88
62)	trans-1,3-Dichloropropene	14.18	75	21126	1.8772	ug/L	96
63)	1,1,2-Trichloroethane	14.44	97	12909	2.1910	ug/L	95
64)	2-Hexanone	14.37	43	7231	1.4684	ug/L	85
65)	1,3-Dichloropropane	14.80	76	21493	2.0106	ug/L	78
66)	Tetrachloroethene	14.93	166	16759	2.2055	ug/L	99
67)	Dibromochloromethane	15.24	129	16155	2.0866	ug/L	98
68)	1,2-Dibromoethane	15.54	107	11986	2.0565	ug/L	92
69)	1-Chlorohexane	15.65	91	15108	1.6351	ug/L	69
70)	Chlorobenzene	16.13	112	44433	2.2093	ug/L	87
71)	1,1,1,2-Tetrachloroethane	16.18	131	16621	2.1209	ug/L	98
72)	Ethylbenzene	16.17	106	21477	2.0157	ug/L	90
73)	m-,p-Xylene	16.28	106	53676	4.2243	ug/L	89
74)	o-Xylene	16.94	106	22398	1.8018	ug/L	88
75)	Styrene	16.98	104	38527	1.8208	ug/L	95
76)	Bromoform	17.56	173	10051	1.9961	ug/L	98
77)	Isopropylbenzene	17.44	105	60037	1.9110	ug/L	97
79)	1,1,2,2-Tetrachloroethane	17.71	83	14894	1.9708	ug/L	99
81)	1,2,3-Trichloropropane	17.93	110	4174	1.8076	ug/L	82
82)	trans-1,4-Dichloro-2-Buten	17.99	53	3377	1.6629	ug/L	79
83)	n-Propylbenzene	18.04	91	71806	1.8929	ug/L	99
84)	Bromobenzene	18.19	156	18260	2.0507	ug/L	95
85)	1,3,5-Trimethylbenzene	18.27	105	50442	1.8182	ug/L	99
86)	2-Chlorotoluene	18.36	91	54978	2.0738	ug/L	96
87)	4-Chlorotoluene	18.42	91	51177	2.0574	ug/L	97
88)	a-Methylstyrene	18.75	118	21643	1.4773	ug/L	99
89)	tert-Butylbenzene	18.82	134	11405	1.9811	ug/L	99
90)	1,2,4-Trimethylbenzene	18.88	105	58471	2.0016	ug/L	97
91)	sec-Butylbenzene	19.14	105	64762	1.9437	ug/L	99
92)	p-Isopropyltoluene	19.33	119	51177	1.8009	ug/L	98
93)	1,3-Dichlorobenzene	19.55	146	35819	2.0861	ug/L	99
94)	1,4-Dichlorobenzene	19.70	146	38295	2.1530	ug/L	88
95)	n-Butylbenzene	19.95	91	51256	1.8747	ug/L	95
96)	1,2-Dichlorobenzene	20.29	146	34387	2.1432	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	21.48	75	2375	1.5692	ug/L	89
98)	1,2,4-Trichlorobenzene	22.83	180	23089	1.9423	ug/L	97
99)	Hexachlorobutadiene	23.03	225	10091	2.1466	ug/L	96
100)	Naphthalene	23.29	128	42266	1.7166	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	22343	2.0212	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138399.D 8260WTR.M Tue Apr 12 14:52:43 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138399.D Vial: 5
Acq On : 11 Apr 2016 17:09 Operator: TMB
Sample : WG564297-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138399.D Vial: 5
Acq On : 11 Apr 2016 17:09 Operator: TMB
Sample : WG564297-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	2.0000	1.9887	0.6	100	0.01
3	P	Chloromethane	2.0000	2.1636	-8.2	100	0.00
4	C	Vinyl Chloride	2.0000	2.1313	-6.6	100	0.00
5	T	1,3-Butadiene	-1.0000	2.4919	0.0	100	0.02
6	T	Bromomethane	2.0000	2.0470	-2.4	100	0.02
7	T	Chloroethane	2.0000	2.1103	-5.5	100	0.01
8	T	Trichlorofluoromethane	2.0000	2.1878	-9.4	100	0.01
9	T	Diethyl ether	25.0000	26.6367	-6.5	100	0.00
10	T	Isoprene	-1.0000	2.1346	0.0	100	0.01
11	T	Acrolein	12.5000	12.2264	2.2	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	2.0000	2.1647	-8.2	100	0.01
13	T	Acetone	-1.0000	2.8544	0.0	100	0.00
14	C	1,1-Dichloroethene	2.0000	2.0850	-4.3	100	0.00
15	T	Tert-Butyl Alcohol	50.0000	48.0431	3.9	100	-0.04
16	T	Dimethyl Sulfide	-1.0000	2.0028	0.0	100	0.01
17	T	Iodomethane	2.0000	2.2416	-12.1	100	0.01
18	T	Methyl acetate	-1.0000	2.3259	0.0	100	0.00
19	T	Methylene Chloride	2.0000	2.2061	-10.3	100	0.00
20	T	Carbon Disulfide	2.0000	2.1440	-7.2	100	0.01
21	T	Acrylonitrile	12.5000	12.0527	3.6	100	0.00
22	T	Methyl Tert Butyl Ether	2.0000	1.8970	5.1	100	0.00
23	T	trans-1,2-Dichloroethene	2.0000	2.0296	-1.5	100	0.00
24	T	n-Hexane	-1.0000	2.0554	0.0	100	0.00
25	T	Diisopropyl ether	25.0000	27.0950	-8.4	100	0.00
26	T	Vinyl Acetate	-1.0000	1.8481	0.0	100	0.00
27	P	1,1-Dichloroethane	2.0000	2.1916	-9.6	100	0.01
28	T	Ethyl-Tert-Butyl ether	25.0000	26.3869	-5.5	100	0.00
29	T	2-Butanone	-1.0000	2.0025	0.0	100	0.00
30	T	Propionitrile	25.0000	25.6119	-2.4	100	0.00
31	T	2,2-Dichloropropane	2.0000	2.1727	-8.6	100	0.00
32	T	cis-1,2-Dichloroethene	2.0000	2.1524	-7.6	100	0.00
33	C	Chloroform	2.0000	2.0922	-4.6	100	0.00
34		1-Bromopropane	2.0000	1.8216	8.9	100	0.00
35	T	Bromochloromethane	2.0000	2.1176	-5.9	100	0.00
36	T	Tetrahydrofuran	25.0000	24.4597	2.2	100	0.00
37	S	Dibromofluoromethane	1.0000	1.0539	-5.4	100	0.00
38	T	1,1,1-Trichloroethane	2.0000	2.1145	-5.7	100	0.00
39	T	Cyclohexane	2.0000	2.0219	-1.1	100	0.00
40	T	1,1-Dichloropropene	2.0000	1.9595	2.0	100	0.00
41	T	Tert-Amyl-Methyl ether	25.0000	26.0637	-4.3	100	0.00
42	T	Carbon Tetrachloride	2.0000	2.0630	-3.2	100	0.00
43	S	1,2-Dichloroethane-d4	1.0000	1.0850	-8.5	100	0.00
44		Heptane	-1.0000	0.0000	0.0	100	0.00
45	T	1,2-Dichloroethane	2.0000	2.1100	-5.5	100	0.00
46	T	Benzene	2.0000	2.2058	-10.3	100	0.00
47	T	Trichloroethene	2.0000	2.0128	-0.6	100	0.00
48	T	Methylcyclohexane	-1.0000	1.8734	0.0	100	0.00
49	C	1,2-Dichloropropane	2.0000	2.1064	-5.3	100	0.00
50	T	1,4-Dioxane	-1.0000	35.2500	0.0	100	0.00
51	T	Bromodichloromethane	2.0000	2.0986	-4.9	100	0.00
52	T	Dibromomethane	2.0000	2.0823	-4.1	100	0.00
53	T	2-Chloroethyl Vinyl Ether	2.0000	1.5589	22.1#	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	1.3663	0.0	100	0.00

(#) = Out of Range
6M138399.D 8260WTR.M Tue Apr 12 15:28:34 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138399.D Vial: 5
Acq On : 11 Apr 2016 17:09 Operator: TMB
Sample : WG564297-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	2.0000	1.9669	1.7	100	0.00
56	T	Dimethyl Disulfide	-1.0000	1.3616	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	1.0000	1.0741	-7.4	100	0.00
59	C	Toluene	2.0000	2.1411	-7.1	100	0.00
60	T	Ethyl Methacrylate	2.0000	1.6778	16.1	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	100	0.00
62	T	trans-1,3-Dichloropropene	2.0000	1.9149	4.3	100	0.00
63	T	1,1,2-Trichloroethane	2.0000	2.2177	-10.9	100	0.00
64	T	2-Hexanone	-1.0000	1.5282	0.0	100	0.00
65	T	1,3-Dichloropropane	2.0000	2.0776	-3.9	100	0.00
66	T	Tetrachloroethene	2.0000	2.0975	-4.9	100	0.00
67	T	Dibromochloromethane	2.0000	2.0563	-2.8	100	0.00
68	T	1,2-Dibromoethane	2.0000	2.0994	-5.0	100	0.00
69	T	1-Chlorohexane	2.0000	1.8648	6.8	100	0.00
70	P	Chlorobenzene	2.0000	2.2188	-10.9	100	0.00
71	T	1,1,1,2-Tetrachloroethane	2.0000	2.0935	-4.7	100	0.00
72	C	Ethylbenzene	2.0000	2.0470	-2.4	100	0.00
73	T	m-,p-Xylene	4.0000	4.3120	-7.8	100	0.00
74	T	o-Xylene	2.0000	1.8615	6.9	100	0.00
75	T	Styrene	2.0000	1.9082	4.6	100	0.00
76	P	Bromoform	2.0000	1.9106	4.5	100	0.00
77	T	Isopropylbenzene	2.0000	1.9821	0.9	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	2.0000	2.1116	-5.6	100	0.00
80	S	p-Bromofluorobenzene	1.0000	1.0079	-0.8	100	0.00
81	T	1,2,3-Trichloropropane	2.0000	1.8920	5.4	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	2.0000	1.8488	7.6	100	0.00
83	T	n-Propylbenzene	2.0000	2.0630	-3.1	100	0.00
84	T	Bromobenzene	2.0000	2.0939	-4.7	100	0.00
85	T	1,3,5-Trimethylbenzene	2.0000	1.9098	4.5	100	0.00
86	T	2-Chlorotoluene	2.0000	2.2071	-10.4	100	0.00
87	T	4-Chlorotoluene	2.0000	2.1375	-6.9	100	0.00
88	T	a-Methylstyrene	-1.0000	1.6187	0.0	100	0.00
89	T	tert-Butylbenzene	2.0000	2.0593	-3.0	100	0.00
90	T	1,2,4-Trimethylbenzene	2.0000	2.0770	-3.8	100	0.00
91	T	sec-Butylbenzene	2.0000	2.0452	-2.3	100	0.00
92	T	p-Isopropyltoluene	2.0000	1.9035	4.8	100	0.00
93	T	1,3-Dichlorobenzene	2.0000	2.1028	-5.1	100	0.00
94	T	1,4-Dichlorobenzene	2.0000	2.1521	-7.6	100	0.00
95	T	n-Butylbenzene	2.0000	2.0366	-1.8	100	0.00
96	T	1,2-Dichlorobenzene	2.0000	2.1271	-6.4	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	2.0000	1.6606	17.0	100	0.00
98	T	1,2,4-Trichlorobenzene	2.0000	2.0217	-1.1	100	0.00
99	T	Hexachlorobutadiene	2.0000	2.1730	-8.7	100	0.00
100	T	Naphthalene	2.0000	1.8738	6.3	100	0.00
101	T	1,2,3-Trichlorobenzene	2.0000	2.0900	-4.5	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138399.D 8260WTR.M Tue Apr 12 15:28:34 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138400.D Vial: 6
Acq On : 11 Apr 2016 17:43 Operator: TMB
Sample : WG564297-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:43 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.58	96	732964	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	533035	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	293903	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	17275	2.2032	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	8.80%#		
43) 1,2-Dichloroethane-d4	11.12	65	21723	2.2964	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	9.20%#		
58) Toluene-d8	13.86	98	56936	2.2526	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	9.00%#		
80) p-Bromofluorobenzene	17.85	95	22339	2.0700	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	8.28%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.45	85	54911	4.0029	ug/L	99
3) Chloromethane	3.94	50	42574	3.4477	ug/L	97
4) Vinyl Chloride	4.18	62	32904	3.7166	ug/L	99
5) 1,3-Butadiene	4.22	54	24666	4.1218	ug/L	87
6) Bromomethane	5.08	94	15467	3.9246	ug/L	97
7) Chloroethane	5.25	64	19370	3.6338	ug/L	99
8) Trichlorofluoromethane	5.75	101	69265	4.5357	ug/L	99
9) Diethyl ether	6.30	59	320751	85.1702	ug/L	93
10) Isoprene	6.34	67	43724	4.3054	ug/L	91
11) Acrolein	6.55	56	27295	37.3034	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	37445	4.7365	ug/L	95
13) Acetone	6.67	43	12718	5.9037	ug/L	95
14) 1,1-Dichloroethene	6.89	61	62445	4.6873	ug/L	96
15) Tert-Butyl Alcohol	7.02	59	61484	78.0043	ug/L	91
16) Dimethyl Sulfide	7.18	62	29821	4.5638	ug/L	96
17) Iodomethane	7.45	142	7968	2.7871	ug/L	97
18) Methyl acetate	7.46	43	34311	5.0341	ug/L	86
19) Methylene Chloride	7.73	84	41277	5.0981	ug/L	76
20) Carbon Disulfide	7.78	76	112769	4.5927	ug/L	98
21) Acrylonitrile	7.93	53	62077	23.3585	ug/L	93
22) Methyl Tert Butyl Ether	7.96	73	94832	4.5384	ug/L	93
23) trans-1,2-Dichloroethene	8.22	96	35331	4.7417	ug/L	80
24) n-Hexane	8.30	57	50785	4.3720	ug/L	95
25) Diisopropyl ether	8.68	45	1487764	50.7587	ug/L	96
26) Vinyl Acetate	8.86	43	56253	4.0148	ug/L	94
27) 1,1-Dichloroethane	8.90	63	77116	4.8819	ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	1226202	50.8890	ug/L	96
29) 2-Butanone	9.53	43	16832	5.0056	ug/L	92
30) Propionitrile	9.64	54	48115	47.9389	ug/L	100
31) 2,2-Dichloropropane	9.76	77	59258	4.7965	ug/L	92
32) cis-1,2-Dichloroethene	9.83	96	39039	4.7537	ug/L	81
33) Chloroform	10.07	83	71811	4.9538	ug/L	98
34) 1-Bromopropane	10.22	122	6074	5.6135	ug/L	92
35) Bromochloromethane	10.33	130	24330	5.2923	ug/L	99
36) Tetrahydrofuran	10.36	42	103784	45.7403	ug/L	85
38) 1,1,1-Trichloroethane	10.66	97	63435	4.9733	ug/L	97
39) Cyclohexane	10.70	56	64476	4.4349	ug/L	89
40) 1,1-Dichloropropene	10.88	75	49568	4.6037	ug/L	94
41) Tert-Amyl-Methyl ether	11.01	73	941009	47.3545	ug/L	92
42) Carbon Tetrachloride	11.05	117	58588	4.9959	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138400.D 8260WTR.M Tue Apr 12 14:52:44 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138400.D Vial: 6
Acq On : 11 Apr 2016 17:43 Operator: TMB
Sample : WG564297-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:43 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

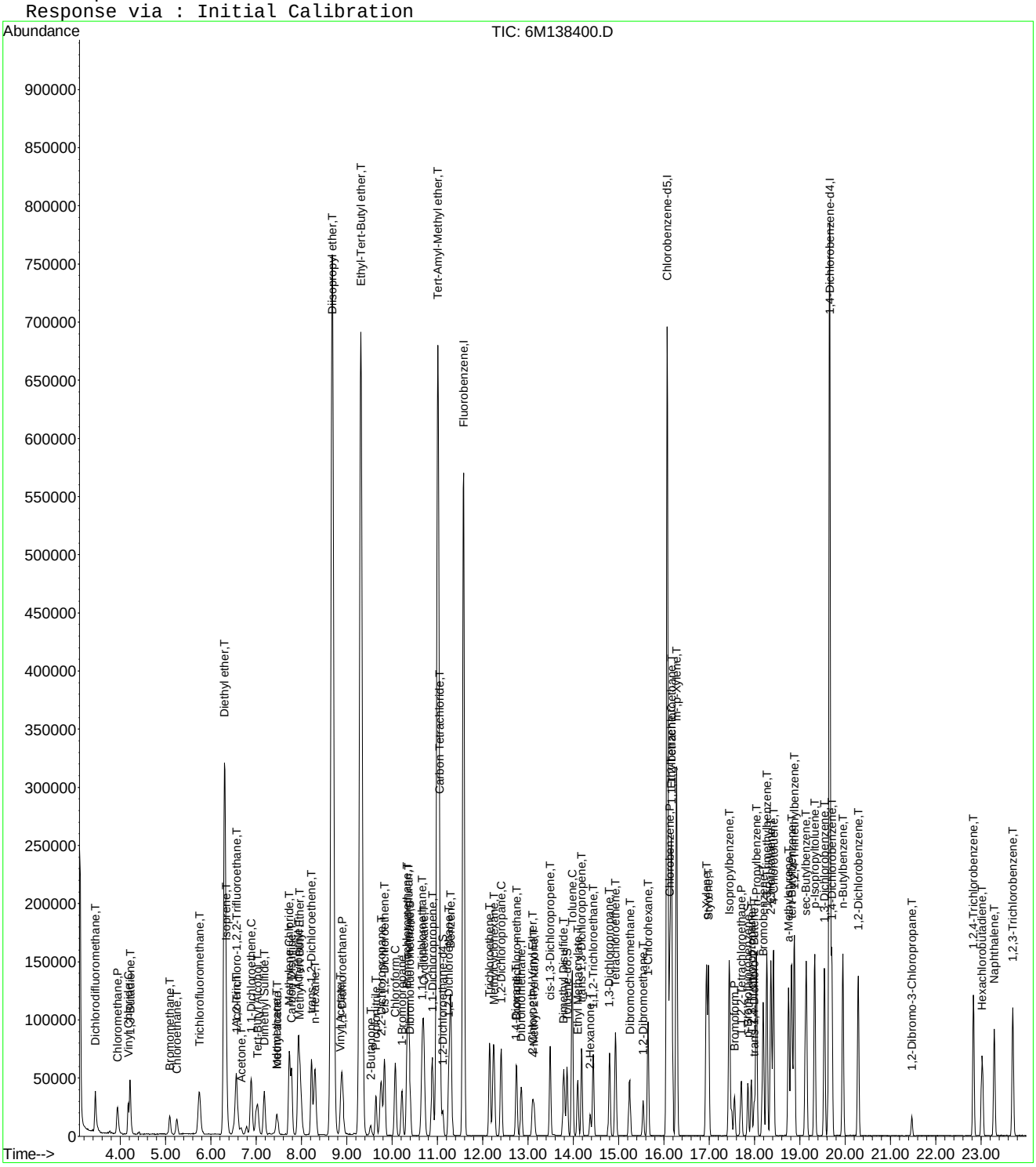
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	57463	4.8860	ug/L	97
46)	Benzene	11.29	78	152099	4.9362	ug/L	91
47)	Trichloroethene	12.15	130	37404	5.0134	ug/L	98
48)	Methylcyclohexane	12.25	83	47592	4.3062	ug/L	85
49)	1,2-Dichloropropane	12.41	63	41468	4.8217	ug/L	100
50)	1,4-Dioxane	12.73	88	5137	70.4391	ug/L	91
51)	Bromodichloromethane	12.75	83	53329	4.8592	ug/L	97
52)	Dibromomethane	12.85	93	21613	4.7502	ug/L	98
53)	2-Chloroethyl Vinyl Ether	13.10	63	15642	3.7449	ug/L	97
54)	4-Methyl-2-Pentanone	13.13	58	10630	4.1756	ug/L	95
55)	cis-1,3-Dichloropropene	13.49	75	56738	4.6219	ug/L	97
56)	Dimethyl Disulfide	13.78	79	23403	3.5649	ug/L	91
59)	Toluene	13.98	91	149560	4.9046	ug/L	98
60)	Ethyl Methacrylate	14.10	69	36389	4.1739	ug/L	86
62)	trans-1,3-Dichloropropene	14.18	75	54211	4.7418	ug/L	98
63)	1,1,2-Trichloroethane	14.44	97	29289	4.8934	ug/L	99
64)	2-Hexanone	14.37	43	20490	4.0958	ug/L	92
65)	1,3-Dichloropropane	14.80	76	54201	4.9911	ug/L	86
66)	Tetrachloroethene	14.93	166	39593	5.1291	ug/L	98
67)	Dibromochloromethane	15.24	129	38373	4.8788	ug/L	100
68)	1,2-Dibromoethane	15.54	107	28672	4.8426	ug/L	100
69)	1-Chlorohexane	15.65	91	39848	4.2453	ug/L	75
70)	Chlorobenzene	16.13	112	101750	4.9803	ug/L	93
71)	1,1,1,2-Tetrachloroethane	16.17	131	38960	4.8938	ug/L	97
72)	Ethylbenzene	16.16	106	51478	4.7558	ug/L	89
73)	m-,p-Xylene	16.28	106	127102	9.8466	ug/L	90
74)	o-Xylene	16.94	106	57915	4.5861	ug/L	92
75)	Styrene	16.98	104	102672	4.7765	ug/L	95
76)	Bromoform	17.56	173	24800	4.8483	ug/L	99
77)	Isopropylbenzene	17.44	105	151273	4.7398	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.71	83	34726	4.5288	ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	11089	4.7330	ug/L	88
82)	trans-1,4-Dichloro-2-Buten	17.99	53	10185	3.8461	ug/L	76
83)	n-Propylbenzene	18.04	91	186207	4.8380	ug/L	98
84)	Bromobenzene	18.19	156	44935	4.9737	ug/L	95
85)	1,3,5-Trimethylbenzene	18.27	105	134211	4.7679	ug/L	98
86)	2-Chlorotoluene	18.36	91	133636	4.9681	ug/L	97
87)	4-Chlorotoluene	18.42	91	126290	5.0038	ug/L	97
88)	a-Methylstyrene	18.75	118	58940	3.9652	ug/L	98
89)	tert-Butylbenzene	18.82	134	27959	4.7867	ug/L	98
90)	1,2,4-Trimethylbenzene	18.88	105	146336	4.9373	ug/L	98
91)	sec-Butylbenzene	19.14	105	160834	4.7576	ug/L	98
92)	p-Isopropyltoluene	19.33	119	136396	4.7306	ug/L	96
93)	1,3-Dichlorobenzene	19.54	146	86356	4.9571	ug/L	98
94)	1,4-Dichlorobenzene	19.71	146	88128	4.8833	ug/L	93
95)	n-Butylbenzene	19.95	91	124884	4.5018	ug/L	98
96)	1,2-Dichlorobenzene	20.29	146	82056	5.0406	ug/L	98
97)	1,2-Dibromo-3-Chloropropan	21.47	75	6960	4.5322	ug/L	82
98)	1,2,4-Trichlorobenzene	22.83	180	54557	4.5234	ug/L	99
99)	Hexachlorobutadiene	23.03	225	23200	4.8641	ug/L	99
100)	Naphthalene	23.29	128	108796	4.3550	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	54196	4.8322	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138400.D 8260WTR.M Tue Apr 12 14:52:44 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138400.D Vial: 6
Acq On : 11 Apr 2016 17:43 Operator: TMB
Sample : WG564297-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138400.D Vial: 6
Acq On : 11 Apr 2016 17:43 Operator: TMB
Sample : WG564297-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	5.0000	4.3597	12.8	100	0.01
3	P	Chloromethane	5.0000	4.8312	3.4	100	0.01
4	C	Vinyl Chloride	5.0000	4.6153	7.7	100	0.01
5	T	1,3-Butadiene	5.0000	5.0883	-1.8	100	0.02
6	T	Bromomethane	5.0000	4.4328	11.3	100	0.02
7	T	Chloroethane	5.0000	4.6874	6.3	100	0.02
8	T	Trichlorofluoromethane	5.0000	4.7524	5.0	100	0.02
9	T	Diethyl ether	50.0000	49.8588	0.3	100	0.00
10	T	Isoprene	5.0000	4.7439	5.1	100	0.02
11	T	Acrolein	25.0000	24.0017	4.0	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	5.0000	4.7858	4.3	100	0.02
13	T	Acetone	5.0000	5.5956	-11.9	100	0.00
14	C	1,1-Dichloroethene	5.0000	4.7258	5.5	100	0.01
15	T	Tert-Butyl Alcohol	100.0000	94.1649	5.8	100	-0.03
16	T	Dimethyl Sulfide	5.0000	4.8235	3.5	100	0.01
17	T	Iodomethane	5.0000	3.3775	32.5#	100	0.01
18	T	Methyl acetate	5.0000	5.4360	-8.7	100	0.00
19	T	Methylene Chloride	5.0000	5.1346	-2.7	100	0.00
20	T	Carbon Disulfide	5.0000	4.8256	3.5	100	0.01
21	T	Acrylonitrile	25.0000	23.2551	7.0	100	0.00
22	T	Methyl Tert Butyl Ether	5.0000	4.7774	4.5	100	0.00
23	T	trans-1,2-Dichloroethene	5.0000	4.8035	3.9	100	0.00
24	T	n-Hexane	5.0000	4.8298	3.4	100	0.01
25	T	Diisopropyl ether	50.0000	49.3349	1.3	100	0.00
26	T	Vinyl Acetate	5.0000	4.7901	4.2	100	0.00
27	P	1,1-Dichloroethane	5.0000	4.9662	0.7	100	0.01
28	T	Ethyl-Tert-Butyl ether	50.0000	48.6599	2.7	100	0.00
29	T	2-Butanone	5.0000	5.0173	-0.3	100	0.00
30	T	Propionitrile	50.0000	49.9239	0.2	100	0.00
31	T	2,2-Dichloropropane	5.0000	4.8876	2.2	100	0.00
32	T	cis-1,2-Dichloroethene	5.0000	4.8539	2.9	100	0.00
33	C	Chloroform	5.0000	4.9744	0.5	100	0.00
34		1-Bromopropane	5.0000	4.8216	3.6	100	0.00
35	T	Bromochloromethane	5.0000	5.0451	-0.9	100	0.00
36	T	Tetrahydrofuran	50.0000	47.4861	5.0	100	0.00
37	S	Dibromofluoromethane	2.5000	2.3013	7.9	100	0.00
38	T	1,1,1-Trichloroethane	5.0000	4.7717	4.6	100	0.00
39	T	Cyclohexane	5.0000	4.7504	5.0	100	0.01
40	T	1,1-Dichloropropene	5.0000	4.7262	5.5	100	0.00
41	T	Tert-Amyl-Methyl ether	50.0000	48.4410	3.1	100	0.00
42	T	Carbon Tetrachloride	5.0000	4.6922	6.2	100	0.00
43	S	1,2-Dichloroethane-d4	2.5000	2.3844	4.6	100	0.00
44		Heptane	-1.0000	0.0000	0.0	100	0.00
45	T	1,2-Dichloroethane	5.0000	4.9871	0.3	100	0.00
46	T	Benzene	5.0000	4.9953	0.1	100	0.00
47	T	Trichloroethene	5.0000	4.6962	6.1	100	0.00
48	T	Methylcyclohexane	5.0000	4.4750	10.5	100	0.01
49	C	1,2-Dichloropropane	5.0000	4.9805	0.4	100	0.00
50	T	1,4-Dioxane	100.0000	81.0615	18.9	100	0.00
51	T	Bromodichloromethane	5.0000	4.7731	4.5	100	0.00
52	T	Dibromomethane	5.0000	4.8660	2.7	100	0.00
53	T	2-Chloroethyl Vinyl Ether	5.0000	4.0477	19.0	100	0.00
54	T	4-Methyl-2-Pentanone	5.0000	4.1302	17.4	100	0.00

(#) = Out of Range
6M138400.D 8260WTR.M Tue Apr 12 15:28:45 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138400.D Vial: 6
Acq On : 11 Apr 2016 17:43 Operator: TMB
Sample : WG564297-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:22:51 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	5.0000	4.8111	3.8	100	0.00
56	T	Dimethyl Disulfide	5.0000	3.7841	24.3#	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	2.5000	2.3726	5.1	100	0.00
59	C	Toluene	5.0000	5.0414	-0.8	100	0.00
60	T	Ethyl Methacrylate	5.0000	4.5631	8.7	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	100	0.00
62	T	trans-1,3-Dichloropropene	5.0000	4.8369	3.3	100	0.00
63	T	1,1,2-Trichloroethane	5.0000	4.9530	0.9	100	0.00
64	T	2-Hexanone	5.0000	4.2627	14.7	100	0.00
65	T	1,3-Dichloropropane	5.0000	5.1573	-3.1	100	0.00
66	T	Tetrachloroethene	5.0000	4.8780	2.4	100	0.00
67	T	Dibromochloromethane	5.0000	4.8080	3.8	100	0.00
68	T	1,2-Dibromoethane	5.0000	4.9435	1.1	100	0.00
69	T	1-Chlorohexane	5.0000	4.4532	10.9	100	0.00
70	P	Chlorobenzene	5.0000	5.0015	-0.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	5.0000	4.8305	3.4	100	0.00
72	C	Ethylbenzene	5.0000	4.8298	3.4	100	0.00
73	T	m-,p-Xylene	10.0000	10.0511	-0.5	100	0.00
74	T	o-Xylene	5.0000	4.7381	5.2	100	0.00
75	T	Styrene	5.0000	5.0057	-0.1	100	0.00
76	P	Bromoform	5.0000	4.6406	7.2	100	0.00
77	T	Isopropylbenzene	5.0000	4.9162	1.7	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	5.0000	4.8524	3.0	100	0.00
80	S	p-Bromofluorobenzene	2.5000	2.2767	8.9	100	0.00
81	T	1,2,3-Trichloropropane	5.0000	4.9540	0.9	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	5.0000	4.4577	10.8	100	0.00
83	T	n-Propylbenzene	5.0000	5.2726	-5.5	100	0.00
84	T	Bromobenzene	5.0000	5.0787	-1.6	100	0.00
85	T	1,3,5-Trimethylbenzene	5.0000	5.0082	-0.2	100	0.00
86	T	2-Chlorotoluene	5.0000	5.2876	-5.8	100	0.00
87	T	4-Chlorotoluene	5.0000	5.1987	-4.0	100	0.00
88	T	a-Methylstyrene	5.0000	4.3447	13.1	100	0.00
89	T	tert-Butylbenzene	5.0000	4.9757	0.5	100	0.00
90	T	1,2,4-Trimethylbenzene	5.0000	5.1232	-2.5	100	0.00
91	T	sec-Butylbenzene	5.0000	5.0060	-0.1	100	0.00
92	T	p-Isopropyltoluene	5.0000	5.0001	-0.0	100	0.00
93	T	1,3-Dichlorobenzene	5.0000	4.9966	0.1	100	0.00
94	T	1,4-Dichlorobenzene	5.0000	4.8812	2.4	100	0.00
95	T	n-Butylbenzene	5.0000	4.8908	2.2	100	0.00
96	T	1,2-Dichlorobenzene	5.0000	5.0026	-0.1	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	5.0000	4.7962	4.1	100	0.00
98	T	1,2,4-Trichlorobenzene	5.0000	4.7083	5.8	100	0.00
99	T	Hexachlorobutadiene	5.0000	4.9240	1.5	100	0.00
100	T	Naphthalene	5.0000	4.7539	4.9	100	0.00
101	T	1,2,3-Trichlorobenzene	5.0000	4.9965	0.1	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138400.D 8260WTR.M Tue Apr 12 15:28:45 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138401.D Vial: 7
Acq On : 11 Apr 2016 18:15 Operator: TMB
Sample : WG564297-07 20ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:44 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	729075	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	541175	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	302313	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	78387	10.0507	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 40.20%#			
43) 1,2-Dichloroethane-d4	11.12	65	94152	10.0063	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 40.04%#			
58) Toluene-d8	13.86	98	256890	10.0107	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 40.04%#			
80) p-Bromofluorobenzene	17.85	95	106056	9.5541	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 38.20%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.45	85	281116	20.6020	ug/L	99
3) Chloromethane	3.94	50	201596	16.4125	ug/L	97
4) Vinyl Chloride	4.17	62	155271	17.6319	ug/L	99
5) 1,3-Butadiene	4.22	54	117028	19.6604	ug/L	92
6) Bromomethane	5.08	94	66604	16.9904	ug/L	99
7) Chloroethane	5.25	64	88431	16.6781	ug/L	97
8) Trichlorofluoromethane	5.75	101	263773	17.3649	ug/L	100
9) Diethyl ether	6.30	59	525985	140.4117	ug/L	93
10) Isoprene	6.33	67	205597	20.3525	ug/L	93
11) Acrolein	6.55	56	46525	63.9237	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.55	101	161128	20.4902	ug/L	96
13) Acetone	6.66	43	47919	22.3625	ug/L	97
14) 1,1-Dichloroethene	6.89	61	278775	21.0374	ug/L	95
15) Tert-Butyl Alcohol	7.01	59	105948	135.1325	ug/L	94
16) Dimethyl Sulfide	7.18	62	139855	21.5177	ug/L	93
17) Iodomethane	7.44	142	102250	19.0767	ug/L	95
18) Methyl acetate	7.46	43	135523	19.9900	ug/L	93
19) Methylene Chloride	7.73	84	164458	20.4204	ug/L	75
20) Carbon Disulfide	7.78	76	503628	20.6203	ug/L	99
21) Acrylonitrile	7.93	53	107783	40.7732	ug/L	97
22) Methyl Tert Butyl Ether	7.95	73	418276	20.1243	ug/L	95
23) trans-1,2-Dichloroethene	8.22	96	153760	20.7461	ug/L	80
24) n-Hexane	8.29	57	233196	20.1824	ug/L	92
25) Diisopropyl ether	8.68	45	2474726	84.8816	ug/L	96
26) Vinyl Acetate	8.86	43	248438	17.8259	ug/L	95
27) 1,1-Dichloroethane	8.89	63	326018	20.7488	ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	2062281	86.0439	ug/L	97
29) 2-Butanone	9.52	43	68082	20.3548	ug/L	91
30) Propionitrile	9.64	54	76895	77.0223	ug/L	97
31) 2,2-Dichloropropane	9.76	77	247687	20.1552	ug/L	94
32) cis-1,2-Dichloroethene	9.83	96	170954	20.9277	ug/L	100
33) Chloroform	10.07	83	302539	20.9817	ug/L	98
34) 1-Bromopropane	10.21	122	27870	24.5031	ug/L	99
35) Bromochloromethane	10.32	130	101500	22.1960	ug/L	100
36) Tetrahydrofuran	10.35	42	170896	75.7201	ug/L	86
38) 1,1,1-Trichloroethane	10.66	97	274554	21.6399	ug/L	97
39) Cyclohexane	10.69	56	298624	20.6500	ug/L	90
40) 1,1-Dichloropropene	10.88	75	220715	20.6088	ug/L	93
41) Tert-Amyl-Methyl ether	11.01	73	1592490	80.5665	ug/L	93
42) Carbon Tetrachloride	11.05	117	260091	22.2966	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138401.D 8260WTR.M Tue Apr 12 14:52:44 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138401.D Vial: 7
Acq On : 11 Apr 2016 18:15 Operator: TMB
Sample : WG564297-07 20ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:44 2016 Quant Results File: 8260WTR.RES

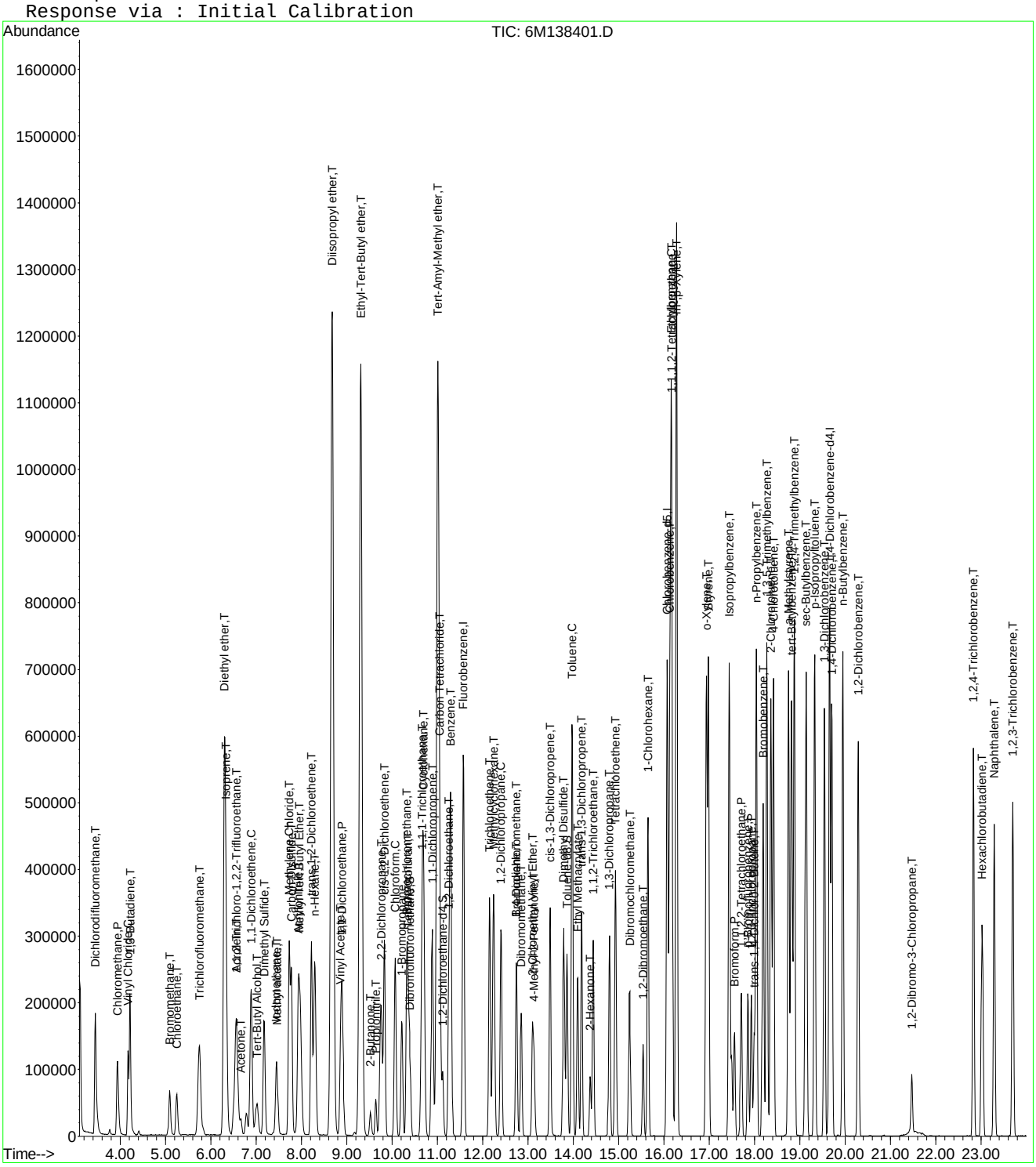
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	239947	20.5113 ug/L	99
46)	Benzene	11.29	78	636859	20.7787 ug/L	92
47)	Trichloroethene	12.15	130	161723	21.7919 ug/L	95
48)	Methylcyclohexane	12.24	83	231491	21.0576 ug/L	86
49)	1,2-Dichloropropane	12.40	63	174068	20.3479 ug/L	99
50)	1,4-Dioxane	12.74	88	9278	127.8995 ug/L	86
51)	Bromodichloromethane	12.74	83	231932	21.2456 ug/L	97
52)	Dibromomethane	12.85	93	93821	20.7302 ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.10	63	80473	19.3692 ug/L	98
54)	4-Methyl-2-Pentanone	13.13	58	51214	20.2248 ug/L	96
55)	cis-1,3-Dichloropropene	13.49	75	257814	21.1138 ug/L	96
56)	Dimethyl Disulfide	13.78	79	125741	19.2557 ug/L	90
59)	Toluene	13.97	91	647717	20.9214 ug/L	99
60)	Ethyl Methacrylate	14.10	69	182469	20.6146 ug/L	88
62)	trans-1,3-Dichloropropene	14.18	75	240974	20.7609 ug/L	97
63)	1,1,2-Trichloroethane	14.44	97	125356	20.6285 ug/L	99
64)	2-Hexanone	14.37	43	95550	18.8122 ug/L	94
65)	1,3-Dichloropropane	14.80	76	224486	20.3607 ug/L	82
66)	Tetrachloroethene	14.93	166	169394	21.6141 ug/L	98
67)	Dibromochloromethane	15.24	129	171633	21.4936 ug/L	99
68)	1,2-Dibromoethane	15.54	107	124915	20.7803 ug/L	99
69)	1-Chlorohexane	15.65	91	204106	21.4179 ug/L	81
70)	Chlorobenzene	16.13	112	423280	20.4063 ug/L	96
71)	1,1,1,2-Tetrachloroethane	16.17	131	172627	21.3576 ug/L	98
72)	Ethylbenzene	16.16	106	230205	20.9478 ug/L	94
73)	m-,p-Xylene	16.28	106	559144	42.6653 ug/L	90
74)	o-Xylene	16.94	106	271867	21.2044 ug/L	91
75)	Styrene	16.98	104	482207	22.0960 ug/L	96
76)	Bromoform	17.56	173	110075	21.1956 ug/L	99
77)	Isopropylbenzene	17.44	105	714913	22.0633 ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.71	83	154008	19.5264 ug/L	98
81)	1,2,3-Trichloropropane	17.93	110	48679	20.1991 ug/L	86
82)	trans-1,4-Dichloro-2-Buten	17.99	53	51859	16.8414 ug/L	76
83)	n-Propylbenzene	18.04	91	860290	21.7301 ug/L	99
84)	Bromobenzene	18.19	156	194229	20.9004 ug/L	97
85)	1,3,5-Trimethylbenzene	18.27	105	624466	21.5673 ug/L	98
86)	2-Chlorotoluene	18.36	91	572847	20.7040 ug/L	98
87)	4-Chlorotoluene	18.42	91	541137	20.8444 ug/L	98
88)	a-Methylstyrene	18.75	118	307013	20.0800 ug/L	99
89)	tert-Butylbenzene	18.82	134	128204	21.3383 ug/L	100
90)	1,2,4-Trimethylbenzene	18.88	105	653623	21.4393 ug/L	97
91)	sec-Butylbenzene	19.14	105	741829	21.3336 ug/L	99
92)	p-Isopropyltoluene	19.33	119	636212	21.4518 ug/L	97
93)	1,3-Dichlorobenzene	19.54	146	372530	20.7893 ug/L	99
94)	1,4-Dichlorobenzene	19.71	146	372766	20.0809 ug/L	99
95)	n-Butylbenzene	19.95	91	587150	20.5768 ug/L	98
96)	1,2-Dichlorobenzene	20.29	146	351440	20.9880 ug/L	99
97)	1,2-Dibromo-3-Chloropropan	21.47	75	31084	19.6783 ug/L	96
98)	1,2,4-Trichlorobenzene	22.83	180	258318	20.8219 ug/L	99
99)	Hexachlorobutadiene	23.03	225	104364	21.2722 ug/L	99
100)	Naphthalene	23.29	128	532576	20.7256 ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	242570	21.0263 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138401.D 8260WTR.M Tue Apr 12 14:52:44 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138401.D Vial: 7
Acq On : 11 Apr 2016 18:15 Operator: TMB
Sample : WG564297-07 20ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\041116\6M138402.D Vial: 8
Acq On : 11 Apr 2016 18:45 Operator: TMB
Sample : WG564297-08 50ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 11 19:09:14 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	732076	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	539131	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	307429	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.39	111	193553	24.7155 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.88%		
43) 1,2-Dichloroethane-d4	11.12	65	229217	24.2609 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.04%		
58) Toluene-d8	13.86	98	622594	24.3537 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.40%		
80) p-Bromofluorobenzene	17.85	95	265065	23.4811 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 93.92%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.45	85	687685	50.1915 ug/L	98
3) Chloromethane	3.94	50	487470	39.5236 ug/L	99
4) Vinyl Chloride	4.17	62	367146	41.5206 ug/L	100
5) 1,3-Butadiene	4.21	54	229145	38.3380 ug/L	95
6) Bromomethane	5.08	94	173012	43.9538 ug/L	100
7) Chloroethane	5.25	64	223920	42.0581 ug/L	96
8) Trichlorofluoromethane	5.74	101	647308	42.4394 ug/L	100
9) Diethyl ether	6.30	59	619084	164.5870 ug/L	93
10) Isoprene	6.33	67	454246	44.7825 ug/L	93
11) Acrolein	6.55	56	56416	77.1959 ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	397999	50.4049 ug/L	95
13) Acetone	6.66	43	117250	54.4932 ug/L	98
14) 1,1-Dichloroethene	6.89	61	688712	51.7598 ug/L	95
15) Tert-Butyl Alcohol	7.01	59	134567	170.9313 ug/L	94
16) Dimethyl Sulfide	7.18	62	300788	46.0887 ug/L	89
17) Iodomethane	7.44	142	274387	48.6100 ug/L	95
18) Methyl acetate	7.46	43	305458	44.8711 ug/L	94
19) Methylene Chloride	7.73	84	396519	49.0330 ug/L	77
20) Carbon Disulfide	7.78	76	1104164	45.0230 ug/L	100
21) Acrylonitrile	7.93	53	137937	51.9663 ug/L	99
22) Methyl Tert Butyl Ether	7.96	73	1063423	50.9542 ug/L	94
23) trans-1,2-Dichloroethene	8.22	96	383483	51.5294 ug/L	83
24) n-Hexane	8.30	57	510092	43.9659 ug/L	93
25) Diisopropyl ether	8.68	45	2848637	97.3060 ug/L	96
26) Vinyl Acetate	8.86	43	595725	42.5692 ug/L	96
27) 1,1-Dichloroethane	8.90	63	780460	49.4672 ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	2512871	104.4139 ug/L	95
29) 2-Butanone	9.52	43	175906	52.3759 ug/L	93
30) Propionitrile	9.64	54	96328	96.0919 ug/L	97
31) 2,2-Dichloropropane	9.76	77	609751	49.4143 ug/L	94
32) cis-1,2-Dichloroethene	9.83	96	420270	51.2373 ug/L	100
33) Chloroform	10.07	83	732813	50.6137 ug/L	97
34) 1-Bromopropane	10.22	122	64975	56.3822 ug/L	100
35) Bromochloromethane	10.33	130	250906	54.6433 ug/L	100
36) Tetrahydrofuran	10.35	42	211278	93.2287 ug/L	87
38) 1,1,1-Trichloroethane	10.66	97	680912	53.4484 ug/L	99
39) Cyclohexane	10.69	56	664235	45.7439 ug/L	90
40) 1,1-Dichloropropene	10.89	75	550040	51.1482 ug/L	93
41) Tert-Amyl-Methyl ether	11.01	73	1893427	95.3987 ug/L	93
42) Carbon Tetrachloride	11.05	117	648771	55.3886 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138402.D 8260WTR.M Mon Apr 11 19:09:14 2016 Page 1

Data File : C:\MSDchem\1\data\041116\6M138402.D Vial: 8
Acq On : 11 Apr 2016 18:45 Operator: TMB
Sample : WG564297-08 50ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 11 19:09:14 2016 Quant Results File: 8260WTR.RES

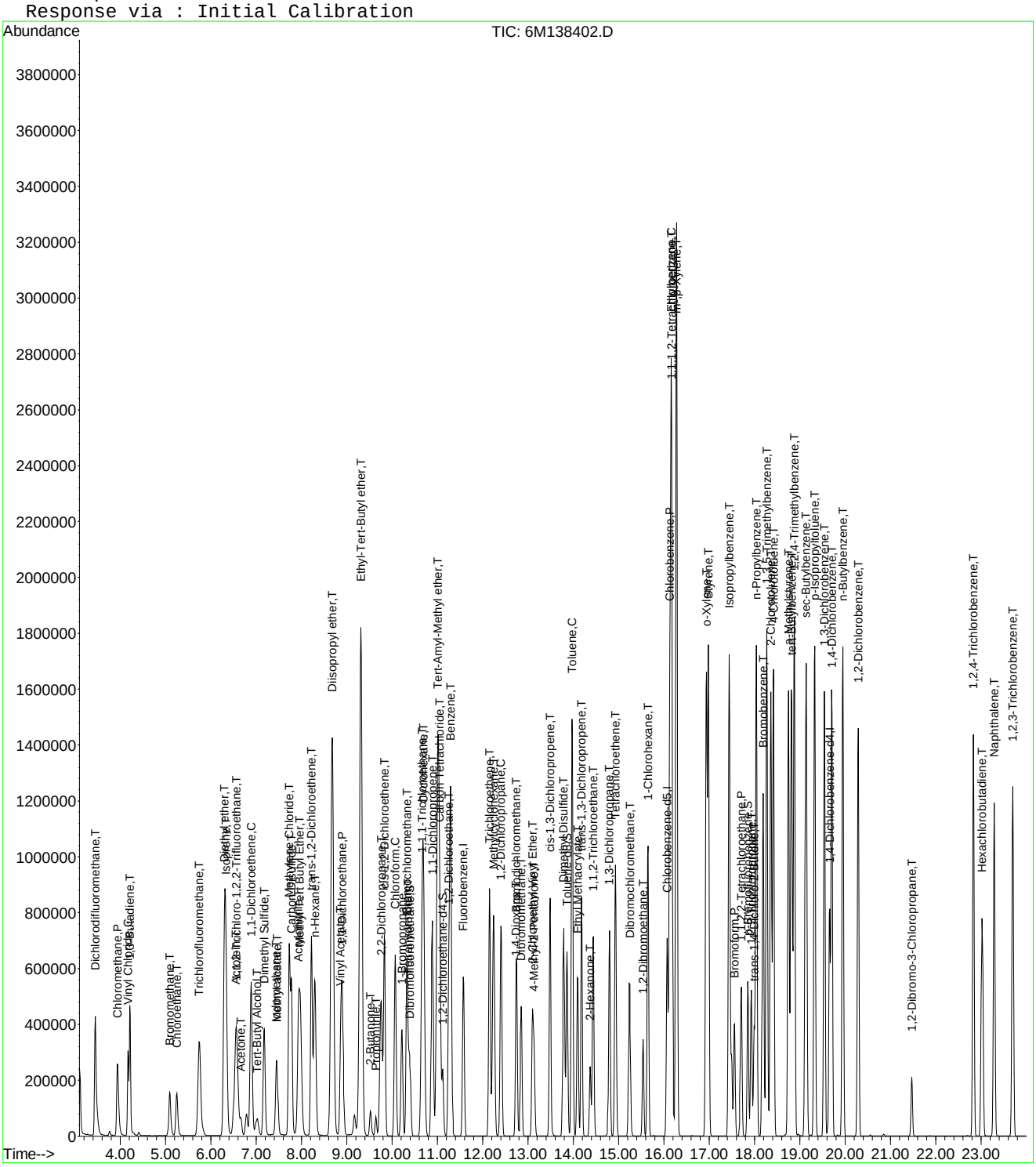
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	592678	50.4561	ug/L	98
46)	Benzene	11.29	78	1529594	49.7012	ug/L	91
47)	Trichloroethene	12.15	130	397847	53.3895	ug/L	95
48)	Methylcyclohexane	12.24	83	517769	46.9058	ug/L	88
49)	1,2-Dichloropropane	12.40	63	423641	49.3190	ug/L	99
50)	1,4-Dioxane	12.73	88	12737	174.8630	ug/L	87
51)	Bromodichloromethane	12.74	83	578207	52.7482	ug/L	98
52)	Dibromomethane	12.85	93	231619	50.9675	ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.10	63	219120	52.5242	ug/L	100
54)	4-Methyl-2-Pentanone	13.13	58	136149	53.5459	ug/L	96
55)	cis-1,3-Dichloropropene	13.49	75	641851	52.3493	ug/L	97
56)	Dimethyl Disulfide	13.79	79	302335	46.1091	ug/L	90
59)	Toluene	13.97	91	1564634	50.7296	ug/L	99
60)	Ethyl Methacrylate	14.10	69	430764	48.8504	ug/L	86
62)	trans-1,3-Dichloropropene	14.18	75	599589	51.8528	ug/L	99
63)	1,1,2-Trichloroethane	14.44	97	308463	50.9530	ug/L	99
64)	2-Hexanone	14.37	43	257855	50.9599	ug/L	95
65)	1,3-Dichloropropane	14.80	76	549723	50.0485	ug/L	82
66)	Tetrachloroethene	14.93	166	416630	53.3622	ug/L	99
67)	Dibromochloromethane	15.25	129	429267	53.9608	ug/L	100
68)	1,2-Dibromoethane	15.54	107	316392	52.8330	ug/L	99
69)	1-Chlorohexane	15.65	91	459151	48.3639	ug/L	83
70)	Chlorobenzene	16.13	112	1029782	49.8338	ug/L	97
71)	1,1,1,2-Tetrachloroethane	16.17	131	422742	52.5003	ug/L	98
72)	Ethylbenzene	16.16	106	562411	51.3713	ug/L	95
73)	m-,p-Xylene	16.28	106	1358722	104.0699	ug/L	91
74)	o-Xylene	16.94	106	668470	52.3352	ug/L	91
75)	Styrene	16.98	104	1175539	54.0705	ug/L	95
76)	Bromoform	17.56	173	282984	54.6967	ug/L	98
77)	Isopropylbenzene	17.44	105	1751816	54.2688	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.71	83	384393	47.9254	ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	122313	49.9087	ug/L	86
82)	trans-1,4-Dichloro-2-Buten	17.99	53	128237	40.1562	ug/L	85
83)	n-Propylbenzene	18.04	91	2074621	51.5310	ug/L	100
84)	Bromobenzene	18.19	156	478810	50.6660	ug/L	98
85)	1,3,5-Trimethylbenzene	18.27	105	1535208	52.1393	ug/L	99
86)	2-Chlorotoluene	18.36	91	1393178	49.5148	ug/L	98
87)	4-Chlorotoluene	18.42	91	1301348	49.2932	ug/L	98
88)	a-Methylstyrene	18.75	118	710419	45.6912	ug/L	99
89)	tert-Butylbenzene	18.82	134	313375	51.2902	ug/L	99
90)	1,2,4-Trimethylbenzene	18.88	105	1599537	51.5930	ug/L	97
91)	sec-Butylbenzene	19.14	105	1819710	51.4605	ug/L	100
92)	p-Isopropyltoluene	19.33	119	1577403	52.3019	ug/L	98
93)	1,3-Dichlorobenzene	19.54	146	920117	50.4932	ug/L	99
94)	1,4-Dichlorobenzene	19.71	146	922125	48.8483	ug/L	100
95)	n-Butylbenzene	19.95	91	1447266	49.8757	ug/L	99
96)	1,2-Dichlorobenzene	20.29	146	865949	50.8539	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	21.47	75	80514	50.1228	ug/L	93
98)	1,2,4-Trichlorobenzene	22.83	180	642179	50.9019	ug/L	99
99)	Hexachlorobutadiene	23.03	225	257356	51.5831	ug/L	100
100)	Naphthalene	23.29	128	1369619	52.4128	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	603738	51.4619	ug/L	100

(#) = qualifier out of range (m) = manual integration
6M138402.D 8260WTR.M Mon Apr 11 19:09:14 2016 Page 2

Data File : C:\MSDchem\1\data\041116\6M138402.D Vial: 8
Acq On : 11 Apr 2016 18:45 Operator: TMB
Sample : WG564297-08 50ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 11 19:09 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138403.D Vial: 9
Acq On : 11 Apr 2016 19:17 Operator: TMB
Sample : WG564297-09 100ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:45 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	696305	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	524581	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	311457	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.40	111	338846	45.4913 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 181.96%#		
43) 1,2-Dichloroethane-d4	11.12	65	413958	46.0651 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 184.28%#		
58) Toluene-d8	13.86	98	1105047	44.4245 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 177.68%#		
80) p-Bromofluorobenzene	17.85	95	507786	44.4011 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 177.60%#		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.45	85	1188614	91.2091 ug/L	98
3) Chloromethane	3.93	50	718060	61.2106 ug/L	100
4) Vinyl Chloride	4.17	62	634524	75.4448 ug/L	100
5) 1,3-Butadiene	4.21	54	431793	75.9542 ug/L	94
6) Bromomethane	5.07	94	335120	89.5112 ug/L	100
7) Chloroethane	5.24	64	374083	73.8723 ug/L	97
8) Trichlorofluoromethane	5.74	101	1363629	93.9964 ug/L	99
9) Diethyl ether	6.30	59	1222755	341.7765 ug/L	94
10) Isoprene	6.33	67	830077	86.0383 ug/L	92
11) Acrolein	6.56	56	112095	161.2630 ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	692673	92.2308 ug/L	95
13) Acetone	6.67	43	210727	102.9689 ug/L	100
14) 1,1-Dichloroethene	6.88	61	1199510	94.7797 ug/L	96
15) Tert-Butyl Alcohol	7.03	59	282161	376.8225 ug/L	97
16) Dimethyl Sulfide	7.17	62	558911	90.0396 ug/L	90
17) Iodomethane	7.44	142	521513	95.7210 ug/L	95
18) Methyl acetate	7.46	43	580436	89.6450 ug/L	94
19) Methylene Chloride	7.73	84	692520	90.0355 ug/L	77
20) Carbon Disulfide	7.78	76	2048370	87.8145 ug/L	100
21) Acrylonitrile	7.93	53	271341	107.4763 ug/L	100
22) Methyl Tert Butyl Ether	7.96	73	1940261	97.7442 ug/L	95
23) trans-1,2-Dichloroethene	8.22	96	671349	94.8449 ug/L	83
24) n-Hexane	8.29	57	964057	87.3629 ug/L	94
25) Diisopropyl ether	8.68	45	5615900	201.6874 ug/L	97
26) Vinyl Acetate	8.86	43	1063467	79.8970 ug/L	97
27) 1,1-Dichloroethane	8.89	63	1358080	90.5000 ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	4818986	210.5235 ug/L	97
29) 2-Butanone	9.52	43	325720	101.9652 ug/L	93
30) Propionitrile	9.64	54	192660	202.0610 ug/L	97
31) 2,2-Dichloropropane	9.75	77	1084629	92.4140 ug/L	96
32) cis-1,2-Dichloroethene	9.83	96	742035	95.1129 ug/L	98
33) Chloroform	10.07	83	1293408	93.9219 ug/L	97
34) 1-Bromopropane	10.22	122	122910	111.7538 ug/L	100
35) Bromochloromethane	10.33	130	448085	102.5989 ug/L	99
36) Tetrahydrofuran	10.35	42	418608	194.2046 ug/L	88
38) 1,1,1-Trichloroethane	10.66	97	1210182	99.8736 ug/L	98
39) Cyclohexane	10.69	56	1239461	89.7431 ug/L	90
40) 1,1-Dichloropropene	10.89	75	972829	95.1106 ug/L	93
41) Tert-Amyl-Methyl ether	11.01	73	3830226	202.8967 ug/L	94
42) Carbon Tetrachloride	11.05	117	1159150	104.0460 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138403.D 8260WTR.M Tue Apr 12 14:52:45 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138403.D Vial: 9
Acq On : 11 Apr 2016 19:17 Operator: TMB
Sample : WG564297-09 100ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:45 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

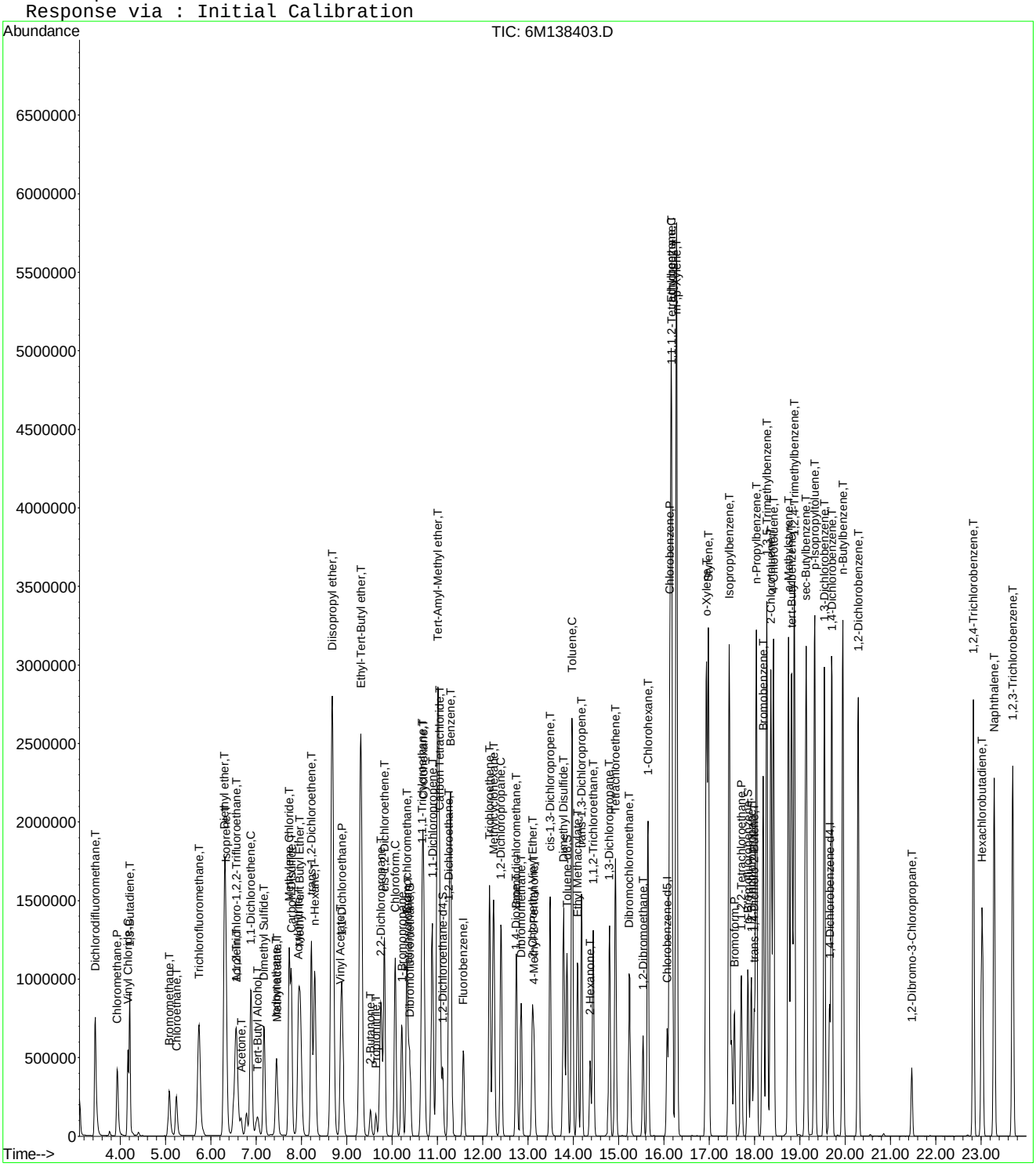
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	1069749	95.7488 ug/L	99
46)	Benzene	11.29	78	2672206	91.2887 ug/L	90
47)	Trichloroethene	12.15	130	726383	102.4854 ug/L	95
48)	Methylcyclohexane	12.24	83	987732	94.0777 ug/L	88
49)	1,2-Dichloropropane	12.40	63	759477	92.9582 ug/L	98
50)	1,4-Dioxane	12.73	88	28189	406.8806 ug/L	86
51)	Bromodichloromethane	12.74	83	1047936	100.5114 ug/L	98
52)	Dibromomethane	12.85	93	427391	98.8783 ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.10	63	407281	102.6428 ug/L	99
54)	4-Methyl-2-Pentanone	13.13	58	260249	107.6112 ug/L	99
55)	cis-1,3-Dichloropropene	13.49	75	1162571	99.6902 ug/L	97
56)	Dimethyl Disulfide	13.79	79	597400	95.7899 ug/L	90
59)	Toluene	13.97	91	2767613	92.2223 ug/L	100
60)	Ethyl Methacrylate	14.09	69	832420	97.0182 ug/L	87
62)	trans-1,3-Dichloropropene	14.18	75	1094103	97.2430 ug/L	99
63)	1,1,2-Trichloroethane	14.44	97	565523	96.0060 ug/L	99
64)	2-Hexanone	14.37	43	502372	102.0376 ug/L	96
65)	1,3-Dichloropropane	14.80	76	1001982	93.7539 ug/L	82
66)	Tetrachloroethene	14.93	166	746654	98.2843 ug/L	98
67)	Dibromochloromethane	15.24	129	799788	103.3255 ug/L	100
68)	1,2-Dibromoethane	15.54	107	589837	101.2264 ug/L	99
69)	1-Chlorohexane	15.65	91	892792	96.6490 ug/L	84
70)	Chlorobenzene	16.13	112	1839520	91.4883 ug/L	96
71)	1,1,1,2-Tetrachloroethane	16.17	131	773791	98.7625 ug/L	97
72)	Ethylbenzene	16.16	106	1012557	95.0534 ug/L	95
73)	m-,p-Xylene	16.28	106	2422897	190.7266 ug/L	92
74)	o-Xylene	16.94	106	1226519	98.6889 ug/L	93
75)	Styrene	16.98	104	2154111	101.8295 ug/L	94
76)	Bromoform	17.56	173	551798	109.6128 ug/L	99
77)	Isopropylbenzene	17.44	105	3188774	101.5236 ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.71	83	730581	89.9094 ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	238965	96.2464 ug/L	83
82)	trans-1,4-Dichloro-2-Buten	17.99	53	265162	81.3801 ug/L	86
83)	n-Propylbenzene	18.04	91	3806880	93.3352 ug/L	100
84)	Bromobenzene	18.19	156	899814	93.9838 ug/L	99
85)	1,3,5-Trimethylbenzene	18.27	105	2866994	96.1106 ug/L	99
86)	2-Chlorotoluene	18.36	91	2562030	89.8792 ug/L	98
87)	4-Chlorotoluene	18.42	91	2447663	91.5150 ug/L	98
88)	a-Methylstyrene	18.75	118	1424417	90.4278 ug/L	99
89)	tert-Butylbenzene	18.82	134	585003	94.5093 ug/L	81
90)	1,2,4-Trimethylbenzene	18.88	105	2992087	95.2614 ug/L	97
91)	sec-Butylbenzene	19.14	105	3363551	93.8895 ug/L	99
92)	p-Isopropyltoluene	19.33	119	2949096	96.5185 ug/L	99
93)	1,3-Dichlorobenzene	19.54	146	1736369	94.0544 ug/L	99
94)	1,4-Dichlorobenzene	19.71	146	1748375	91.4199 ug/L	99
95)	n-Butylbenzene	19.95	91	2712907	92.2830 ug/L	100
96)	1,2-Dichlorobenzene	20.29	146	1648560	95.5615 ug/L	98
97)	1,2-Dibromo-3-Chloropropan	21.47	75	162093	99.6035 ug/L	94
98)	1,2,4-Trichlorobenzene	22.83	180	1225189	95.8579 ug/L	100
99)	Hexachlorobutadiene	23.03	225	486763	96.3026 ug/L	99
100)	Naphthalene	23.29	128	2642110	99.8010 ug/L	99
101)	1,2,3-Trichlorobenzene	23.70	180	1157129	97.3567 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138403.D 8260WTR.M Tue Apr 12 14:52:45 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138403.D Vial: 9
Acq On : 11 Apr 2016 19:17 Operator: TMB
Sample : WG564297-09 100ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138404.D Vial: 10
Acq On : 11 Apr 2016 19:49 Operator: TMB
Sample : WG564297-10 200ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:45 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	709357	25.00	ug/L		0.00
57) Chlorobenzene-d5	16.07	117	536593	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	321035	25.00	ug/L		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	10.39	111	722368	95.1962	ug/L		0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 380.80%#				
43) 1,2-Dichloroethane-d4	11.12	65	866589	94.6594	ug/L		0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 378.64%#				
58) Toluene-d8	13.86	98	2354529	92.5366	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 370.16%#				
80) p-Bromofluorobenzene	17.85	95	1085196	92.0592	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 368.24%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.44	85	2463542	185.5631	ug/L		98
3) Chloromethane	3.93	50	1544496	129.2371	ug/L		99
4) Vinyl Chloride	4.17	62	1309905	152.8819	ug/L		100
5) 1,3-Butadiene	4.21	54	935259	161.4889	ug/L		95
6) Bromomethane	5.07	94	736215	193.0262	ug/L		100
7) Chloroethane	5.24	64	768240	148.9173	ug/L		97
8) Trichlorofluoromethane	5.73	101	2852014	192.9751	ug/L		100
9) Diethyl ether	6.29	59	886	0.2431	ug/L	#	46
10) Isoprene	6.33	67	1806670	183.8176	ug/L		92
11) Acrolein	6.55	56	1531	2.1620	ug/L		76
12) 1,1,2-Trichloro-1,2,2-Trif	6.54	101	1451078	189.6589	ug/L		95
13) Acetone	6.67	43	402918	193.2579	ug/L		99
14) 1,1-Dichloroethene	6.88	61	2503996	194.2136	ug/L		96
15) Tert-Butyl Alcohol	7.03	59	2351	3.0820	ug/L	#	59
16) Dimethyl Sulfide	7.17	62	1188328	187.9152	ug/L		90
17) Iodomethane	7.44	142	961018	171.9970	ug/L		96
18) Methyl acetate	7.46	43	1169407	177.2850	ug/L		95
19) Methylene Chloride	7.73	84	1426581	182.0592	ug/L		78
20) Carbon Disulfide	7.77	76	4393830	184.8994	ug/L		99
21) Acrylonitrile	7.96	53	45141	17.5511	ug/L	#	33
22) Methyl Tert Butyl Ether	7.96	73	3954017	195.5258	ug/L		95
23) trans-1,2-Dichloroethene	8.22	96	1398532	193.9424	ug/L		83
24) n-Hexane	8.29	57	2054918	182.7905	ug/L		95
25) Diisopropyl ether	8.69	45	3957	0.1395	ug/L	#	47
26) Vinyl Acetate	8.86	43	2203618	162.5090	ug/L		97
27) 1,1-Dichloroethane	8.89	63	2808656	183.7201	ug/L		99
28) Ethyl-Tert-Butyl ether	9.31	59	8951	0.3838	ug/L	#	48
29) 2-Butanone	9.52	43	626145	192.4054	ug/L		95
30) Propionitrile	9.63	54	188	0.1935	ug/L	#	57
31) 2,2-Dichloropropane	9.75	77	2283733	191.0015	ug/L		97
32) cis-1,2-Dichloroethene	9.83	96	1538060	193.5186	ug/L		99
33) Chloroform	10.07	83	2691423	191.8438	ug/L		97
34) 1-Bromopropane	10.22	122	271321	241.7055	ug/L		99
35) Bromochloromethane	10.33	130	924931	207.8865	ug/L		99
36) Tetrahydrofuran	10.36	42	5394	2.4564	ug/L		78
38) 1,1,1-Trichloroethane	10.66	97	2538753	205.6626	ug/L		98
39) Cyclohexane	10.69	56	2685389	190.8578	ug/L		91
40) 1,1-Dichloropropene	10.88	75	2042589	196.0235	ug/L		94
42) Carbon Tetrachloride	11.05	117	2442791	215.2320	ug/L		98
45) 1,2-Dichloroethane	11.25	62	2174935	191.0875	ug/L		99

(#) = qualifier out of range (m) = manual integration
6M138404.D 8260WTR.M Tue Apr 12 14:52:46 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138404.D Vial: 10
Acq On : 11 Apr 2016 19:49 Operator: TMB
Sample : WG564297-10 200ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:45 2016 Quant Results File: 8260WTR.RES

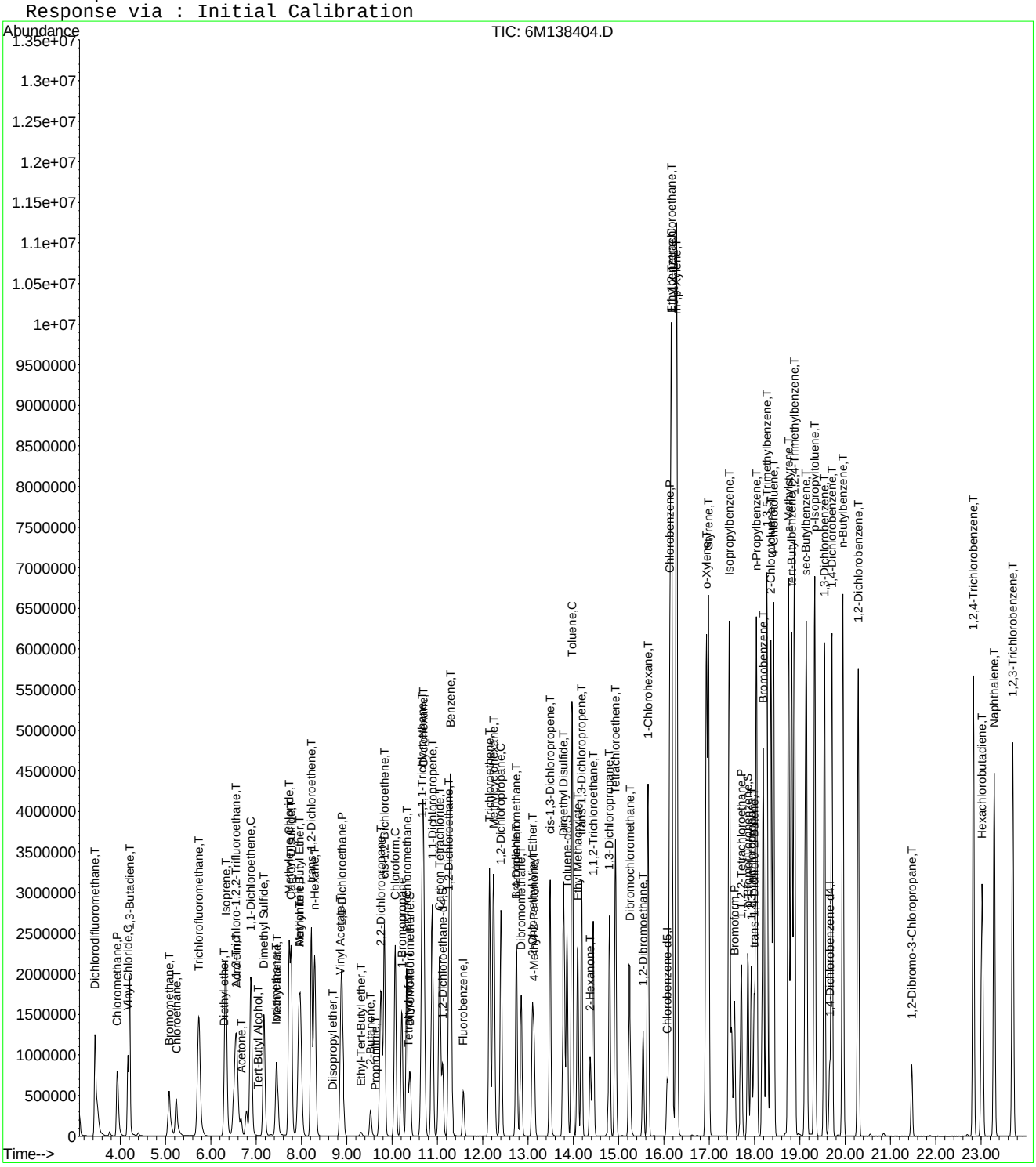
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Benzene	11.29	78	5404737	181.2409	ug/L		89
47)	Trichloroethene	12.15	130	1505223	208.4644	ug/L		94
48)	Methylcyclohexane	12.24	83	2131512	199.2829	ug/L		88
49)	1,2-Dichloropropane	12.40	63	1559546	187.3726	ug/L		98
50)	1,4-Dioxane	12.74	88	2806	39.7566	ug/L	#	18
51)	Bromodichloromethane	12.74	83	2166611	203.9841	ug/L		97
52)	Dibromomethane	12.85	93	870096	197.5956	ug/L		100
53)	2-Chloroethyl Vinyl Ether	13.10	63	823846	203.8051	ug/L		99
54)	4-Methyl-2-Pentanone	13.13	58	521726	211.7608	ug/L		99
55)	cis-1,3-Dichloropropene	13.49	75	2391438	201.2921	ug/L		97
56)	Dimethyl Disulfide	13.78	79	1327556	208.9498	ug/L		91
59)	Toluene	13.97	91	5582379	181.8517	ug/L		100
60)	Ethyl Methacrylate	14.10	69	1771055	201.7950	ug/L		87
62)	trans-1,3-Dichloropropene	14.18	75	2244443	195.0187	ug/L		99
63)	1,1,2-Trichloroethane	14.44	97	1140056	189.2091	ug/L		99
64)	2-Hexanone	14.37	43	1015819	201.7059	ug/L		97
65)	1,3-Dichloropropane	14.80	76	2024725	185.2093	ug/L		83
66)	Tetrachloroethene	14.93	166	1561840	200.9875	ug/L		97
67)	Dibromochloromethane	15.24	129	1648604	208.2172	ug/L		100
68)	1,2-Dibromoethane	15.54	107	1195878	200.6394	ug/L		99
69)	1-Chlorohexane	15.65	91	1936650	204.9585	ug/L		85
70)	Chlorobenzene	16.13	112	3714717	180.6151	ug/L		94
71)	1,1,1,2-Tetrachloroethane	16.17	131	1597758	199.3641	ug/L		97
72)	Ethylbenzene	16.17	106	2066632	189.6614	ug/L		100
73)	m-,p-Xylene	16.28	106	4823571	371.2040	ug/L		96
74)	o-Xylene	16.94	106	2498530	196.5379	ug/L		93
75)	Styrene	16.98	104	4399902	203.3368	ug/L		92
76)	Bromoform	17.56	173	1163845	226.0185	ug/L		98
77)	Isopropylbenzene	17.44	105	6394631	199.0336	ug/L		98
79)	1,1,2,2-Tetrachloroethane	17.71	83	1500242	179.1199	ug/L		97
81)	1,2,3-Trichloropropane	17.93	110	489773	191.3774	ug/L		87
82)	trans-1,4-Dichloro-2-Buten	17.99	53	580029	172.0798	ug/L		78
83)	n-Propylbenzene	18.04	91	7431503	176.7661	ug/L		97
84)	Bromobenzene	18.19	156	1893149	191.8363	ug/L		100
85)	1,3,5-Trimethylbenzene	18.27	105	5841499	189.9830	ug/L		100
86)	2-Chlorotoluene	18.36	91	5172691	176.0506	ug/L		99
87)	4-Chlorotoluene	18.42	91	5052159	183.2582	ug/L		99
88)	a-Methylstyrene	18.75	118	3091148	190.3840	ug/L		98
89)	tert-Butylbenzene	18.82	134	1230325	192.8333	ug/L		84
90)	1,2,4-Trimethylbenzene	18.88	105	5976401	184.5986	ug/L		100
91)	sec-Butylbenzene	19.14	105	6701559	181.4849	ug/L		97
92)	p-Isopropyltoluene	19.33	119	5913215	187.7547	ug/L		99
93)	1,3-Dichlorobenzene	19.54	146	3543096	186.1939	ug/L		97
94)	1,4-Dichlorobenzene	19.71	146	3554794	180.3293	ug/L		98
95)	n-Butylbenzene	19.95	91	5404982	178.3721	ug/L		98
96)	1,2-Dichlorobenzene	20.29	146	3338993	187.7758	ug/L		97
97)	1,2-Dibromo-3-Chloropropan	21.47	75	331393	197.5602	ug/L		95
98)	1,2,4-Trichlorobenzene	22.83	180	2533878	192.3341	ug/L		99
99)	Hexachlorobutadiene	23.03	225	1015031	194.8253	ug/L		99
100)	Naphthalene	23.29	128	5148494	188.6731	ug/L		98
101)	1,2,3-Trichlorobenzene	23.70	180	2349533	191.7835	ug/L		99

(#) = qualifier out of range (m) = manual integration
6M138404.D 8260WTR.M Tue Apr 12 14:52:46 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041116\6M138404.D Vial: 10
Acq On : 11 Apr 2016 19:49 Operator: TMB
Sample : WG564297-10 200ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138405.D Vial: 11
Acq On : 11 Apr 2016 20:21 Operator: TMB
Sample : WG564297-11 300ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:46 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.58	96	776364	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	576889	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	331024	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	1190776	143.3807	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 573.52%#			
43) 1,2-Dichloroethane-d4	11.12	65	1411580	140.8820	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 563.52%#			
58) Toluene-d8	13.86	98	3840929	140.4102	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 561.64%#			
80) p-Bromofluorobenzene	17.86	95	1671824	137.5443	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 550.16%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.44	85	3794488	261.1466	ug/L	98
3) Chloromethane	3.93	50	2368763	181.1013	ug/L	100
4) Vinyl Chloride	4.16	62	1990150	212.2274	ug/L	99
5) 1,3-Butadiene	4.20	54	1367707	215.7761	ug/L	94
6) Bromomethane	5.06	94	1216629	291.4534	ug/L	100
7) Chloroethane	5.23	64	1216292	215.4198	ug/L	97
8) Trichlorofluoromethane	5.73	101	4658995	288.0324	ug/L	99
9) Diethyl ether	6.30	59	1903875	477.2822	ug/L	95
10) Isoprene	6.32	67	2877096	267.4619	ug/L	92
11) Acrolein	6.55	56	181152	233.7360	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.54	101	2391667	285.6160	ug/L	95
13) Acetone	6.67	43	647339	283.6951	ug/L	99
14) 1,1-Dichloroethene	6.88	61	4072571	288.6118	ug/L	96
15) Tert-Butyl Alcohol	7.05	59	424706	508.7007	ug/L	96
16) Dimethyl Sulfide	7.17	62	1923956	277.9842	ug/L	90
17) Iodomethane	7.44	142	1602772	261.3531	ug/L	96
18) Methyl acetate	7.46	43	1883858	260.9480	ug/L	95
19) Methylene Chloride	7.73	84	2289052	266.9139	ug/L	80
20) Carbon Disulfide	7.77	76	6880776	264.5631	ug/L	99
21) Acrylonitrile	7.93	53	463418	164.6283	ug/L	96
22) Methyl Tert Butyl Ether	7.96	73	6373403	287.9628	ug/L	94
23) trans-1,2-Dichloroethene	8.22	96	2277805	288.6133	ug/L	83
24) n-Hexane	8.29	57	3251087	264.2330	ug/L	95
25) Diisopropyl ether	8.68	45	8947800	288.2105	ug/L	98
26) Vinyl Acetate	8.86	43	3881371	261.5325	ug/L	98
27) 1,1-Dichloroethane	8.89	63	4546014	271.6992	ug/L	99
28) Ethyl-Tert-Butyl ether	9.31	59	7784133	304.9926	ug/L	98
29) 2-Butanone	9.53	43	1002212	281.3852	ug/L	95
30) Propionitrile	9.65	54	290858	273.5938	ug/L	98
31) 2,2-Dichloropropane	9.76	77	3718833	284.1826	ug/L	97
32) cis-1,2-Dichloroethene	9.83	96	2487762	285.9946	ug/L	100
33) Chloroform	10.07	83	4371594	284.7116	ug/L	97
34) 1-Bromopropane	10.22	122	448279	364.6845	ug/L	99
35) Bromochloromethane	10.33	130	1514013	310.9181	ug/L	99
36) Tetrahydrofuran	10.36	42	648471	269.8216	ug/L	89
38) 1,1,1-Trichloroethane	10.66	97	4177441	309.2037	ug/L	98
39) Cyclohexane	10.69	56	4311506	279.9827	ug/L	91
40) 1,1-Dichloropropene	10.88	75	3345873	293.3838	ug/L	94
41) Tert-Amyl-Methyl ether	11.01	73	6238729	296.4017	ug/L	94
42) Carbon Tetrachloride	11.05	117	4040869	325.3081	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138405.D 8260WTR.M Tue Apr 12 14:52:47 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138405.D Vial: 11
Acq On : 11 Apr 2016 20:21 Operator: TMB
Sample : WG564297-11 300ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52:46 2016 Quant Results File: 8260WTR.RES

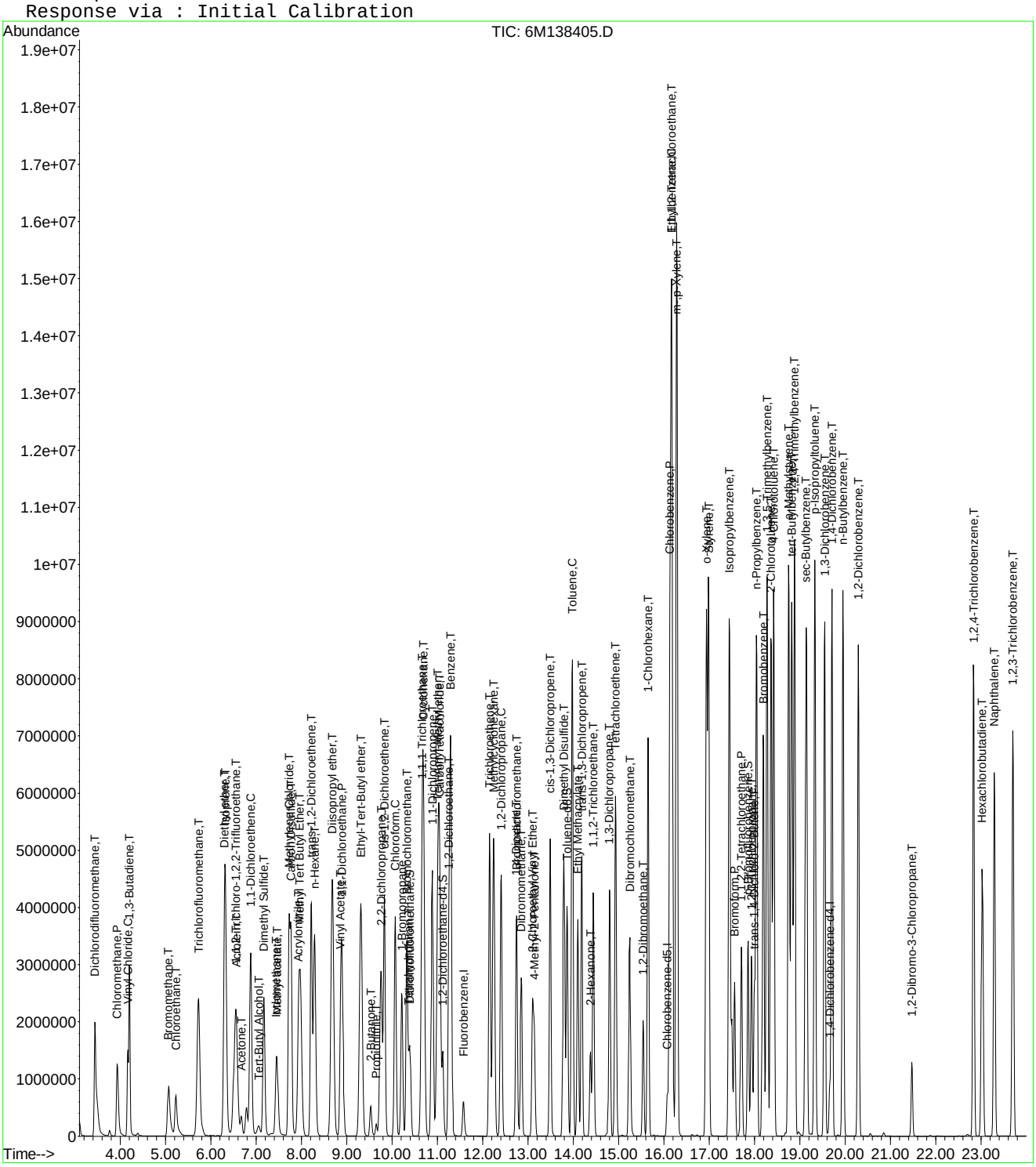
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

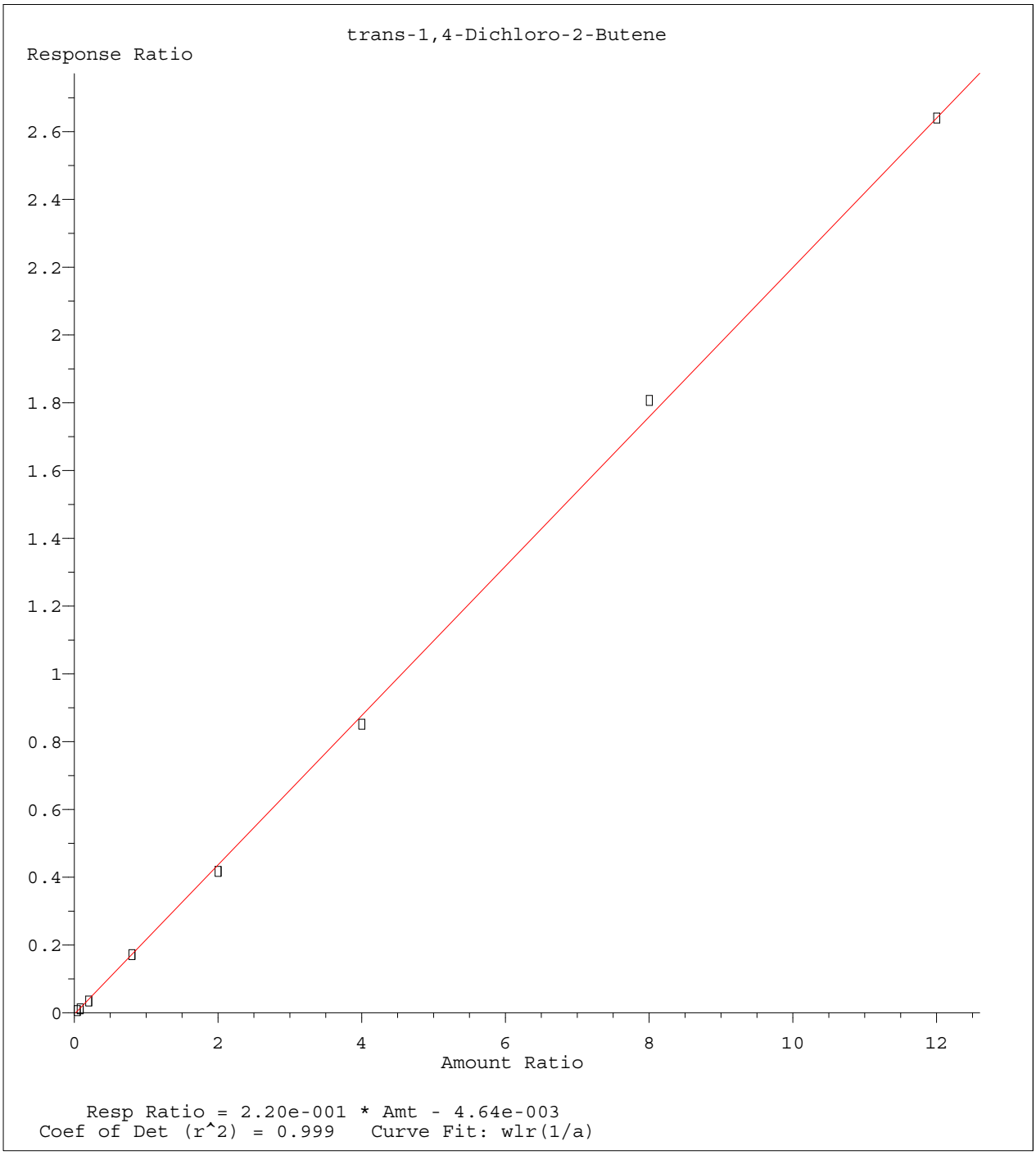
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	3553704	285.2770 ug/L	99
46)	Benzene	11.29	78	8373610	256.5629 ug/L	87
47)	Trichloroethene	12.15	130	2439754	308.7284 ug/L	94
48)	Methylcyclohexane	12.24	83	3456632	295.2806 ug/L	88
49)	1,2-Dichloropropane	12.41	63	2545678	279.4543 ug/L	97
50)	1,4-Dioxane	12.74	88	44008	569.7090 ug/L	91
51)	Bromodichloromethane	12.75	83	3556435	305.9353 ug/L	98
52)	Dibromomethane	12.84	93	1424022	295.4787 ug/L	100
53)	2-Chloroethyl Vinyl Ether	13.10	63	1250100	282.5617 ug/L	99
54)	4-Methyl-2-Pentanone	13.14	58	820070	304.1260 ug/L	98
55)	cis-1,3-Dichloropropene	13.49	75	3880219	298.4168 ug/L	97
56)	Dimethyl Disulfide	13.79	79	2194312	315.5637 ug/L	91
59)	Toluene	13.98	91	8527834	258.3982 ug/L	96
60)	Ethyl Methacrylate	14.10	69	2782361	294.8795 ug/L	88
62)	trans-1,3-Dichloropropene	14.19	75	3632092	293.5467 ug/L	99
63)	1,1,2-Trichloroethane	14.44	97	1821748	281.2269 ug/L	99
64)	2-Hexanone	14.38	43	1554684	287.1423 ug/L	98
65)	1,3-Dichloropropane	14.80	76	3232715	275.0533 ug/L	83
66)	Tetrachloroethene	14.93	166	2568505	307.4438 ug/L	97
67)	Dibromochloromethane	15.24	129	2626863	308.5960 ug/L	99
68)	1,2-Dibromoethane	15.54	107	1907290	297.6452 ug/L	99
69)	1-Chlorohexane	15.65	91	3084344	303.6200 ug/L	85
70)	Chlorobenzene	16.13	112	5742867	259.7227 ug/L	92
71)	1,1,1,2-Tetrachloroethane	16.17	131	2510274	291.3465 ug/L	97
72)	Ethylbenzene	16.17	106	3266993	278.8796 ug/L	86
73)	m-,p-Xylene	16.28	106	7202421	515.5553 ug/L	83
74)	o-Xylene	16.94	106	3808647	278.6667 ug/L	99
75)	Styrene	16.99	104	6491883	279.0593 ug/L	88
76)	Bromoform	17.56	173	1823482	329.3845 ug/L	98
77)	Isopropylbenzene	17.44	105	9059966	262.2951 ug/L	94
79)	1,1,2,2-Tetrachloroethane	17.71	83	2327659	269.5224 ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	748917	283.8066 ug/L	85
82)	trans-1,4-Dichloro-2-Buten	17.99	53	873846	251.1682 ug/L	83
83)	n-Propylbenzene	18.04	91	10098312	232.9506 ug/L	92
84)	Bromobenzene	18.20	156	2887256	283.7423 ug/L	100
85)	1,3,5-Trimethylbenzene	18.28	105	8191100	258.3602 ug/L	95
86)	2-Chlorotoluene	18.36	91	7228215	238.5859 ug/L	97
87)	4-Chlorotoluene	18.42	91	7432826	261.4769 ug/L	96
88)	a-Methylstyrene	18.75	118	4565188	272.6855 ug/L	97
89)	tert-Butylbenzene	18.82	134	1858167	282.4488 ug/L	94
90)	1,2,4-Trimethylbenzene	18.88	105	8375182	250.8856 ug/L	94
91)	sec-Butylbenzene	19.13	105	9360160	245.8334 ug/L	93
92)	p-Isopropyltoluene	19.33	119	8377297	257.9669 ug/L	96
93)	1,3-Dichlorobenzene	19.55	146	5250806	267.6095 ug/L	95
94)	1,4-Dichlorobenzene	19.71	146	5247528	258.1662 ug/L	97
95)	n-Butylbenzene	19.95	91	7659620	245.1505 ug/L	95
96)	1,2-Dichlorobenzene	20.29	146	4935034	269.1579 ug/L	96
97)	1,2-Dibromo-3-Chloropropan	21.47	75	494747	286.0436 ug/L	96
98)	1,2,4-Trichlorobenzene	22.84	180	3756300	276.5182 ug/L	99
99)	Hexachlorobutadiene	23.03	225	1526793	284.2098 ug/L	100
100)	Naphthalene	23.29	128	7284135	258.8812 ug/L	96
101)	1,2,3-Trichlorobenzene	23.70	180	3499681	277.0455 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138405.D 8260WTR.M Tue Apr 12 14:52:47 2016 Page 2

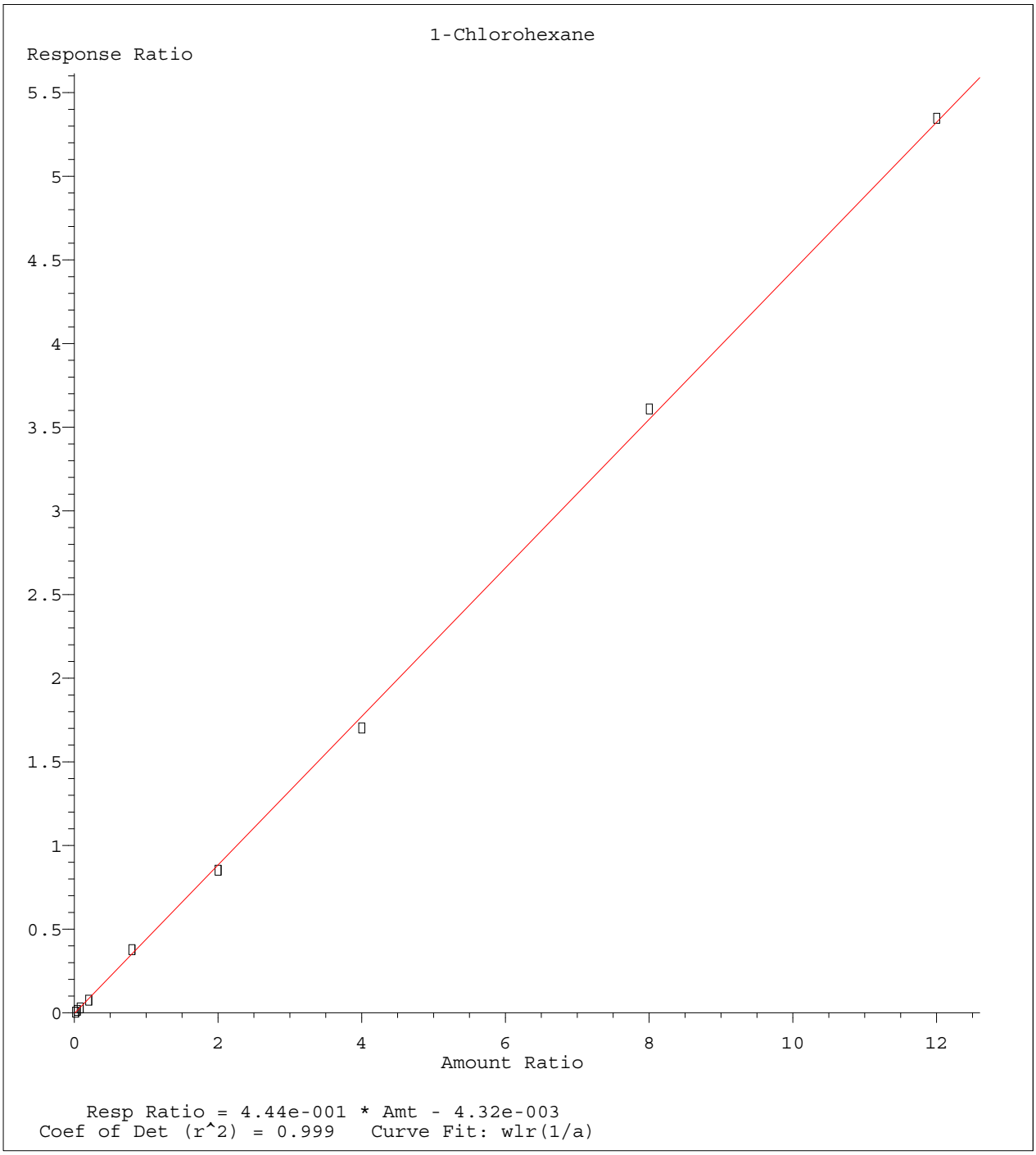
Data File : C:\MSDCHEM\1\DATA\041116\6M138405.D Vial: 11
Acq On : 11 Apr 2016 20:21 Operator: TMB
Sample : WG564297-11 300ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 14:52 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Mar 08 14:18:19 2016
Response via : Initial Calibration

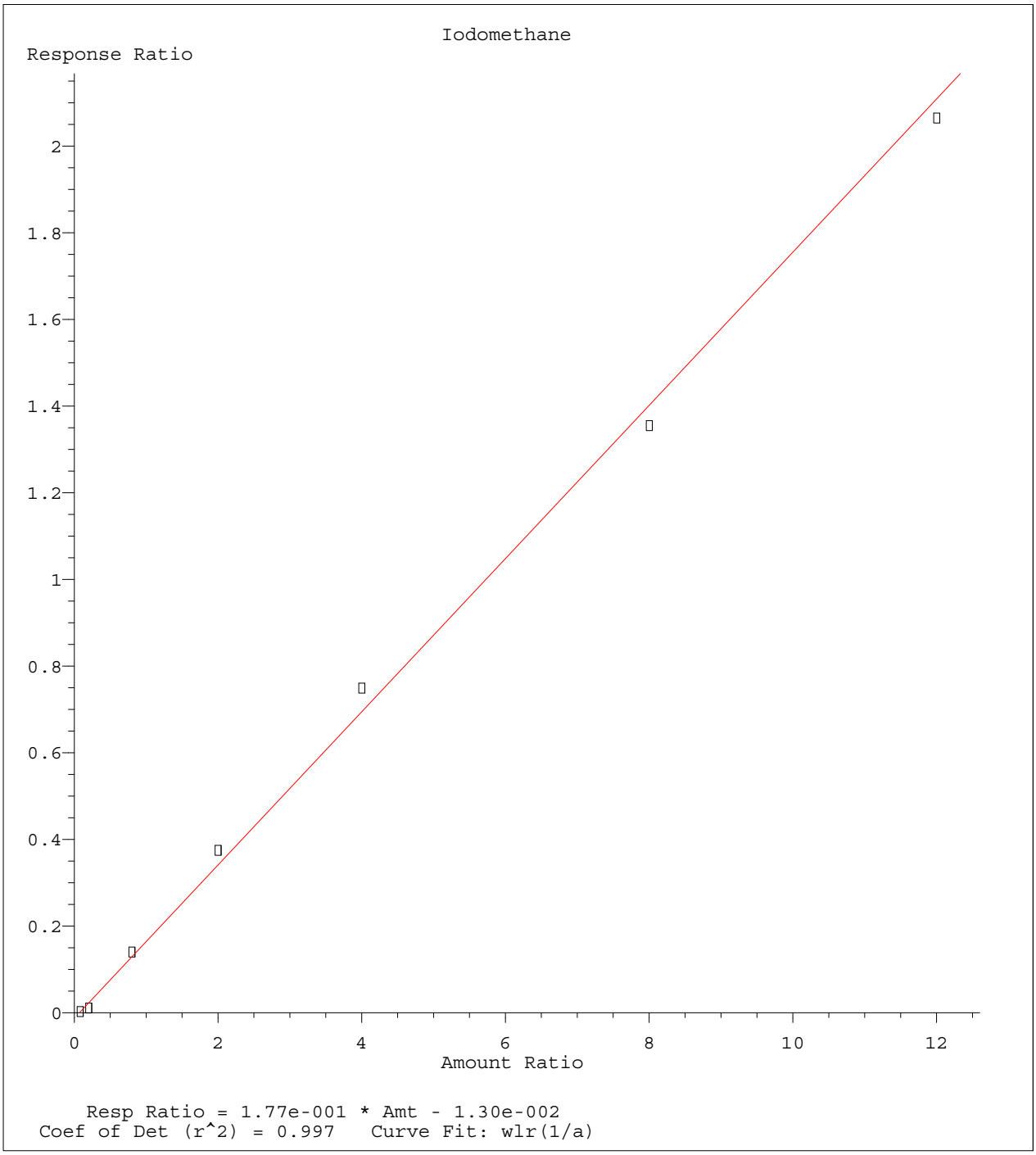




Method Name: C:\MSDCHEM\1\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Apr 12 15:28:54 2016



Method Name: C:\MSDCHEM\1\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Apr 12 15:28:54 2016



Method Name: C:\MSDCHEM\1\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Apr 12 15:28:54 2016

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138408.D Vial: 14
Acq On : 11 Apr 2016 21:58 Operator: TMB
Sample : WG564297-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 15:50:04 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	739777	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	545184	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	309733	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	182976	24.1510	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.60%			
43) 1,2-Dichloroethane-d4	11.12	65	214972	23.3790	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 93.52%			
58) Toluene-d8	13.86	98	596471	24.3019	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.20%			
80) p-Bromofluorobenzene	17.85	95	250098	24.1858	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.76%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.44	85	641252	50.4443	ug/L	99
3) Chloromethane	3.93	50	392515	44.1313	ug/L	99
4) Vinyl Chloride	4.16	62	330009	45.8628	ug/L	99
5) 1,3-Butadiene	4.20	54	191587	39.1580	ug/L	94
6) Bromomethane	5.07	94	154801	43.9565	ug/L	99
7) Chloroethane	5.23	64	206014	49.3949	ug/L	98
8) Trichlorofluoromethane	5.72	101	727584	49.4608	ug/L	99
9) Diethyl ether	6.30	59	672115	103.5141	ug/L	95
10) Isoprene	6.32	67	588291	63.2396	ug/L	94
11) Acrolein	6.56	56	81531	71.0335	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.55	101	383527	48.5669	ug/L	94
13) Acetone	6.67	43	113303	49.3912	ug/L	97
14) 1,1-Dichloroethene	6.88	61	627958	47.0859	ug/L	95
15) Tert-Butyl Alcohol	7.05	59	140917	213.8318	ug/L	96
16) Dimethyl Sulfide	7.17	62	439322	70.4051	ug/L	91
17) Iodomethane	7.44	142	170353	34.3998	ug/L	95
18) Methyl acetate	7.46	43	301453	47.3200	ug/L	94
19) Methylene Chloride	7.72	84	381756	47.0505	ug/L	79
20) Carbon Disulfide	7.77	76	1092241	46.3083	ug/L	99
21) Acrylonitrile	7.93	53	139889	51.9222	ug/L	99
22) Methyl Tert Butyl Ether	7.97	73	1046735	52.2463	ug/L	95
23) trans-1,2-Dichloroethene	8.21	96	370797	49.9485	ug/L	84
24) n-Hexane	8.29	57	516300	48.6498	ug/L	95
25) Diisopropyl ether	8.68	45	3024383	99.3661	ug/L	96
26) Vinyl Acetate	8.86	43	180002	15.1865	ug/L	97
27) 1,1-Dichloroethane	8.89	63	713861	45.5489	ug/L	99
28) Ethyl-Tert-Butyl ether	9.31	59	2451049	96.3703	ug/L	97
29) 2-Butanone	9.52	43	168261	49.6939	ug/L	93
30) Propionitrile	9.65	54	93487	96.1083	ug/L	98
31) 2,2-Dichloropropane	9.75	77	537067	43.8897	ug/L	96
32) cis-1,2-Dichloroethene	9.83	96	406487	50.0753	ug/L	99
33) Chloroform	10.07	83	693500	47.5968	ug/L	97
34) 1-Bromopropane	10.21	122	93247	73.3389	ug/L	100
35) Bromochloromethane	10.32	130	235958	48.4779	ug/L	100
36) Tetrahydrofuran	10.36	42	208336	94.4457	ug/L	87
38) 1,1,1-Trichloroethane	10.66	97	645069	48.0769	ug/L	99
39) Cyclohexane	10.69	56	709507	51.7927	ug/L	91
40) 1,1-Dichloropropene	10.89	75	508381	48.0267	ug/L	94
41) Tert-Amyl-Methyl ether	11.01	73	2040132	104.0541	ug/L	94
42) Carbon Tetrachloride	11.05	117	609072	48.3299	ug/L	97

(#) = qualifier out of range (m) = manual integration
6M138408.D 8260WTR.M Tue Apr 12 15:50:05 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138408.D Vial: 14
Acq On : 11 Apr 2016 21:58 Operator: TMB
Sample : WG564297-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 15:50:04 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

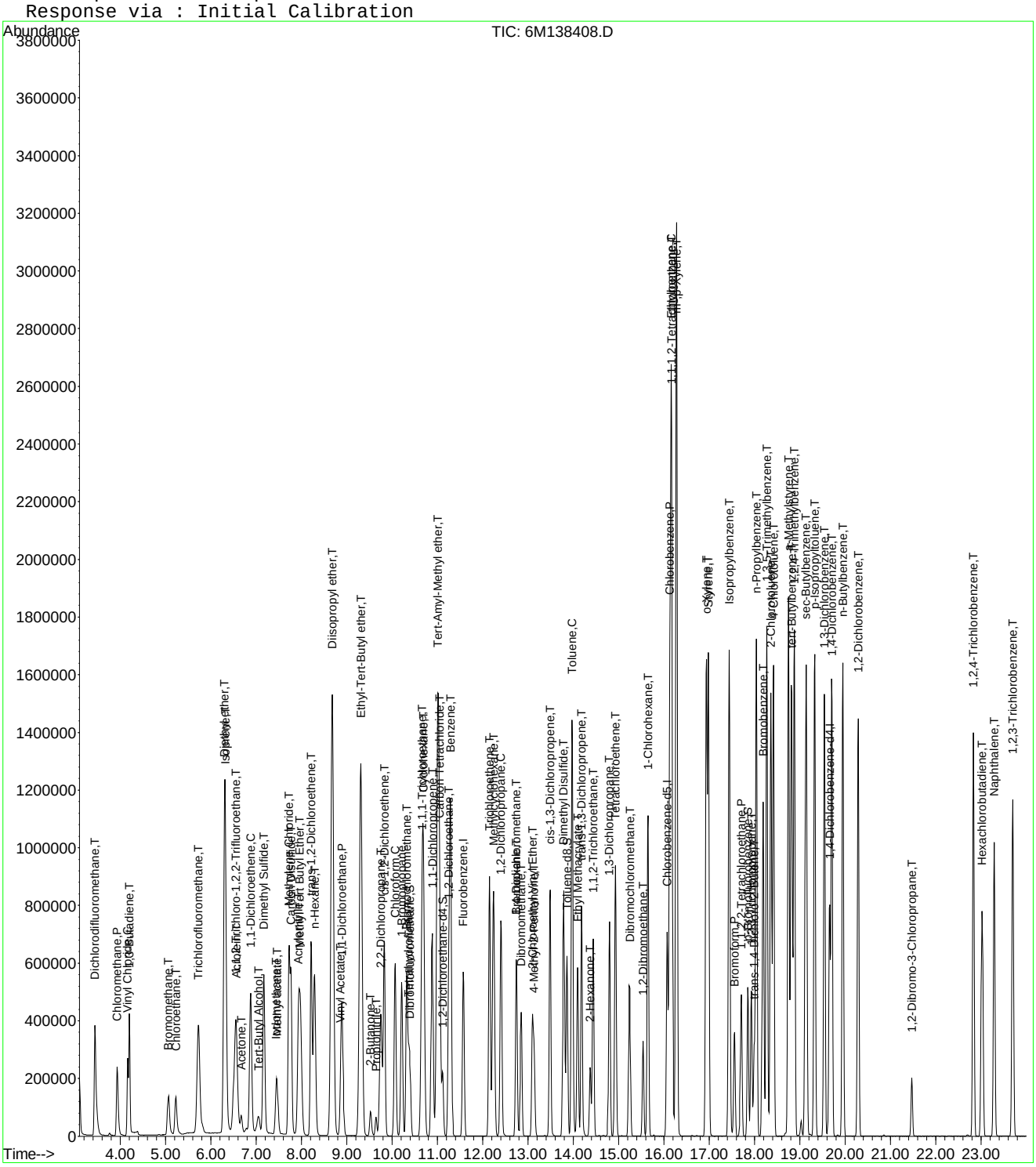
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	568808	48.9109	ug/L	100
46)	Benzene	11.29	78	1464872	47.6672	ug/L	92
47)	Trichloroethene	12.15	130	415067	51.6328	ug/L	97
48)	Methylcyclohexane	12.24	83	566460	52.7730	ug/L	89
49)	1,2-Dichloropropane	12.40	63	422955	50.3314	ug/L	99
50)	1,4-Dioxane	12.74	88	13461	210.4574	ug/L	89
51)	Bromodichloromethane	12.74	83	552770	49.0184	ug/L	98
52)	Dibromomethane	12.85	93	213504	47.6258	ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.10	63	212007	54.3560	ug/L	100
54)	4-Methyl-2-Pentanone	13.13	58	132018	50.8221	ug/L	96
55)	cis-1,3-Dichloropropene	13.49	75	658204	55.2986	ug/L	98
56)	Dimethyl Disulfide	13.79	79	352567	56.4818	ug/L	92
59)	Toluene	13.97	91	1514477	49.9122	ug/L	99
60)	Ethyl Methacrylate	14.10	69	459068	56.2834	ug/L	90
62)	trans-1,3-Dichloropropene	14.18	75	564432	49.2386	ug/L	99
63)	1,1,2-Trichloroethane	14.44	97	295013	48.7772	ug/L	99
64)	2-Hexanone	14.37	43	245422	49.9194	ug/L	96
65)	1,3-Dichloropropane	14.80	76	557125	51.8298	ug/L	84
66)	Tetrachloroethene	14.93	166	401108	48.3163	ug/L	98
67)	Dibromochloromethane	15.25	129	409721	50.1928	ug/L	100
68)	1,2-Dibromoethane	15.54	107	304781	51.3780	ug/L	99
69)	1-Chlorohexane	15.65	91	501820	52.0781	ug/L	86
70)	Chlorobenzene	16.13	112	1011690	48.6217	ug/L	97
71)	1,1,1,2-Tetrachloroethane	16.18	131	411801	49.9203	ug/L	98
72)	Ethylbenzene	16.16	106	544971	49.9909	ug/L	95
73)	m-,p-Xylene	16.28	106	1331512	102.9480	ug/L	91
74)	o-Xylene	16.94	106	668162	53.4449	ug/L	92
75)	Styrene	16.98	104	1129132	53.8229	ug/L	95
76)	Bromoform	17.56	173	257867	47.1774	ug/L	99
77)	Isopropylbenzene	17.44	105	1726964	54.8739	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.71	83	350072	46.4169	ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	120126	50.9229	ug/L	98
82)	trans-1,4-Dichloro-2-Buten	17.99	53	104356	38.7500	ug/L	77
83)	n-Propylbenzene	18.04	91	2039059	54.7869	ug/L	100
84)	Bromobenzene	18.19	156	459398	49.2687	ug/L	99
85)	1,3,5-Trimethylbenzene	18.27	105	1489891	52.7554	ug/L	99
86)	2-Chlorotoluene	18.36	91	1343746	50.4508	ug/L	99
87)	4-Chlorotoluene	18.42	91	1287410	50.2877	ug/L	98
88)	a-Methylstyrene	18.75	118	835595	58.4464	ug/L	99
89)	tert-Butylbenzene	18.82	134	312459	52.7648	ug/L	83
90)	1,2,4-Trimethylbenzene	18.88	105	1501228	49.8714	ug/L	98
91)	sec-Butylbenzene	19.14	105	1759598	51.9689	ug/L	100
92)	p-Isopropyltoluene	19.33	119	1497753	52.1000	ug/L	98
93)	1,3-Dichlorobenzene	19.54	146	895402	49.1609	ug/L	99
94)	1,4-Dichlorobenzene	19.71	146	914647	48.0713	ug/L	100
95)	n-Butylbenzene	19.95	91	1351251	50.2141	ug/L	100
96)	1,2-Dichlorobenzene	20.29	146	866087	50.1031	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	21.47	75	77100	50.4153	ug/L	95
98)	1,2,4-Trichlorobenzene	22.83	180	624831	51.1672	ug/L	99
99)	Hexachlorobutadiene	23.03	225	263010	52.9685	ug/L	99
100)	Naphthalene	23.29	128	1182539	49.0310	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	577758	50.5429	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138408.D 8260WTR.M Tue Apr 12 15:50:05 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041116\6M138408.D Vial: 14
Acq On : 11 Apr 2016 21:58 Operator: TMB
Sample : WG564297-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 12 15:50 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041116\6M138408.D Vial: 14
Acq On : 11 Apr 2016 21:58 Operator: TMB
Sample : WG564297-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	101	0.00
2	T	Dichlorodifluoromethane	50.0000	50.4443	-0.9	93	0.00
3	P	Chloromethane	50.0000	44.1313	11.7	81	0.00
4	C	Vinyl Chloride	50.0000	45.8628	8.3	90	0.00
5	T	1,3-Butadiene	50.0000	39.1580	21.7#	84	0.00
6	T	Bromomethane	50.0000	43.9564	12.1	89	0.00
7	T	Chloroethane	50.0000	49.3949	1.2	92	0.00
8	T	Trichlorofluoromethane	50.0000	49.4608	1.1	112	0.00
9	T	Diethyl ether	100.0000	103.5141	-3.5	109	0.00
10	T	Isoprene	50.0000	63.2396	-26.5#	130	0.00
11	T	Acrolein	50.0000	71.0335	-42.1#	145	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	48.5669	2.9	96	0.00
13	T	Acetone	50.0000	49.3912	1.2	97	0.00
14	C	1,1-Dichloroethene	50.0000	47.0859	5.8	91	0.00
15	T	Tert-Butyl Alcohol	200.0000	213.8318	-6.9	105	0.00
16	T	Dimethyl Sulfide	50.0000	70.4051	-40.8#	146	0.00
17	T	Iodomethane	50.0000	34.3998	31.2#	62	0.00
18	T	Methyl acetate	50.0000	47.3200	5.4	99	0.00
19	T	Methylene Chloride	50.0000	47.0505	5.9	96	0.00
20	T	Carbon Disulfide	50.0000	46.3083	7.4	99	0.00
21	T	Acrylonitrile	50.0000	51.9222	-3.8	101	0.00
22	T	Methyl Tert Butyl Ether	50.0000	52.2463	-4.5	98	0.00
23	T	trans-1,2-Dichloroethene	50.0000	49.9485	0.1	97	0.00
24	T	n-Hexane	50.0000	48.6499	2.7	101	0.00
25	T	Diisopropyl ether	100.0000	99.3661	0.6	106	0.00
26	T	Vinyl Acetate	50.0000	15.1865	69.6#	30	0.00
27	P	1,1-Dichloroethane	50.0000	45.5489	8.9	91	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	96.3703	3.6	98	0.00
29	T	2-Butanone	50.0000	49.6939	0.6	96	0.00
30	T	Propionitrile	100.0000	96.1084	3.9	97	0.00
31	T	2,2-Dichloropropane	50.0000	43.8897	12.2	88	0.00
32	T	cis-1,2-Dichloroethene	50.0000	50.0753	-0.2	97	0.00
33	C	Chloroform	50.0000	47.5968	4.8	95	0.00
34		1-Bromopropane	50.0000	73.3389	-46.7#	144	0.00
35	T	Bromochloromethane	50.0000	48.4779	3.0	94	0.00
36	T	Tetrahydrofuran	100.0000	94.4457	5.6	99	0.00
37	S	Dibromofluoromethane	25.0000	24.1510	3.4	95	0.00
38	T	1,1,1-Trichloroethane	50.0000	48.0769	3.8	95	0.00
39	T	Cyclohexane	50.0000	51.7927	-3.6	107	0.00
40	T	1,1-Dichloropropene	50.0000	48.0267	3.9	92	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	104.0541	-4.1	108	0.00
42	T	Carbon Tetrachloride	50.0000	48.3299	3.3	94	0.00
43	S	1,2-Dichloroethane-d4	25.0000	23.3790	6.5	94	0.00
44		Heptane	-1.0000	0.0000	0.0	105	0.00
45	T	1,2-Dichloroethane	50.0000	48.9109	2.2	96	0.00
46	T	Benzene	50.0000	47.6672	4.7	96	0.00
47	T	Trichloroethene	50.0000	51.6328	-3.3	104	0.00
48	T	Methylcyclohexane	50.0000	52.7730	-5.5	109	0.00
49	C	1,2-Dichloropropane	50.0000	50.3314	-0.7	100	0.00
50	T	1,4-Dioxane	200.0000	210.4574	-5.2	106	0.00
51	T	Bromodichloromethane	50.0000	49.0184	2.0	96	0.00
52	T	Dibromomethane	50.0000	47.6258	4.7	92	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	54.3560	-8.7	97	0.00
54	T	4-Methyl-2-Pentanone	50.0000	50.8221	-1.6	97	0.00

(#) = Out of Range
6M138408.D 8260WTR.M Tue Apr 12 15:50:09 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041116\6M138408.D Vial: 14
Acq On : 11 Apr 2016 21:58 Operator: TMB
Sample : WG564297-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD75503 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	50.0000	55.2987	-10.6	103	0.00
56	T	Dimethyl Disulfide	50.0000	56.4818	-13.0	117	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	101	0.00
58	S	Toluene-d8	25.0000	24.3019	2.8	96	0.00
59	C	Toluene	50.0000	49.9122	0.2	97	0.00
60	T	Ethyl Methacrylate	50.0000	56.2834	-12.6	107	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	96	0.00
62	T	trans-1,3-Dichloropropene	50.0000	49.2386	1.5	94	0.00
63	T	1,1,2-Trichloroethane	50.0000	48.7772	2.4	96	0.00
64	T	2-Hexanone	50.0000	49.9194	0.2	95	0.00
65	T	1,3-Dichloropropane	50.0000	51.8298	-3.7	101	0.00
66	T	Tetrachloroethene	50.0000	48.3163	3.4	96	0.00
67	T	Dibromochloromethane	50.0000	50.1928	-0.4	95	0.00
68	T	1,2-Dibromoethane	50.0000	51.3780	-2.8	96	0.00
69	T	1-Chlorohexane	50.0000	52.0781	-4.2	109	0.00
70	P	Chlorobenzene	50.0000	48.6217	2.8	98	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	49.9203	0.2	97	0.00
72	C	Ethylbenzene	50.0000	49.9909	0.0	97	0.00
73	T	m-,p-Xylene	100.0000	102.9480	-2.9	98	0.00
74	T	o-Xylene	50.0000	53.4449	-6.9	100	0.00
75	T	Styrene	50.0000	53.8229	-7.6	96	0.00
76	P	Bromoform	50.0000	47.1774	5.6	91	0.00
77	T	Isopropylbenzene	50.0000	54.8739	-9.7	99	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	101	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	46.4169	7.2	91	0.00
80	S	p-Bromofluorobenzene	25.0000	24.1858	3.3	94	0.00
81	T	1,2,3-Trichloropropane	50.0000	50.9229	-1.8	98	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	38.7500	22.5#	81	0.00
83	T	n-Propylbenzene	50.0000	54.7869	-9.6	98	0.00
84	T	Bromobenzene	50.0000	49.2687	1.5	96	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	52.7554	-5.5	97	0.00
86	T	2-Chlorotoluene	50.0000	50.4508	-0.9	96	0.00
87	T	4-Chlorotoluene	50.0000	50.2877	-0.6	99	0.00
88	T	a-Methylstyrene	50.0000	58.4464	-16.9	118	0.00
89	T	tert-Butylbenzene	50.0000	52.7648	-5.5	100	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	49.8714	0.3	94	0.00
91	T	sec-Butylbenzene	50.0000	51.9689	-3.9	97	0.00
92	T	p-Isopropyltoluene	50.0000	52.1000	-4.2	95	0.00
93	T	1,3-Dichlorobenzene	50.0000	49.1609	1.7	97	0.00
94	T	1,4-Dichlorobenzene	50.0000	48.0713	3.9	99	0.00
95	T	n-Butylbenzene	50.0000	50.2141	-0.4	93	0.00
96	T	1,2-Dichlorobenzene	50.0000	50.1031	-0.2	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	50.4153	-0.8	96	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	51.1672	-2.3	97	0.00
99	T	Hexachlorobutadiene	50.0000	52.9685	-5.9	102	0.00
100	T	Naphthalene	50.0000	49.0310	1.9	86	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	50.5429	-1.1	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138408.D 8260WTR.M Tue Apr 12 15:50:09 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407828.D Vial: 2
Acq On : 5 Oct 2015 11:49 Operator: TMB
Sample : WG540826-02 5ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:55 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

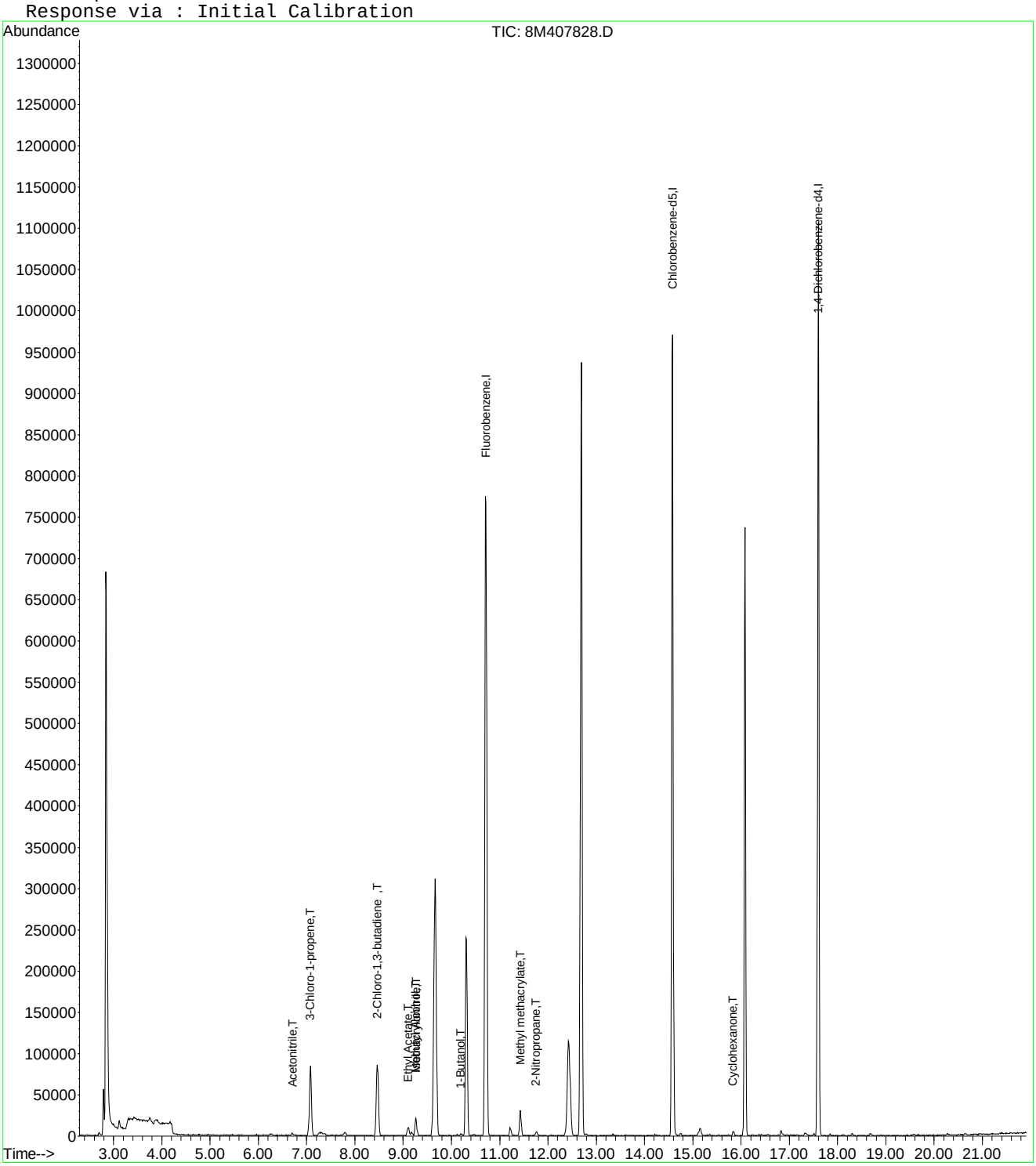
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.72	96	928093	25.00	ug/L		0.00
11) Chlorobenzene-d5	14.58	117	670481	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	347120	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	6.71	41	3724	5.2139	ug/L		81
3) 3-Chloro-1-propene	7.08	41	87895	5.0600	ug/L		95
4) 2-Chloro-1,3-butadiene	8.46	53	83096	4.6491	ug/L		97
5) Ethyl Acetate	9.11	43	19297	4.0869	ug/L		95
6) Methacrylonitrile	9.27	67	8508	4.1055	ug/L		97
7) Isobutyl Alcohol	9.26	43	1318	6.8122	ug/L	#	56
8) 1-Butanol	10.19	56	1930	20.2377	ug/L	#	64
9) Methyl methacrylate	11.43	41	22250	3.8908	ug/L		96
10) 2-Nitropropane	11.75	43	2454	2.5566	ug/L		66
13) Cyclohexanone	15.83	55	2773	3.7471	ug/L	#	43

(#) = qualifier out of range (m) = manual integration
8M407828.D A9FOOWTR.M Tue Oct 06 11:56:56 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407828.D Vial: 2
Acq On : 5 Oct 2015 11:49 Operator: TMB
Sample : WG540826-02 5ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407828.D Vial: 2
Acq On : 5 Oct 2015 11:49 Operator: TMB
Sample : WG540826-02 5ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	5.0000	5.2139	-4.3	100	0.01
3	T	3-Chloro-1-propene	5.0000	5.0600	-1.2	100	0.00
4	T	2-Chloro-1,3-butadiene	5.0000	4.6491	7.0	100	0.00
5	T	Ethyl Acetate	5.0000	4.0869	18.3	100	0.01
6	T	Methacrylonitrile	5.0000	4.1055	17.9	100	0.01
7	T	Isobutyl Alcohol	-1.0000	6.8122	0.0	100	-0.01
8	T	1-Butanol	-1.0000	20.2377	0.0	100	0.00
9	T	Methyl methacrylate	5.0000	3.8908	22.2	100	0.00
10	T	2-Nitropropane	-1.0000	2.5566	0.0	0	-0.01
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	3.7471	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407828.D A9FOOWTR.M Tue Oct 06 11:54:24 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407829.D Vial: 3
Acq On : 5 Oct 2015 12:17 Operator: TMB
Sample : WG540826-03 20ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:56 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

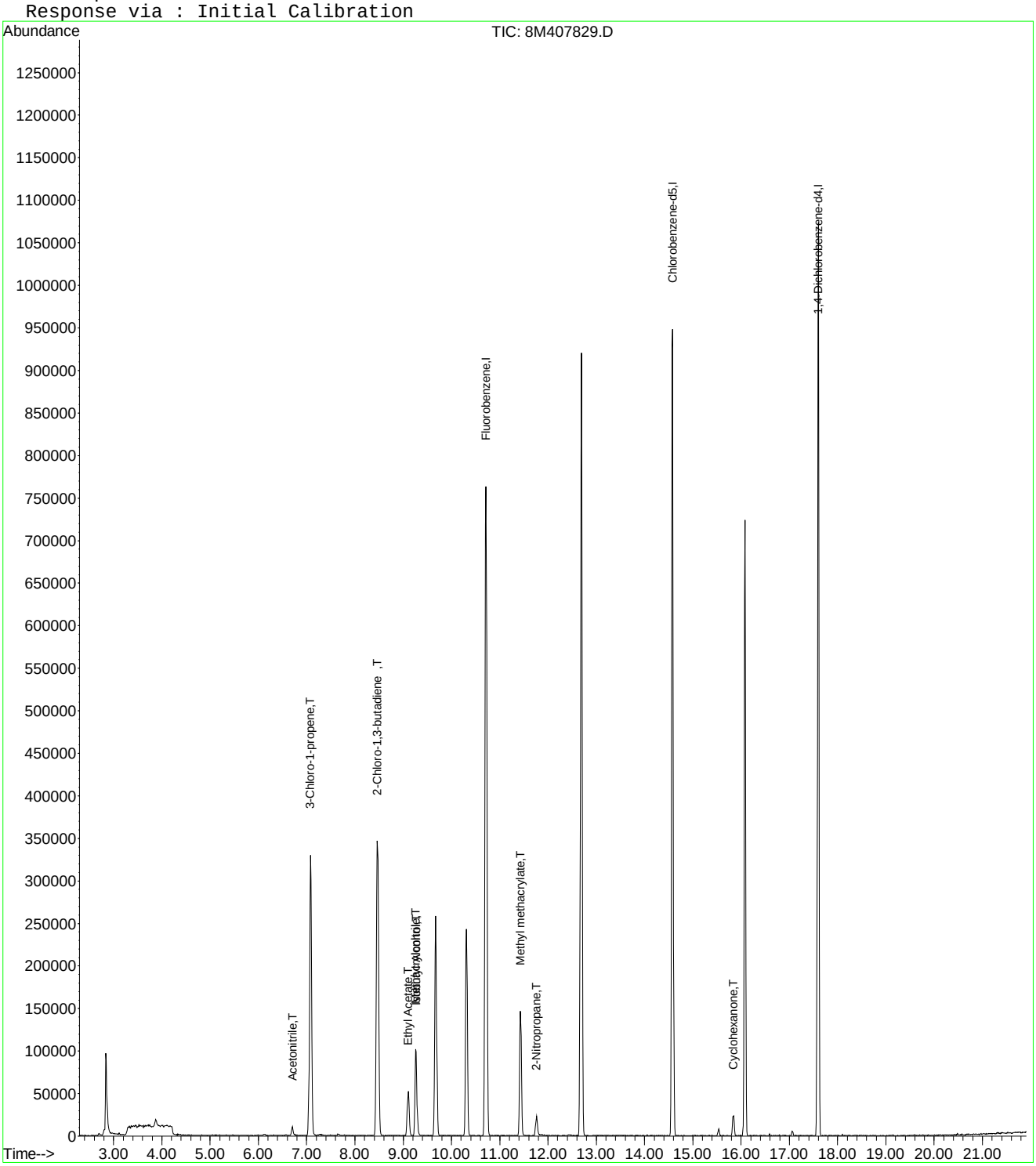
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	903673	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	657140	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	345767	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.71	41	14085	20.2529	ug/L	98
3) 3-Chloro-1-propene	7.08	41	349549	20.6667	ug/L	100
4) 2-Chloro-1,3-butadiene	8.46	53	347796	19.9846	ug/L	100
5) Ethyl Acetate	9.10	43	93237	20.2805	ug/L	97
6) Methacrylonitrile	9.26	67	40077	19.8617	ug/L	100
7) Isobutyl Alcohol	9.27	43	6436	34.1640	ug/L #	94
9) Methyl methacrylate	11.43	41	106029	19.0419	ug/L	97
10) 2-Nitropropane	11.76	43	12836	13.7339	ug/L	86
13) Cyclohexanone	15.84	55	14620	19.8329	ug/L	92

(#) = qualifier out of range (m) = manual integration
8M407829.D A9FOOWTR.M Tue Oct 06 11:56:56 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407829.D Vial: 3
Acq On : 5 Oct 2015 12:17 Operator: TMB
Sample : WG540826-03 20ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407829.D Vial: 3
Acq On : 5 Oct 2015 12:17 Operator: TMB
Sample : WG540826-03 20ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	20.0000	20.2529	-1.3	100	0.00
3	T	3-Chloro-1-propene	20.0000	20.6667	-3.3	100	0.00
4	T	2-Chloro-1,3-butadiene	20.0000	19.9846	0.1	100	0.00
5	T	Ethyl Acetate	20.0000	20.2805	-1.4	100	0.00
6	T	Methacrylonitrile	20.0000	19.8618	0.7	100	0.00
7	T	Isobutyl Alcohol	-1.0000	34.1640	0.0	100	0.00
8	T	1-Butanol	-1.0000	0.0000	0.0	0	-10.19#
9	T	Methyl methacrylate	20.0000	19.0419	4.8	100	0.00
10	T	2-Nitropropane	-1.0000	13.7339	0.0	0	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	19.8329	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407829.D A9FOOWTR.M Tue Oct 06 11:54:38 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 13:13:37 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

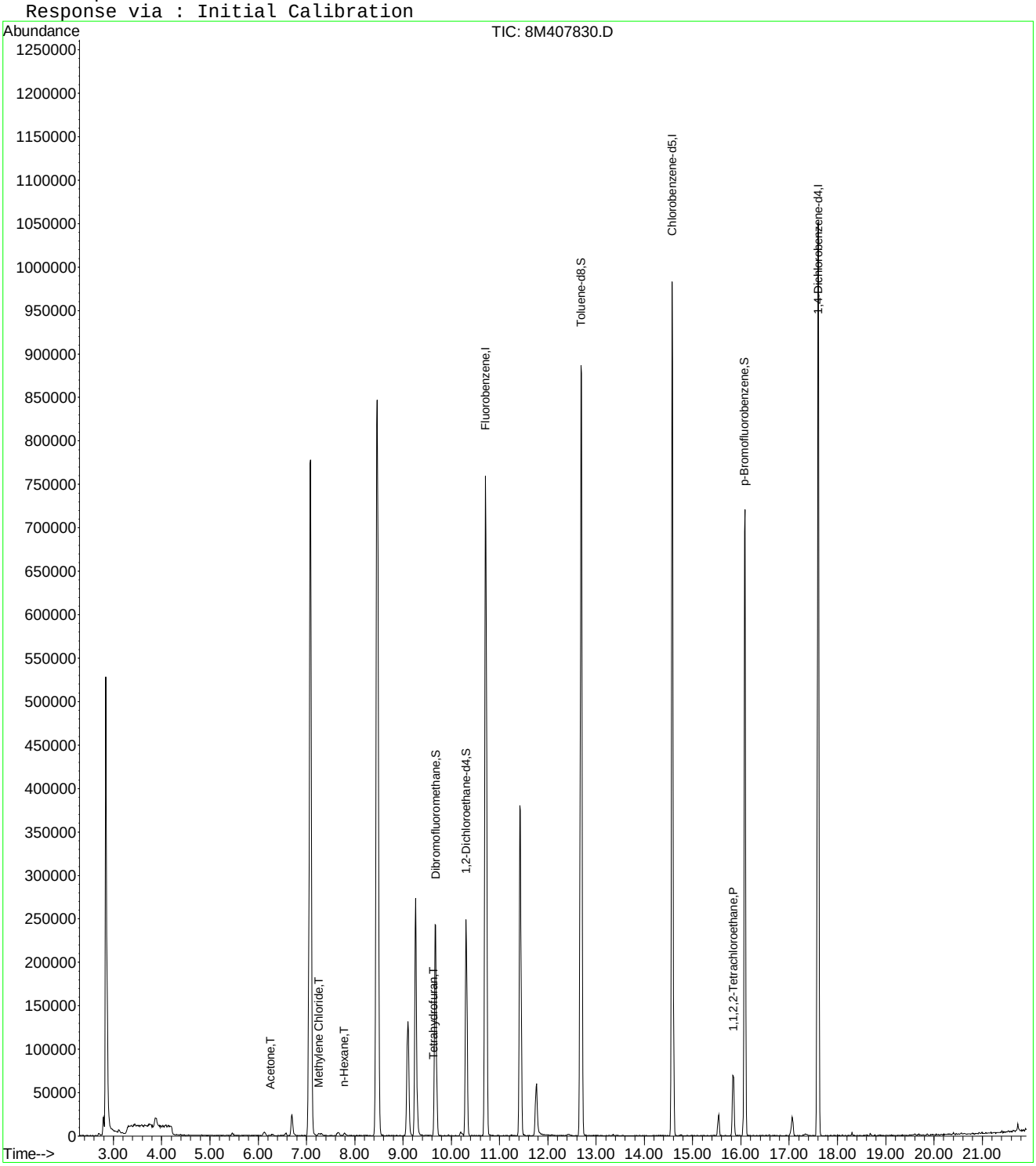
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	883897	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	665815	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	354078	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.68	111	212038	25.2054 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.84%		
43) 1,2-Dichloroethane-d4	10.31	65	214919	25.0573 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.24%		
58) Toluene-d8	12.69	98	784209	25.3851 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.56%		
80) p-Bromofluorobenzene	16.07	95	309869	25.0818 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 100.32%		
Target Compounds					Qvalue
13) Acetone	6.26	43	674	0.5137 ug/L #	48
19) Methylene Chloride	7.26	84	1894	0.2128 ug/L	67
24) n-Hexane	7.79	57	2250	0.1674 ug/L	96
36) Tetrahydrofuran	9.64	42	735	0.4954 ug/L #	40
79) 1,1,2,2-Tetrachloroethane	15.85	83	3323	0.5087 ug/L #	26

(#) = qualifier out of range (m) = manual integration
8M407830.D 8260WT.M Mon Oct 05 13:13:38 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 13:13 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



8M407830.D 8260WT.M Mon Oct 05 13:13:39 2015 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:57 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

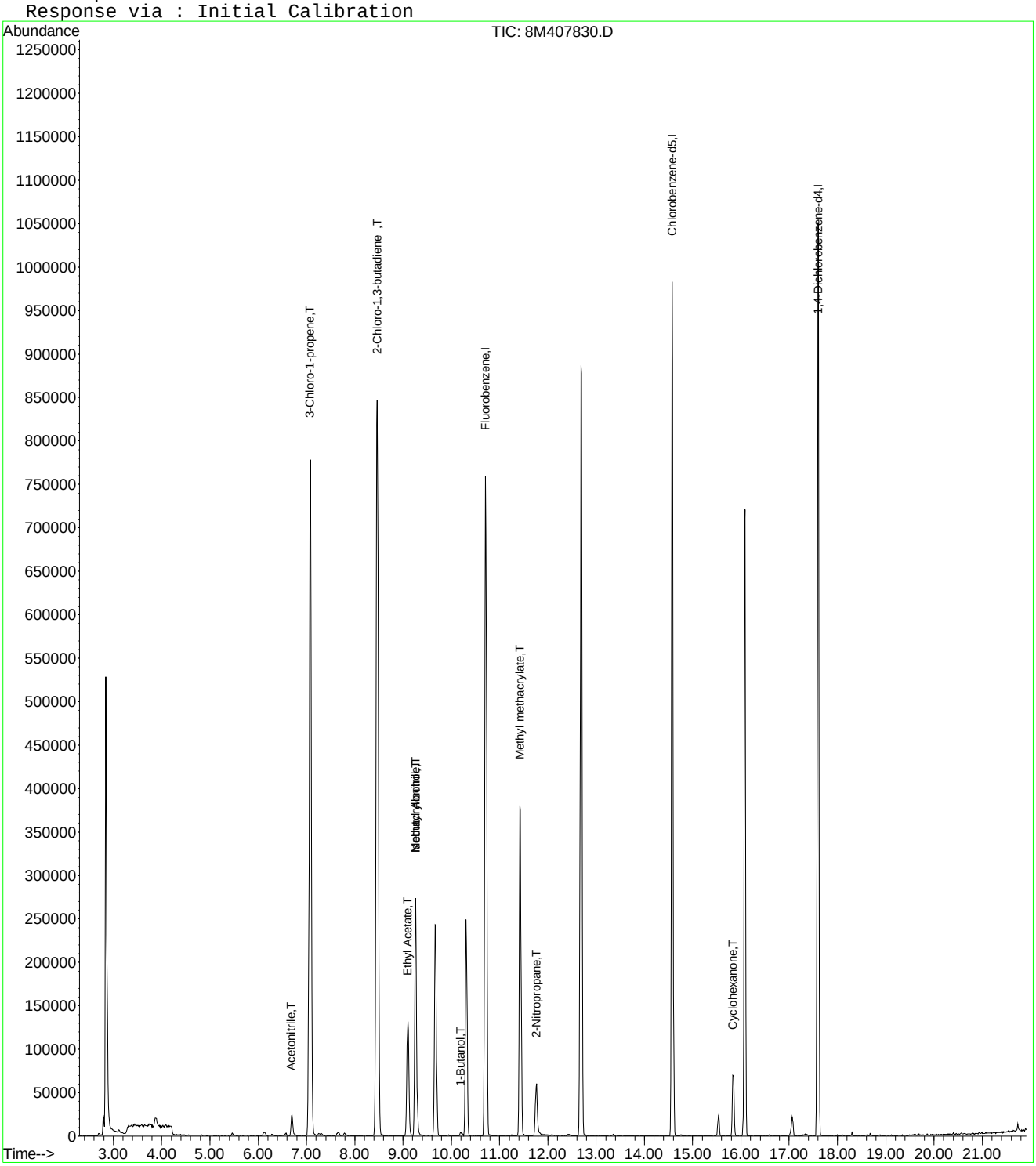
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	883897	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	665815	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	354078	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.69	41	35080	51.5703	ug/L	99
3) 3-Chloro-1-propene	7.07	41	841804	50.8844	ug/L	100
4) 2-Chloro-1,3-butadiene	8.47	53	851495	50.0222	ug/L	100
5) Ethyl Acetate	9.10	43	233139	51.8459	ug/L	97
6) Methacrylonitrile	9.26	67	101702	51.5301	ug/L	97
7) Isobutyl Alcohol	9.26	43	17567	95.3366	ug/L	98
8) 1-Butanol	10.19	56	3729	41.0570	ug/L	92
9) Methyl methacrylate	11.42	41	280126	51.4337	ug/L	98
10) 2-Nitropropane	11.76	43	37061	40.5407	ug/L	95
13) Cyclohexanone	15.84	55	40139	53.1730	ug/L	88

(#) = qualifier out of range (m) = manual integration
8M407830.D A9FOOWTR.M Tue Oct 06 11:56:57 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407830.D Vial: 4
Acq On : 5 Oct 2015 12:51 Operator: TMB
Sample : WG540826-04 50ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	50.0000	51.5703	-3.1	100	0.00
3	T	3-Chloro-1-propene	50.0000	50.8844	-1.8	100	0.00
4	T	2-Chloro-1,3-butadiene	50.0000	50.0222	-0.0	100	0.00
5	T	Ethyl Acetate	50.0000	51.8459	-3.7	100	0.00
6	T	Methacrylonitrile	50.0000	51.5301	-3.1	100	0.00
7	T	Isobutyl Alcohol	100.0000	95.3366	4.7	100	0.00
8	T	1-Butanol	50.0000	41.0570	17.9	100	0.00
9	T	Methyl methacrylate	50.0000	51.4337	-2.9	100	0.00
10	T	2-Nitropropane	50.0000	40.5407	18.9	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	50.0000	53.1730	-6.3	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407830.D A9FOOWTR.M Tue Oct 06 11:54:56 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 13:42:04 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

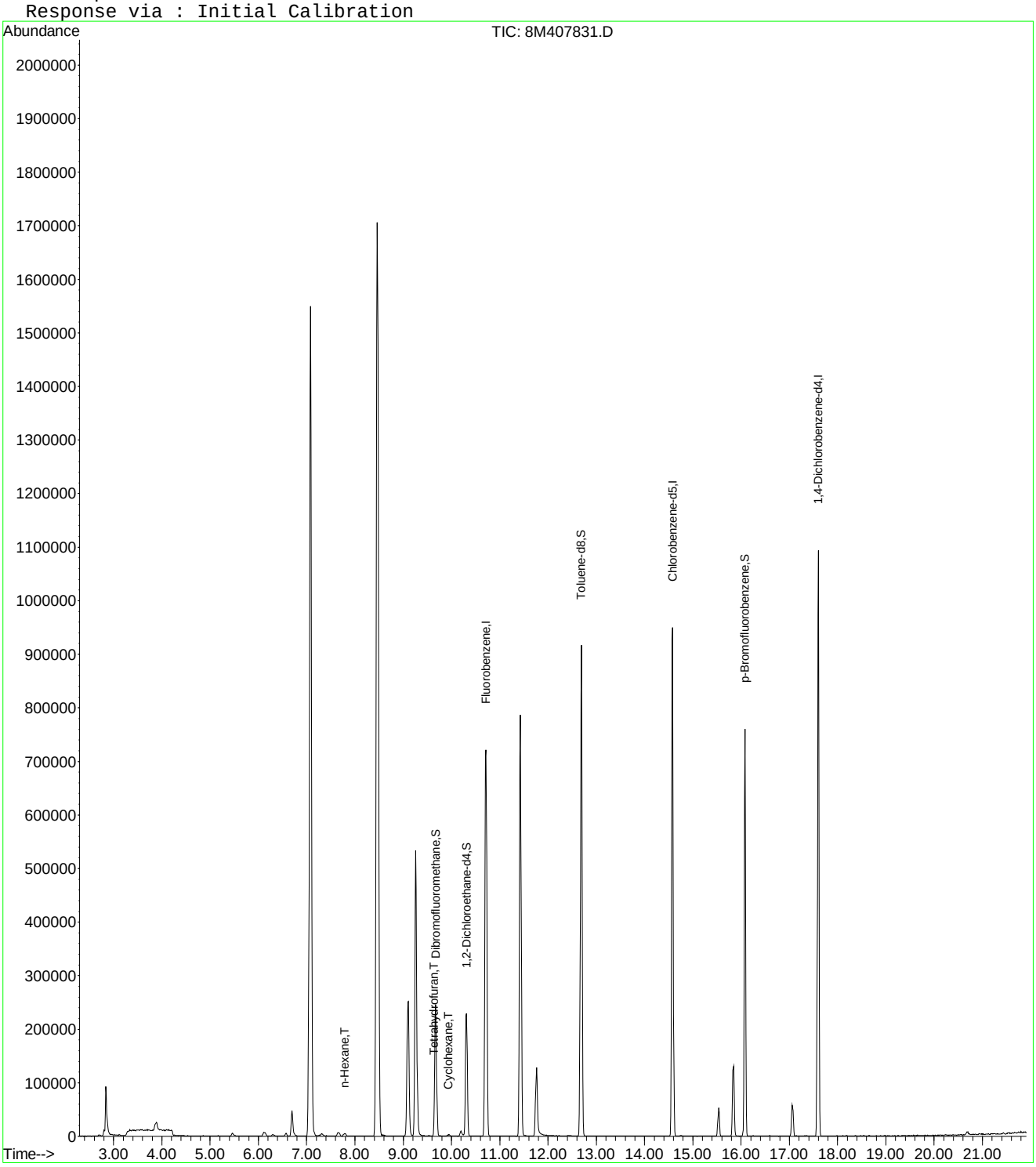
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	866178	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	661111	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	356230	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	202803	24.6008	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.40%			
43) 1,2-Dichloroethane-d4	10.31	65	203632	24.2270	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 96.92%			
58) Toluene-d8	12.69	98	789106	25.7254	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.92%			
80) p-Bromofluorobenzene	16.08	95	308907	24.8529	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 99.40%			
Target Compounds						Qvalue
24) n-Hexane	7.79	57	3351	0.2544	ug/L	79
36) Tetrahydrofuran	9.64	42	639	0.4395	ug/L #	40
39) Cyclohexane	9.94	56	2379	0.1385	ug/L #	66

(#) = qualifier out of range (m) = manual integration
8M407831.D 8260WT.M Mon Oct 05 13:42:05 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 13:42 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:58 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

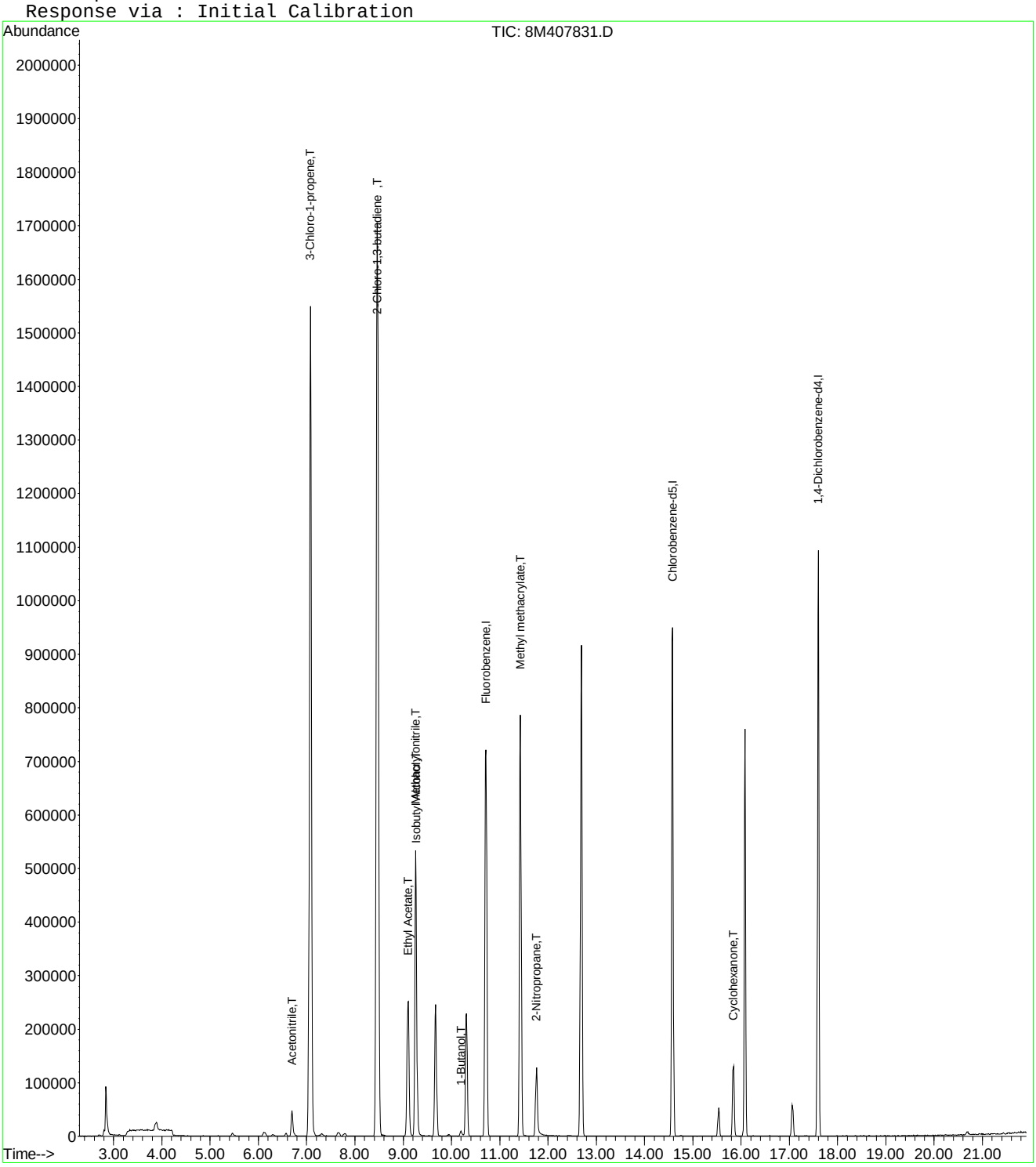
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	866178	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	661111	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	356230	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	67393	101.0995	ug/L	100
3) 3-Chloro-1-propene	7.08	41	1633129	100.7368	ug/L	100
4) 2-Chloro-1,3-butadiene	8.46	53	1684207	100.9649	ug/L	99
5) Ethyl Acetate	9.10	43	453445	102.9007	ug/L	99
6) Methacrylonitrile	9.26	67	196843	101.7762	ug/L	95
7) Isobutyl Alcohol	9.27	43	37534	207.8650	ug/L	92
8) 1-Butanol	10.20	56	8253	92.7258	ug/L	78
9) Methyl methacrylate	11.43	41	562497	105.3924	ug/L	98
10) 2-Nitropropane	11.76	43	77739	86.7776	ug/L	89
13) Cyclohexanone	15.84	55	74077	97.5385	ug/L	84

(#) = qualifier out of range (m) = manual integration
8M407831.D A9FOOWTR.M Tue Oct 06 11:56:58 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407831.D Vial: 5
Acq On : 5 Oct 2015 13:20 Operator: TMB
Sample : WG540826-05 100ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:54:01 2015
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	100.0000	101.0995	-1.1	100	0.00
3	T	3-Chloro-1-propene	100.0000	100.7368	-0.7	100	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	100.9649	-1.0	100	0.00
5	T	Ethyl Acetate	100.0000	102.9007	-2.9	100	0.00
6	T	Methacrylonitrile	100.0000	101.7762	-1.8	100	0.00
7	T	Isobutyl Alcohol	200.0000	207.8650	-3.9	100	0.00
8	T	1-Butanol	100.0000	92.7258	7.3	100	0.00
9	T	Methyl methacrylate	100.0000	105.3924	-5.4	100	0.00
10	T	2-Nitropropane	100.0000	86.7776	13.2	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	100.0000	97.5386	2.5	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407831.D A9FOOWTR.M Tue Oct 06 11:55:12 2015 Page 1

Data File : C:\MSDchem\2\data\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 14:10:58 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

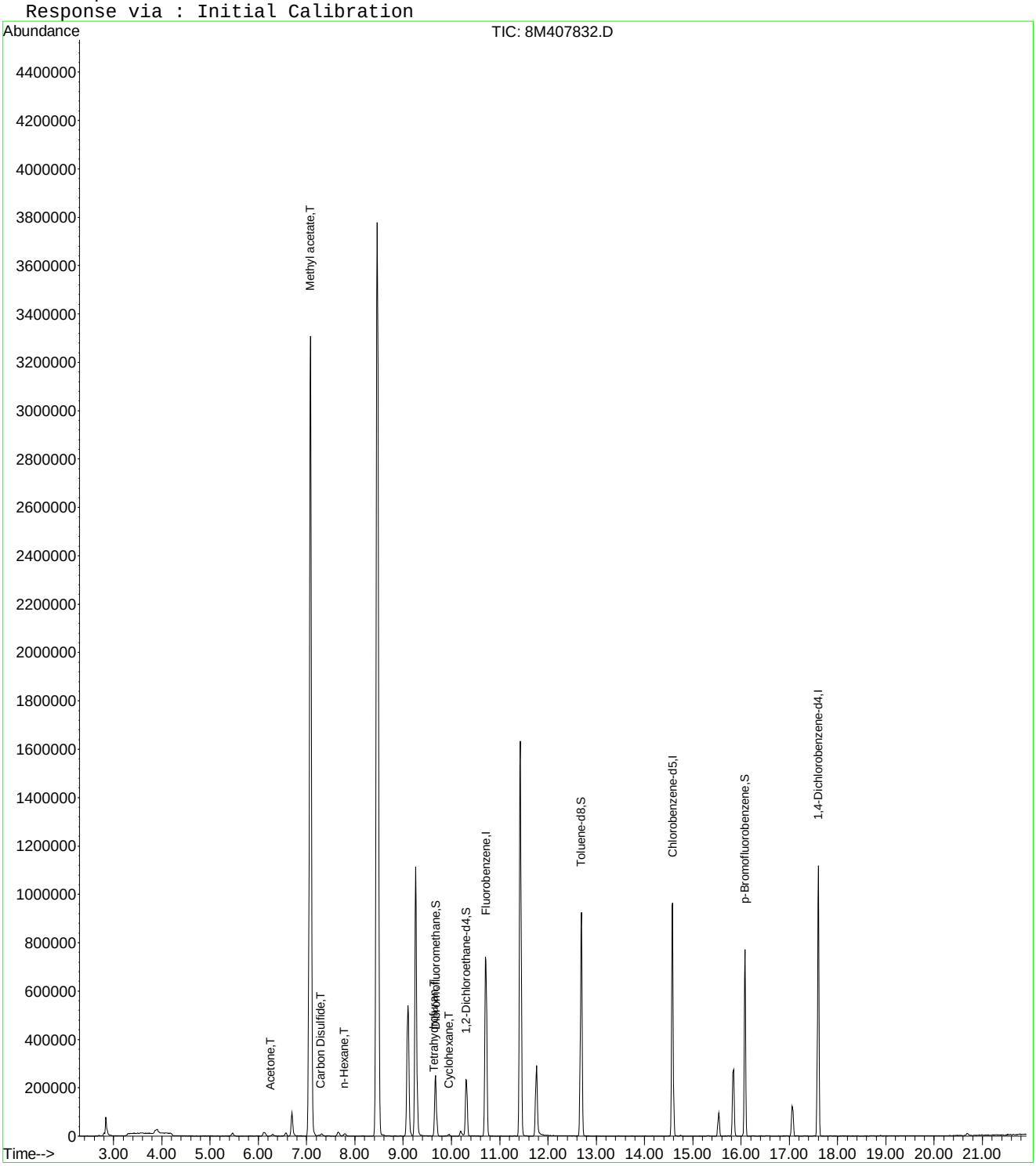
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.72	96	897754	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	673480	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	363907	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	208738	24.4301 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.72%		
43) 1,2-Dichloroethane-d4	10.30	65	213605	24.5197 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.08%		
58) Toluene-d8	12.69	98	807841	25.8525 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.40%		
80) p-Bromofluorobenzene	16.08	95	324104	25.5255 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.12%		
Target Compounds					Qvalue
13) Acetone	6.25	43	677	0.5081 ug/L #	48
18) Methyl acetate	7.08	43	1823	0.3618 ug/L #	1
20) Carbon Disulfide	7.30	76	5054	0.1712 ug/L #	78
24) n-Hexane	7.78	57	7743	0.5671 ug/L	88
36) Tetrahydrofuran	9.64	42	1466	0.9728 ug/L #	40
39) Cyclohexane	9.95	56	4715	0.2647 ug/L	84

(#) = qualifier out of range (m) = manual integration
8M407832.D 8260WT.M Mon Oct 05 14:10:59 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 14:10 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:58 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

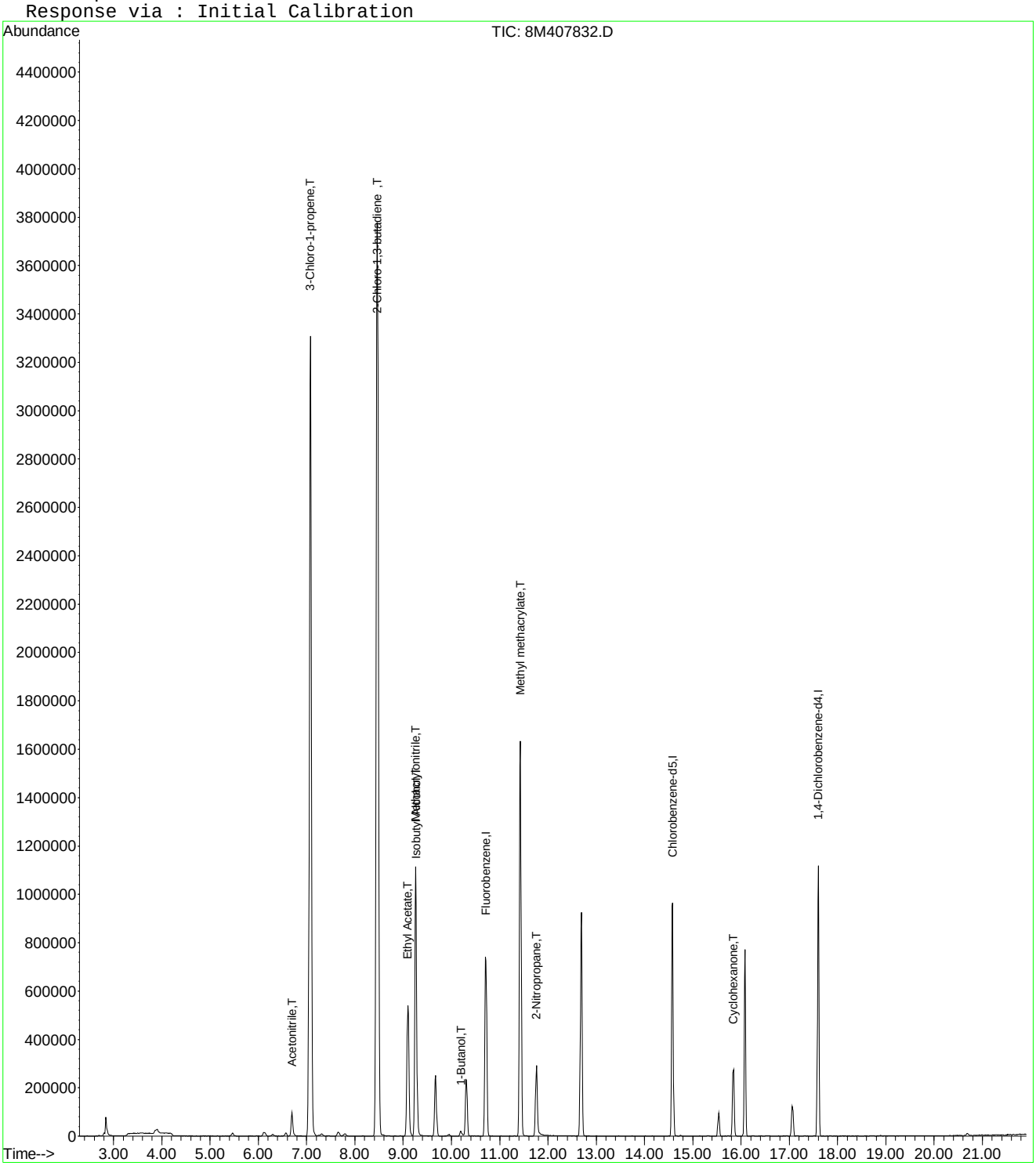
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	897754	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	673480	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	363907	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	138277	200.1400	ug/L	97
3) 3-Chloro-1-propene	7.08	41	3475078	206.8151	ug/L	99
4) 2-Chloro-1,3-butadiene	8.46	53	3691199	213.4973	ug/L	98
5) Ethyl Acetate	9.09	43	949825	207.9635	ug/L	98
6) Methacrylonitrile	9.26	67	412747	205.9018	ug/L	95
7) Isobutyl Alcohol	9.27	43	71985	384.6346	ug/L	94
8) 1-Butanol	10.20	56	18764	203.4062	ug/L	78
9) Methyl methacrylate	11.43	41	1165248	210.6479	ug/L	99
10) 2-Nitropropane	11.76	43	181242	195.1989	ug/L	92
13) Cyclohexanone	15.84	55	156208	201.3429	ug/L	89

(#) = qualifier out of range (m) = manual integration
8M407832.D A9FOOWTR.M Tue Oct 06 11:56:59 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407832.D Vial: 6
Acq On : 5 Oct 2015 13:49 Operator: TMB
Sample : WG540826-06 200ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Data File : C:\MSDchem\2\data\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 14:39:56 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

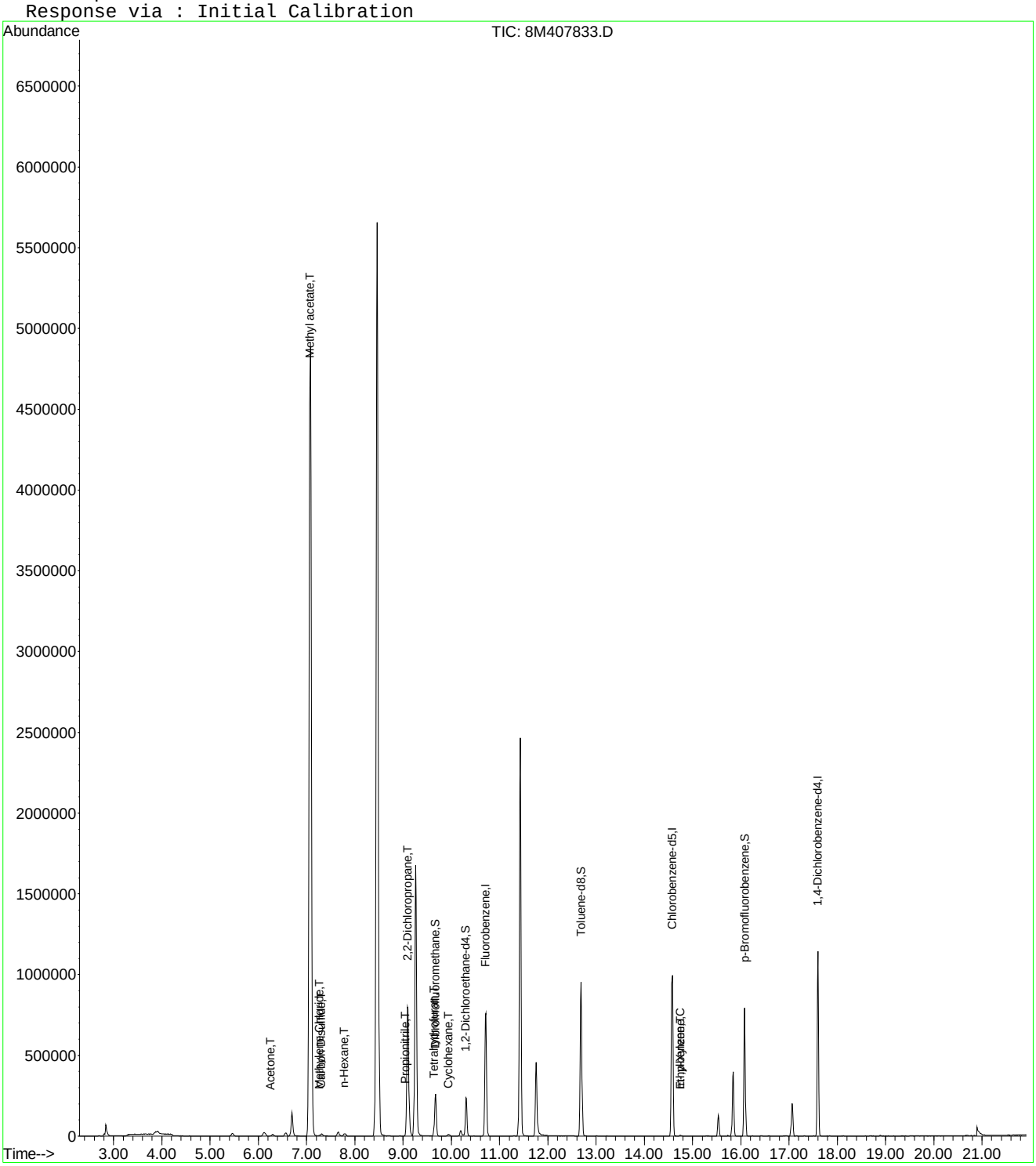
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	914795	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	689423	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	367388	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	213426	24.5135	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.04%			
43) 1,2-Dichloroethane-d4	10.30	65	216408	24.3787	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.52%			
58) Toluene-d8	12.69	98	818846	25.5987	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.40%			
80) p-Bromofluorobenzene	16.08	95	327784	25.5707	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.28%			
Target Compounds						Qvalue
13) Acetone	6.25	43	1107	0.8153	ug/L #	48
18) Methyl acetate	7.07	43	3926	0.7646	ug/L #	1
19) Methylene Chloride	7.26	84	1197	0.1300	ug/L	55
20) Carbon Disulfide	7.31	76	6659	0.2214	ug/L #	86
24) n-Hexane	7.78	57	11874	0.8534	ug/L	97
30) Propionitrile	9.05	54	208	0.3030	ug/L #	1
31) 2,2-Dichloropropane	9.09	77	2023	0.1353	ug/L #	42
36) Tetrahydrofuran	9.64	42	1301	0.8472	ug/L #	40
39) Cyclohexane	9.94	56	6598	0.3636	ug/L	94
72) Ethylbenzene	14.75	106	2422	0.1584	ug/L	54
73) m-,p-Xylene	14.75	106	2422	0.1381	ug/L	82

(#) = qualifier out of range (m) = manual integration
8M407833.D 8260WT.M Mon Oct 05 14:39:57 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 14:39 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:56:59 2015 Quant Results File: A9FOOWTR.RES

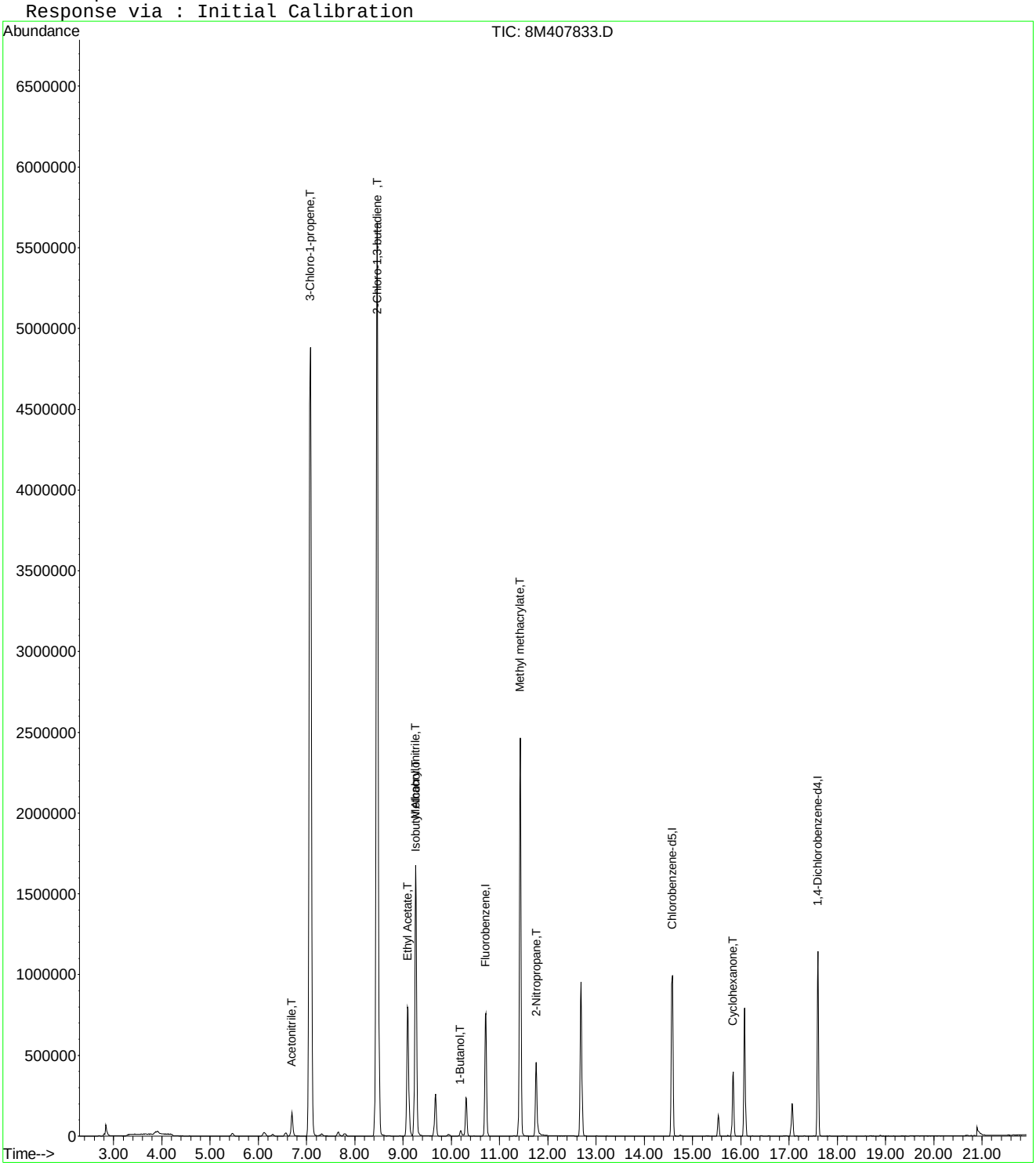
Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	914795	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	689423	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	367388	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	204679	290.7307	ug/L	99
3) 3-Chloro-1-propene	7.08	41	5107808	298.3223	ug/L	99
4) 2-Chloro-1,3-butadiene	8.46	53	5432917	308.3838	ug/L	97
5) Ethyl Acetate	9.09	43	1404245	301.7310	ug/L	99
6) Methacrylonitrile	9.26	67	619787	303.4256	ug/L	96
7) Isobutyl Alcohol	9.27	43	113276	593.9881	ug/L	97
8) 1-Butanol	10.19	56	30662	326.1916	ug/L	85
9) Methyl methacrylate	11.43	41	1738162	308.3633	ug/L	98
10) 2-Nitropropane	11.76	43	289289	305.7623	ug/L	92
13) Cyclohexanone	15.84	55	224807	287.0174	ug/L	90

(#) = qualifier out of range (m) = manual integration
8M407833.D A9FOOWTR.M Tue Oct 06 11:56:59 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407833.D Vial: 7
Acq On : 5 Oct 2015 14:17 Operator: TMB
Sample : WG540826-07 300ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:56 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 15:09:02 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

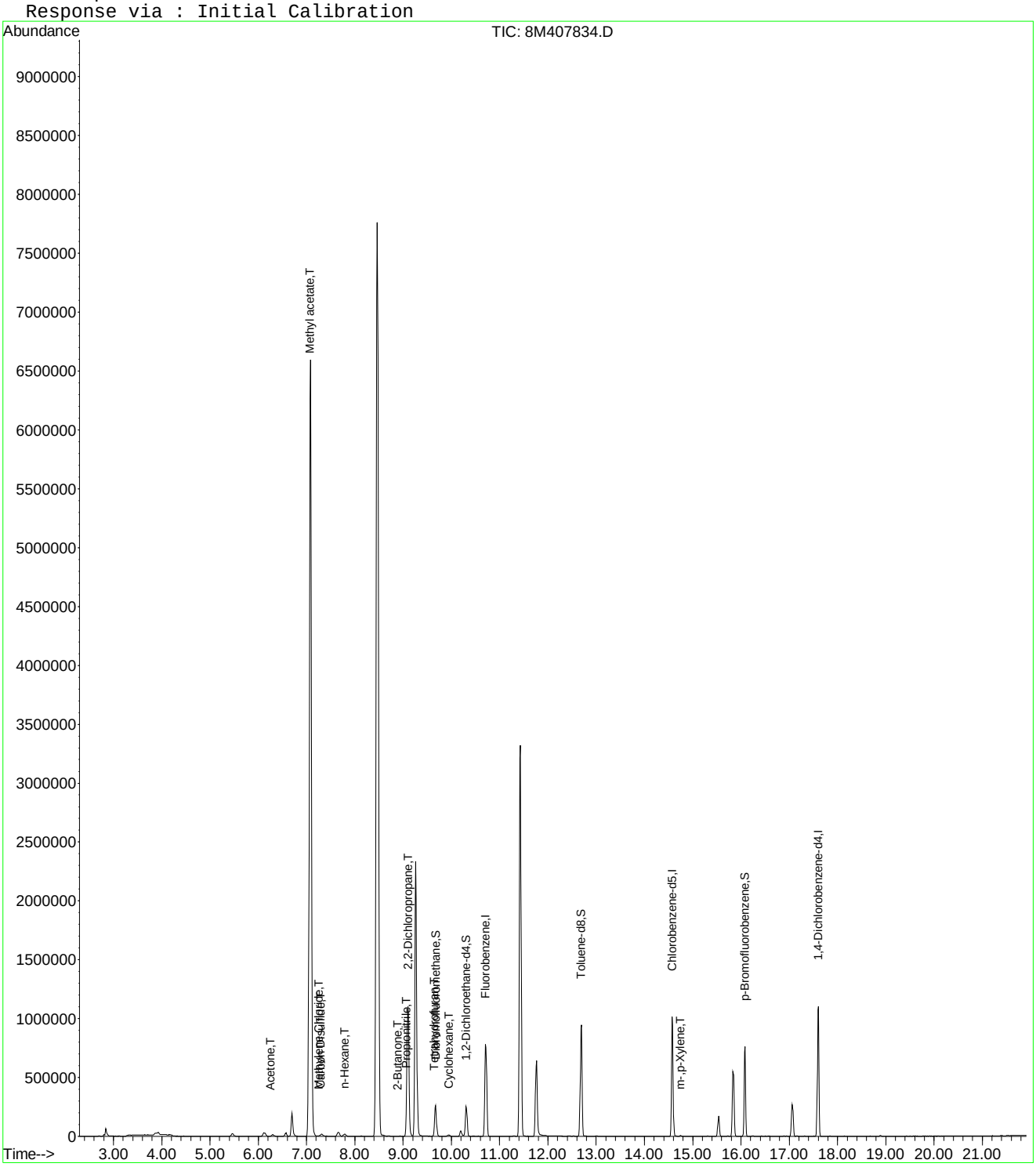
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	933879	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	691340	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	373332	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	222232	25.0033 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.00%		
43) 1,2-Dichloroethane-d4	10.31	65	222556	24.5590 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 98.24%		
58) Toluene-d8	12.69	98	831940	25.9359 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.76%		
80) p-Bromofluorobenzene	16.08	95	329799	25.3183 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 101.28%		
Target Compounds					Qvalue
13) Acetone	6.25	43	2307	1.6644 ug/L #	48
18) Methyl acetate	7.07	43	5300	1.0111 ug/L #	1
19) Methylene Chloride	7.26	84	1631	0.1735 ug/L #	6
20) Carbon Disulfide	7.30	76	9227	0.3005 ug/L #	79
24) n-Hexane	7.79	57	16005	1.1268 ug/L	89
29) 2-Butanone	8.89	43	1241	0.5197 ug/L #	57
30) Propionitrile	9.07	54	773	1.1032 ug/L #	1
31) 2,2-Dichloropropane	9.11	77	2811	0.1842 ug/L #	42
36) Tetrahydrofuran	9.65	42	1879	1.1986 ug/L #	40
39) Cyclohexane	9.95	56	9653	0.5211 ug/L	94
73) m-,p-Xylene	14.75	106	3655	0.2078 ug/L	100

(#) = qualifier out of range (m) = manual integration
8M407834.D 8260WT.M Mon Oct 05 15:09:03 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 15:09 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:57:00 2015 Quant Results File: A9FOOWTR.RES

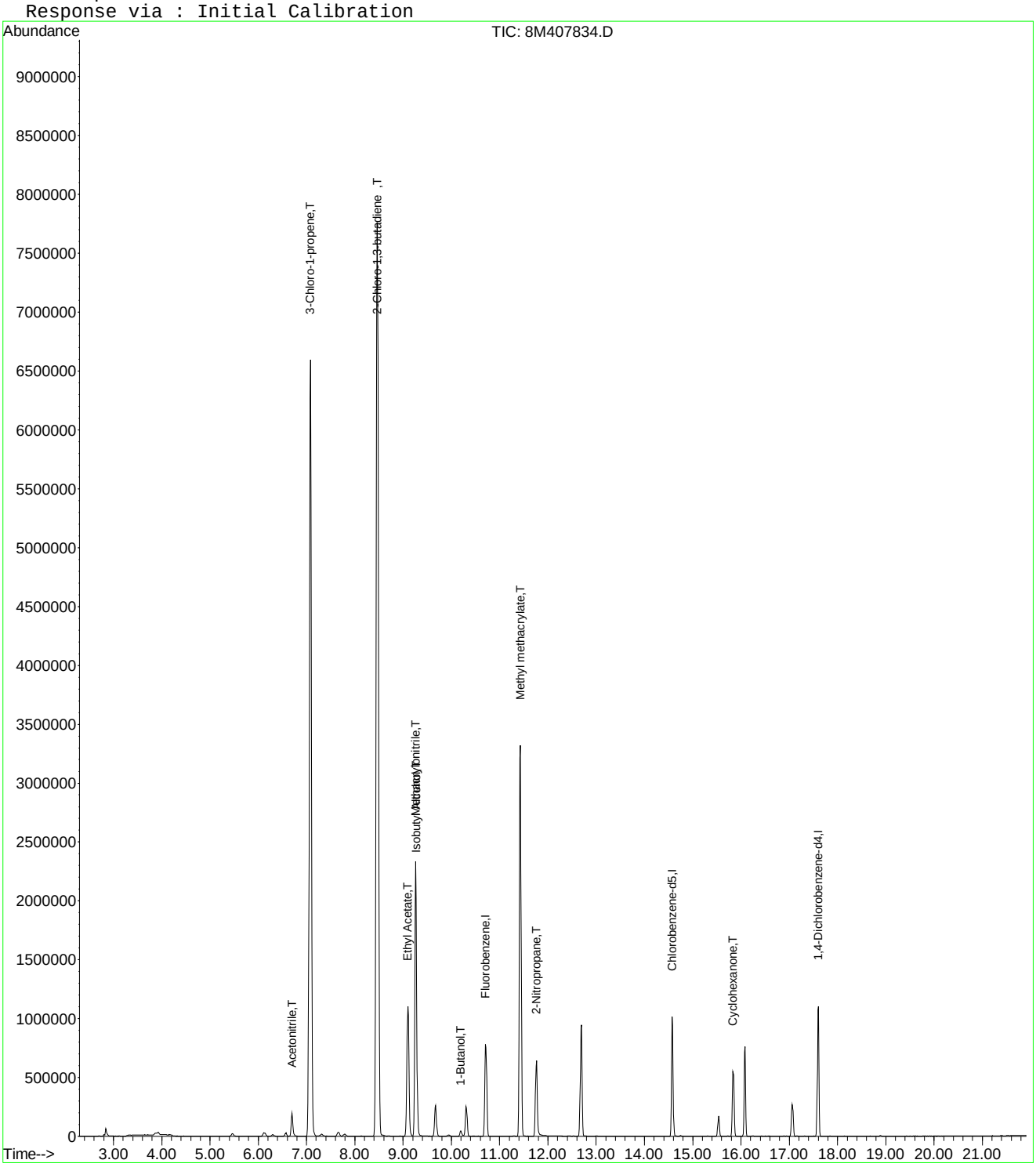
Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	933879	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.57	117	691340	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	373332	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	276454	384.6570	ug/L	96
3) 3-Chloro-1-propene	7.08	41	6839307	391.2880	ug/L	97
4) 2-Chloro-1,3-butadiene	8.47	53	7261886	403.7765	ug/L	94
5) Ethyl Acetate	9.10	43	1919647	404.0467	ug/L	99
6) Methacrylonitrile	9.26	67	856150	410.5753	ug/L	97
7) Isobutyl Alcohol	9.27	43	151941	780.4553	ug/L	92
8) 1-Butanol	10.19	56	39703	413.7412	ug/L	80
9) Methyl methacrylate	11.43	41	2385524	414.5619	ug/L	99
10) 2-Nitropropane	11.76	43	432493	447.7796	ug/L	93
13) Cyclohexanone	15.83	55	313432	393.7962	ug/L	87

(#) = qualifier out of range (m) = manual integration
8M407834.D A9FOOWTR.M Tue Oct 06 11:57:00 2015 Page 1

Data File : C:\MSDCHEM\2\DATA\100515\8M407834.D Vial: 8
Acq On : 5 Oct 2015 14:47 Operator: TMB
Sample : WG540826-08 400ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:57 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 15:37:56 2015 Quant Results File: 8260WT.RES

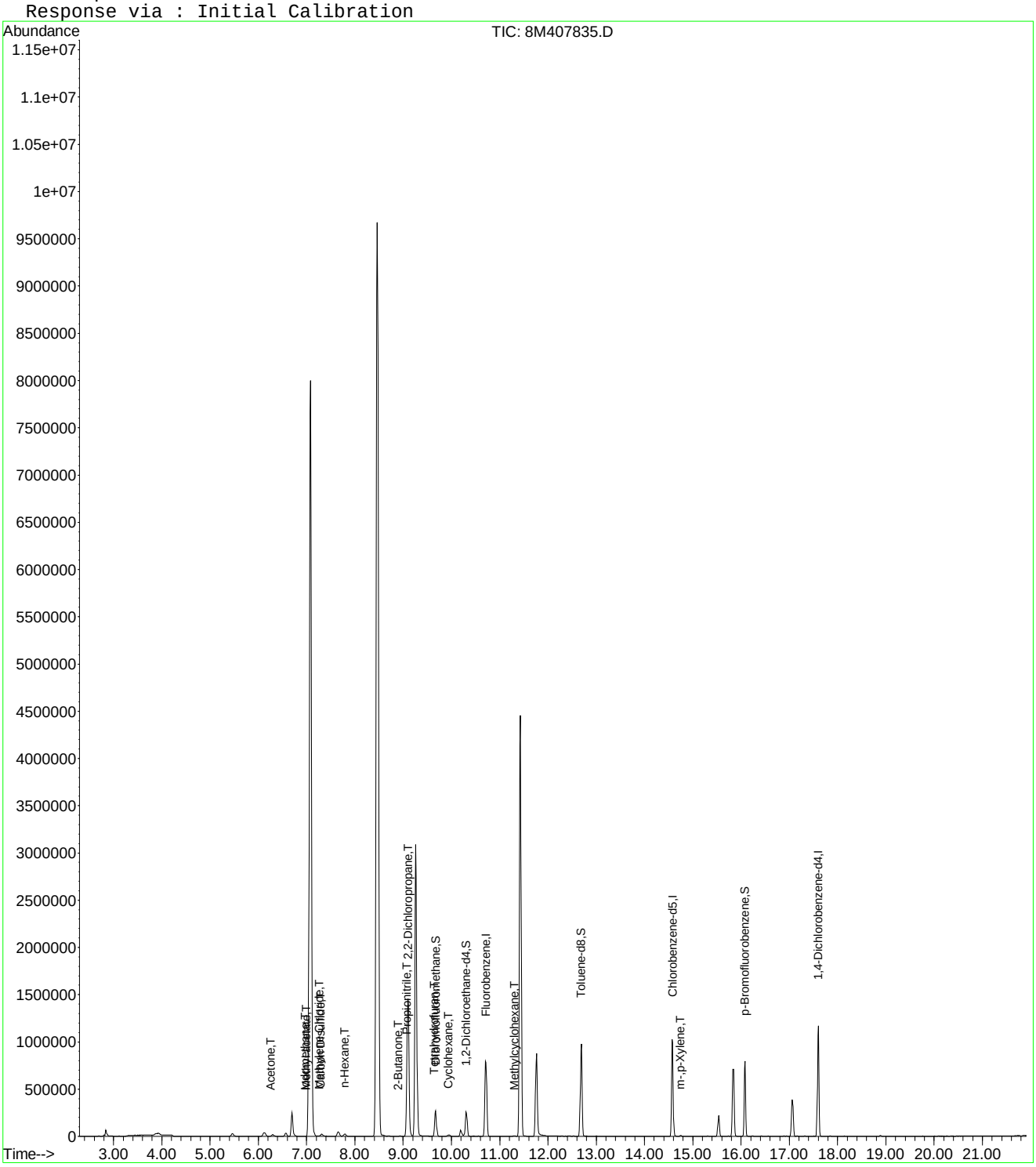
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.72	96	952136	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	712384	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	381907	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	222948	24.6029 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.40%		
43) 1,2-Dichloroethane-d4	10.30	65	229612	24.8518 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.40%		
58) Toluene-d8	12.69	98	849027	25.6867 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.76%		
80) p-Bromofluorobenzene	16.08	95	340742	25.5710 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 102.28%		
Target Compounds					Qvalue
13) Acetone	6.26	43	2624	1.8568 ug/L #	48
17) Iodomethane	6.98	142	414	1.8830 ug/L #	28
18) Methyl acetate	7.00	43	818	0.1531 ug/L #	64
19) Methylene Chloride	7.27	84	2206	0.2301 ug/L	69
20) Carbon Disulfide	7.30	76	12486	0.3989 ug/L #	78
24) n-Hexane	7.79	57	21760	1.5026 ug/L	96
29) 2-Butanone	8.90	43	1797	0.7381 ug/L #	57
30) Propionitrile	9.07	54	1629	2.2802 ug/L #	1
31) 2,2-Dichloropropane	9.11	77	3861	0.2482 ug/L #	52
36) Tetrahydrofuran	9.65	42	2063	1.2908 ug/L #	40
39) Cyclohexane	9.94	56	13508	0.7152 ug/L	88
48) Methylcyclohexane	11.31	83	2456	0.1572 ug/L #	73
73) m-,p-Xylene	14.75	106	3865	0.2133 ug/L	76

(#) = qualifier out of range (m) = manual integration
8M407835.D 8260WT.M Mon Oct 05 15:37:57 2015 Page 1

Data File : C:\MSDchem\2\data\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 15:37 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:57:01 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

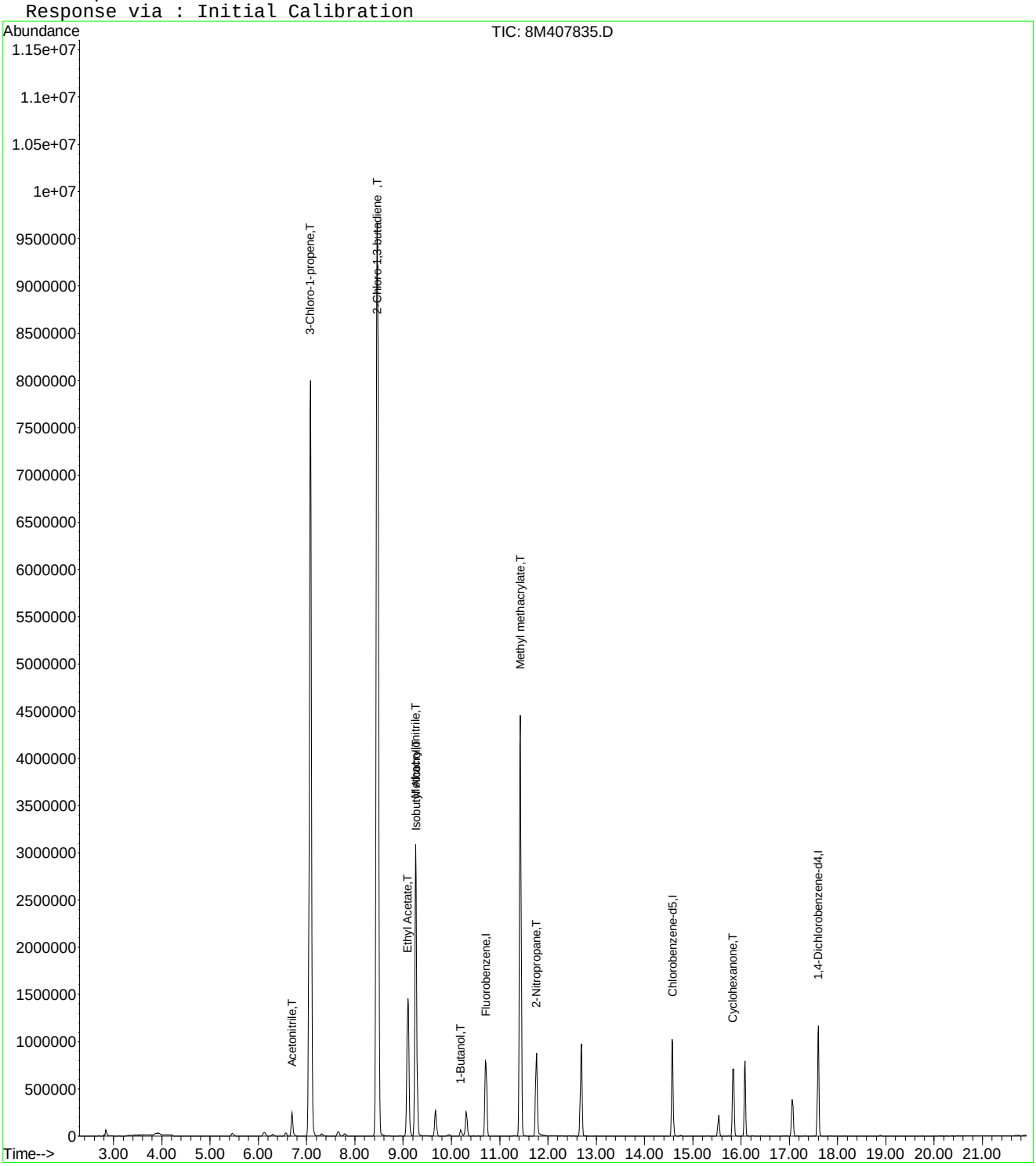
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	952136	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	712384	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	381907	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	355656	485.3695	ug/L	97
3) 3-Chloro-1-propene	7.08	41	8223448	461.4556	ug/L	95
4) 2-Chloro-1,3-butadiene	8.46	53	8764656	477.9893	ug/L	90
5) Ethyl Acetate	9.09	43	2535700	523.4795	ug/L	100
6) Methacrylonitrile	9.26	67	1137496	535.0377	ug/L	97
7) Isobutyl Alcohol	9.27	43	214402	1080.1734	ug/L	98
8) 1-Butanol	10.19	56	54442	556.4564	ug/L	87
9) Methyl methacrylate	11.43	41	3137676	534.8171	ug/L	99
10) 2-Nitropropane	11.76	43	594174	603.3794	ug/L	94
13) Cyclohexanone	15.83	55	412487	506.6127	ug/L	87

(#) = qualifier out of range (m) = manual integration
8M407835.D A9FOOWTR.M Tue Oct 06 11:57:01 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407835.D Vial: 9
Acq On : 5 Oct 2015 15:15 Operator: TMB
Sample : WG540826-09 500ug/L STD A9FOO Inst : HPMS8
Misc : 1,1 STD72810 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:57 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 05 17:10:31 2015 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

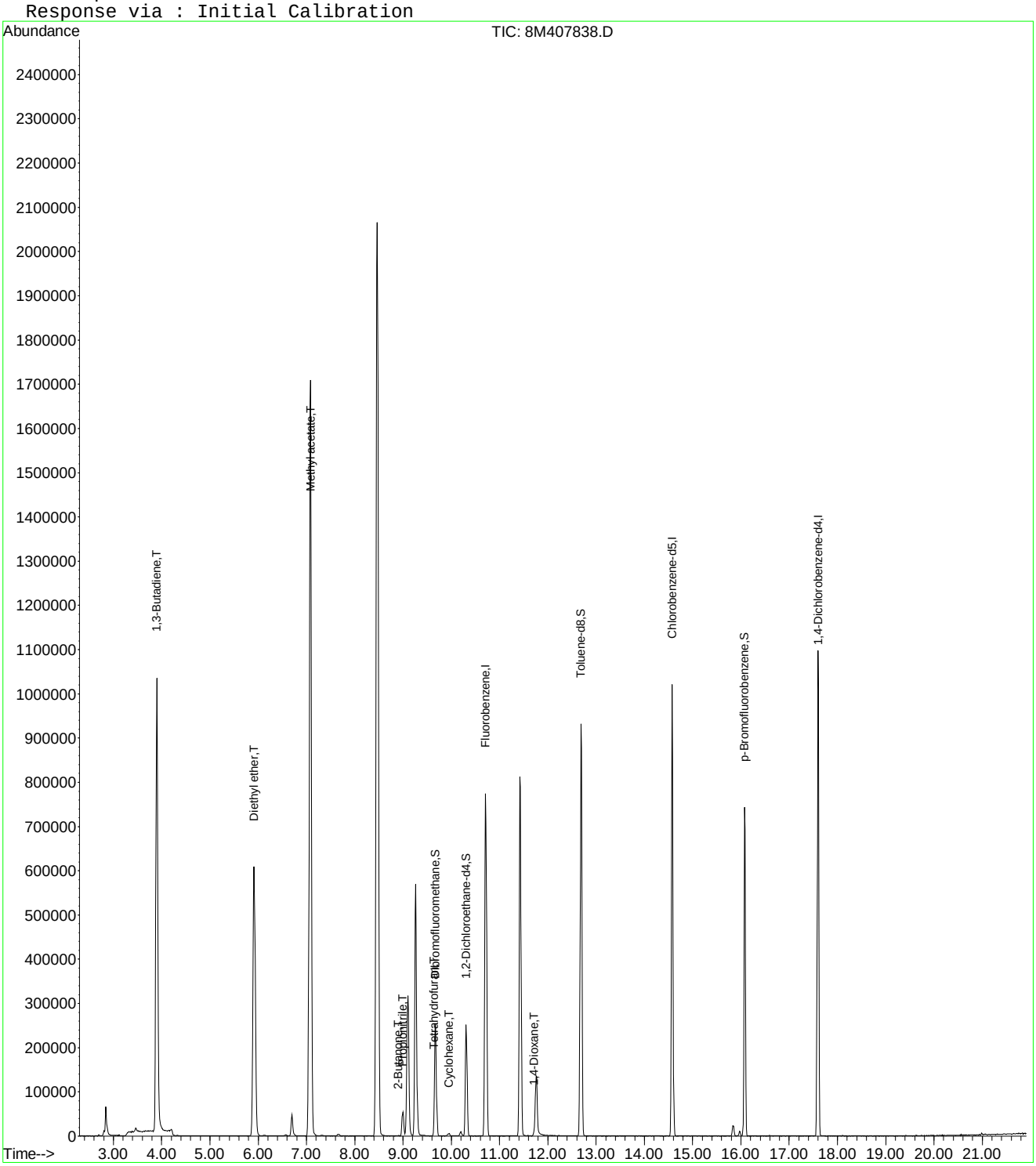
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	910348	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	672710	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	361469	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	216028	24.9336 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 99.72%		
43) 1,2-Dichloroethane-d4	10.31	65	220386	24.9481 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.80%		
58) Toluene-d8	12.68	98	805489	25.8067 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.24%		
80) p-Bromofluorobenzene	16.07	95	318985	25.2918 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 101.16%		
Target Compounds					Qvalue
5) 1,3-Butadiene	3.90	54	680860	64.5479 ug/L	96
9) Diethyl ether	5.91	59	636031	102.4537 ug/L	99
18) Methyl acetate	7.09	43	861	0.1685 ug/L #	1
29) 2-Butanone	8.90	43	1914	0.8222 ug/L	83
30) Propionitrile	8.99	54	68619	100.4600 ug/L	99
36) Tetrahydrofuran	9.65	42	849	0.5556 ug/L #	40
39) Cyclohexane	9.96	56	4155	0.2301 ug/L #	88
51) 1,4-Dioxane	11.71	88	8398	188.8572 ug/L	85

(#) = qualifier out of range (m) = manual integration
8M407838.D 8260WT.M Mon Oct 05 17:10:32 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 5 17:10 2015 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 09-30-15 HPMS 8
Last Update : Thu Oct 01 09:30:44 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 11:57:03 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

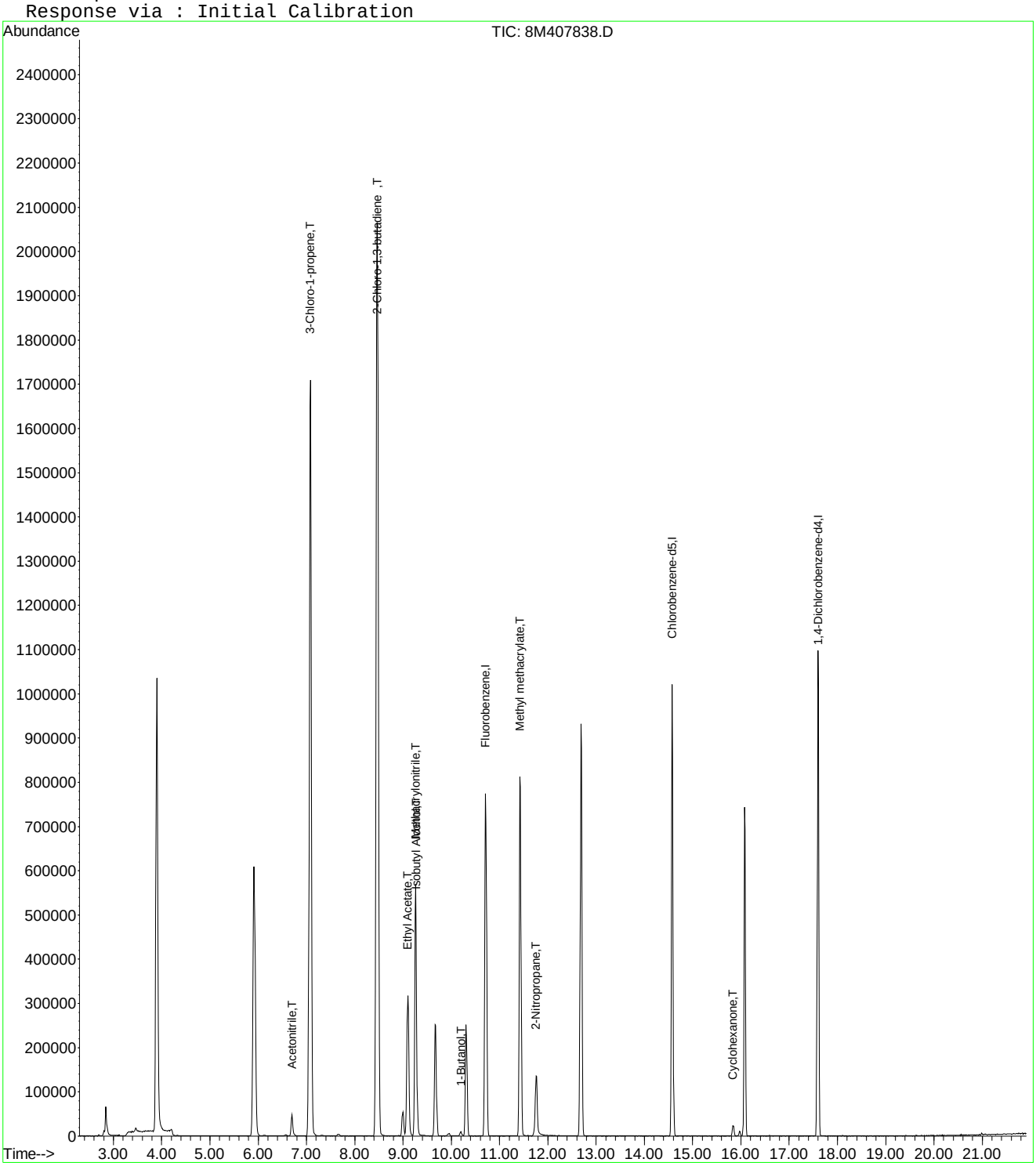
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	910348	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	672710	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	361469	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	68331	97.5330	ug/L	99
3) 3-Chloro-1-propene	7.08	41	1823769	107.0379	ug/L	100
4) 2-Chloro-1,3-butadiene	8.47	53	2081638	118.7353	ug/L	100
5) Ethyl Acetate	9.10	43	556798	120.2240	ug/L	97
6) Methacrylonitrile	9.26	67	209938	103.2802	ug/L	94
7) Isobutyl Alcohol	9.27	43	38987	205.4358	ug/L	96
8) 1-Butanol	10.20	56	7758	82.9351	ug/L	93
9) Methyl methacrylate	11.42	41	590033	105.1877	ug/L	99
10) 2-Nitropropane	11.75	43	94685	100.5656	ug/L	93
13) Cyclohexanone	15.84	55	13964	18.1202	ug/L	94

(#) = qualifier out of range (m) = manual integration
8M407838.D A9FOOWTR.M Tue Oct 06 11:57:03 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG541826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 11:57 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG540826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 06 12:32:35 2015 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

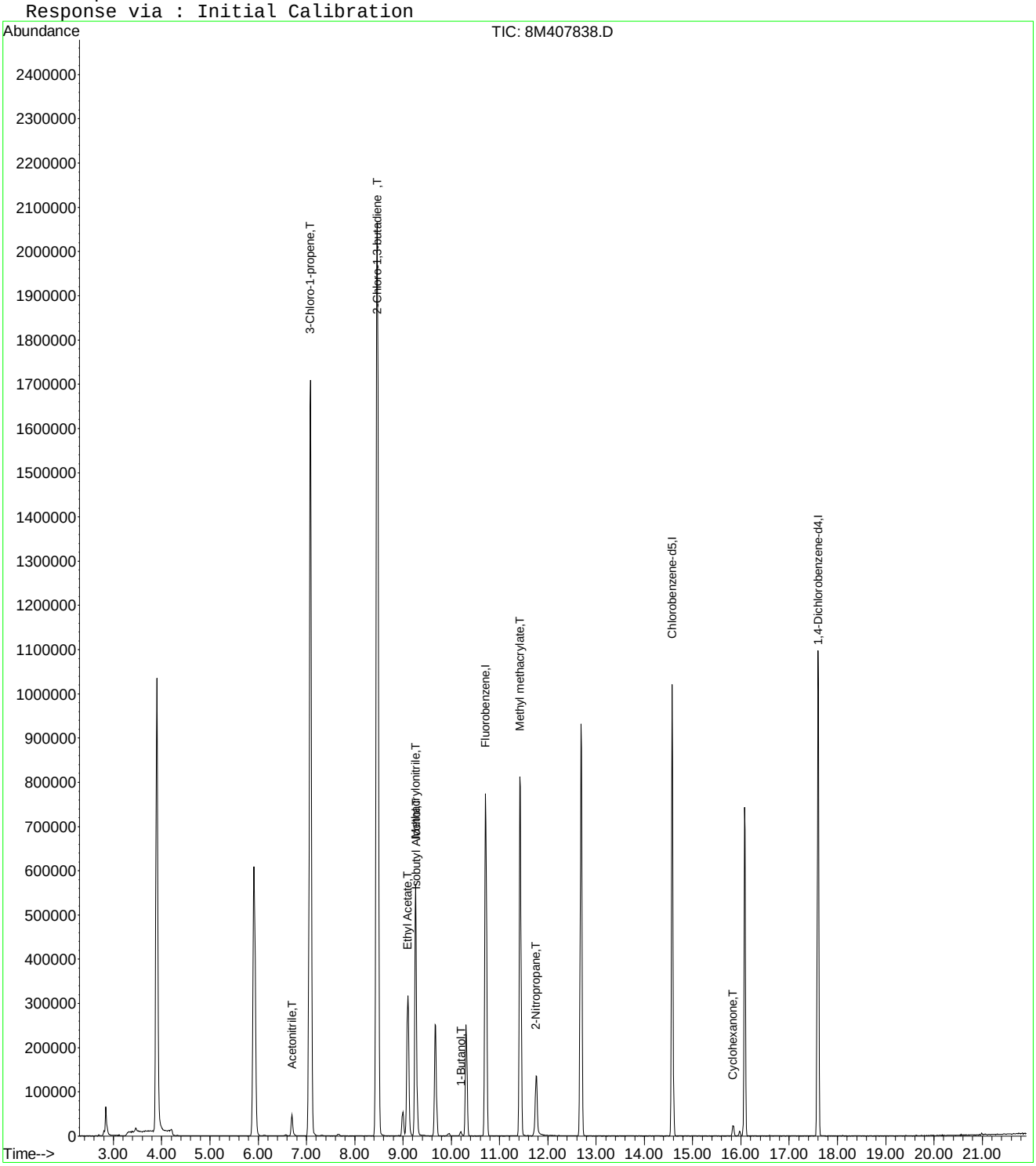
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	910348	25.00	ug/L	0.00
11) Chlorobenzene-d5	14.58	117	672710	25.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4	17.60	152	361469	25.00	ug/L	0.00
Target Compounds						Qvalue
2) Acetonitrile	6.70	41	68331	97.5330	ug/L	99
3) 3-Chloro-1-propene	7.08	41	1823769	107.0379	ug/L	100
4) 2-Chloro-1,3-butadiene	8.47	53	2081638	118.7353	ug/L	100
5) Ethyl Acetate	9.10	43	556798	120.2240	ug/L	97
6) Methacrylonitrile	9.26	67	209938	103.2802	ug/L	94
7) Isobutyl Alcohol	9.27	43	38987	205.4358	ug/L	96
8) 1-Butanol	10.20	56	7758	82.9351	ug/L	93
9) Methyl methacrylate	11.42	41	590033	105.1877	ug/L	99
10) 2-Nitropropane	11.75	43	94685	100.5656	ug/L	93
13) Cyclohexanone	15.84	55	13964	18.1202	ug/L	94

(#) = qualifier out of range (m) = manual integration
8M407838.D A9FOOWTR.M Tue Oct 06 12:32:36 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG540826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 6 12:32 2015 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



8M407838.D A9FOOWTR.M Tue Oct 06 12:32:36 2015 Page 2

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\100515\8M407838.D Vial: 12
Acq On : 5 Oct 2015 16:48 Operator: TMB
Sample : WG540826-10 100ug/L ALT SRC STD A9/FOO Inst : HPMS8
Misc : 1,1 STD72811 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
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	25.0000	25.0000	0.0	105	0.00
2	T	Acetonitrile	100.0000	97.5330	2.5	101	0.00
3	T	3-Chloro-1-propene	100.0000	107.0379	-7.0	112	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	118.7354	-18.7	124	0.00
5	T	Ethyl Acetate	100.0000	120.2240	-20.2	123	0.00
6	T	Methacrylonitrile	100.0000	103.2802	-3.3	107	0.00
7	T	Isobutyl Alcohol	200.0000	205.4358	-2.7	104	0.00
8	T	1-Butanol	100.0000	82.9351	17.1	94	0.01
9	T	Methyl methacrylate	100.0000	105.1877	-5.2	105	0.00
10	T	2-Nitropropane	100.0000	100.5656	-0.6	122	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	102	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	101	0.00
13	T	Cyclohexanone	100.0000	18.1202	81.9#	19	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M407838.D A9FOOWTR.M Tue Oct 06 12:32:39 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411392.D Vial: 2
Acq On : 13 Apr 2016 12:11 Operator: TMB
Sample : WG564484-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:42 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	751539	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	517751	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	251518	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	12.68	98	228	0.0088	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.04%#		
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	3.18	85	2895	0.2395	ug/L #	75
3) Chloromethane	3.63	50	6683	0.3578	ug/L	83
4) Vinyl Chloride	3.85	62	2778	0.2497	ug/L #	61
5) 1,3-Butadiene	3.91	54	2793	Below Cal	#	24
6) Bromomethane	4.75	94	409	0.7378	ug/L #	61
7) Chloroethane	4.90	64	1275	0.2082	ug/L #	43
8) Trichlorofluoromethane	5.39	101	3677	0.2673	ug/L #	92
10) Isoprene	5.95	67	2853	0.2721	ug/L	81
12) 1,1,2-Trichloro-1,2,2-Trif	6.15	101	1332	0.1782	ug/L #	49
13) Acetone	6.25	43	474	0.3318	ug/L #	48
14) 1,1-Dichloroethene	6.47	61	4246	0.2986	ug/L	82
16) Dimethyl Sulfide	6.74	62	941	0.1454	ug/L #	48
19) Methylene Chloride	7.25	84	2434	0.3107	ug/L	72
20) Carbon Disulfide	7.30	76	10045	0.3852	ug/L #	88
22) Methyl Tert Butyl Ether	7.48	73	4148	0.2619	ug/L	81
23) trans-1,2-Dichloroethene	7.71	61	3781	0.2788	ug/L	95
24) n-Hexane	7.80	57	4123	0.3121	ug/L	91
26) Vinyl Acetate	8.30	43	2929	0.2339	ug/L #	79
27) 1,1-Dichloroethane	8.33	63	5022	0.2949	ug/L #	80
31) 2,2-Dichloropropane	9.10	77	3349	0.2642	ug/L	90
32) cis-1,2-Dichloroethene	9.17	96	2152	0.2541	ug/L	81
33) Chloroform	9.38	83	4096	0.2860	ug/L	94
35) Bromochloromethane	9.61	130	934	0.2175	ug/L	65
36) Tetrahydrofuran	9.65	42	5462	3.1239	ug/L	82
38) 1,1,1-Trichloroethane	9.90	97	3318	0.2616	ug/L	85
39) Cyclohexane	9.94	56	5157	0.2948	ug/L #	82
40) 1,1-Dichloropropene	10.11	75	2712	0.2425	ug/L #	71
42) Carbon Tetrachloride	10.26	117	2782	0.2472	ug/L #	70
45) 1,2-Dichloroethane	10.42	62	2781	0.2559	ug/L #	76
46) Benzene	10.46	78	8779	0.2886	ug/L	97
47) Trichloroethene	11.21	130	2272	0.2966	ug/L	90
48) Methylcyclohexane	11.30	83	3623	0.2976	ug/L	86
49) 1,2-Dichloropropane	11.42	63	1749	0.1921	ug/L	76
50) Bromodichloromethane	11.73	83	2384	0.2211	ug/L #	92
52) Dibromomethane	11.81	93	786	0.2066	ug/L	83
55) cis-1,3-Dichloropropene	12.36	75	2890	0.2427	ug/L	94
56) Dimethyl Disulfide	12.62	79	1159	0.1836	ug/L	94
59) Toluene	12.78	91	8895	0.2921	ug/L	98
60) Ethyl Methacrylate	12.88	69	1272	0.1982	ug/L	90
62) trans-1,3-Dichloropropene	12.96	75	2096	0.2051	ug/L	88

(#) = qualifier out of range (m) = manual integration
8M411392.D 8260WT.M Thu Apr 14 08:46:43 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411392.D Vial: 2
Acq On : 13 Apr 2016 12:11 Operator: TMB
Sample : WG564484-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:42 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

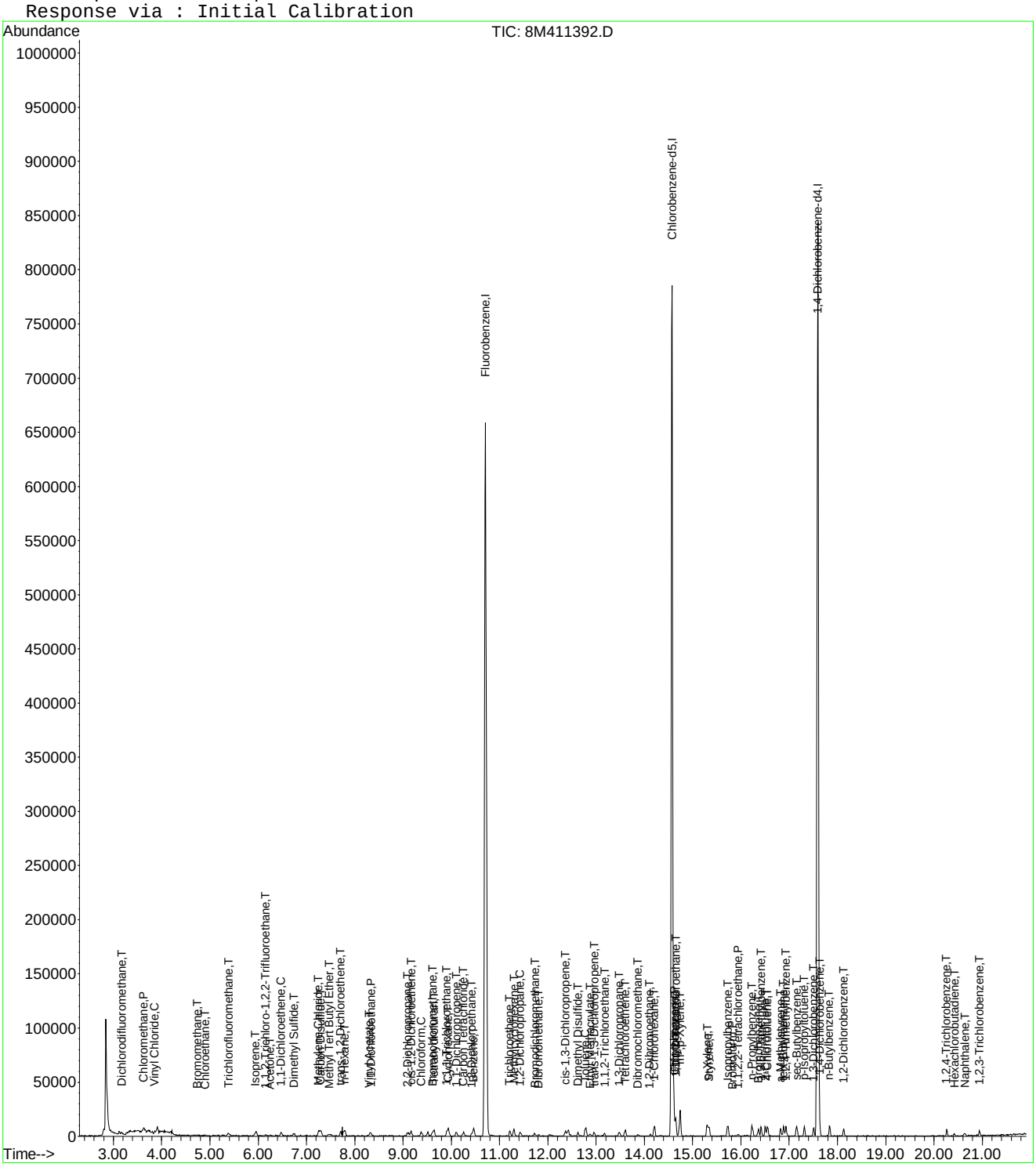
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
63)	1,1,2-Trichloroethane	13.18	97	1060	0.2176 ug/L		84
65)	1,3-Dichloropropane	13.48	76	2477	0.2718 ug/L		89
66)	Tetrachloroethene	13.60	164	1464	0.2510 ug/L		86
67)	Dibromochloromethane	13.86	129	1225	0.1908 ug/L		82
68)	1,2-Dibromoethane	14.11	107	1013	0.3164 ug/L		86
69)	1-Chlorohexane	14.20	91	2969	0.2878 ug/L		64
70)	Chlorobenzene	14.63	112	6441	0.3135 ug/L		82
71)	1,1,1,2-Tetrachloroethane	14.66	131	1892	0.2641 ug/L		78
72)	Ethylbenzene	14.65	106	3298	0.2898 ug/L		81
73)	m-,p-Xylene	14.74	106	8609	0.6475 ug/L		88
74)	o-Xylene	15.31	106	3787	0.2804 ug/L		89
75)	Styrene	15.34	104	5737	0.2677 ug/L		85
76)	Bromoform	15.83	173	255	0.3666 ug/L	#	27
77)	Isopropylbenzene	15.73	105	9509	0.2926 ug/L		98
79)	1,1,2,2-Tetrachloroethane	15.94	83	1081	0.1956 ug/L	#	93
83)	n-Propylbenzene	16.23	91	12095	0.3209 ug/L		95
84)	Bromobenzene	16.36	156	2266	0.3023 ug/L		88
85)	1,3,5-Trimethylbenzene	16.42	105	7832	0.2961 ug/L		90
86)	2-Chlorotoluene	16.51	91	8390	0.3421 ug/L		98
87)	4-Chlorotoluene	16.55	91	7403	0.2899 ug/L		93
88)	a-Methylstyrene	16.82	118	2983	0.2071 ug/L		74
89)	tert-Butylbenzene	16.88	134	1296	0.2405 ug/L		65
90)	1,2,4-Trimethylbenzene	16.93	105	8407	0.3027 ug/L		85
91)	sec-Butylbenzene	17.16	105	10080	0.3069 ug/L		94
92)	p-Isopropyltoluene	17.31	119	8316	0.3107 ug/L		94
93)	1,3-Dichlorobenzene	17.51	146	4718	0.3094 ug/L		96
94)	1,4-Dichlorobenzene	17.63	146	5300	0.3472 ug/L	#	1
95)	n-Butylbenzene	17.83	91	8611	0.3161 ug/L		98
96)	1,2-Dichlorobenzene	18.13	146	4266	0.3161 ug/L		96
98)	1,2,4-Trichlorobenzene	20.26	180	2690	0.2833 ug/L		93
99)	Hexachlorobutadiene	20.43	225	1006	0.2692 ug/L		83
100)	Naphthalene	20.64	128	4982	0.3133 ug/L	#	68
101)	1,2,3-Trichlorobenzene	20.94	180	2280	0.2877 ug/L	#	87

(#) = qualifier out of range (m) = manual integration
8M411392.D 8260WT.M Thu Apr 14 08:46:43 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411392.D Vial: 2
Acq On : 13 Apr 2016 12:11 Operator: TMB
Sample : WG564484-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041316\8M411392.D Vial: 2
Acq On : 13 Apr 2016 12:11 Operator: TMB
Sample : WG564484-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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	100	0.00
2	T	Dichlorodifluoromethane	-1.0000	0.2395	0.0	100	0.00
3	P	Chloromethane	-1.0000	0.3578	0.0	100	0.00
4	C	Vinyl Chloride	-1.0000	0.2497	0.0	100	0.00
5	T	1,3-Butadiene	-1.0000	-1.0000	0.0	100	0.02
6	T	Bromomethane	-1.0000	0.7378	0.0	100	0.00
7	T	Chloroethane	-1.0000	0.2082	0.0	100	0.00
8	T	Trichlorofluoromethane	-1.0000	0.2673	0.0	100	0.00
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-5.91#
10	T	Isoprene	-1.0000	0.2721	0.0	100	0.00
11	T	Acrolein	-1.0000	0.0000	0.0	0	-6.15#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.1782	0.0	100	0.00
13	T	Acetone	-1.0000	0.3318	0.0	100	0.00
14	C	1,1-Dichloroethene	-1.0000	0.2986	0.0	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-6.59#
16	T	Dimethyl Sulfide	-1.0000	0.1454	0.0	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-7.00#
18	T	Methyl acetate	-1.0000	0.0000	0.0	0	-7.01#
19	T	Methylene Chloride	-1.0000	0.3107	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.3852	0.0	100	0.00
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.44#
22	T	Methyl Tert Butyl Ether	-1.0000	0.2619	0.0	100	0.00
23	T	trans-1,2-Dichloroethene	-1.0000	0.2788	0.0	100	0.00
24	T	n-Hexane	-1.0000	0.3121	0.0	100	0.00
25	T	Diisopropyl ether	-1.0000	0.0000	0.0	0	-8.13#
26	T	Vinyl Acetate	-1.0000	0.2339	0.0	100	0.00
27	P	1,1-Dichloroethane	-1.0000	0.2949	0.0	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-8.71#
29	T	2-Butanone	-1.0000	0.0000	0.0	0	-8.89#
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-8.99#
31	T	2,2-Dichloropropane	-1.0000	0.2642	0.0	100	0.00
32	T	cis-1,2-Dichloroethene	-1.0000	0.2541	0.0	100	0.00
33	C	Chloroform	0.3000	0.2860	4.7	100	0.00
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-9.52#
35	T	Bromochloromethane	-1.0000	0.2175	0.0	100	0.00
36	T	Tetrahydrofuran	-1.0000	3.1239	0.0	100	0.01
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-9.66#
38	T	1,1,1-Trichloroethane	-1.0000	0.2616	0.0	100	0.00
39	T	Cyclohexane	-1.0000	0.2948	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.2425	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-10.21#
42	T	Carbon Tetrachloride	-1.0000	0.2472	0.0	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-10.30#
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	-1.0000	0.2559	0.0	100	0.00
46	T	Benzene	-1.0000	0.2886	0.0	100	0.00
47	T	Trichloroethene	-1.0000	0.2966	0.0	100	0.00
48	T	Methylcyclohexane	-1.0000	0.2976	0.0	100	0.00
49	C	1,2-Dichloropropane	-1.0000	0.1921	0.0	100	0.00
50	T	Bromodichloromethane	-1.0000	0.2211	0.0	100	0.00
51	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.72#
52	T	Dibromomethane	-1.0000	0.2066	0.0	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.1190	0.0	100	-0.02
54	T	4-Methyl-2-Pentanone	-1.0000	0.1141	0.0	100	0.01

(#) = Out of Range
8M411392.D 8260WT.M Thu Apr 14 08:47:09 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411392.D Vial: 2
Acq On : 13 Apr 2016 12:11 Operator: TMB
Sample : WG564484-02 0.3ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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)
55	T	cis-1,3-Dichloropropene	-1.0000	0.2427	0.0	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.1836	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0088	0.0	100	0.00
59	C	Toluene	-1.0000	0.2921	0.0	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.1982	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	-1.0000	0.2051	0.0	100	0.00
63	T	1,1,2-Trichloroethane	-1.0000	0.2176	0.0	100	0.00
64	T	2-Hexanone	-1.0000	0.0000	0.0	0	-13.12#
65	T	1,3-Dichloropropane	-1.0000	0.2718	0.0	100	0.00
66	T	Tetrachloroethene	-1.0000	0.2510	0.0	100	0.00
67	T	Dibromochloromethane	-1.0000	0.1908	0.0	100	0.00
68	T	1,2-Dibromoethane	-1.0000	0.3164	0.0	100	0.00
69	T	1-Chlorohexane	-1.0000	0.2878	0.0	100	0.00
70	P	Chlorobenzene	-1.0000	0.3135	0.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	-1.0000	0.2641	0.0	100	0.00
72	C	Ethylbenzene	-1.0000	0.2898	0.0	100	0.00
73	T	m-,p-Xylene	-1.0000	0.6475	0.0	100	0.00
74	T	o-Xylene	-1.0000	0.2804	0.0	100	0.00
75	T	Styrene	-1.0000	0.2677	0.0	100	0.00
76	P	Bromoform	-1.0000	0.3666	0.0	0	0.00
77	T	Isopropylbenzene	-1.0000	0.2926	0.0	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	-1.0000	0.1956	0.0	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.0000	0.0	0	-16.07#
81	T	1,2,3-Trichloropropane	-1.0000	0.0000	0.0	0	-16.13#
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.0000	0.0	0	-16.18#
83	T	n-Propylbenzene	-1.0000	0.3209	0.0	0	0.00
84	T	Bromobenzene	0.3000	0.3023	-0.8	100	0.00
85	T	1,3,5-Trimethylbenzene	-1.0000	0.2961	0.0	100	0.00
86	T	2-Chlorotoluene	-1.0000	0.3421	0.0	100	0.00
87	T	4-Chlorotoluene	-1.0000	0.2899	0.0	100	0.00
88	T	a-Methylstyrene	-1.0000	0.2071	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.2405	0.0	100	0.00
90	T	1,2,4-Trimethylbenzene	-1.0000	0.3027	0.0	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.3069	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.3107	0.0	100	0.00
93	T	1,3-Dichlorobenzene	-1.0000	0.3094	0.0	100	0.00
94	T	1,4-Dichlorobenzene	0.3000	0.3472	-15.7	100	0.00
95	T	n-Butylbenzene	-1.0000	0.3161	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.3000	0.3161	-5.4	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-19.12#
98	T	1,2,4-Trichlorobenzene	-1.0000	0.2833	0.0	100	0.00
99	T	Hexachlorobutadiene	-1.0000	0.2692	0.0	100	0.00
100	T	Naphthalene	-1.0000	0.3133	0.0	100	0.00
101	T	1,2,3-Trichlorobenzene	0.3000	0.2877	4.1	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411392.D 8260WT.M Thu Apr 14 08:47:09 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411394.D Vial: 4
Acq On : 13 Apr 2016 13:13 Operator: TMB
Sample : WG564484-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:43 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.71	96	664574	25.00	ug/L		0.00
57) Chlorobenzene-d5	14.57	117	460774	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	229072	25.00	ug/L		-0.01
System Monitoring Compounds							
37) Dibromofluoromethane	9.66	111	3352	0.4933	ug/L		0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	1.96%#			
43) 1,2-Dichloroethane-d4	10.30	65	3558	0.4987	ug/L		0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	2.00%#			
58) Toluene-d8	12.68	98	13057	0.5663	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	2.28%#			
80) p-Bromofluorobenzene	16.08	95	4828	0.5395	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	2.16%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.17	85	10756	1.0063	ug/L		96
3) Chloromethane	3.64	50	18188	1.1013	ug/L		86
4) Vinyl Chloride	3.85	62	11013	1.1196	ug/L		92
5) 1,3-Butadiene	3.91	54	11669	0.6515	ug/L		76
6) Bromomethane	4.75	94	2639	1.3086	ug/L		95
7) Chloroethane	4.91	64	5272	0.9737	ug/L		88
8) Trichlorofluoromethane	5.38	101	12813	1.0533	ug/L	#	91
9) Diethyl ether	5.92	59	23502	4.7917	ug/L		89
10) Isoprene	5.95	67	9093	0.9809	ug/L		90
11) Acrolein	6.16	56	860	2.3641	ug/L		85
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	6542	0.9898	ug/L		90
13) Acetone	6.26	43	747	0.5913	ug/L	#	48
14) 1,1-Dichloroethene	6.48	61	12842	1.0211	ug/L		94
15) Tert-Butyl Alcohol	6.58	59	2271	7.6959	ug/L	#	55
16) Dimethyl Sulfide	6.74	62	5588	0.9763	ug/L		94
18) Methyl acetate	7.02	43	3984	0.8951	ug/L	#	66
19) Methylene Chloride	7.26	84	7163	1.0340	ug/L		81
20) Carbon Disulfide	7.31	76	24450	1.0602	ug/L		98
21) Acrylonitrile	7.45	53	4048	2.1237	ug/L		99
22) Methyl Tert Butyl Ether	7.48	73	12587	0.8989	ug/L		97
23) trans-1,2-Dichloroethene	7.71	61	11903	0.9925	ug/L		85
24) n-Hexane	7.78	57	12268	1.0503	ug/L		98
25) Diisopropyl ether	8.13	45	149942	4.9857	ug/L		96
26) Vinyl Acetate	8.30	43	9362	0.8453	ug/L	#	79
27) 1,1-Dichloroethane	8.33	63	15658	1.0398	ug/L	#	94
28) Ethyl-Tert-Butyl ether	8.71	59	107934	4.9055	ug/L		96
29) 2-Butanone	8.90	43	1759	0.8395	ug/L	#	57
30) Propionitrile	8.99	54	2826	4.6420	ug/L	#	56
31) 2,2-Dichloropropane	9.10	77	11595	1.0345	ug/L		99
32) cis-1,2-Dichloroethene	9.18	96	7850	1.0483	ug/L		84
33) Chloroform	9.38	83	13173	1.0401	ug/L		97
34) 1-Bromopropane	9.52	122	817	0.7367	ug/L		92
35) Bromochloromethane	9.61	130	3657	0.9629	ug/L		65
36) Tetrahydrofuran	9.64	42	10243	6.6249	ug/L		86
38) 1,1,1-Trichloroethane	9.91	97	12050	1.0745	ug/L		97
39) Cyclohexane	9.94	56	15135	0.9783	ug/L		92
40) 1,1-Dichloropropene	10.11	75	9465	0.9569	ug/L		95
41) Tert-Amyl-Methyl ether	10.22	73	70801	4.7694	ug/L		92
42) Carbon Tetrachloride	10.25	117	9743	0.9790	ug/L		99
45) 1,2-Dichloroethane	10.43	62	9812	1.0211	ug/L		98

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

Data File : C:\MSDCHEM\2\DATA\041316\8M411394.D Vial: 4
Acq On : 13 Apr 2016 13:13 Operator: TMB
Sample : WG564484-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:43 2016 Quant Results File: 8260WT.RES

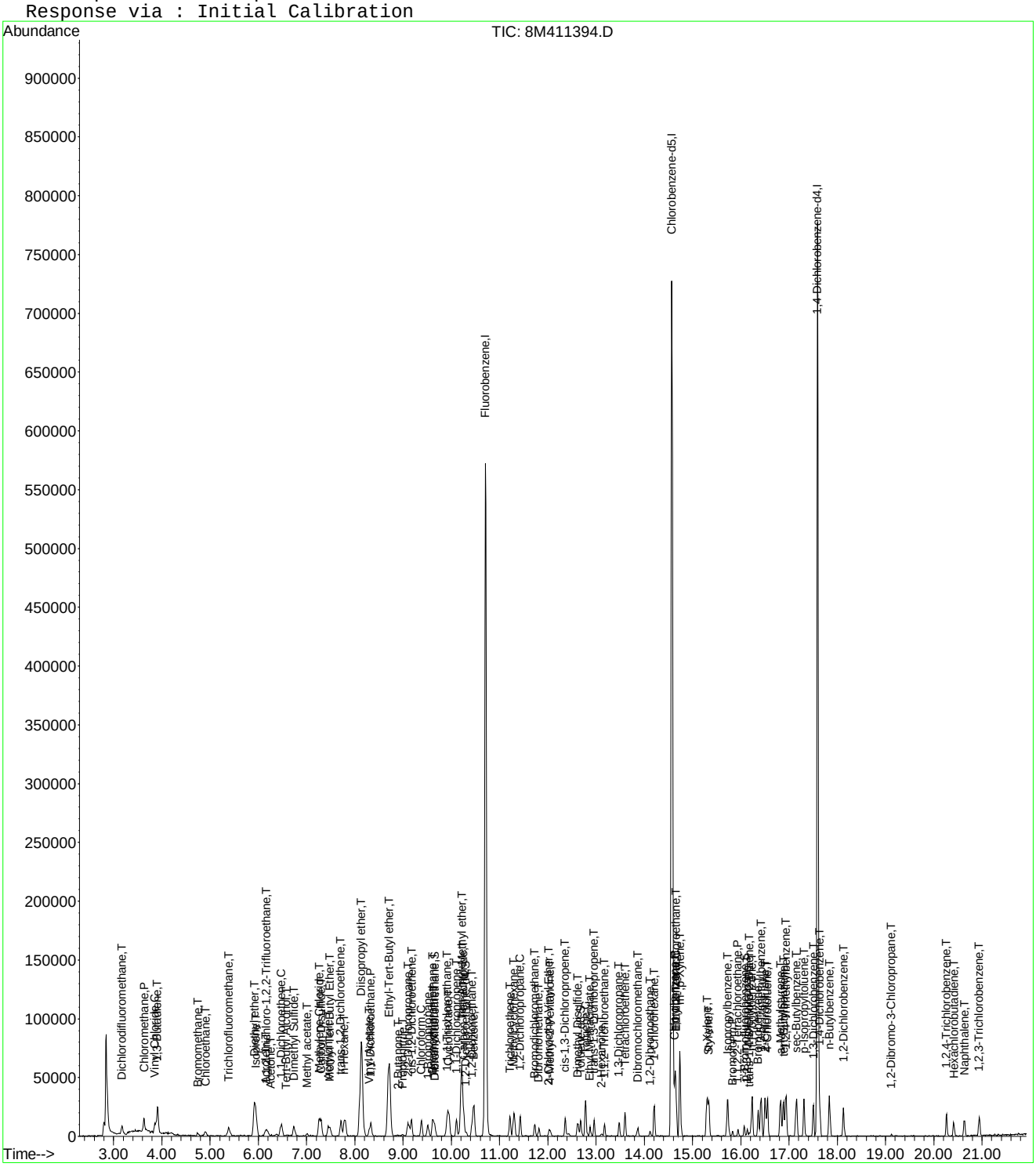
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	Benzene	10.47	78	27588	1.0255 ug/L		93
47)	Trichloroethene	11.22	130	6658	0.9830 ug/L		92
48)	Methylcyclohexane	11.30	83	10614	0.9861 ug/L		87
49)	1,2-Dichloropropane	11.43	63	7792	0.9680 ug/L		99
50)	Bromodichloromethane	11.73	83	9627	1.0095 ug/L	#	95
52)	Dibromomethane	11.81	93	3254	0.9673 ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	3317	1.0101 ug/L	#	75
54)	4-Methyl-2-Pentanone	12.05	58	1444	0.8133 ug/L	#	41
55)	cis-1,3-Dichloropropene	12.36	75	9938	0.9439 ug/L		97
56)	Dimethyl Disulfide	12.62	79	3719	0.6662 ug/L		98
59)	Toluene	12.78	91	29808	1.0999 ug/L		98
60)	Ethyl Methacrylate	12.88	69	5278	0.9240 ug/L		93
62)	trans-1,3-Dichloropropene	12.96	75	8921	0.9810 ug/L		94
63)	1,1,2-Trichloroethane	13.18	97	4030	0.9297 ug/L		93
64)	2-Hexanone	13.11	58	1500	0.9330 ug/L	#	57
65)	1,3-Dichloropropane	13.48	76	7958	0.9812 ug/L		85
66)	Tetrachloroethene	13.60	164	5567	1.0724 ug/L		98
67)	Dibromochloromethane	13.87	129	4939	0.8646 ug/L		98
68)	1,2-Dibromoethane	14.12	107	4220	1.0649 ug/L		97
69)	1-Chlorohexane	14.21	91	9389	1.0227 ug/L		77
70)	Chlorobenzene	14.62	112	19121	1.0457 ug/L		68
71)	1,1,1,2-Tetrachloroethane	14.65	131	5975	0.9371 ug/L		95
72)	Ethylbenzene	14.65	106	10588	1.0453 ug/L		96
73)	m-,p-Xylene	14.74	106	25541	2.1585 ug/L		93
74)	o-Xylene	15.31	106	12312	1.0244 ug/L		98
75)	Styrene	15.34	104	18433	0.9664 ug/L		92
76)	Bromoform	15.83	173	2344	0.9686 ug/L		96
77)	Isopropylbenzene	15.73	105	29928	1.0347 ug/L		96
79)	1,1,2,2-Tetrachloroethane	15.94	83	4777	0.9489 ug/L	#	95
81)	1,2,3-Trichloropropane	16.13	110	1209	0.8831 ug/L		67
82)	trans-1,4-Dichloro-2-Buten	16.17	53	1646	0.8165 ug/L	#	63
83)	n-Propylbenzene	16.24	91	37004	1.0780 ug/L		98
84)	Bromobenzene	16.36	156	6392	0.9364 ug/L		73
85)	1,3,5-Trimethylbenzene	16.42	105	26054	1.0815 ug/L		92
86)	2-Chlorotoluene	16.50	91	23958	1.0728 ug/L		94
87)	4-Chlorotoluene	16.56	91	24926	1.0716 ug/L		95
88)	a-Methylstyrene	16.82	118	10490	0.7995 ug/L		92
89)	tert-Butylbenzene	16.89	134	4323	0.8810 ug/L		64
90)	1,2,4-Trimethylbenzene	16.94	105	26202	1.0360 ug/L		96
91)	sec-Butylbenzene	17.16	105	33001	1.1034 ug/L		93
92)	p-Isopropyltoluene	17.31	119	25131	1.0308 ug/L		92
93)	1,3-Dichlorobenzene	17.51	146	13976	1.0063 ug/L		95
94)	1,4-Dichlorobenzene	17.63	146	14045	1.0103 ug/L		90
95)	n-Butylbenzene	17.84	91	26658	1.0743 ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	12137	0.9876 ug/L		95
97)	1,2-Dibromo-3-Chloropropan	19.12	75	619	0.6808 ug/L	#	56
98)	1,2,4-Trichlorobenzene	20.27	180	9142	1.0571 ug/L		92
99)	Hexachlorobutadiene	20.42	225	3431	1.0080 ug/L		98
100)	Naphthalene	20.64	128	14310	0.9880 ug/L		91
101)	1,2,3-Trichlorobenzene	20.94	180	7257	1.0055 ug/L		94

(#) = qualifier out of range (m) = manual integration
8M411394.D 8260WT.M Thu Apr 14 08:46:44 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041316\8M411394.D Vial: 4
Acq On : 13 Apr 2016 13:13 Operator: TMB
Sample : WG564484-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041316\8M411394.D Vial: 4
Acq On : 13 Apr 2016 13:13 Operator: TMB
Sample : WG564484-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:48:16 2016
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	100	0.00
2	T	Dichlorodifluoromethane	1.0000	1.0063	-0.6	100	0.00
3	P	Chloromethane	1.0000	1.1013	-10.1	100	0.00
4	C	Vinyl Chloride	1.0000	1.1196	-12.0	100	0.00
5	T	1,3-Butadiene	-1.0000	0.6515	0.0	100	0.02
6	T	Bromomethane	1.0000	1.3086	-30.9#	100	0.01
7	T	Chloroethane	1.0000	0.9737	2.6	100	0.00
8	T	Trichlorofluoromethane	1.0000	1.0533	-5.3	100	0.00
9	T	Diethyl ether	5.0000	4.7917	4.2	100	0.00
10	T	Isoprene	1.0000	0.9809	1.9	100	0.00
11	T	Acrolein	2.5000	2.3641	5.4	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	1.0000	0.9898	1.0	100	0.00
13	T	Acetone	-1.0000	0.5913	0.0	100	0.00
14	C	1,1-Dichloroethene	1.0000	1.0211	-2.1	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	7.6959	0.0	100	-0.01
16	T	Dimethyl Sulfide	1.0000	0.9763	2.4	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-7.00#
18	T	Methyl acetate	-1.0000	0.8951	0.0	100	0.00
19	T	Methylene Chloride	1.0000	1.0340	-3.4	100	0.00
20	T	Carbon Disulfide	1.0000	1.0602	-6.0	100	0.00
21	T	Acrylonitrile	2.5000	2.1237	15.1	100	0.00
22	T	Methyl Tert Butyl Ether	1.0000	0.8989	10.1	100	0.00
23	T	trans-1,2-Dichloroethene	1.0000	0.9925	0.7	100	0.00
24	T	n-Hexane	-1.0000	1.0503	0.0	100	-0.01
25	T	Diisopropyl ether	5.0000	4.9858	0.3	100	0.00
26	T	Vinyl Acetate	-1.0000	0.8453	0.0	100	0.00
27	P	1,1-Dichloroethane	1.0000	1.0398	-4.0	100	0.00
28	T	Ethyl-Tert-Butyl ether	5.0000	4.9055	1.9	100	0.00
29	T	2-Butanone	-1.0000	0.8395	0.0	100	0.00
30	T	Propionitrile	5.0000	4.6421	7.2	100	0.00
31	T	2,2-Dichloropropane	1.0000	1.0345	-3.4	100	0.00
32	T	cis-1,2-Dichloroethene	1.0000	1.0482	-4.8	100	0.00
33	C	Chloroform	1.0000	1.0401	-4.0	100	0.00
34		1-Bromopropane	1.0000	0.7367	26.3#	100	0.00
35	T	Bromochloromethane	1.0000	0.9629	3.7	100	0.00
36	T	Tetrahydrofuran	5.0000	6.6249	-32.5#	100	0.00
37	S	Dibromofluoromethane	0.5000	0.4933	1.3	100	0.00
38	T	1,1,1-Trichloroethane	1.0000	1.0745	-7.5	100	0.00
39	T	Cyclohexane	1.0000	0.9783	2.2	100	0.00
40	T	1,1-Dichloropropene	1.0000	0.9569	4.3	100	0.00
41	T	Tert-Amyl-Methyl ether	5.0000	4.7694	4.6	100	0.00
42	T	Carbon Tetrachloride	1.0000	0.9790	2.1	100	0.00
43	S	1,2-Dichloroethane-d4	0.5000	0.4987	0.3	100	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	1.0000	1.0211	-2.1	100	0.00
46	T	Benzene	1.0000	1.0255	-2.6	100	0.00
47	T	Trichloroethene	1.0000	0.9830	1.7	100	0.00
48	T	Methylcyclohexane	-1.0000	0.9861	0.0	100	0.00
49	C	1,2-Dichloropropane	1.0000	0.9680	3.2	100	0.00
50	T	Bromodichloromethane	1.0000	1.0095	-0.9	100	0.00
51	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.72#
52	T	Dibromomethane	1.0000	0.9673	3.3	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	1.0101	0.0	100	-0.01
54	T	4-Methyl-2-Pentanone	-1.0000	0.8133	0.0	100	0.00

(#) = Out of Range
8M411394.D 8260WT.M Thu Apr 14 09:10:53 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411394.D Vial: 4
Acq On : 13 Apr 2016 13:13 Operator: TMB
Sample : WG564484-04 1ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:48:16 2016
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)
55	T	cis-1,3-Dichloropropene	1.0000	0.9439	5.6	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.6662	0.0	100	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	0.5000	0.5663	-13.3	100	0.00
59	C	Toluene	1.0000	1.0999	-10.0	100	0.00
60	T	Ethyl Methacrylate	1.0000	0.9240	7.6	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	1.0000	0.9810	1.9	100	0.00
63	T	1,1,2-Trichloroethane	1.0000	0.9297	7.0	100	0.00
64	T	2-Hexanone	-1.0000	0.9330	0.0	100	0.00
65	T	1,3-Dichloropropane	1.0000	0.9812	1.9	100	0.00
66	T	Tetrachloroethene	1.0000	1.0724	-7.2	100	0.00
67	T	Dibromochloromethane	1.0000	0.8646	13.5	100	0.00
68	T	1,2-Dibromoethane	1.0000	1.0649	-6.5	100	0.00
69	T	1-Chlorohexane	1.0000	1.0227	-2.3	100	0.00
70	P	Chlorobenzene	1.0000	1.0457	-4.6	100	0.00
71	T	1,1,1,2-Tetrachloroethane	1.0000	0.9371	6.3	100	0.00
72	C	Ethylbenzene	1.0000	1.0453	-4.5	100	0.00
73	T	m-,p-Xylene	2.0000	2.1585	-7.9	100	-0.01
74	T	o-Xylene	1.0000	1.0244	-2.4	100	0.00
75	T	Styrene	1.0000	0.9664	3.4	100	0.00
76	P	Bromoform	1.0000	0.9686	3.1	100	0.00
77	T	Isopropylbenzene	1.0000	1.0347	-3.5	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	-0.01
79	P	1,1,2,2-Tetrachloroethane	1.0000	0.9489	5.1	100	-0.01
80	S	p-Bromofluorobenzene	-1.0000	0.5395	0.0	100	0.00
81	T	1,2,3-Trichloropropane	1.0000	0.8831	11.7	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	1.0000	0.8165	18.4	100	-0.01
83	T	n-Propylbenzene	1.0000	1.0780	-7.8	100	0.00
84	T	Bromobenzene	1.0000	0.9364	6.4	100	0.00
85	T	1,3,5-Trimethylbenzene	1.0000	1.0815	-8.1	100	0.00
86	T	2-Chlorotoluene	1.0000	1.0728	-7.3	100	0.00
87	T	4-Chlorotoluene	1.0000	1.0716	-7.2	100	0.00
88	T	a-Methylstyrene	-1.0000	0.7995	0.0	100	0.00
89	T	tert-Butylbenzene	1.0000	0.8810	11.9	100	0.00
90	T	1,2,4-Trimethylbenzene	1.0000	1.0360	-3.6	100	0.00
91	T	sec-Butylbenzene	1.0000	1.1034	-10.3	100	0.00
92	T	p-Isopropyltoluene	1.0000	1.0308	-3.1	100	0.00
93	T	1,3-Dichlorobenzene	1.0000	1.0063	-0.6	100	0.00
94	T	1,4-Dichlorobenzene	1.0000	1.0103	-1.0	100	-0.01
95	T	n-Butylbenzene	1.0000	1.0743	-7.4	100	0.00
96	T	1,2-Dichlorobenzene	1.0000	0.9876	1.2	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.6808	0.0	100	0.00
98	T	1,2,4-Trichlorobenzene	1.0000	1.0571	-5.7	100	0.00
99	T	Hexachlorobutadiene	1.0000	1.0080	-0.8	100	0.00
100	T	Naphthalene	1.0000	0.9880	1.2	100	0.00
101	T	1,2,3-Trichlorobenzene	1.0000	1.0055	-0.6	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411394.D 8260WT.M Thu Apr 14 09:10:53 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041316\8M411395.D Vial: 5
Acq On : 13 Apr 2016 13:43 Operator: TMB
Sample : WG564484-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 09:11:23 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:48:16 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	659337	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	460537	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	228735	25.00	ug/L	-0.01
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	3.17	85	3368	0.3176	ug/L	83
3) Chloromethane	3.63	50	9474	0.5782	ug/L	91
4) Vinyl Chloride	3.86	62	4205	0.4309	ug/L #	58
5) 1,3-Butadiene	3.91	54	4080	Below Cal #		44
6) Bromomethane	4.75	94	731	0.8319	ug/L #	36
7) Chloroethane	4.90	64	1855	0.3453	ug/L #	43
8) Trichlorofluoromethane	5.38	101	4229	0.3504	ug/L #	93
10) Isoprene	5.95	67	2932	0.3188	ug/L	97
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	1962	0.2992	ug/L #	48
14) 1,1-Dichloroethene	6.47	61	4516	0.3619	ug/L	77
16) Dimethyl Sulfide	6.75	62	1779	0.3133	ug/L	59
18) Methyl acetate	7.02	43	1115	0.2525	ug/L #	66
19) Methylene Chloride	7.26	84	2838	0.4129	ug/L	70
20) Carbon Disulfide	7.31	76	9192	0.4017	ug/L #	87
22) Methyl Tert Butyl Ether	7.49	73	4858	0.3497	ug/L #	71
23) trans-1,2-Dichloroethene	7.71	61	4312	0.3624	ug/L	92
24) n-Hexane	7.79	57	3590	0.3098	ug/L	87
26) Vinyl Acetate	8.31	43	3434	0.3125	ug/L #	79
27) 1,1-Dichloroethane	8.34	63	5820	0.3896	ug/L #	86
31) 2,2-Dichloropropane	9.09	77	4336	0.3899	ug/L	82
32) cis-1,2-Dichloroethene	9.17	96	2703	0.3638	ug/L	100
33) Chloroform	9.37	83	4512	0.3591	ug/L	74
35) Bromochloromethane	9.61	130	1235	0.3278	ug/L #	58
36) Tetrahydrofuran	9.64	42	3028	1.9740	ug/L #	75
38) 1,1,1-Trichloroethane	9.90	97	3757	0.3377	ug/L	99
39) Cyclohexane	9.94	56	4856	0.3164	ug/L #	88
40) 1,1-Dichloropropene	10.12	75	3355	0.3419	ug/L	84
42) Carbon Tetrachloride	10.24	117	3604	0.3650	ug/L #	87
45) 1,2-Dichloroethane	10.43	62	3188	0.3344	ug/L	90
46) Benzene	10.47	78	10446	0.3914	ug/L	97
47) Trichloroethene	11.22	130	2314	0.3444	ug/L	76
48) Methylcyclohexane	11.31	83	3388	0.3172	ug/L	82
49) 1,2-Dichloropropane	11.43	63	2799	0.3505	ug/L	86
50) Bromodichloromethane	11.72	83	3535	0.3736	ug/L #	93
52) Dibromomethane	11.81	93	952	0.2852	ug/L	74
53) 2-Chloroethyl Vinyl Ether	12.03	63	731	0.2244	ug/L #	51
55) cis-1,3-Dichloropropene	12.36	75	3472	0.3324	ug/L	92
56) Dimethyl Disulfide	12.63	79	1218	0.2199	ug/L	89
59) Toluene	12.78	91	11045	0.4078	ug/L	98
60) Ethyl Methacrylate	12.88	69	1506	0.2638	ug/L	75

(#) = qualifier out of range (m) = manual integration
8M411395.D 8260WT.M Thu Apr 14 09:11:23 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411395.D Vial: 5
Acq On : 13 Apr 2016 13:43 Operator: TMB
Sample : WG564484-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 09:11:23 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:48:16 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

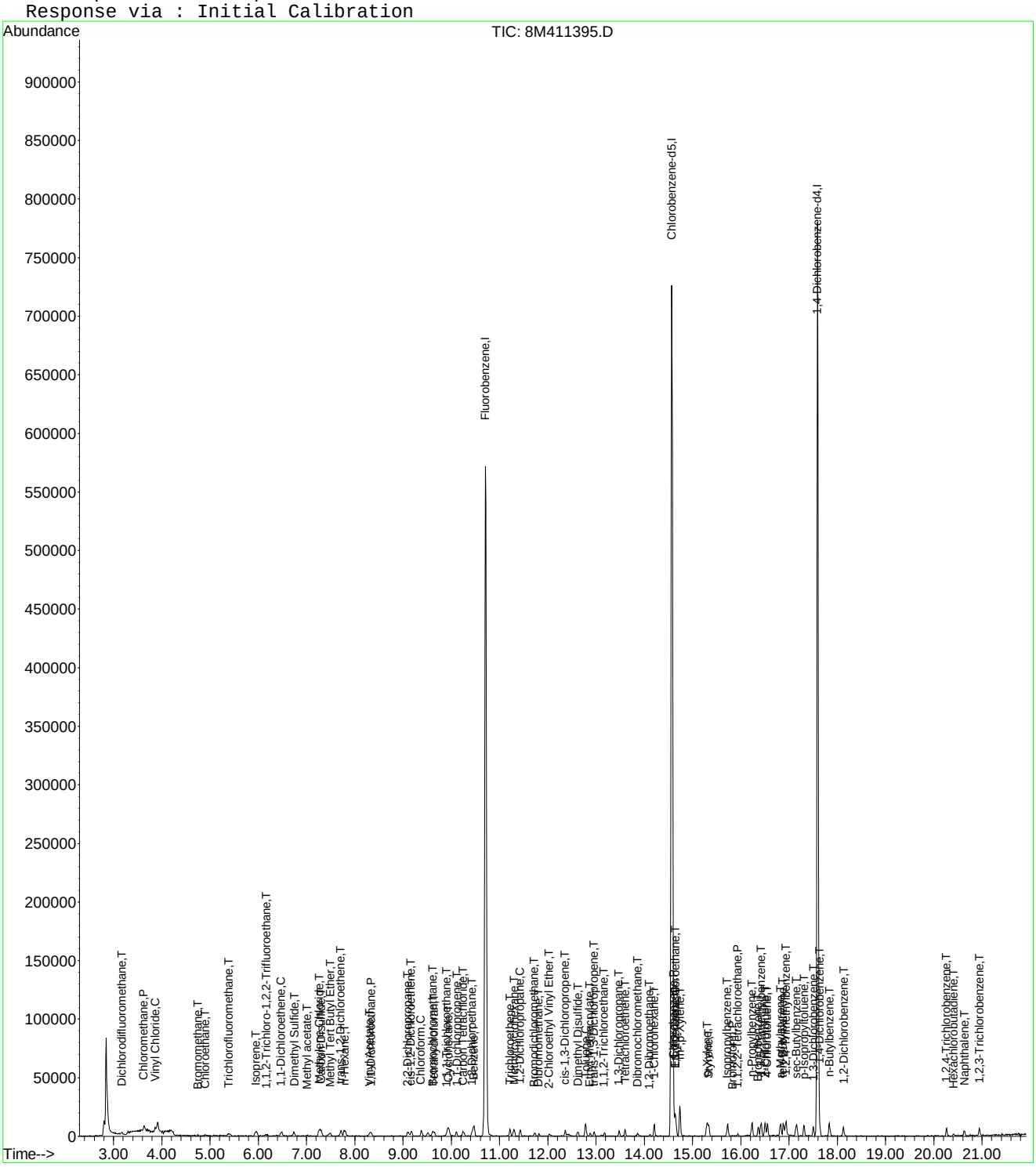
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
62)	trans-1,3-Dichloropropene	12.96	75	2781	0.3060 ug/L		98
63)	1,1,2-Trichloroethane	13.17	97	1344	0.3102 ug/L		95
65)	1,3-Dichloropropane	13.48	76	3078	0.3797 ug/L		96
66)	Tetrachloroethene	13.60	164	1650	0.3180 ug/L		91
67)	Dibromochloromethane	13.86	129	1915	0.3354 ug/L		91
68)	1,2-Dibromoethane	14.11	107	1089	0.3589 ug/L		87
69)	1-Chlorohexane	14.21	91	2996	0.3265 ug/L		68
70)	Chlorobenzene	14.61	112	7249	0.3966 ug/L		85
71)	1,1,1,2-Tetrachloroethane	14.64	131	2228	0.3496 ug/L		87
72)	Ethylbenzene	14.64	106	3535	0.3492 ug/L		84
73)	m-,p-Xylene	14.74	106	9079	0.7677 ug/L		85
74)	o-Xylene	15.31	106	4359	0.3629 ug/L		93
75)	Styrene	15.34	104	6453	0.3385 ug/L		95
76)	Bromoform	15.83	173	477	0.4378 ug/L	#	27
77)	Isopropylbenzene	15.72	105	10880	0.3764 ug/L		87
79)	1,1,2,2-Tetrachloroethane	15.94	83	1475	0.2934 ug/L	#	88
83)	n-Propylbenzene	16.24	91	13874	0.4048 ug/L		96
84)	Bromobenzene	16.36	156	2482	0.3641 ug/L		73
85)	1,3,5-Trimethylbenzene	16.42	105	8911	0.3704 ug/L		96
86)	2-Chlorotoluene	16.50	91	9127	0.4093 ug/L		83
87)	4-Chlorotoluene	16.55	91	9103	0.3919 ug/L		96
88)	a-Methylstyrene	16.82	118	3966	0.3027 ug/L		91
89)	tert-Butylbenzene	16.88	134	1682	0.3433 ug/L		74
90)	1,2,4-Trimethylbenzene	16.94	105	10344	0.4096 ug/L		91
91)	sec-Butylbenzene	17.16	105	11489	0.3847 ug/L		95
92)	p-Isopropyltoluene	17.31	119	8659	0.3557 ug/L		93
93)	1,3-Dichlorobenzene	17.51	146	5593	0.4033 ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	5317	0.3830 ug/L		96
95)	n-Butylbenzene	17.84	91	9386	0.3788 ug/L		95
96)	1,2-Dichlorobenzene	18.14	146	4398	0.3584 ug/L		82
98)	1,2,4-Trichlorobenzene	20.27	180	3106	0.3597 ug/L		86
99)	Hexachlorobutadiene	20.41	225	1046	0.3078 ug/L	#	40
100)	Naphthalene	20.64	128	5305	0.3668 ug/L	#	78
101)	1,2,3-Trichlorobenzene	20.95	180	2622	0.3638 ug/L		95

(#) = qualifier out of range (m) = manual integration
8M411395.D 8260WT.M Thu Apr 14 09:11:23 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411395.D Vial: 5
Acq On : 13 Apr 2016 13:43 Operator: TMB
Sample : WG564484-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 9:11 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:48:16 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041316\8M411395.D Vial: 5
Acq On : 13 Apr 2016 13:43 Operator: TMB
Sample : WG564484-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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	100	0.00
2	T	Dichlorodifluoromethane	0.4000	0.3176	20.6	100	0.00
3	P	Chloromethane	-1.0000	0.5782	0.0	100	0.00
4	C	Vinyl Chloride	0.4000	0.4309	-7.7	100	0.02
5	T	1,3-Butadiene	-1.0000	-1.0000	0.0	100	0.02
6	T	Bromomethane	-1.0000	7.1326	0.0	100	0.01
7	T	Chloroethane	0.4000	0.3453	13.7	100	0.00
8	T	Trichlorofluoromethane	0.4000	0.3504	12.4	100	0.00
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-5.91#
10	T	Isoprene	0.4000	0.3188	20.3	100	0.00
11	T	Acrolein	-1.0000	0.0000	0.0	0	-6.15#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.2992	0.0	100	0.00
13	T	Acetone	-1.0000	0.0000	0.0	0	-6.25#
14	C	1,1-Dichloroethene	0.4000	0.3619	9.5	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-6.59#
16	T	Dimethyl Sulfide	0.4000	0.3133	21.7	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-7.00#
18	T	Methyl acetate	-1.0000	0.2525	0.0	100	0.00
19	T	Methylene Chloride	-1.0000	0.4129	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.4017	0.0	100	0.00
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.44#
22	T	Methyl Tert Butyl Ether	-1.0000	0.3497	0.0	100	0.02
23	T	trans-1,2-Dichloroethene	0.4000	0.3624	9.4	100	0.00
24	T	n-Hexane	-1.0000	0.3098	0.0	100	0.00
25	T	Diisopropyl ether	-1.0000	0.0000	0.0	0	-8.13#
26	T	Vinyl Acetate	-1.0000	0.3125	0.0	100	0.00
27	P	1,1-Dichloroethane	0.4000	0.3896	2.6	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-8.71#
29	T	2-Butanone	-1.0000	0.0000	0.0	0	-8.89#
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-8.99#
31	T	2,2-Dichloropropane	0.4000	0.3899	2.5	100	-0.01
32	T	cis-1,2-Dichloroethene	0.4000	0.3638	9.0	100	0.00
33	C	Chloroform	0.4000	0.3591	10.2	100	-0.01
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-9.52#
35	T	Bromochloromethane	0.4000	0.3278	18.1	100	0.00
36	T	Tetrahydrofuran	-1.0000	1.9740	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-9.66#
38	T	1,1,1-Trichloroethane	0.4000	0.3377	15.6	100	-0.01
39	T	Cyclohexane	-1.0000	0.3164	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.3419	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-10.21#
42	T	Carbon Tetrachloride	0.4000	0.3650	8.7	100	-0.01
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-10.30#
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	0.4000	0.3344	16.4	100	0.00
46	T	Benzene	0.4000	0.3914	2.2	100	0.00
47	T	Trichloroethene	0.4000	0.3443	13.9	100	0.00
48	T	Methylcyclohexane	-1.0000	0.3172	0.0	100	0.00
49	C	1,2-Dichloropropane	0.4000	0.3505	12.4	100	0.00
50	T	Bromodichloromethane	0.4000	0.3736	6.6	100	-0.01
51	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.72#
52	T	Dibromomethane	0.4000	0.2853	28.7#	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.2244	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-12.05#

(#) = Out of Range
8M411395.D 8260WT.M Thu Apr 14 08:47:22 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411395.D Vial: 5
Acq On : 13 Apr 2016 13:43 Operator: TMB
Sample : WG564484-03 0.4ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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)
55	T	cis-1,3-Dichloropropene	0.4000	0.3324	16.9	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.2199	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0000	0.0	0	-12.68#
59	C	Toluene	0.4000	0.4078	-1.9	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.2638	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	-1.0000	0.3060	0.0	100	0.00
63	T	1,1,2-Trichloroethane	0.4000	0.3102	22.4	100	-0.01
64	T	2-Hexanone	-1.0000	0.0000	0.0	0	-13.12#
65	T	1,3-Dichloropropane	0.4000	0.3797	5.1	100	0.00
66	T	Tetrachloroethene	0.4000	0.3180	20.5	100	0.00
67	T	Dibromochloromethane	0.4000	0.3354	16.2	100	-0.01
68	T	1,2-Dibromoethane	0.4000	0.3589	10.3	100	-0.01
69	T	1-Chlorohexane	0.4000	0.3265	18.4	100	0.00
70	P	Chlorobenzene	0.4000	0.3966	0.8	100	-0.01
71	T	1,1,1,2-Tetrachloroethane	0.4000	0.3496	12.6	100	-0.01
72	C	Ethylbenzene	0.4000	0.3492	12.7	100	-0.01
73	T	m-,p-Xylene	0.8000	0.7677	4.0	100	-0.01
74	T	o-Xylene	-1.0000	0.3629	0.0	100	0.00
75	T	Styrene	0.4000	0.3385	15.4	100	0.00
76	P	Bromoform	-1.0000	0.4378	0.0	0	0.00
77	T	Isopropylbenzene	0.4000	0.3764	5.9	100	-0.01
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	-0.01
79	P	1,1,2,2-Tetrachloroethane	0.4000	0.2934	26.6#	100	-0.01
80	S	p-Bromofluorobenzene	-1.0000	0.0000	0.0	0	-16.07#
81	T	1,2,3-Trichloropropane	-1.0000	0.0000	0.0	0	-16.13#
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.1018	0.0	100	-0.01
83	T	n-Propylbenzene	0.4000	0.4048	-1.2	100	0.00
84	T	Bromobenzene	0.4000	0.3641	9.0	100	0.00
85	T	1,3,5-Trimethylbenzene	0.4000	0.3704	7.4	100	0.00
86	T	2-Chlorotoluene	0.4000	0.4093	-2.3	100	0.00
87	T	4-Chlorotoluene	0.4000	0.3919	2.0	100	-0.01
88	T	a-Methylstyrene	-1.0000	0.3027	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.3433	0.0	100	-0.01
90	T	1,2,4-Trimethylbenzene	0.4000	0.4096	-2.4	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.3847	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.3557	0.0	100	0.00
93	T	1,3-Dichlorobenzene	0.4000	0.4033	-0.8	100	0.00
94	T	1,4-Dichlorobenzene	0.4000	0.3830	4.2	100	0.00
95	T	n-Butylbenzene	-1.0000	0.3788	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.4000	0.3584	10.4	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-19.12#
98	T	1,2,4-Trichlorobenzene	0.4000	0.3597	10.1	100	0.00
99	T	Hexachlorobutadiene	0.4000	0.3078	23.1	100	-0.01
100	T	Naphthalene	0.4000	0.3668	8.3	100	0.00
101	T	1,2,3-Trichlorobenzene	0.4000	0.3638	9.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411395.D 8260WT.M Thu Apr 14 08:47:22 2016 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:44:13 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	652317	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	457630	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	229350	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	7062	1.0588	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	4.24%#		
43) 1,2-Dichloroethane-d4	10.31	65	7083	1.0115	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	4.04%#		
58) Toluene-d8	12.68	98	23013	1.0049	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	4.00%#		
80) p-Bromofluorobenzene	16.07	95	9402	1.0492	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	4.20%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	19105	1.8210	ug/L	98
3) Chloromethane	3.63	50	35397	2.1837	ug/L	97
4) Vinyl Chloride	3.85	62	19997	2.0711	ug/L	96
5) 1,3-Butadiene	3.91	54	21929	1.7263	ug/L	79
6) Bromomethane	4.74	94	5623	2.0813	ug/L	87
7) Chloroethane	4.90	64	9824	1.8485	ug/L	96
8) Trichlorofluoromethane	5.38	101	22978	1.9244	ug/L	96
9) Diethyl ether	5.92	59	127824	26.5513	ug/L	93
10) Isoprene	5.94	67	17069	1.8759	ug/L	91
11) Acrolein	6.15	56	6677	13.8554	ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	6.19	101	11757m	1.8123	ug/L	
13) Acetone	6.25	43	2820	2.2740	ug/L #	62
14) 1,1-Dichloroethene	6.48	61	23859	1.9328	ug/L	96
15) Tert-Butyl Alcohol	6.58	59	15532	53.6235	ug/L #	94
16) Dimethyl Sulfide	6.73	62	11005	1.9588	ug/L	89
17) Iodomethane	6.99	142	1000	4.4131	ug/L #	30
18) Methyl acetate	7.02	43	8786	2.0110	ug/L #	82
19) Methylene Chloride	7.25	84	12854	1.8904	ug/L	74
20) Carbon Disulfide	7.30	76	43369	1.9159	ug/L	100
21) Acrylonitrile	7.44	53	23881	12.7641	ug/L	97
22) Methyl Tert Butyl Ether	7.47	73	27036	1.9670	ug/L	90
23) trans-1,2-Dichloroethene	7.71	61	23956	2.0351	ug/L	85
24) n-Hexane	7.79	57	19669	1.7155	ug/L	96
25) Diisopropyl ether	8.13	45	789228	26.7359	ug/L	96
26) Vinyl Acetate	8.31	43	21051	1.9365	ug/L	93
27) 1,1-Dichloroethane	8.33	63	28687	1.9408	ug/L	96
28) Ethyl-Tert-Butyl ether	8.70	59	569455	26.3673	ug/L	97
29) 2-Butanone	8.89	43	4271	2.0768	ug/L #	57
30) Propionitrile	8.99	54	15150	25.3533	ug/L	100
31) 2,2-Dichloropropane	9.10	77	21246	1.9311	ug/L	100
32) cis-1,2-Dichloroethene	9.18	96	13994	1.9038	ug/L	83
33) Chloroform	9.38	83	25698	2.0671	ug/L	94
34) 1-Bromopropane	9.52	122	1846	1.6957	ug/L	94
35) Bromochloromethane	9.61	130	7717	2.0702	ug/L	79
36) Tetrahydrofuran	9.64	42	37252	24.5464	ug/L	92
38) 1,1,1-Trichloroethane	9.91	97	22630	2.0559	ug/L	92
39) Cyclohexane	9.94	56	28813	1.8973	ug/L	92
40) 1,1-Dichloropropene	10.11	75	18828	1.9393	ug/L	92
41) Tert-Amyl-Methyl ether	10.21	73	388134	26.6371	ug/L	94
42) Carbon Tetrachloride	10.25	117	18241	1.8673	ug/L	96

(#) = qualifier out of range (m) = manual integration
8M411396.D 8260WT.M Thu Apr 14 08:46:58 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:44:13 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

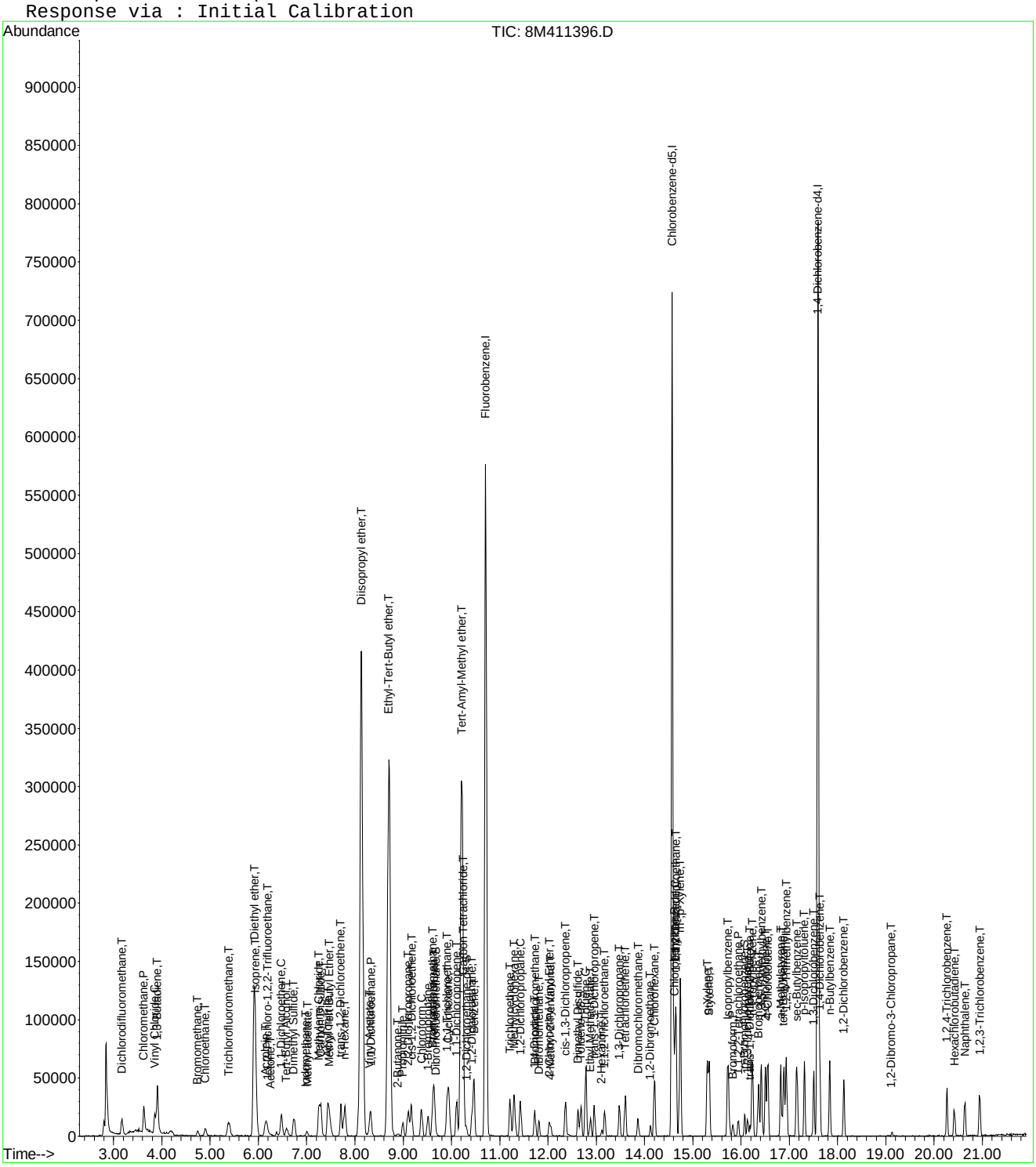
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	18820	1.9954	ug/L		97
46)	Benzene	10.47	78	52857	2.0017	ug/L		94
47)	Trichloroethene	11.21	130	12578	1.8919	ug/L		97
48)	Methylcyclohexane	11.30	83	19600	1.8551	ug/L		90
49)	1,2-Dichloropropane	11.43	63	15350	1.9427	ug/L		95
50)	Bromodichloromethane	11.73	83	17899	1.9122	ug/L		95
51)	1,4-Dioxane	11.72	88	1044	38.0043	ug/L		73
52)	Dibromomethane	11.81	93	6073	1.8392	ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.03	63	5649	1.7525	ug/L		85
54)	4-Methyl-2-Pentanone	12.05	58	2965	1.7015	ug/L	#	74
55)	cis-1,3-Dichloropropene	12.36	75	19363	1.8737	ug/L		96
56)	Dimethyl Disulfide	12.62	79	8060	1.4710	ug/L		100
59)	Toluene	12.78	91	53627	1.9923	ug/L		100
60)	Ethyl Methacrylate	12.88	69	9691	1.7081	ug/L		84
62)	trans-1,3-Dichloropropene	12.96	75	17329	1.9186	ug/L		98
63)	1,1,2-Trichloroethane	13.17	97	8662	2.0121	ug/L		100
64)	2-Hexanone	13.11	58	2941	1.8418	ug/L	#	97
65)	1,3-Dichloropropane	13.48	76	16584	2.0587	ug/L		91
66)	Tetrachloroethene	13.60	164	9727	1.8866	ug/L		89
67)	Dibromochloromethane	13.87	129	10390	1.8313	ug/L		97
68)	1,2-Dibromoethane	14.12	107	7562	1.8304	ug/L		89
69)	1-Chlorohexane	14.21	91	17909	1.9642	ug/L		84
70)	Chlorobenzene	14.62	112	37054	2.0403	ug/L		86
71)	1,1,1,2-Tetrachloroethane	14.65	131	11823	1.8671	ug/L		99
72)	Ethylbenzene	14.64	106	19405	1.9289	ug/L		91
73)	m-,p-Xylene	14.74	106	48129	4.0953	ug/L		95
74)	o-Xylene	15.31	106	23216	1.9449	ug/L		98
75)	Styrene	15.34	104	36440	1.9236	ug/L		98
76)	Bromoform	15.83	173	5557	1.8930	ug/L		95
77)	Isopropylbenzene	15.73	105	57499	2.0016	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	10239	2.0315	ug/L	#	95
81)	1,2,3-Trichloropropane	16.13	110	2611	1.9050	ug/L		86
82)	trans-1,4-Dichloro-2-Buten	16.18	53	3533	1.7503	ug/L		83
83)	n-Propylbenzene	16.24	91	72528	2.1103	ug/L		95
84)	Bromobenzene	16.36	156	14083	2.0606	ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	47749	1.9796	ug/L		99
86)	2-Chlorotoluene	16.50	91	45827	2.0495	ug/L		99
87)	4-Chlorotoluene	16.56	91	46664	2.0037	ug/L		93
88)	a-Methylstyrene	16.82	118	23425	1.7833	ug/L		98
89)	tert-Butylbenzene	16.88	134	9325	1.8980	ug/L		81
90)	1,2,4-Trimethylbenzene	16.94	105	49461	1.9532	ug/L		100
91)	sec-Butylbenzene	17.16	105	58638	1.9582	ug/L		96
92)	p-Isopropyltoluene	17.31	119	47350	1.9398	ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	27565	1.9824	ug/L		99
94)	1,4-Dichlorobenzene	17.63	146	26619	1.9124	ug/L	#	74
95)	n-Butylbenzene	17.84	91	48740	1.9619	ug/L		98
96)	1,2-Dichlorobenzene	18.13	146	25409	2.0650	ug/L		99
97)	1,2-Dibromo-3-Chloropropan	19.11	75	1610	1.7685	ug/L		91
98)	1,2,4-Trichlorobenzene	20.27	180	16054	1.8541	ug/L		97
99)	Hexachlorobutadiene	20.42	225	5675	1.6652	ug/L		93
100)	Naphthalene	20.64	128	28428	1.9603	ug/L		98
101)	1,2,3-Trichlorobenzene	20.95	180	14071	1.9473	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411396.D 8260WT.M Thu Apr 14 08:46:59 2016 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:44 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



8M411396.D 8260WT.M Thu Apr 14 08:46:59 2016 Page 3

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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	100	0.00
2	T	Dichlorodifluoromethane	2.0000	1.8210	9.0	100	0.00
3	P	Chloromethane	2.0000	2.1837	-9.2	100	0.00
4	C	Vinyl Chloride	2.0000	2.0711	-3.6	100	0.00
5	T	1,3-Butadiene	2.0000	1.7263	13.7	100	0.02
6	T	Bromomethane	2.0000	2.0813	-4.1	100	0.00
7	T	Chloroethane	2.0000	1.8485	7.6	100	0.00
8	T	Trichlorofluoromethane	2.0000	1.9244	3.8	100	0.00
9	T	Diethyl ether	25.0000	26.5513	-6.2	100	0.00
10	T	Isoprene	2.0000	1.8759	6.2	100	-0.01
11	T	Acrolein	12.5000	13.8554	-10.8	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	2.0000	1.8123	9.4	100	0.03
13	T	Acetone	-1.0000	2.2740	0.0	100	0.00
14	C	1,1-Dichloroethene	2.0000	1.9328	3.4	100	0.00
15	T	Tert-Butyl Alcohol	50.0000	53.6236	-7.2	100	-0.01
16	T	Dimethyl Sulfide	2.0000	1.9588	2.1	100	-0.01
17	T	Iodomethane	-1.0000	4.4131	0.0	0	-0.01
18	T	Methyl acetate	-1.0000	2.0110	0.0	100	0.00
19	T	Methylene Chloride	2.0000	1.8904	5.5	100	0.00
20	T	Carbon Disulfide	2.0000	1.9159	4.2	100	0.00
21	T	Acrylonitrile	12.5000	12.7641	-2.1	100	0.00
22	T	Methyl Tert Butyl Ether	2.0000	1.9670	1.6	100	0.00
23	T	trans-1,2-Dichloroethene	2.0000	2.0351	-1.8	100	0.00
24	T	n-Hexane	-1.0000	1.7155	0.0	100	0.00
25	T	Diisopropyl ether	25.0000	26.7359	-6.9	100	0.00
26	T	Vinyl Acetate	2.0000	1.9365	3.2	100	0.00
27	P	1,1-Dichloroethane	2.0000	1.9409	3.0	100	0.00
28	T	Ethyl-Tert-Butyl ether	25.0000	26.3673	-5.5	100	-0.01
29	T	2-Butanone	-1.0000	2.0768	0.0	100	0.00
30	T	Propionitrile	25.0000	25.3533	-1.4	100	0.00
31	T	2,2-Dichloropropane	2.0000	1.9311	3.4	100	0.00
32	T	cis-1,2-Dichloroethene	2.0000	1.9038	4.8	100	0.00
33	C	Chloroform	2.0000	2.0671	-3.4	100	0.00
34		1-Bromopropane	2.0000	1.6957	15.2	100	0.00
35	T	Bromochloromethane	2.0000	2.0702	-3.5	100	0.00
36	T	Tetrahydrofuran	25.0000	24.5464	1.8	100	0.00
37	S	Dibromofluoromethane	1.0000	1.0588	-5.9	100	0.00
38	T	1,1,1-Trichloroethane	2.0000	2.0559	-2.8	100	0.00
39	T	Cyclohexane	2.0000	1.8974	5.1	100	0.00
40	T	1,1-Dichloropropene	2.0000	1.9393	3.0	100	0.00
41	T	Tert-Amyl-Methyl ether	25.0000	26.6371	-6.5	100	0.00
42	T	Carbon Tetrachloride	2.0000	1.8673	6.6	100	0.00
43	S	1,2-Dichloroethane-d4	1.0000	1.0115	-1.1	100	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	2.0000	1.9954	0.2	100	0.00
46	T	Benzene	2.0000	2.0017	-0.1	100	0.00
47	T	Trichloroethene	2.0000	1.8919	5.4	100	0.00
48	T	Methylcyclohexane	-1.0000	1.8551	0.0	100	0.00
49	C	1,2-Dichloropropane	2.0000	1.9427	2.9	100	0.00
50	T	Bromodichloromethane	2.0000	1.9122	4.4	100	0.00
51	T	1,4-Dioxane	-1.0000	38.0043	0.0	100	0.00
52	T	Dibromomethane	2.0000	1.8392	8.0	100	0.00
53	T	2-Chloroethyl Vinyl Ether	2.0000	1.7525	12.4	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	1.7015	0.0	100	0.00

(#) = Out of Range
8M411396.D 8260WT.M Thu Apr 14 08:47:44 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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%

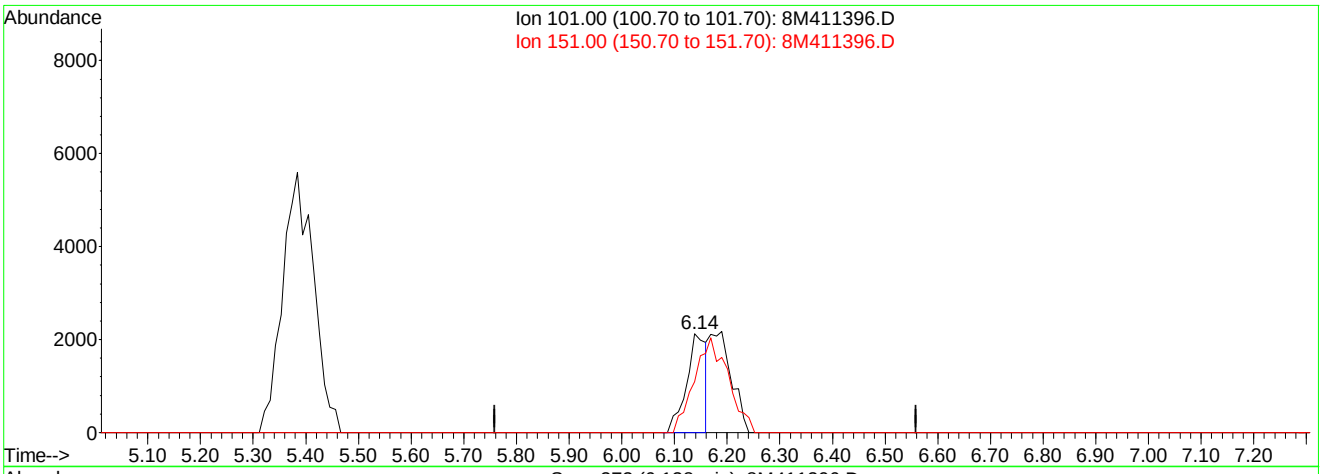
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	2.0000	1.8737	6.3	100	0.00
56	T	Dimethyl Disulfide	-1.0000	1.4710	0.0	100	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	1.0000	1.0049	-0.5	100	0.00
59	C	Toluene	2.0000	1.9924	0.4	100	0.00
60	T	Ethyl Methacrylate	2.0000	1.7081	14.6	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	2.0000	1.9186	4.1	100	0.00
63	T	1,1,2-Trichloroethane	2.0000	2.0121	-0.6	100	-0.01
64	T	2-Hexanone	-1.0000	1.8418	0.0	100	0.00
65	T	1,3-Dichloropropane	2.0000	2.0587	-2.9	100	0.00
66	T	Tetrachloroethene	2.0000	1.8866	5.7	100	0.00
67	T	Dibromochloromethane	2.0000	1.8313	8.4	100	0.00
68	T	1,2-Dibromoethane	2.0000	1.8304	8.5	100	0.00
69	T	1-Chlorohexane	2.0000	1.9642	1.8	100	0.00
70	P	Chlorobenzene	2.0000	2.0403	-2.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	2.0000	1.8671	6.6	100	0.00
72	C	Ethylbenzene	2.0000	1.9289	3.6	100	-0.01
73	T	m-,p-Xylene	4.0000	4.0953	-2.4	100	-0.01
74	T	o-Xylene	2.0000	1.9449	2.8	100	0.00
75	T	Styrene	2.0000	1.9236	3.8	100	0.00
76	P	Bromoform	2.0000	1.8929	5.4	100	0.00
77	T	Isopropylbenzene	2.0000	2.0017	-0.1	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	-0.01
79	P	1,1,2,2-Tetrachloroethane	2.0000	2.0315	-1.6	100	0.00
80	S	p-Bromofluorobenzene	1.0000	1.0493	-4.9	100	0.00
81	T	1,2,3-Trichloropropane	2.0000	1.9050	4.8	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	2.0000	1.7503	12.5	100	0.00
83	T	n-Propylbenzene	2.0000	2.1103	-5.5	100	0.00
84	T	Bromobenzene	2.0000	2.0606	-3.0	100	0.00
85	T	1,3,5-Trimethylbenzene	2.0000	1.9796	1.0	100	0.00
86	T	2-Chlorotoluene	2.0000	2.0495	-2.5	100	0.00
87	T	4-Chlorotoluene	2.0000	2.0037	-0.2	100	0.00
88	T	a-Methylstyrene	-1.0000	1.7833	0.0	100	0.00
89	T	tert-Butylbenzene	2.0000	1.8980	5.1	100	-0.01
90	T	1,2,4-Trimethylbenzene	2.0000	1.9532	2.3	100	0.00
91	T	sec-Butylbenzene	2.0000	1.9582	2.1	100	0.00
92	T	p-Isopropyltoluene	2.0000	1.9398	3.0	100	0.00
93	T	1,3-Dichlorobenzene	2.0000	1.9824	0.9	100	0.00
94	T	1,4-Dichlorobenzene	2.0000	1.9124	4.4	100	0.00
95	T	n-Butylbenzene	2.0000	1.9619	1.9	100	0.00
96	T	1,2-Dichlorobenzene	2.0000	2.0650	-3.2	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	2.0000	1.7685	11.6	100	-0.01
98	T	1,2,4-Trichlorobenzene	2.0000	1.8541	7.3	100	0.00
99	T	Hexachlorobutadiene	2.0000	1.6652	16.7	100	0.00
100	T	Naphthalene	2.0000	1.9603	2.0	100	0.00
101	T	1,2,3-Trichlorobenzene	2.0000	1.9473	2.6	100	0.00

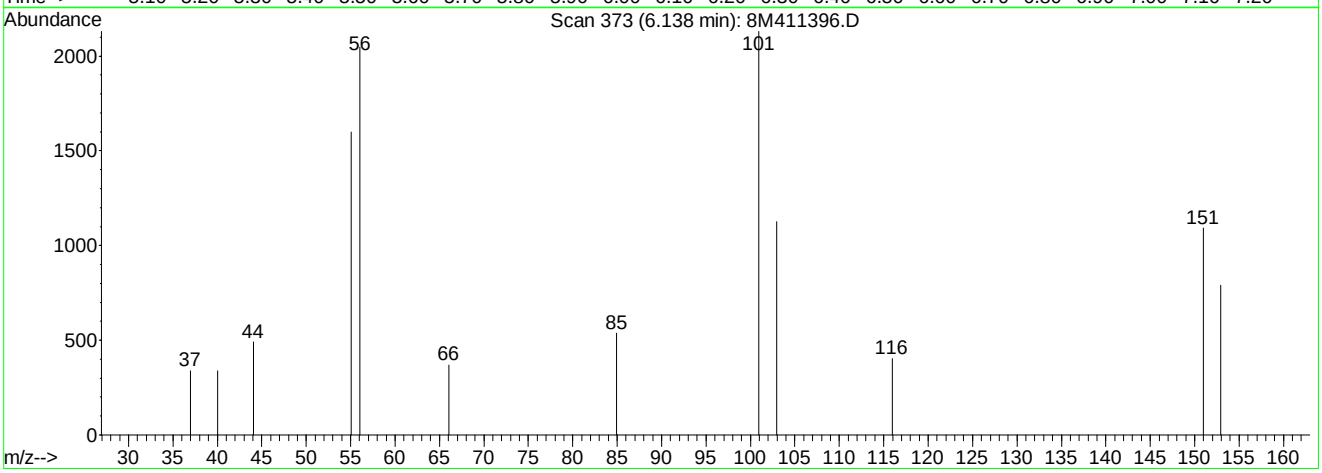
(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411396.D 8260WT.M Thu Apr 14 08:47:44 2016 Page 2

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 13 14:35 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:15:54 2016
Response via : Single Level Calibration





TIC: 8M411396.D

(12) 1,1,2-Trichloro-1,2,2-Trifluoroethane (T)

6.14min 0.86ug/L

response 5522

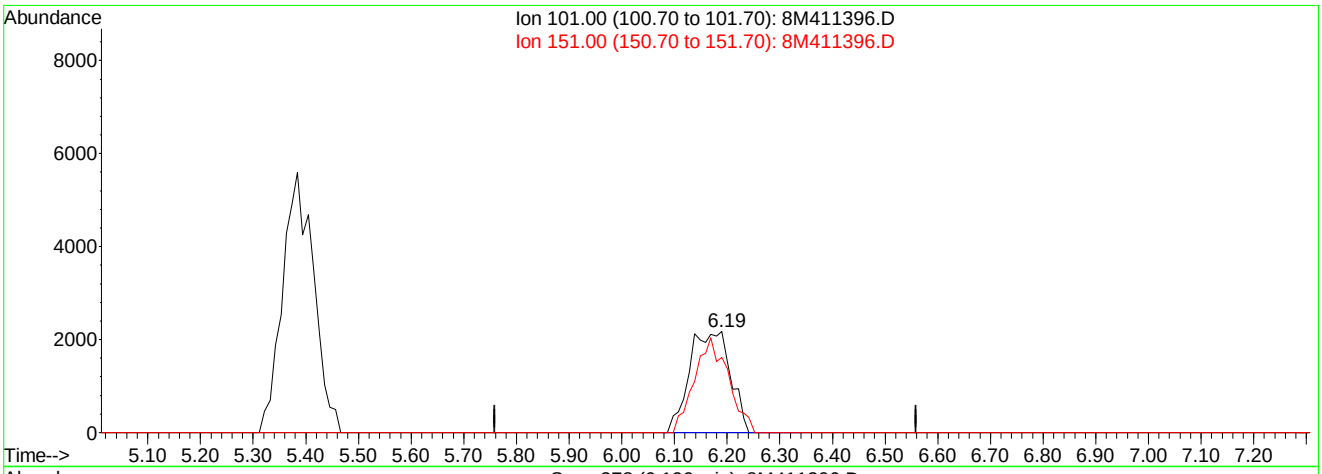
Ion	Exp%	Act%
101.00	100	100
151.00	77.80	165.45#
0.00	0.00	0.00
0.00	0.00	0.00

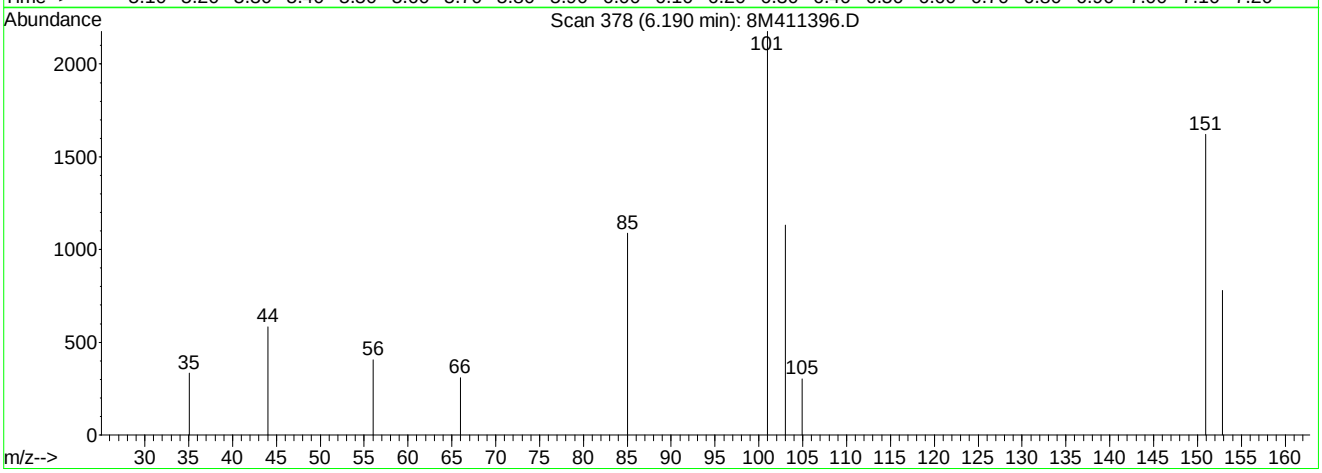
8M411396.D 8260WT.M Thu Apr 14 08:17:52 2016

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\2\DATA\041316\8M411396.D Vial: 6
Acq On : 13 Apr 2016 14:13 Operator: TMB
Sample : WG564484-05 2ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:17 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:15:54 2016
Response via : Single Level Calibration





TIC: 8M411396.D

(12) 1,1,2-Trichloro-1,2,2-Trifluoroethane (T)

6.19min 1.84ug/L mint

response 11757

Ion	Exp%	Act%
101.00	100	100
151.00	77.80	77.71
0.00	0.00	0.00
0.00	0.00	0.00

8M411396.D 8260WT.M Thu Apr 14 2016

Analyst: 04/14/2016 09:47 Supervisor: 04/15/2016 13:42

#2 - Data system splits the peak incorrectly or integrates a false peak as a rider peak

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411397.D Vial: 7
Acq On : 13 Apr 2016 14:42 Operator: TMB
Sample : WG564484-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:45 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	656315	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	462146	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	235740	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	16484	2.4564	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery =	9.84%#		
43) 1,2-Dichloroethane-d4	10.31	65	17514	2.4858	ug/L	0.01
Spiked Amount 25.000	Range 80 - 120		Recovery =	9.96%#		
58) Toluene-d8	12.68	98	57100	2.4690	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	9.88%#		
80) p-Bromofluorobenzene	16.07	95	21981	2.3866	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	9.56%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	47380	4.4884	ug/L	100
3) Chloromethane	3.63	50	82168	5.0381	ug/L	99
4) Vinyl Chloride	3.86	62	47559	4.8956	ug/L	97
5) 1,3-Butadiene	3.91	54	50959	4.6894	ug/L	88
6) Bromomethane	4.74	94	13034	3.9415	ug/L	100
7) Chloroethane	4.90	64	25248	4.7219	ug/L	99
8) Trichlorofluoromethane	5.40	101	58734	4.8889	ug/L	98
9) Diethyl ether	5.92	59	242770	50.1204	ug/L	93
10) Isoprene	5.95	67	44164	4.8240	ug/L	92
11) Acrolein	6.15	56	13033	25.3642	ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	31580	4.8382	ug/L	90
13) Acetone	6.26	43	6251	5.0100	ug/L	90
14) 1,1-Dichloroethene	6.48	61	60161	4.8440	ug/L	93
15) Tert-Butyl Alcohol	6.58	59	29049	99.6795	ug/L	94
16) Dimethyl Sulfide	6.74	62	26798	4.7407	ug/L	89
17) Iodomethane	7.00	142	4712	5.5405	ug/L	96
18) Methyl acetate	7.01	43	21285	4.8422	ug/L #	90
19) Methylene Chloride	7.26	84	33743	4.9322	ug/L	84
20) Carbon Disulfide	7.30	76	109923	4.8265	ug/L	98
21) Acrylonitrile	7.44	53	43318	23.0118	ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	66448	4.8050	ug/L	90
23) trans-1,2-Dichloroethene	7.71	61	57027	4.8149	ug/L	87
24) n-Hexane	7.79	57	53746	4.6590	ug/L	100
25) Diisopropyl ether	8.13	45	1514293	50.9856	ug/L	96
26) Vinyl Acetate	8.30	43	52011	4.7555	ug/L	93
27) 1,1-Dichloroethane	8.33	63	72046	4.8446	ug/L	95
28) Ethyl-Tert-Butyl ether	8.71	59	1107832	50.9831	ug/L	97
29) 2-Butanone	8.89	43	8860	4.2820	ug/L	98
30) Propionitrile	8.99	54	30155	50.1566	ug/L	97
31) 2,2-Dichloropropane	9.11	77	53315	4.8165	ug/L	99
32) cis-1,2-Dichloroethene	9.18	96	35705	4.8279	ug/L	83
33) Chloroform	9.38	83	61240	4.8960	ug/L	98
34) 1-Bromopropane	9.52	122	5249	4.7923	ug/L	95
35) Bromochloromethane	9.61	130	18429	4.9137	ug/L	82
36) Tetrahydrofuran	9.63	42	71704	46.9599	ug/L	93
38) 1,1,1-Trichloroethane	9.91	97	53191	4.8029	ug/L	99
39) Cyclohexane	9.95	56	72832	4.7668	ug/L	88
40) 1,1-Dichloropropene	10.11	75	48646	4.9800	ug/L	95
41) Tert-Amyl-Methyl ether	10.21	73	743437	50.7103	ug/L	93
42) Carbon Tetrachloride	10.25	117	48166	4.9007	ug/L	99

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

Data File : C:\MSDCHEM\2\DATA\041316\8M411397.D Vial: 7
Acq On : 13 Apr 2016 14:42 Operator: TMB
Sample : WG564484-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:45 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

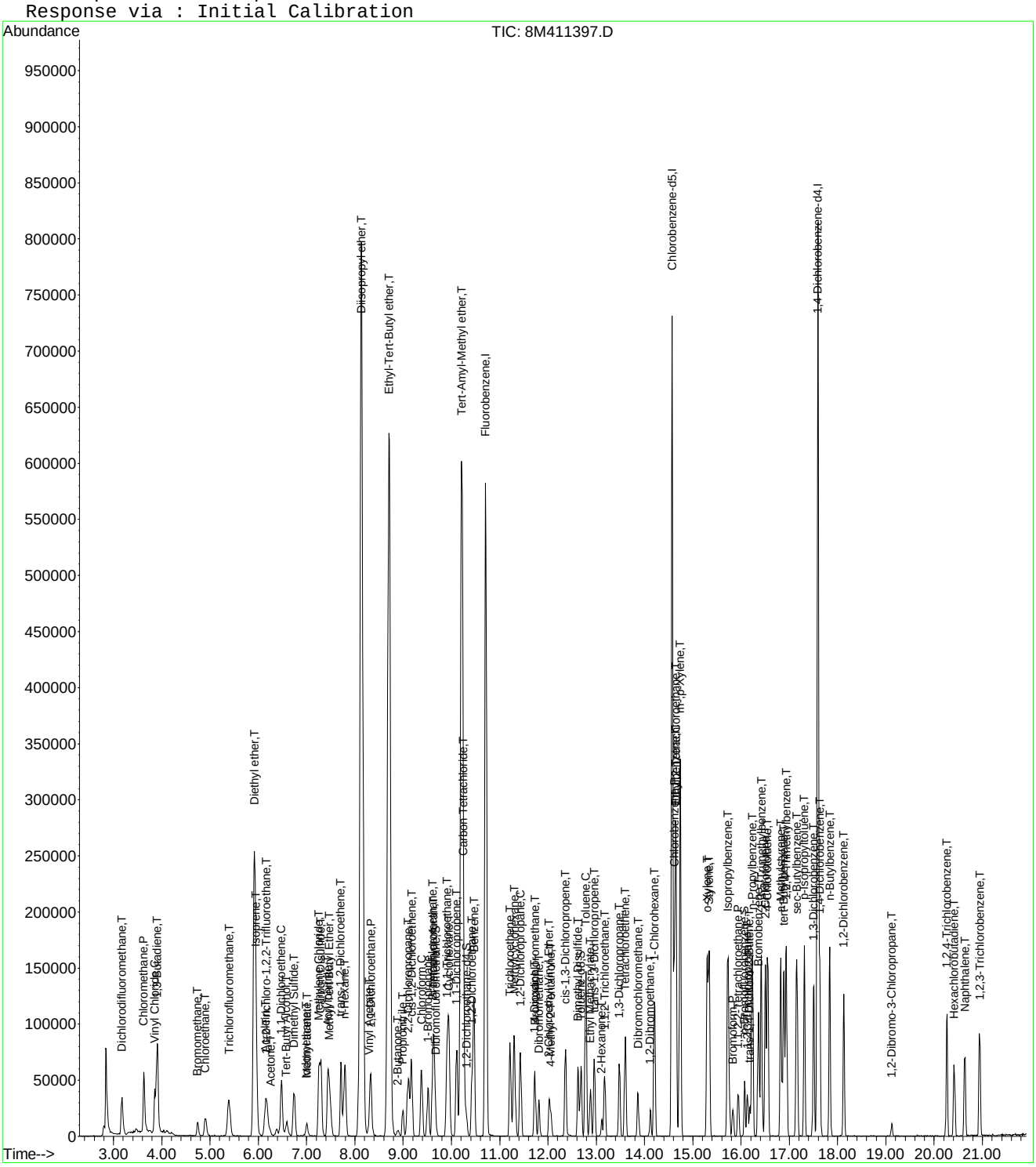
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	48230	5.0825	ug/L		98
46)	Benzene	10.47	78	135688	5.1073	ug/L		95
47)	Trichloroethene	11.21	130	33104	4.9490	ug/L		97
48)	Methylcyclohexane	11.31	83	49987	4.7023	ug/L		91
49)	1,2-Dichloropropane	11.43	63	38094	4.7917	ug/L		94
50)	Bromodichloromethane	11.73	83	43778	4.6483	ug/L		99
51)	1,4-Dioxane	11.72	88	2384	86.2552	ug/L		99
52)	Dibromomethane	11.81	93	15929	4.7948	ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.02	63	16059	4.9517	ug/L		89
54)	4-Methyl-2-Pentanone	12.06	58	7960	4.5400	ug/L		87
55)	cis-1,3-Dichloropropene	12.36	75	49686	4.7787	ug/L		99
56)	Dimethyl Disulfide	12.62	79	22088	4.0066	ug/L		99
59)	Toluene	12.79	91	135188	4.9734	ug/L		98
60)	Ethyl Methacrylate	12.88	69	26921	4.6987	ug/L		87
62)	trans-1,3-Dichloropropene	12.96	75	42148	4.6209	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	20803	4.7851	ug/L		100
64)	2-Hexanone	13.12	58	7502	4.6523	ug/L	#	99
65)	1,3-Dichloropropane	13.48	76	37863	4.6544	ug/L		86
66)	Tetrachloroethene	13.60	164	25455	4.8890	ug/L		100
67)	Dibromochloromethane	13.87	129	27565	4.8110	ug/L		94
68)	1,2-Dibromoethane	14.12	107	19997	4.6100	ug/L		95
69)	1-Chlorohexane	14.21	91	45191	4.9079	ug/L		81
70)	Chlorobenzene	14.62	112	90524	4.9357	ug/L		94
71)	1,1,1,2-Tetrachloroethane	14.66	131	29596	4.6281	ug/L		98
72)	Ethylbenzene	14.66	106	48660	4.7898	ug/L		96
73)	m-,p-Xylene	14.74	106	114860	9.6780	ug/L		92
74)	o-Xylene	15.30	106	56307	4.6709	ug/L		97
75)	Styrene	15.34	104	92978	4.8603	ug/L		98
76)	Bromoform	15.83	173	14288	4.3525	ug/L		97
77)	Isopropylbenzene	15.73	105	146165	5.0386	ug/L		97
79)	1,1,2,2-Tetrachloroethane	15.94	83	25395	4.9020	ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	6425	4.5606	ug/L		84
82)	trans-1,4-Dichloro-2-Buten	16.18	53	9874	4.7592	ug/L		91
83)	n-Propylbenzene	16.24	91	180123	5.0988	ug/L		98
84)	Bromobenzene	16.36	156	34302	4.8831	ug/L		90
85)	1,3,5-Trimethylbenzene	16.42	105	121985	4.9202	ug/L		100
86)	2-Chlorotoluene	16.51	91	116321	5.0611	ug/L		97
87)	4-Chlorotoluene	16.55	91	112491	4.6993	ug/L		97
88)	a-Methylstyrene	16.83	118	61211	4.5335	ug/L		96
89)	tert-Butylbenzene	16.89	134	23594	4.6722	ug/L		84
90)	1,2,4-Trimethylbenzene	16.94	105	129594	4.9790	ug/L		97
91)	sec-Butylbenzene	17.16	105	155229	5.0433	ug/L		96
92)	p-Isopropyltoluene	17.31	119	122423	4.8794	ug/L		95
93)	1,3-Dichlorobenzene	17.51	146	67214	4.7028	ug/L		95
94)	1,4-Dichlorobenzene	17.63	146	68635	4.7973	ug/L		89
95)	n-Butylbenzene	17.84	91	125884	4.9297	ug/L		95
96)	1,2-Dichlorobenzene	18.13	146	60463	4.7806	ug/L		97
97)	1,2-Dibromo-3-Chloropropan	19.12	75	4000	4.2748	ug/L		88
98)	1,2,4-Trichlorobenzene	20.27	180	41126	4.6210	ug/L		98
99)	Hexachlorobutadiene	20.41	225	16268	4.6441	ug/L		95
100)	Naphthalene	20.64	128	70019	4.6975	ug/L		97
101)	1,2,3-Trichlorobenzene	20.95	180	34127	4.5949	ug/L		94

(#) = qualifier out of range (m) = manual integration
8M411397.D 8260WT.M Thu Apr 14 08:46:45 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411397.D Vial: 7
Acq On : 13 Apr 2016 14:42 Operator: TMB
Sample : WG564484-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



8M411397.D 8260WT.M Thu Apr 14 08:46:45 2016 Page 3

Data File : C:\MSDCHEM\2\DATA\041316\8M411397.D Vial: 7
Acq On : 13 Apr 2016 14:42 Operator: TMB
Sample : WG564484-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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	100	0.00
2	T	Dichlorodifluoromethane	5.0000	4.4884	10.2	100	0.00
3	P	Chloromethane	5.0000	5.0381	-0.8	100	0.00
4	C	Vinyl Chloride	5.0000	4.8956	2.1	100	0.01
5	T	1,3-Butadiene	5.0000	4.6894	6.2	100	0.02
6	T	Bromomethane	5.0000	3.9415	21.2	100	0.00
7	T	Chloroethane	5.0000	4.7218	5.6	100	0.00
8	T	Trichlorofluoromethane	5.0000	4.8889	2.2	100	0.01
9	T	Diethyl ether	50.0000	50.1204	-0.2	100	0.01
10	T	Isoprene	5.0000	4.8240	3.5	100	0.00
11	T	Acrolein	25.0000	25.3642	-1.5	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	5.0000	4.8382	3.2	100	0.01
13	T	Acetone	5.0000	5.0100	-0.2	100	0.01
14	C	1,1-Dichloroethene	5.0000	4.8440	3.1	100	0.01
15	T	Tert-Butyl Alcohol	100.0000	99.6795	0.3	100	0.00
16	T	Dimethyl Sulfide	5.0000	4.7407	5.2	100	0.00
17	T	Iodomethane	5.0000	5.5405	-10.8	100	0.00
18	T	Methyl acetate	5.0000	4.8422	3.2	100	0.00
19	T	Methylene Chloride	5.0000	4.9322	1.4	100	0.00
20	T	Carbon Disulfide	5.0000	4.8265	3.5	100	0.00
21	T	Acrylonitrile	25.0000	23.0118	8.0	100	0.00
22	T	Methyl Tert Butyl Ether	5.0000	4.8050	3.9	100	0.00
23	T	trans-1,2-Dichloroethene	5.0000	4.8149	3.7	100	0.00
24	T	n-Hexane	5.0000	4.6590	6.8	100	0.00
25	T	Diisopropyl ether	50.0000	50.9857	-2.0	100	0.00
26	T	Vinyl Acetate	5.0000	4.7555	4.9	100	0.00
27	P	1,1-Dichloroethane	5.0000	4.8446	3.1	100	0.00
28	T	Ethyl-Tert-Butyl ether	50.0000	50.9831	-2.0	100	0.00
29	T	2-Butanone	5.0000	4.2820	14.4	100	0.00
30	T	Propionitrile	50.0000	50.1566	-0.3	100	0.00
31	T	2,2-Dichloropropane	5.0000	4.8165	3.7	100	0.00
32	T	cis-1,2-Dichloroethene	5.0000	4.8279	3.4	100	0.01
33	C	Chloroform	5.0000	4.8960	2.1	100	0.00
34		1-Bromopropane	5.0000	4.7923	4.2	100	0.00
35	T	Bromochloromethane	5.0000	4.9137	1.7	100	0.00
36	T	Tetrahydrofuran	50.0000	46.9599	6.1	100	0.00
37	S	Dibromofluoromethane	2.5000	2.4564	1.7	100	0.01
38	T	1,1,1-Trichloroethane	5.0000	4.8029	3.9	100	0.00
39	T	Cyclohexane	5.0000	4.7668	4.7	100	0.01
40	T	1,1-Dichloropropene	5.0000	4.9800	0.4	100	0.00
41	T	Tert-Amyl-Methyl ether	50.0000	50.7103	-1.4	100	0.00
42	T	Carbon Tetrachloride	5.0000	4.9007	2.0	100	0.00
43	S	1,2-Dichloroethane-d4	2.5000	2.4858	0.6	100	0.01
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	5.0000	5.0825	-1.6	100	0.00
46	T	Benzene	5.0000	5.1073	-2.1	100	0.00
47	T	Trichloroethene	5.0000	4.9490	1.0	100	0.00
48	T	Methylcyclohexane	5.0000	4.7023	6.0	100	0.01
49	C	1,2-Dichloropropane	5.0000	4.7918	4.2	100	0.00
50	T	Bromodichloromethane	5.0000	4.6483	7.0	100	0.00
51	T	1,4-Dioxane	100.0000	86.2552	13.7	100	0.00
52	T	Dibromomethane	5.0000	4.7948	4.1	100	0.00
53	T	2-Chloroethyl Vinyl Ether	5.0000	4.9517	1.0	100	0.00
54	T	4-Methyl-2-Pentanone	5.0000	4.5400	9.2	100	0.01

(#) = Out of Range
8M411397.D 8260WT.M Thu Apr 14 08:47:56 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411397.D Vial: 7
Acq On : 13 Apr 2016 14:42 Operator: TMB
Sample : WG564484-06 5ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
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)
55	T	cis-1,3-Dichloropropene	5.0000	4.7787	4.4	100	0.00
56	T	Dimethyl Disulfide	5.0000	4.0066	19.9	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	2.5000	2.4690	1.2	100	0.00
59	C	Toluene	5.0000	4.9734	0.5	100	0.00
60	T	Ethyl Methacrylate	5.0000	4.6987	6.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	5.0000	4.6209	7.6	100	0.00
63	T	1,1,2-Trichloroethane	5.0000	4.7851	4.3	100	0.00
64	T	2-Hexanone	5.0000	4.6523	7.0	100	0.00
65	T	1,3-Dichloropropane	5.0000	4.6544	6.9	100	0.00
66	T	Tetrachloroethene	5.0000	4.8890	2.2	100	0.00
67	T	Dibromochloromethane	5.0000	4.8110	3.8	100	0.00
68	T	1,2-Dibromoethane	5.0000	4.6100	7.8	100	0.00
69	T	1-Chlorohexane	5.0000	4.9079	1.8	100	0.00
70	P	Chlorobenzene	5.0000	4.9357	1.3	100	0.00
71	T	1,1,1,2-Tetrachloroethane	5.0000	4.6281	7.4	100	0.00
72	C	Ethylbenzene	5.0000	4.7897	4.2	100	0.00
73	T	m-,p-Xylene	10.0000	9.6780	3.2	100	0.00
74	T	o-Xylene	5.0000	4.6709	6.6	100	0.00
75	T	Styrene	5.0000	4.8603	2.8	100	0.00
76	P	Bromoform	5.0000	4.3525	13.0	100	0.00
77	T	Isopropylbenzene	5.0000	5.0386	-0.8	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	5.0000	4.9020	2.0	100	0.00
80	S	p-Bromofluorobenzene	2.5000	2.3866	4.5	100	0.00
81	T	1,2,3-Trichloropropane	5.0000	4.5606	8.8	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	5.0000	4.7592	4.8	100	0.00
83	T	n-Propylbenzene	5.0000	5.0988	-2.0	100	0.00
84	T	Bromobenzene	5.0000	4.8831	2.3	100	0.00
85	T	1,3,5-Trimethylbenzene	5.0000	4.9202	1.6	100	0.00
86	T	2-Chlorotoluene	5.0000	5.0611	-1.2	100	0.00
87	T	4-Chlorotoluene	5.0000	4.6993	6.0	100	0.00
88	T	a-Methylstyrene	5.0000	4.5335	9.3	100	0.00
89	T	tert-Butylbenzene	5.0000	4.6722	6.6	100	0.00
90	T	1,2,4-Trimethylbenzene	5.0000	4.9790	0.4	100	0.00
91	T	sec-Butylbenzene	5.0000	5.0433	-0.9	100	0.00
92	T	p-Isopropyltoluene	5.0000	4.8793	2.4	100	0.00
93	T	1,3-Dichlorobenzene	5.0000	4.7028	5.9	100	0.00
94	T	1,4-Dichlorobenzene	5.0000	4.7973	4.1	100	0.00
95	T	n-Butylbenzene	5.0000	4.9297	1.4	100	0.00
96	T	1,2-Dichlorobenzene	5.0000	4.7806	4.4	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	5.0000	4.2748	14.5	100	0.00
98	T	1,2,4-Trichlorobenzene	5.0000	4.6210	7.6	100	0.00
99	T	Hexachlorobutadiene	5.0000	4.6441	7.1	100	0.00
100	T	Naphthalene	5.0000	4.6975	6.1	100	0.00
101	T	1,2,3-Trichlorobenzene	5.0000	4.5949	8.1	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411397.D 8260WT.M Thu Apr 14 08:47:56 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411398.D Vial: 8
Acq On : 13 Apr 2016 15:12 Operator: TMB
Sample : WG564484-07 20ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:46 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	682848	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	474270	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	252331	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	67631	9.6867	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 38.76%#			
43) 1,2-Dichloroethane-d4	10.30	65	73714	10.0560	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 40.24%#			
58) Toluene-d8	12.68	98	236805	9.9777	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 39.92%#			
80) p-Bromofluorobenzene	16.07	95	93499	9.4840	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 37.92%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	254243	23.1492	ug/L	99
3) Chloromethane	3.63	50	367549	21.6605	ug/L	97
4) Vinyl Chloride	3.85	62	219890	21.7556	ug/L	97
5) 1,3-Butadiene	3.91	54	243773	24.0921	ug/L	90
6) Bromomethane	4.74	94	70814	17.4886	ug/L	100
7) Chloroethane	4.90	64	117909	21.1944	ug/L	96
8) Trichlorofluoromethane	5.38	101	266696	21.3365	ug/L	99
9) Diethyl ether	5.91	59	369990	73.4172	ug/L	93
10) Isoprene	5.95	67	206121	21.6398	ug/L	95
11) Acrolein	6.15	56	20619	36.9258	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	140861	20.7420	ug/L	94
13) Acetone	6.25	43	26485	20.4023	ug/L	98
14) 1,1-Dichloroethene	6.48	61	273986	21.2032	ug/L	92
15) Tert-Butyl Alcohol	6.58	59	45992	151.6859	ug/L	93
16) Dimethyl Sulfide	6.74	62	122094	20.7598	ug/L	91
17) Iodomethane	7.00	142	47889	18.1097	ug/L	99
18) Methyl acetate	7.01	43	89857	19.6474	ug/L	94
19) Methylene Chloride	7.25	84	148171	20.8166	ug/L	80
20) Carbon Disulfide	7.30	76	491208	20.7298	ug/L	99
21) Acrylonitrile	7.44	53	69980	35.7310	ug/L	97
22) Methyl Tert Butyl Ether	7.47	73	319234	22.1874	ug/L	94
23) trans-1,2-Dichloroethene	7.71	61	262004	21.2621	ug/L	90
24) n-Hexane	7.79	57	237643	19.7999	ug/L	100
25) Diisopropyl ether	8.13	45	2362350	76.4488	ug/L	96
26) Vinyl Acetate	8.30	43	215998	18.9817	ug/L	96
27) 1,1-Dichloroethane	8.33	63	334167	21.5975	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	1723997	76.2566	ug/L	96
29) 2-Butanone	8.89	43	43560	20.2342	ug/L	90
30) Propionitrile	8.99	54	47762	76.3553	ug/L	100
31) 2,2-Dichloropropane	9.10	77	238139	20.6777	ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	166660	21.6595	ug/L	86
33) Chloroform	9.38	83	289763	22.2660	ug/L	99
34) 1-Bromopropane	9.52	122	24720	21.6924	ug/L	100
35) Bromochloromethane	9.61	130	86373	22.1348	ug/L	80
36) Tetrahydrofuran	9.63	42	111855	70.4089	ug/L	90
38) 1,1,1-Trichloroethane	9.91	97	245815	21.3333	ug/L	99
39) Cyclohexane	9.94	56	322255	20.2718	ug/L	91
40) 1,1-Dichloropropene	10.11	75	213639	21.0210	ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	1154655	75.6994	ug/L	94
42) Carbon Tetrachloride	10.25	117	220033	21.5175	ug/L	100

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

Data File : C:\MSDCHEM\2\DATA\041316\8M411398.D Vial: 8
Acq On : 13 Apr 2016 15:12 Operator: TMB
Sample : WG564484-07 20ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:46 2016 Quant Results File: 8260WT.RES

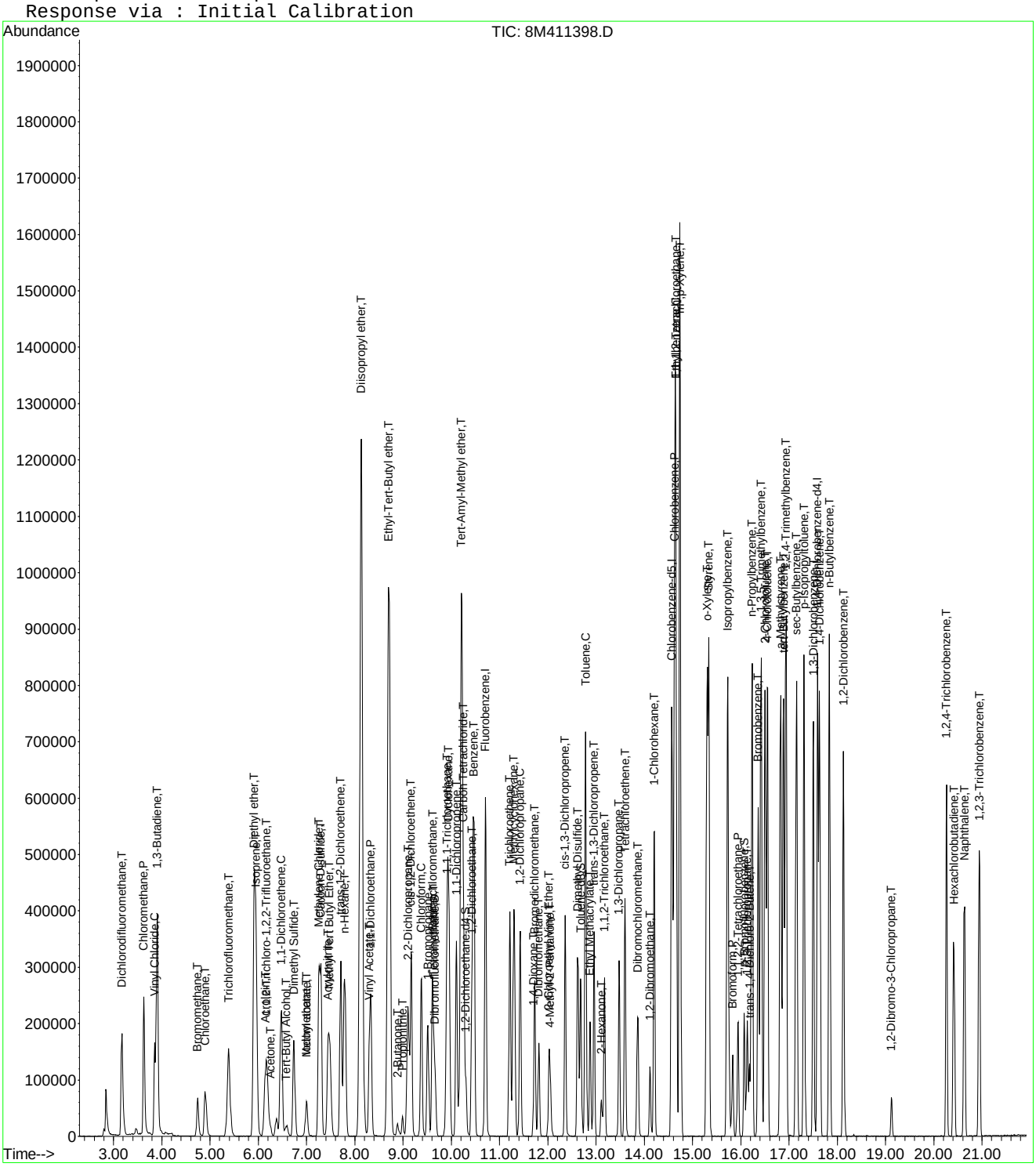
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	221345	22.4190	ug/L		97
46)	Benzene	10.47	78	618816	22.3873	ug/L		94
47)	Trichloroethene	11.21	130	155367	22.3246	ug/L		98
48)	Methylcyclohexane	11.30	83	225501	20.3887	ug/L		90
49)	1,2-Dichloropropane	11.43	63	182341	22.0450	ug/L		93
50)	Bromodichloromethane	11.73	83	219466	22.3973	ug/L		100
51)	1,4-Dioxane	11.71	88	4179	145.3248	ug/L		90
52)	Dibromomethane	11.81	93	79427	22.9792	ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.02	63	71100	21.0716	ug/L		94
54)	4-Methyl-2-Pentanone	12.05	58	35491	19.4557	ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	248784	22.9976	ug/L		98
56)	Dimethyl Disulfide	12.62	79	109959	19.1709	ug/L		99
59)	Toluene	12.78	91	647103	23.1976	ug/L		99
60)	Ethyl Methacrylate	12.88	69	125866	21.4068	ug/L		88
62)	trans-1,3-Dichloropropene	12.96	75	216819	23.1634	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	109584	24.5622	ug/L		99
64)	2-Hexanone	13.11	58	32536	19.6612	ug/L	#	98
65)	1,3-Dichloropropane	13.48	76	192827	23.0977	ug/L		88
66)	Tetrachloroethene	13.60	164	118053	22.0941	ug/L		94
67)	Dibromochloromethane	13.87	129	141584	24.0796	ug/L		99
68)	1,2-Dibromoethane	14.12	107	103622	22.8199	ug/L		99
69)	1-Chlorohexane	14.21	91	204075	21.5968	ug/L		85
70)	Chlorobenzene	14.62	112	434406	23.0800	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.65	131	157349	23.9765	ug/L		100
72)	Ethylbenzene	14.65	106	237422	22.7727	ug/L		98
73)	m-,p-Xylene	14.74	106	560524	46.0220	ug/L		95
74)	o-Xylene	15.31	106	281980	22.7936	ug/L		97
75)	Styrene	15.34	104	485227	24.7160	ug/L		99
76)	Bromoform	15.83	173	85153	23.8241	ug/L		99
77)	Isopropylbenzene	15.73	105	723282	24.2954	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	137476	24.7920	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	37419	24.8142	ug/L		93
82)	trans-1,4-Dichloro-2-Buten	16.18	53	44774	20.1619	ug/L		77
83)	n-Propylbenzene	16.24	91	899107	23.7779	ug/L		99
84)	Bromobenzene	16.36	156	172635	22.9596	ug/L		85
85)	1,3,5-Trimethylbenzene	16.42	105	618802	23.3178	ug/L		100
86)	2-Chlorotoluene	16.50	91	583340	23.7123	ug/L		98
87)	4-Chlorotoluene	16.56	91	583532	22.7742	ug/L		97
88)	a-Methylstyrene	16.82	118	297564	20.5897	ug/L		99
89)	tert-Butylbenzene	16.89	134	123881	22.9184	ug/L		89
90)	1,2,4-Trimethylbenzene	16.94	105	665163	23.8751	ug/L		100
91)	sec-Butylbenzene	17.16	105	782624	23.7551	ug/L		96
92)	p-Isopropyltoluene	17.31	119	641183	23.8750	ug/L		94
93)	1,3-Dichlorobenzene	17.51	146	361040	23.6004	ug/L		96
94)	1,4-Dichlorobenzene	17.63	146	355671	23.2252	ug/L		92
95)	n-Butylbenzene	17.84	91	651334	23.8297	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	324477	23.9685	ug/L		94
97)	1,2-Dibromo-3-Chloropropan	19.12	75	24788	24.7489	ug/L		85
98)	1,2,4-Trichlorobenzene	20.27	180	231024	24.2515	ug/L		99
99)	Hexachlorobutadiene	20.42	225	91017	24.2748	ug/L		98
100)	Naphthalene	20.64	128	399794	25.0582	ug/L		98
101)	1,2,3-Trichlorobenzene	20.95	180	195612	24.6058	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411398.D 8260WT.M Thu Apr 14 08:46:46 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041316\8M411398.D Vial: 8
Acq On : 13 Apr 2016 15:12 Operator: TMB
Sample : WG564484-07 20ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041316\8M411399.D Vial: 9
Acq On : 13 Apr 2016 15:41 Operator: TMB
Sample : WG564484-08 50ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:47 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	706197	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	501557	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	264713	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.66	111	182253	25.2408 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.96%		
43) 1,2-Dichloroethane-d4	10.30	65	195355	25.7691 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 103.08%		
58) Toluene-d8	12.68	98	634937	25.2974 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.20%		
80) p-Bromofluorobenzene	16.07	95	255434	24.6979 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.80%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.17	85	648039	57.0539 ug/L	100
3) Chloromethane	3.63	50	931533	53.0822 ug/L	97
4) Vinyl Chloride	3.85	62	524513	50.1787 ug/L	98
5) 1,3-Butadiene	3.90	54	541381	54.7371 ug/L	96
6) Bromomethane	4.74	94	215245	47.9147 ug/L	99
7) Chloroethane	4.91	64	299108	51.9876 ug/L	97
8) Trichlorofluoromethane	5.38	101	663780	51.3487 ug/L	99
9) Diethyl ether	5.92	59	494659	94.9100 ug/L	94
10) Isoprene	5.95	67	512677	52.0443 ug/L	92
11) Acrolein	6.15	56	29389	48.9039 ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	361286	51.4411 ug/L	91
13) Acetone	6.25	43	72028	53.6510 ug/L	98
14) 1,1-Dichloroethene	6.47	61	692881	51.8477 ug/L	93
15) Tert-Butyl Alcohol	6.58	59	57999	184.9616 ug/L	98
16) Dimethyl Sulfide	6.74	62	320865	52.7534 ug/L	92
17) Iodomethane	7.00	142	155990	48.2102 ug/L	100
18) Methyl acetate	7.01	43	236864	50.0785 ug/L	96
19) Methylene Chloride	7.26	84	369516	50.1970 ug/L	77
20) Carbon Disulfide	7.30	76	1244278	50.7744 ug/L	99
21) Acrylonitrile	7.44	53	100225	49.4818 ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	780309	52.4400 ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	660596	51.8360 ug/L	89
24) n-Hexane	7.79	57	593255	47.7945 ug/L	98
25) Diisopropyl ether	8.13	45	3110242	97.3237 ug/L	96
26) Vinyl Acetate	8.30	43	568948	48.3456 ug/L	97
27) 1,1-Dichloroethane	8.33	63	823651	51.4733 ug/L	98
28) Ethyl-Tert-Butyl ether	8.71	59	2272193	97.1817 ug/L	96
29) 2-Butanone	8.89	43	114133	51.2634 ug/L	92
30) Propionitrile	8.99	54	61757	95.4643 ug/L	100
31) 2,2-Dichloropropane	9.10	77	581151	48.7931 ug/L	99
32) cis-1,2-Dichloroethene	9.18	96	409916	51.5121 ug/L	84
33) Chloroform	9.38	83	704318	52.3318 ug/L	99
34) 1-Bromopropane	9.52	122	62150	52.7349 ug/L	98
35) Bromochloromethane	9.61	130	210460	52.1513 ug/L	78
36) Tetrahydrofuran	9.63	42	149354	90.9049 ug/L	92
38) 1,1,1-Trichloroethane	9.91	97	621319	52.1391 ug/L	98
39) Cyclohexane	9.94	56	815522	49.6052 ug/L	90
40) 1,1-Dichloropropene	10.11	75	543447	51.7044 ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	1534743	97.2913 ug/L	94
42) Carbon Tetrachloride	10.25	117	555389	52.5170 ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411399.D 8260WT.M Thu Apr 14 08:46:47 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411399.D Vial: 9
Acq On : 13 Apr 2016 15:41 Operator: TMB
Sample : WG564484-08 50ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:47 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

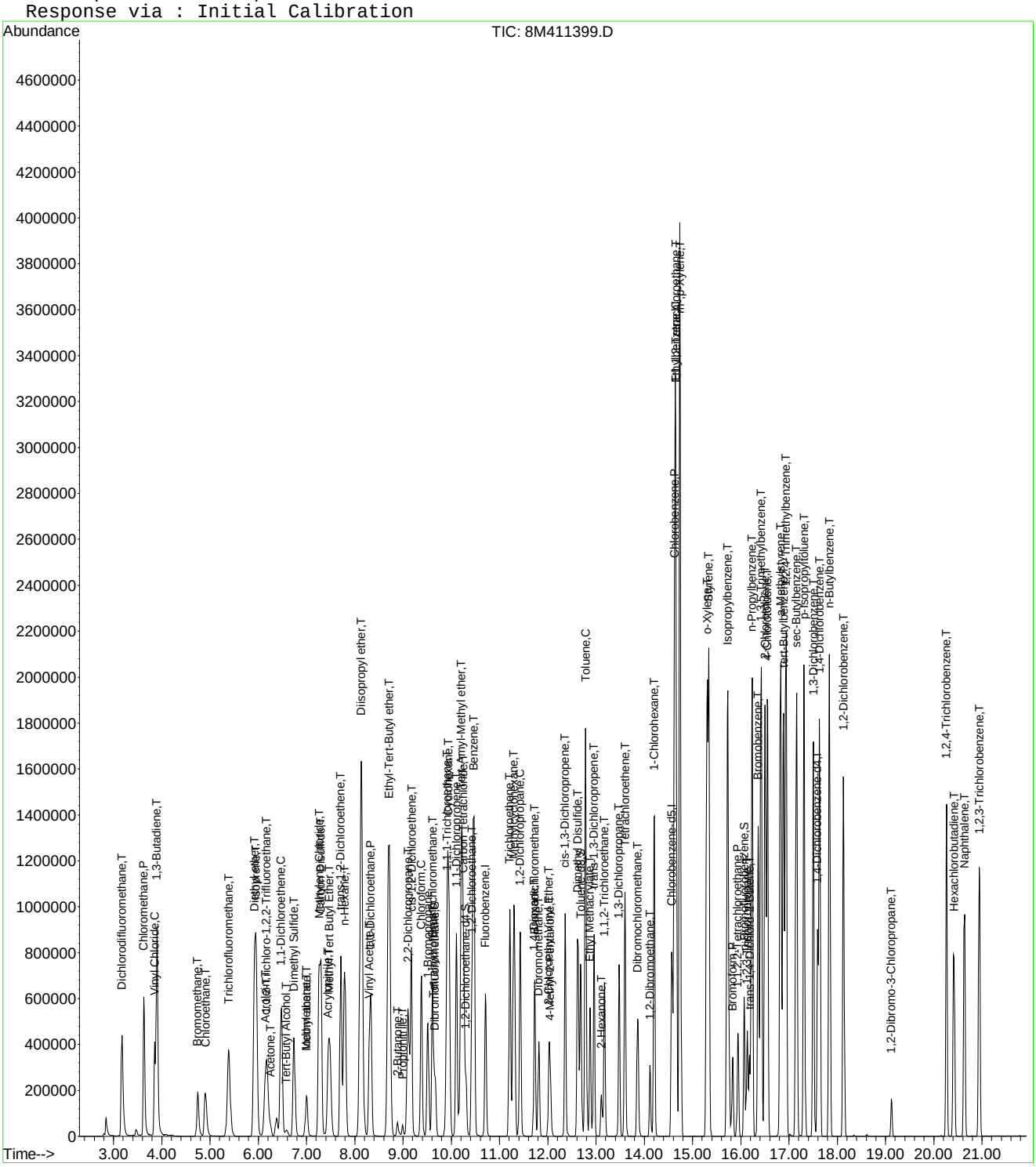
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	539355	52.8225	ug/L		98
46)	Benzene	10.47	78	1519848	53.1666	ug/L		93
47)	Trichloroethene	11.21	130	377356	52.4294	ug/L		97
48)	Methylcyclohexane	11.30	83	566631	49.5380	ug/L		90
49)	1,2-Dichloropropane	11.43	63	447460	52.3092	ug/L		92
50)	Bromodichloromethane	11.73	83	538048	53.0943	ug/L		99
51)	1,4-Dioxane	11.72	88	6087	204.6769	ug/L		93
52)	Dibromomethane	11.81	93	198642	55.5695	ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.02	63	183434	52.5660	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	94661	50.1763	ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	603955	53.9838	ug/L		99
56)	Dimethyl Disulfide	12.62	79	302998	51.0797	ug/L		100
59)	Toluene	12.78	91	1568032	53.1534	ug/L		100
60)	Ethyl Methacrylate	12.88	69	336768	54.1600	ug/L		87
62)	trans-1,3-Dichloropropene	12.96	75	520612	52.5927	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	254305	53.8991	ug/L		96
64)	2-Hexanone	13.11	58	88953	50.8290	ug/L	#	98
65)	1,3-Dichloropropane	13.48	76	465344	52.7085	ug/L		87
66)	Tetrachloroethene	13.60	164	294460	52.1111	ug/L		94
67)	Dibromochloromethane	13.86	129	338669	54.4647	ug/L		98
68)	1,2-Dibromoethane	14.12	107	257144	53.3957	ug/L		100
69)	1-Chlorohexane	14.21	91	526690	52.7059	ug/L		85
70)	Chlorobenzene	14.62	112	1044379	52.4691	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.65	131	374953	54.0261	ug/L		98
72)	Ethylbenzene	14.65	106	577178	52.3491	ug/L		99
73)	m-,p-Xylene	14.74	106	1374107	106.6836	ug/L		99
74)	o-Xylene	15.31	106	677627	51.7953	ug/L		99
75)	Styrene	15.34	104	1167261	56.2221	ug/L		98
76)	Bromoform	15.83	173	199761	52.4804	ug/L		100
77)	Isopropylbenzene	15.73	105	1735941	55.1388	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.94	83	305082	52.4440	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	82733	52.2977	ug/L		86
82)	trans-1,4-Dichloro-2-Buten	16.18	53	122659	52.6502	ug/L		92
83)	n-Propylbenzene	16.24	91	2123133	53.5223	ug/L		100
84)	Bromobenzene	16.36	156	406163	51.4910	ug/L		85
85)	1,3,5-Trimethylbenzene	16.42	105	1476835	53.0473	ug/L		99
86)	2-Chlorotoluene	16.50	91	1360588	52.7197	ug/L		99
87)	4-Chlorotoluene	16.56	91	1362485	50.6879	ug/L		97
88)	a-Methylstyrene	16.82	118	786733	51.8911	ug/L		98
89)	tert-Butylbenzene	16.89	134	296060	52.2100	ug/L		89
90)	1,2,4-Trimethylbenzene	16.94	105	1546772	52.9224	ug/L		99
91)	sec-Butylbenzene	17.16	105	1848368	53.4796	ug/L		97
92)	p-Isopropyltoluene	17.31	119	1512384	53.6809	ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	834665	52.0081	ug/L		95
94)	1,4-Dichlorobenzene	17.63	146	822368	51.1885	ug/L		93
95)	n-Butylbenzene	17.84	91	1545528	53.8998	ug/L		98
96)	1,2-Dichlorobenzene	18.13	146	737672	51.9416	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	54861	52.2124	ug/L		86
98)	1,2,4-Trichlorobenzene	20.27	180	530077	53.0415	ug/L		99
99)	Hexachlorobutadiene	20.42	225	211827	53.8529	ug/L		98
100)	Naphthalene	20.64	128	920454	54.9934	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	447277	53.6308	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411399.D 8260WT.M Thu Apr 14 08:46:47 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411399.D Vial: 9
Acq On : 13 Apr 2016 15:41 Operator: TMB
Sample : WG564484-08 50ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411400.D Vial: 10
Acq On : 13 Apr 2016 16:10 Operator: TMB
Sample : WG564484-09 100ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:48 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	776746	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	558290	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	290576	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	387849	48.8357	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 195.36%#			
43) 1,2-Dichloroethane-d4	10.30	65	410534	49.2346	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 196.92%#			
58) Toluene-d8	12.68	98	1340805	47.9923	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 191.96%#			
80) p-Bromofluorobenzene	16.07	95	564033	49.6823	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 198.72%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	1289357	103.2059	ug/L	99
3) Chloromethane	3.63	50	1813313	93.9443	ug/L	98
4) Vinyl Chloride	3.84	62	1089308	94.7460	ug/L	97
5) 1,3-Butadiene	3.89	54	942333	92.0545	ug/L	94
6) Bromomethane	4.74	94	536624	100.0985	ug/L	100
7) Chloroethane	4.90	64	640659	101.2385	ug/L	97
8) Trichlorofluoromethane	5.38	101	1384374	97.3656	ug/L	99
9) Diethyl ether	5.91	59	1209730	211.0286	ug/L	92
10) Isoprene	5.95	67	1132850	104.5558	ug/L	91
11) Acrolein	6.15	56	80335	103.9787	ug/L	94
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	756520	97.9323	ug/L	93
13) Acetone	6.25	43	137633	93.2065	ug/L	90
14) 1,1-Dichloroethene	6.47	61	1454886	98.9799	ug/L	94
15) Tert-Butyl Alcohol	6.58	59	138577	401.7899	ug/L	97
16) Dimethyl Sulfide	6.74	62	690347	103.1911	ug/L	91
17) Iodomethane	6.99	142	376710	100.9409	ug/L	99
18) Methyl acetate	7.01	43	529694	101.8179	ug/L	96
19) Methylene Chloride	7.25	84	792206	97.8430	ug/L	78
20) Carbon Disulfide	7.30	76	2692716	99.8998	ug/L	100
21) Acrylonitrile	7.44	53	242887	109.0236	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	1643321	100.4073	ug/L	92
23) trans-1,2-Dichloroethene	7.71	61	1388275	99.0417	ug/L	90
24) n-Hexane	7.79	57	1381463	101.1866	ug/L	98
25) Diisopropyl ether	8.13	45	7301236	207.7149	ug/L	98
26) Vinyl Acetate	8.30	43	1403015	108.3911	ug/L	98
27) 1,1-Dichloroethane	8.33	63	1717981	97.6122	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	5372707	208.9196	ug/L	96
29) 2-Butanone	8.89	43	252998	103.3143	ug/L	94
30) Propionitrile	8.99	54	148627	208.8813	ug/L	99
31) 2,2-Dichloropropane	9.10	77	1327426	101.3272	ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	870517	99.4578	ug/L	83
33) Chloroform	9.38	83	1468441	99.1973	ug/L	99
34) 1-Bromopropane	9.52	122	136735	105.4832	ug/L	99
35) Bromochloromethane	9.61	130	448698	101.0872	ug/L	79
36) Tetrahydrofuran	9.63	42	351123	194.3016	ug/L	91
38) 1,1,1-Trichloroethane	9.91	97	1284460	97.9977	ug/L	100
39) Cyclohexane	9.94	56	1816418	100.4509	ug/L	90
40) 1,1-Dichloropropene	10.11	75	1138013	98.4383	ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	3649661	210.3477	ug/L	92
42) Carbon Tetrachloride	10.25	117	1165266	100.1784	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411400.D 8260WT.M Thu Apr 14 08:46:48 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411400.D Vial: 10
Acq On : 13 Apr 2016 16:10 Operator: TMB
Sample : WG564484-09 100ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:48 2016 Quant Results File: 8260WT.RES

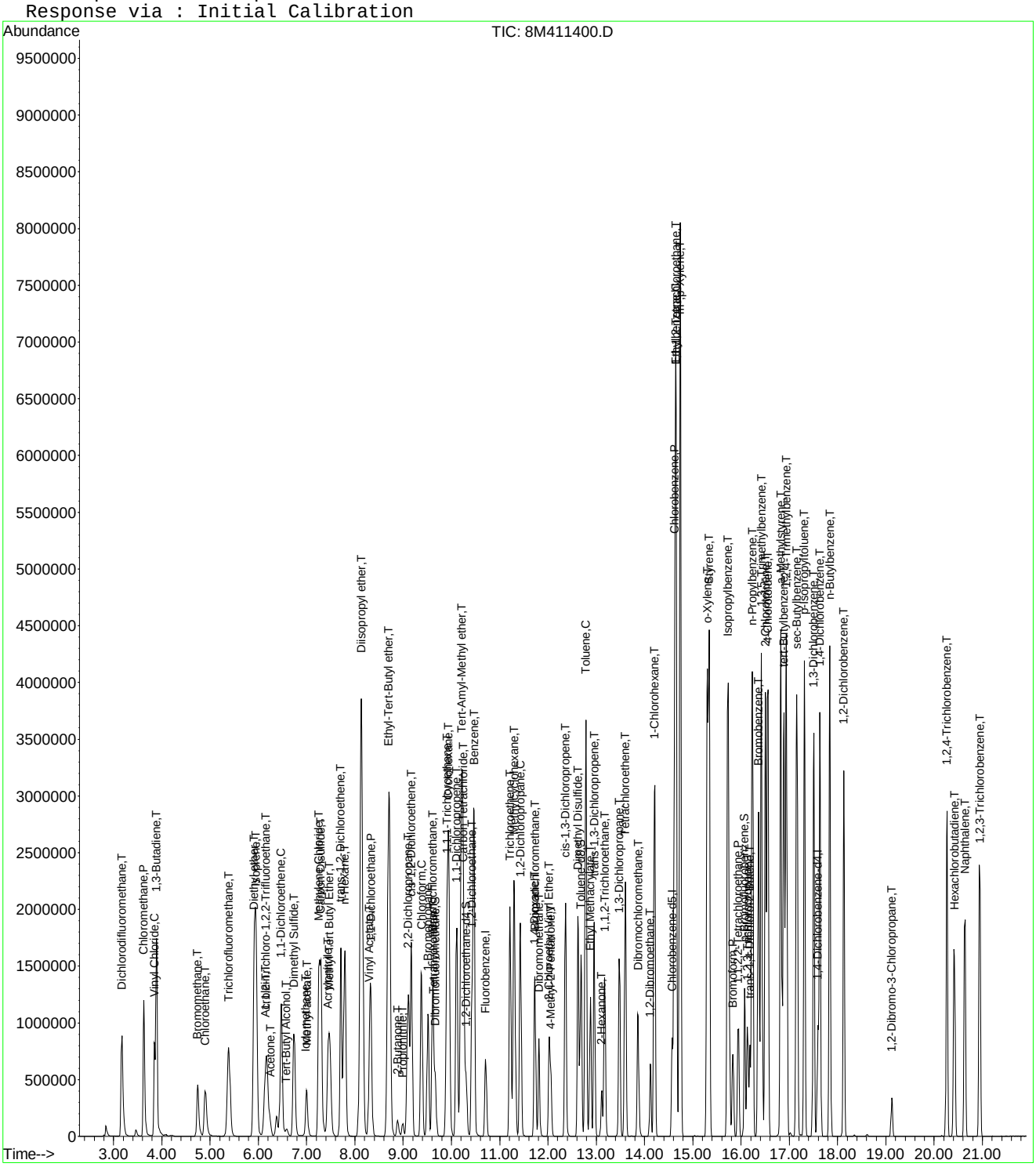
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	1118280	99.5731 ug/L		97
46)	Benzene	10.47	78	3113437	99.0207 ug/L		91
47)	Trichloroethene	11.21	130	791286	99.9549 ug/L		96
48)	Methylcyclohexane	11.30	83	1253590	99.6416 ug/L		88
49)	1,2-Dichloropropane	11.43	63	948770	100.8397 ug/L		92
50)	Bromodichloromethane	11.73	83	1118845	100.3792 ug/L		99
51)	1,4-Dioxane	11.72	88	14000	427.9967 ug/L		100
52)	Dibromomethane	11.81	93	416268	105.8730 ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.02	63	389772	101.5507 ug/L		96
54)	4-Methyl-2-Pentanone	12.06	58	212463	102.3900 ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	1287367	104.6184 ug/L		100
56)	Dimethyl Disulfide	12.62	79	682846	104.6595 ug/L		100
59)	Toluene	12.78	91	3200953	97.4800 ug/L		99
60)	Ethyl Methacrylate	12.88	69	735848	106.3155 ug/L		86
62)	trans-1,3-Dichloropropene	12.96	75	1105045	100.2886 ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	536492	102.1527 ug/L		98
64)	2-Hexanone	13.11	58	201347	103.3610 ug/L	#	98
65)	1,3-Dichloropropane	13.48	76	975426	99.2571 ug/L		89
66)	Tetrachloroethene	13.60	164	625058	99.3768 ug/L		94
67)	Dibromochloromethane	13.87	129	722878	104.4396 ug/L		100
68)	1,2-Dibromoethane	14.12	107	543791	101.3413 ug/L		99
69)	1-Chlorohexane	14.21	91	1148173	103.2219 ug/L		83
70)	Chlorobenzene	14.62	112	2155026	97.2654 ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.65	131	798041	103.3028 ug/L		98
72)	Ethylbenzene	14.65	106	1219279	99.3489 ug/L		96
73)	m-,p-Xylene	14.74	106	2850716	198.8344 ug/L		93
74)	o-Xylene	15.31	106	1427524	98.0265 ug/L		97
75)	Styrene	15.34	104	2392128	103.5104 ug/L		97
76)	Bromoform	15.83	173	420482	98.9725 ug/L		100
77)	Isopropylbenzene	15.73	105	3502337	99.9402 ug/L		97
79)	1,1,2,2-Tetrachloroethane	15.94	83	648175	101.5049 ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	168298	96.9166 ug/L	#	43
82)	trans-1,4-Dichloro-2-Buten	16.18	53	273384	106.9028 ug/L		67
83)	n-Propylbenzene	16.24	91	4237405	97.3135 ug/L		98
84)	Bromobenzene	16.36	156	840033	97.0159 ug/L		89
85)	1,3,5-Trimethylbenzene	16.42	105	3009517	98.4789 ug/L		98
86)	2-Chlorotoluene	16.50	91	2734632	96.5297 ug/L		100
87)	4-Chlorotoluene	16.56	91	2757514	93.4558 ug/L		99
88)	a-Methylstyrene	16.83	118	1688599	101.4630 ug/L		97
89)	tert-Butylbenzene	16.89	134	609370	97.8973 ug/L		92
90)	1,2,4-Trimethylbenzene	16.94	105	3122366	97.3224 ug/L		98
91)	sec-Butylbenzene	17.16	105	3657243	96.3982 ug/L		99
92)	p-Isopropyltoluene	17.31	119	3047881	98.5532 ug/L		98
93)	1,3-Dichlorobenzene	17.51	146	1694591	96.1920 ug/L		92
94)	1,4-Dichlorobenzene	17.63	146	1656939	93.9569 ug/L		92
95)	n-Butylbenzene	17.84	91	3089166	98.1447 ug/L		99
96)	1,2-Dichlorobenzene	18.13	146	1503475	96.4414 ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	115920	100.5041 ug/L		83
98)	1,2,4-Trichlorobenzene	20.27	180	1071044	97.6337 ug/L		99
99)	Hexachlorobutadiene	20.42	225	439223	101.7252 ug/L		99
100)	Naphthalene	20.64	128	1814349	98.7518 ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	899513	98.2564 ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411400.D 8260WT.M Thu Apr 14 08:46:49 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041316\8M411400.D Vial: 10
Acq On : 13 Apr 2016 16:10 Operator: TMB
Sample : WG564484-09 100ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



8M411400.D 8260WT.M Thu Apr 14 08:46:49 2016 Page 3

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411401.D Vial: 11
Acq On : 13 Apr 2016 16:40 Operator: TMB
Sample : WG564484-10 200ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:49 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	836447	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	599763	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	300587	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.66	111	866781	101.3502 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 405.40%#		
43) 1,2-Dichloroethane-d4	10.30	65	891525	99.2876 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 397.16%#		
58) Toluene-d8	12.68	98	2973614	99.0765 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 396.32%#		
80) p-Bromofluorobenzene	16.07	95	1215680	103.5156 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 414.08%#		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.17	85	2873246	213.5722 ug/L	98
3) Chloromethane	3.63	50	3769631	181.3581 ug/L	100
4) Vinyl Chloride	3.85	62	2224265	179.6542 ug/L	99
5) 1,3-Butadiene	3.89	54	1731168	184.1380 ug/L	93
6) Bromomethane	4.74	94	1393650	209.2058 ug/L	99
7) Chloroethane	4.90	64	1499782	220.0836 ug/L	98
8) Trichlorofluoromethane	5.38	101	3172116	207.1770 ug/L	99
10) Isoprene	5.95	67	2534145	217.1940 ug/L	91
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	1775491	213.4346 ug/L	93
13) Acetone	6.25	43	325170	204.4912 ug/L	99
14) 1,1-Dichloroethene	6.47	61	3333435	210.5963 ug/L	94
16) Dimethyl Sulfide	6.74	62	1563132	216.9756 ug/L	93
17) Iodomethane	7.00	142	834381	203.2775 ug/L	99
18) Methyl acetate	7.01	43	1109747	198.0905 ug/L	96
19) Methylene Chloride	7.25	84	1777932	203.9141 ug/L	79
20) Carbon Disulfide	7.30	76	5871983	202.3018 ug/L	99
21) Acrylonitrile	7.47	53	44117	18.3892 ug/L #	33
22) Methyl Tert Butyl Ether	7.47	73	3543669	201.0651 ug/L	91
23) trans-1,2-Dichloroethene	7.71	61	3158608	209.2565 ug/L	90
24) n-Hexane	7.79	57	3148076	214.1261 ug/L	97
26) Vinyl Acetate	8.30	43	2924532	209.8111 ug/L	98
27) 1,1-Dichloroethane	8.33	63	3841295	202.6768 ug/L	99
29) 2-Butanone	8.89	43	529797	200.9062 ug/L	94
30) Propionitrile	8.93	54	909	1.1863 ug/L #	56
31) 2,2-Dichloropropane	9.10	77	2960538	209.8587 ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	1944447	206.2995 ug/L	83
33) Chloroform	9.37	83	3203781	200.9773 ug/L	98
34) 1-Bromopropane	9.52	122	314930	225.6100 ug/L	98
35) Bromochloromethane	9.61	130	983471	205.7521 ug/L	80
36) Tetrahydrofuran	9.63	42	5746	2.9527 ug/L #	76
38) 1,1,1-Trichloroethane	9.91	97	2905449	205.8492 ug/L	100
39) Cyclohexane	9.94	56	4178923	214.6065 ug/L	88
40) 1,1-Dichloropropene	10.11	75	2567312	206.2226 ug/L	98
42) Carbon Tetrachloride	10.25	117	2646381	211.2721 ug/L	100
45) 1,2-Dichloroethane	10.43	62	2412578	199.4864 ug/L	96
46) Benzene	10.47	78	6517743	192.4968 ug/L	85
47) Trichloroethene	11.21	130	1787701	209.7037 ug/L	97
48) Methylcyclohexane	11.30	83	2820062	208.1539 ug/L	87
49) 1,2-Dichloropropane	11.43	63	2131352	210.3616 ug/L	92
50) Bromodichloromethane	11.73	83	2437524	203.0782 ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411401.D 8260WT.M Thu Apr 14 08:46:50 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411401.D Vial: 11
Acq On : 13 Apr 2016 16:40 Operator: TMB
Sample : WG564484-10 200ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:49 2016 Quant Results File: 8260WT.RES

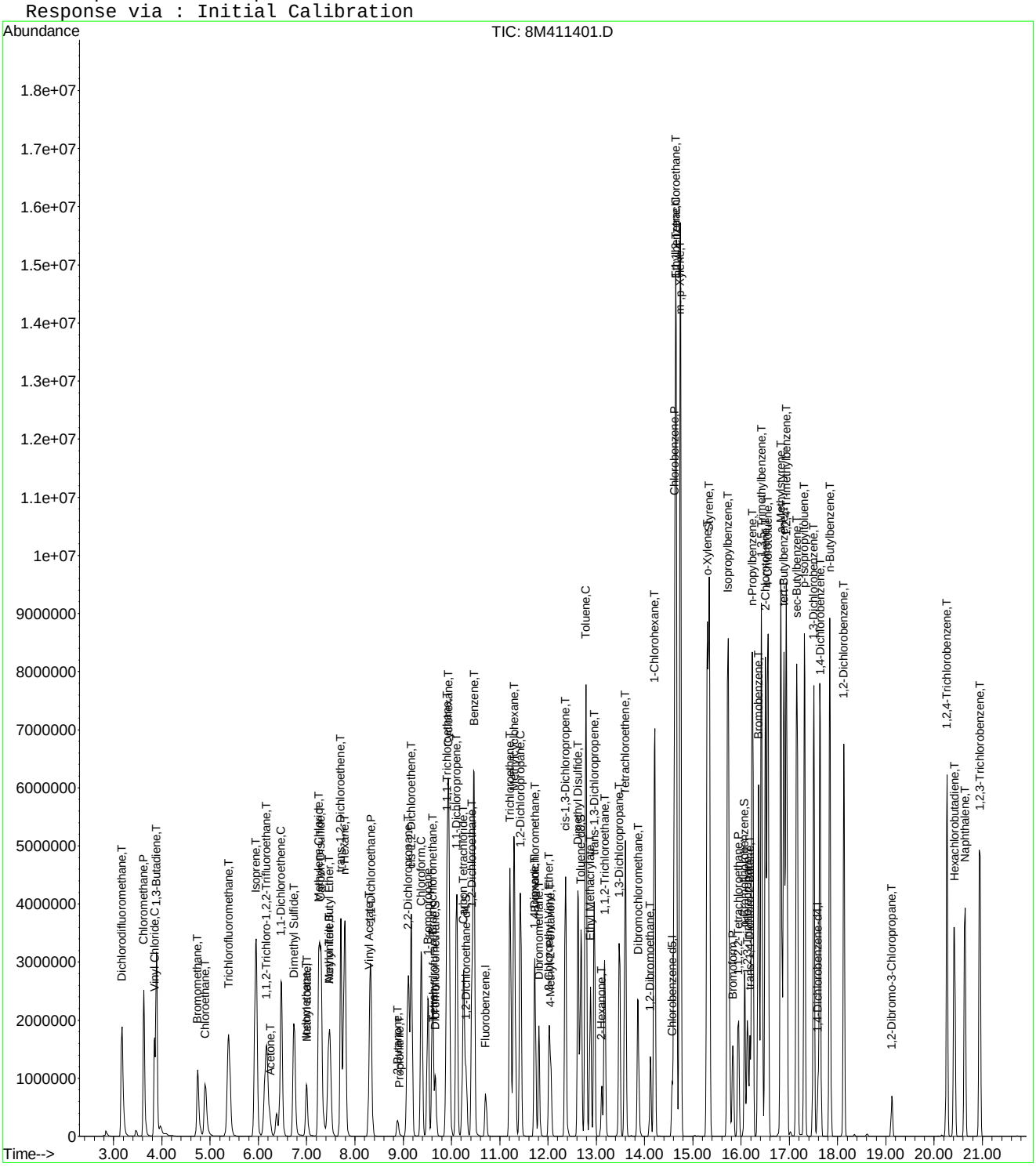
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
51)	1,4-Dioxane	11.72	88	4621	131.1865 ug/L #	56
52)	Dibromomethane	11.81	93	903524	213.3991 ug/L	96
53)	2-Chloroethyl Vinyl Ether	12.02	63	844469	204.3133 ug/L	96
54)	4-Methyl-2-Pentanone	12.05	58	454875	203.5668 ug/L	93
55)	cis-1,3-Dichloropropene	12.36	75	2798880	211.2178 ug/L	99
56)	Dimethyl Disulfide	12.62	79	1513039	215.3508 ug/L	98
59)	Toluene	12.78	91	6517409	184.7530 ug/L	93
60)	Ethyl Methacrylate	12.88	69	1546523	207.9913 ug/L	86
62)	trans-1,3-Dichloropropene	12.96	75	2350628	198.5801 ug/L	98
63)	1,1,2-Trichloroethane	13.18	97	1148130	203.4970 ug/L	97
64)	2-Hexanone	13.11	58	422243	201.7688 ug/L #	96
65)	1,3-Dichloropropane	13.48	76	2071467	196.2119 ug/L	87
66)	Tetrachloroethene	13.60	164	1440484	213.1833 ug/L	94
67)	Dibromochloromethane	13.87	129	1577281	212.1237 ug/L	100
68)	1,2-Dibromoethane	14.12	107	1159760	201.0770 ug/L	99
69)	1-Chlorohexane	14.21	91	2510073	210.0540 ug/L	81
70)	Chlorobenzene	14.62	112	4543266	190.8773 ug/L	94
71)	1,1,1,2-Tetrachloroethane	14.65	131	1739485	209.5984 ug/L	99
72)	Ethylbenzene	14.65	106	2737151	207.6056 ug/L	77
73)	m-,p-Xylene	14.74	106	5905144	383.3965 ug/L	74
74)	o-Xylene	15.31	106	3124412	199.7141 ug/L	87
75)	Styrene	15.34	104	4925647	198.4007 ug/L	92
76)	Bromoform	15.83	173	911195	199.3377 ug/L	100
77)	Isopropylbenzene	15.73	105	7019634	186.4563 ug/L	92
79)	1,1,2,2-Tetrachloroethane	15.95	83	1341395	203.0678 ug/L	99
81)	1,2,3-Trichloropropane	16.13	110	359474	200.1133 ug/L #	47
82)	trans-1,4-Dichloro-2-Buten	16.18	53	580910	219.5910 ug/L	69
83)	n-Propylbenzene	16.24	91	7976000	177.0712 ug/L	89
84)	Bromobenzene	16.36	156	1811673	202.2629 ug/L	88
85)	1,3,5-Trimethylbenzene	16.42	105	6148843	194.5044 ug/L	93
86)	2-Chlorotoluene	16.50	91	5259149	179.4598 ug/L	83
87)	4-Chlorotoluene	16.56	91	5615389	183.9746 ug/L	95
88)	a-Methylstyrene	16.83	118	3564854	207.0678 ug/L	97
89)	tert-Butylbenzene	16.89	134	1356544	210.6751 ug/L	98
90)	1,2,4-Trimethylbenzene	16.94	105	6277085	189.1369 ug/L	91
91)	sec-Butylbenzene	17.16	105	7234129	184.3277 ug/L	96
92)	p-Isopropyltoluene	17.31	119	6125299	191.4652 ug/L	97
93)	1,3-Dichlorobenzene	17.51	146	3553390	194.9874 ug/L	89
94)	1,4-Dichlorobenzene	17.64	146	3490383	191.3307 ug/L	90
95)	n-Butylbenzene	17.84	91	6055587	185.9822 ug/L	96
96)	1,2-Dichlorobenzene	18.13	146	3127482	193.9330 ug/L	89
97)	1,2-Dibromo-3-Chloropropan	19.12	75	233798	195.9548 ug/L	89
98)	1,2,4-Trichlorobenzene	20.27	180	2274510	200.4333 ug/L	99
99)	Hexachlorobutadiene	20.42	225	977512	218.8543 ug/L	98
100)	Naphthalene	20.64	128	3634850	191.2495 ug/L	98
101)	1,2,3-Trichlorobenzene	20.95	180	1892764	199.8662 ug/L	100

(#) = qualifier out of range (m) = manual integration
8M411401.D 8260WT.M Thu Apr 14 08:46:50 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041316\8M411401.D Vial: 11
Acq On : 13 Apr 2016 16:40 Operator: TMB
Sample : WG564484-10 200ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041316\8M411402.D Vial: 12
Acq On : 13 Apr 2016 17:09 Operator: TMB
Sample : WG564484-11 300ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:50 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	897540	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	662972	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.60	152	325327	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	1381341	150.5223	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 602.08%#			
43) 1,2-Dichloroethane-d4	10.30	65	1420395	147.4196	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 589.68%#			
58) Toluene-d8	12.68	98	4551868	137.2019	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 548.80%#			
80) p-Bromofluorobenzene	16.07	95	1965699	154.6513	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 618.60%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	4300955	297.9349	ug/L	98
3) Chloromethane	3.63	50	5408566	242.4961	ug/L	97
4) Vinyl Chloride	3.84	62	3393674	255.4498	ug/L	99
5) 1,3-Butadiene	3.89	54	2460375	Below Cal		92
6) Bromomethane	4.74	94	2327951	295.0799	ug/L	100
7) Chloroethane	4.90	64	2373691	324.6148	ug/L	97
8) Trichlorofluoromethane	5.38	101	5064132	308.2351	ug/L	99
9) Diethyl ether	5.91	59	2096971	316.5705	ug/L	92
10) Isoprene	5.95	67	4000003	319.4930	ug/L	89
11) Acrolein	6.15	56	147604	148.4310	ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	2742128	307.1982	ug/L	94
13) Acetone	6.25	43	486465	285.1021	ug/L	89
14) 1,1-Dichloroethene	6.47	61	5089784	299.6696	ug/L	96
15) Tert-Butyl Alcohol	6.59	59	251894	632.0492	ug/L	98
16) Dimethyl Sulfide	6.74	62	2558389	330.9531	ug/L	93
17) Iodomethane	7.00	142	1325266	298.9211	ug/L	98
18) Methyl acetate	7.01	43	1875863	312.0508	ug/L	96
19) Methylene Chloride	7.26	84	2783151	297.4771	ug/L	79
20) Carbon Disulfide	7.30	76	8914575	286.2201	ug/L	97
21) Acrylonitrile	7.44	53	477187	185.3661	ug/L	93
22) Methyl Tert Butyl Ether	7.47	73	5611421	296.7160	ug/L	89
23) trans-1,2-Dichloroethene	7.71	61	4783480	295.3328	ug/L	90
24) n-Hexane	7.79	57	4921137	311.9424	ug/L	96
25) Diisopropyl ether	8.13	45	11530421	283.8845	ug/L	98
26) Vinyl Acetate	8.30	43	4629210	309.5021	ug/L	99
27) 1,1-Dichloroethane	8.33	63	5784263	284.4193	ug/L	99
28) Ethyl-Tert-Butyl ether	8.71	59	8700232	292.7804	ug/L	96
29) 2-Butanone	8.89	43	907426	320.6858	ug/L	95
30) Propionitrile	8.99	54	271529	330.2503	ug/L	100
31) 2,2-Dichloropropane	9.11	77	4493786	296.8612	ug/L	97
32) cis-1,2-Dichloroethene	9.17	96	2989949	295.6313	ug/L	84
33) Chloroform	9.38	83	4820774	281.8289	ug/L	96
34) 1-Bromopropane	9.52	122	509940	340.4459	ug/L	98
35) Bromochloromethane	9.61	130	1554655	303.1107	ug/L	80
36) Tetrahydrofuran	9.63	42	622240	297.9891	ug/L	91
38) 1,1,1-Trichloroethane	9.91	97	4425820	292.2229	ug/L	99
39) Cyclohexane	9.94	56	6497010	310.9401	ug/L	89
40) 1,1-Dichloropropene	10.11	75	3914599	293.0418	ug/L	99
41) Tert-Amyl-Methyl ether	10.21	73	5987842	298.6626	ug/L	90
42) Carbon Tetrachloride	10.25	117	4073907	303.0996	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411402.D 8260WT.M Thu Apr 14 08:46:51 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041316\8M411402.D Vial: 12
Acq On : 13 Apr 2016 17:09 Operator: TMB
Sample : WG564484-11 300ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 08:46:50 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

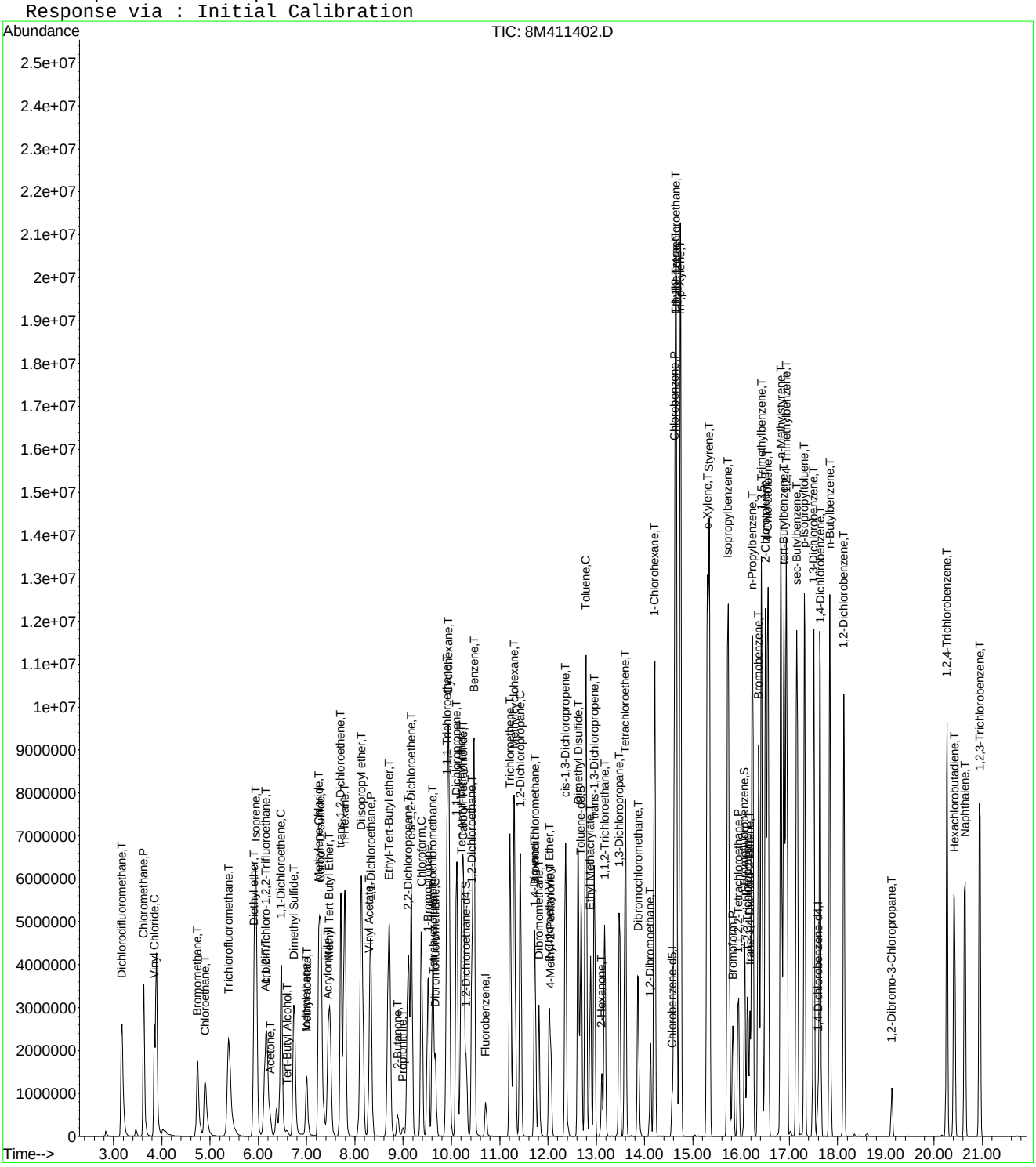
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	3729949	287.4216 ug/L		95
46)	Benzene	10.47	78	9137005	251.4866 ug/L	#	78
47)	Trichloroethene	11.21	130	2764772	302.2422 ug/L		97
48)	Methylcyclohexane	11.30	83	4414290	303.6487 ug/L		87
49)	1,2-Dichloropropane	11.43	63	3318816	305.2665 ug/L		93
50)	Bromodichloromethane	11.73	83	3747080	290.9324 ug/L		97
51)	1,4-Dioxane	11.72	88	25758	681.4748 ug/L		96
52)	Dibromomethane	11.81	93	1437824	316.4779 ug/L		96
53)	2-Chloroethyl Vinyl Ether	12.03	63	1319107	297.4251 ug/L		96
54)	4-Methyl-2-Pentanone	12.05	58	772518	322.1871 ug/L		92
55)	cis-1,3-Dichloropropene	12.36	75	4268547	300.2002 ug/L		97
56)	Dimethyl Disulfide	12.63	79	2477017	328.5564 ug/L		96
59)	Toluene	12.78	91	8988631	230.5125 ug/L		86
60)	Ethyl Methacrylate	12.88	69	2528821	307.6744 ug/L		86
62)	trans-1,3-Dichloropropene	12.96	75	3649508	278.9142 ug/L		96
63)	1,1,2-Trichloroethane	13.18	97	1845727	295.9504 ug/L		98
64)	2-Hexanone	13.12	58	713022	308.2329 ug/L	#	94
65)	1,3-Dichloropropane	13.48	76	3244251	278.0009 ug/L		86
66)	Tetrachloroethene	13.60	164	2251588	301.4520 ug/L		94
67)	Dibromochloromethane	13.87	129	2516983	306.2281 ug/L		99
68)	1,2-Dibromoethane	14.12	107	1861376	291.9018 ug/L		99
69)	1-Chlorohexane	14.21	91	3886943	294.2641 ug/L		79
70)	Chlorobenzene	14.62	112	6512537	247.5260 ug/L		90
71)	1,1,1,2-Tetrachloroethane	14.66	131	2667666	290.7925 ug/L		99
72)	Ethylbenzene	14.66	106	4119403	282.6566 ug/L		61
73)	m-,p-Xylene	14.75	106	8167051	479.6974 ug/L		64
74)	o-Xylene	15.31	106	4744772	274.3722 ug/L		77
75)	Styrene	15.34	104	7130607	259.8310 ug/L		86
76)	Bromoform	15.83	173	1497256	296.1714 ug/L		99
77)	Isopropylbenzene	15.73	105	9570479	229.9751 ug/L		84
79)	1,1,2,2-Tetrachloroethane	15.95	83	2150097	300.7410 ug/L		98
81)	1,2,3-Trichloropropane	16.13	110	580847	298.7586 ug/L	#	46
82)	trans-1,4-Dichloro-2-Buten	16.18	53	969278	338.5354 ug/L		70
83)	n-Propylbenzene	16.24	91	10491939	215.2131 ug/L	#	80
84)	Bromobenzene	16.36	156	2847775	293.7596 ug/L		92
85)	1,3,5-Trimethylbenzene	16.42	105	8565847	250.3551 ug/L		86
86)	2-Chlorotoluene	16.51	91	7274227	229.3447 ug/L	#	75
87)	4-Chlorotoluene	16.56	91	6492574	196.5373 ug/L		86
88)	a-Methylstyrene	16.83	118	5455774	292.8042 ug/L		94
89)	tert-Butylbenzene	16.89	134	2118127	303.9355 ug/L		93
90)	1,2,4-Trimethylbenzene	16.94	105	8583367	238.9605 ug/L		82
91)	sec-Butylbenzene	17.16	105	9759588	229.7661 ug/L		89
92)	p-Isopropyltoluene	17.31	119	8447259	243.9655 ug/L		90
93)	1,3-Dichlorobenzene	17.51	146	5305009	268.9676 ug/L		86
94)	1,4-Dichlorobenzene	17.64	146	5200327	263.3857 ug/L		86
95)	n-Butylbenzene	17.84	91	8224352	233.3818 ug/L		90
96)	1,2-Dichlorobenzene	18.13	146	4726824	270.8173 ug/L		86
97)	1,2-Dibromo-3-Chloropropan	19.12	75	385178	298.2818 ug/L		88
98)	1,2,4-Trichlorobenzene	20.27	180	3465407	282.1540 ug/L		99
99)	Hexachlorobutadiene	20.42	225	1535628	317.6649 ug/L		98
100)	Naphthalene	20.64	128	5422987	263.6346 ug/L		96
101)	1,2,3-Trichlorobenzene	20.95	180	2915970	284.4959 ug/L		99

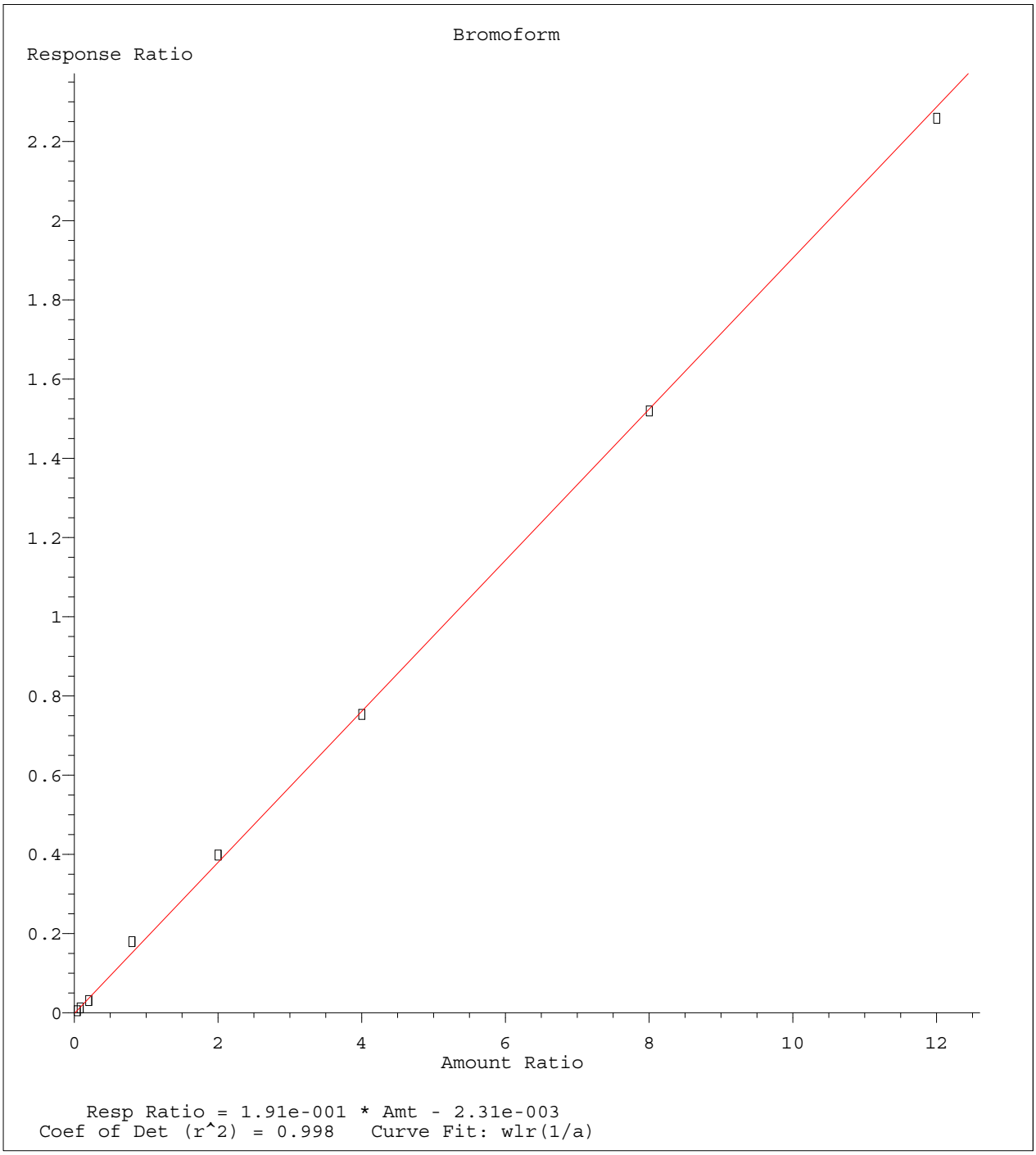
(#) = qualifier out of range (m) = manual integration
8M411402.D 8260WT.M Thu Apr 14 08:46:51 2016 Page 2

Quantitation Report (Not Reviewed)

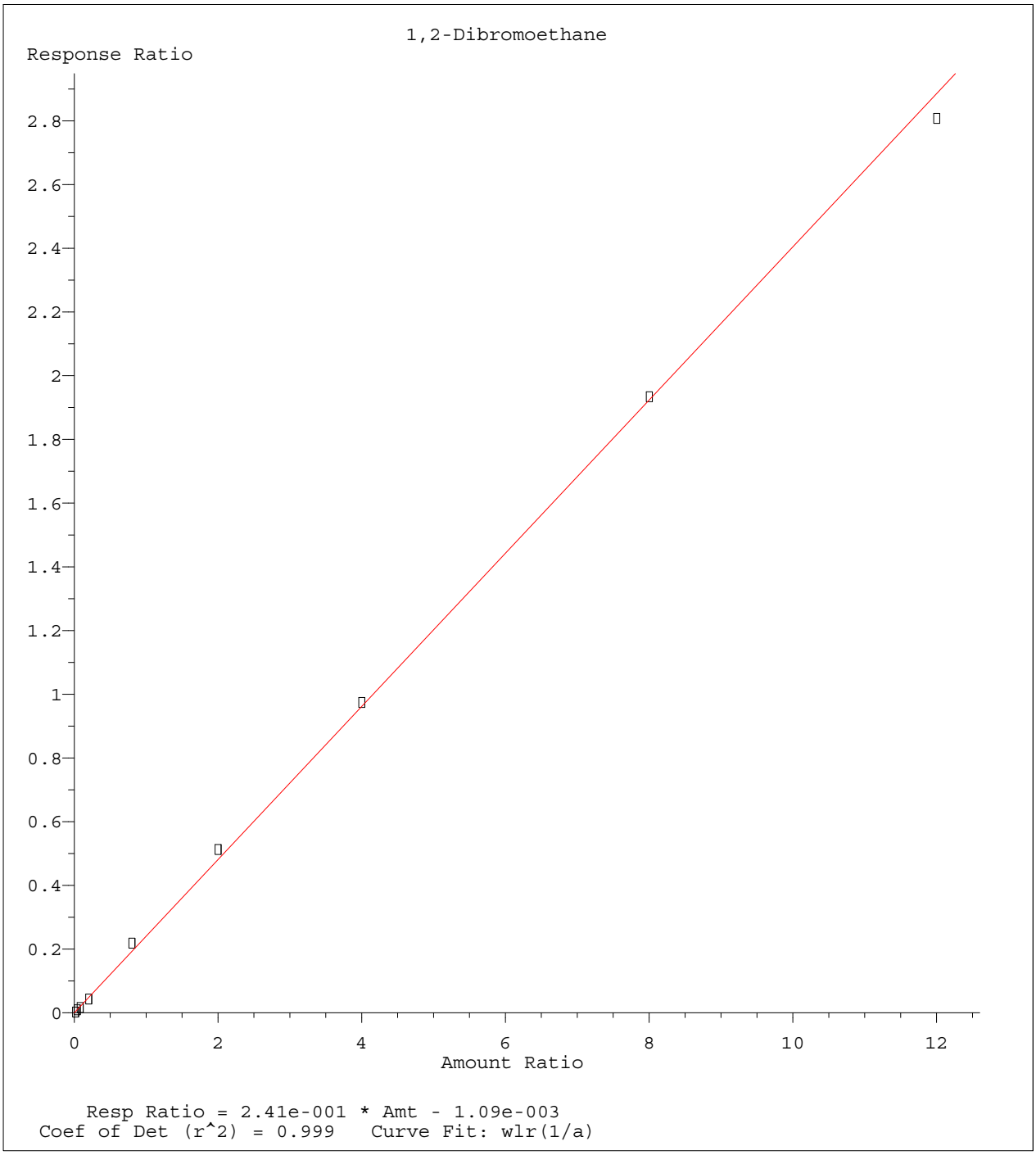
Data File : C:\MSDCHEM\2\DATA\041316\8M411402.D Vial: 12
Acq On : 13 Apr 2016 17:09 Operator: TMB
Sample : WG564484-11 300ug/L STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 8:46 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 08:44:00 2016
Response via : Initial Calibration

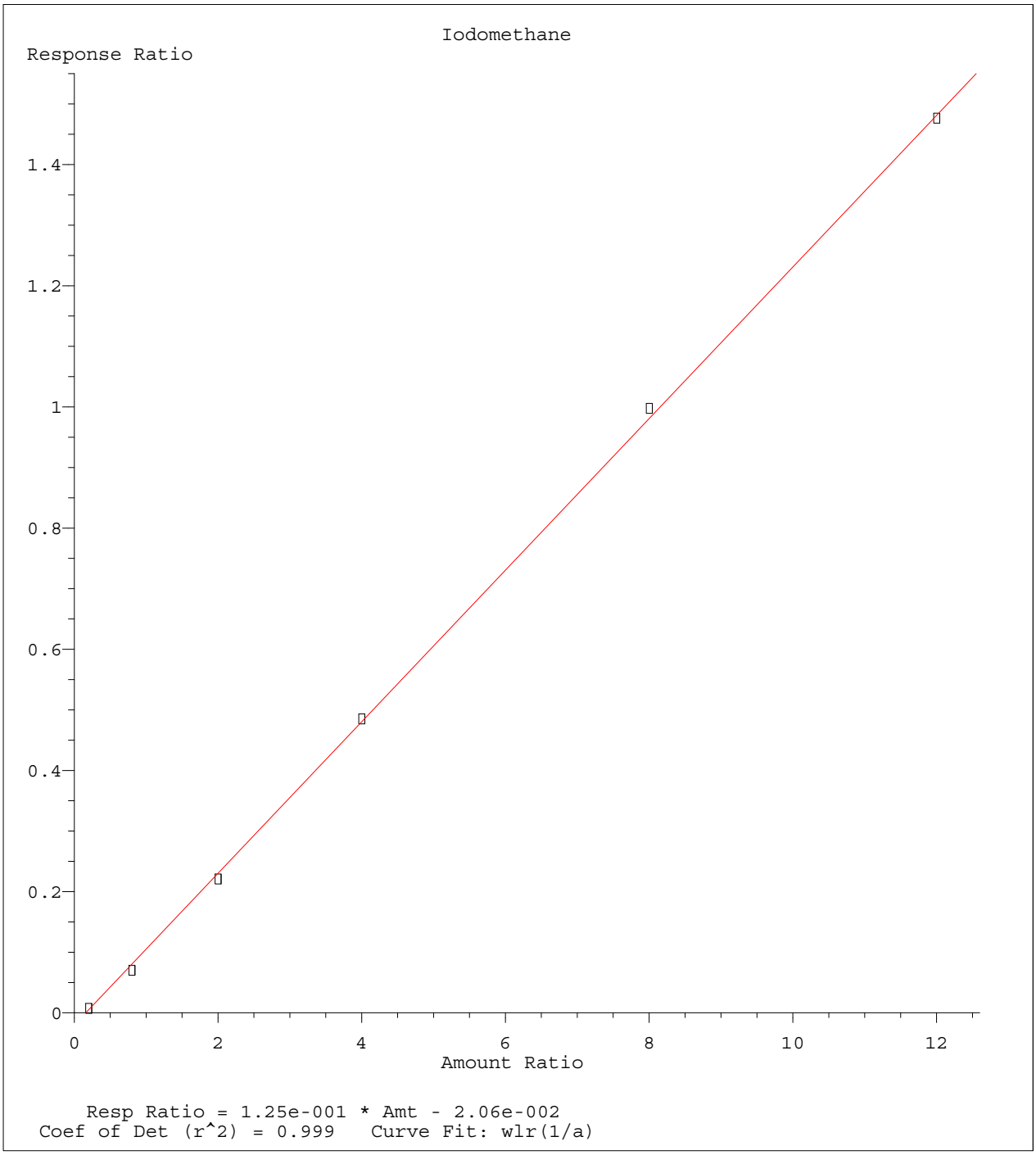




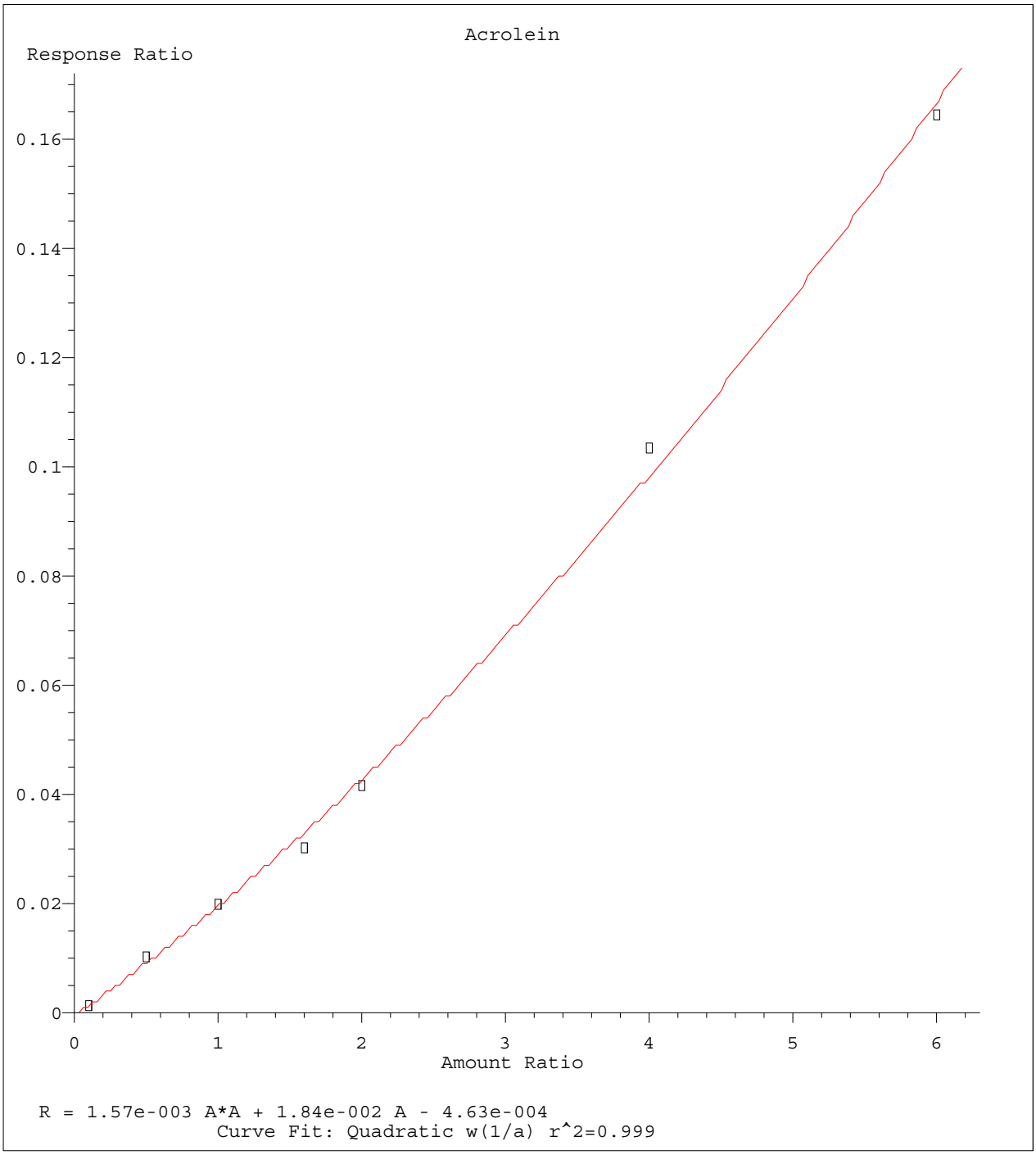
Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Thu Apr 14 08:48:16 2016



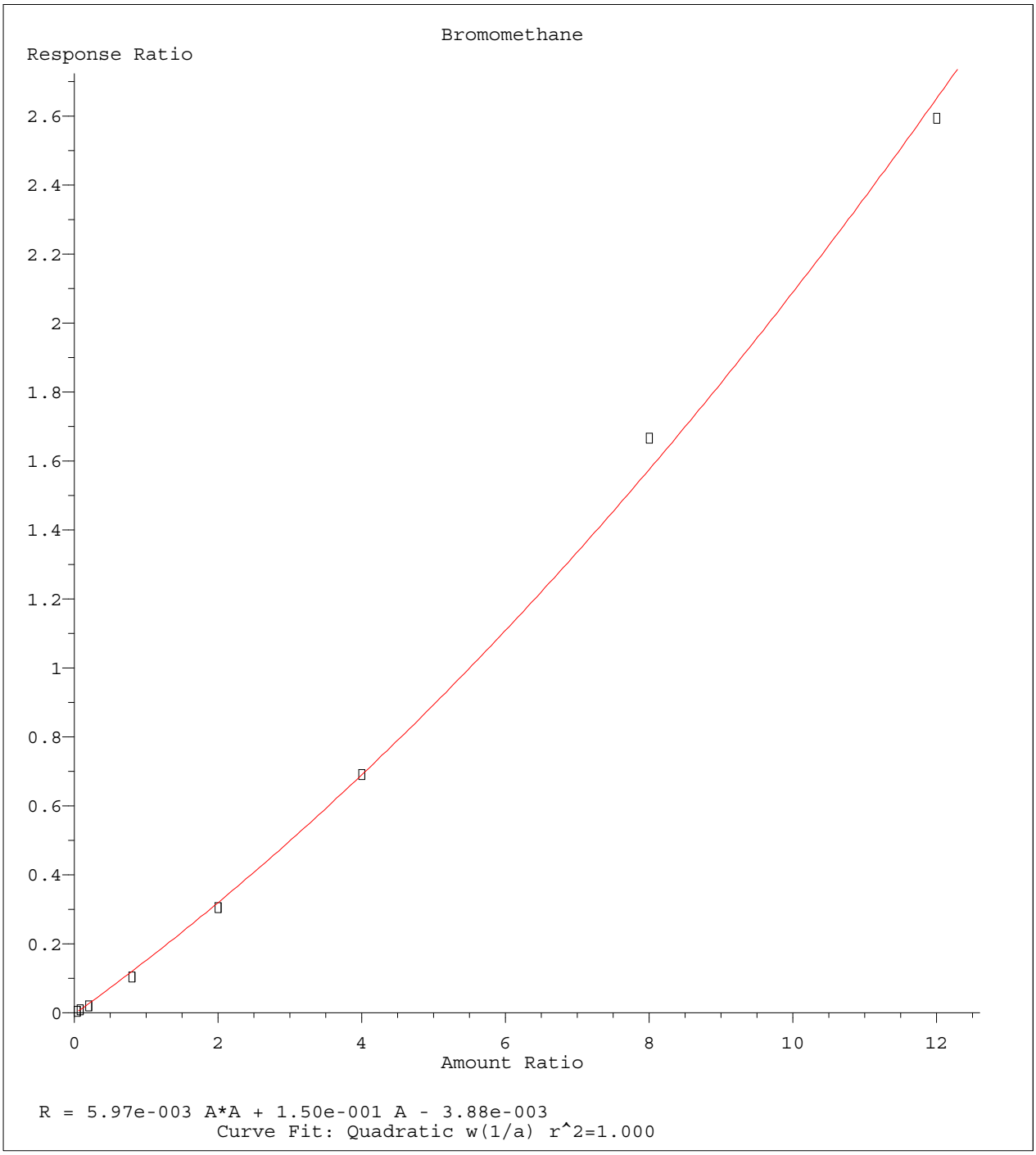
Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Thu Apr 14 08:48:16 2016



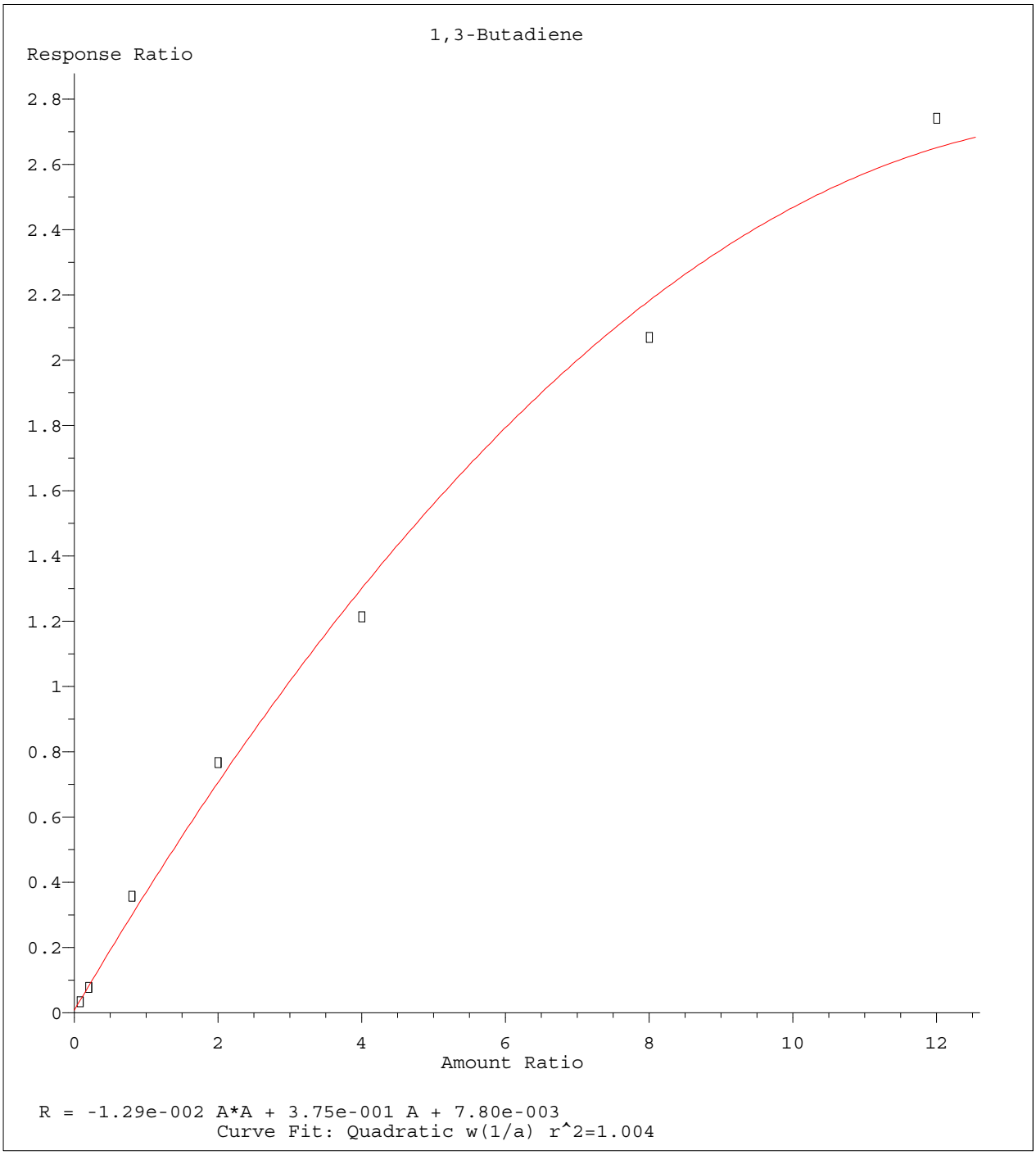
Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Thu Apr 14 08:48:16 2016



Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Thu Apr 14 08:48:16 2016



Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Thu Apr 14 08:48:16 2016



Method Name: C:\MSDCHEM\2\METHODS\8260WT.M
Calibration Table Last Updated: Thu Apr 14 08:48:16 2016

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041416\8M411413.D Vial: 6
Acq On : 14 Apr 2016 12:46 Operator: TMB
Sample : WG564484-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 13:08:27 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	844629	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	597162	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	303420	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	197742	22.8974	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 91.60%			
43) 1,2-Dichloroethane-d4	10.30	65	204746	22.5813	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 90.32%			
58) Toluene-d8	12.68	98	725518	24.2785	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.12%			
80) p-Bromofluorobenzene	16.07	95	290946	24.5428	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.16%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	719561	52.9678	ug/L	99
3) Chloromethane	3.63	50	951598	45.3382	ug/L	98
4) Vinyl Chloride	3.84	62	535230	42.8118	ug/L	98
5) 1,3-Butadiene	3.88	54	352792	28.4561	ug/L	93
6) Bromomethane	4.74	94	256653	47.7799	ug/L	99
7) Chloroethane	4.90	64	396821	57.6669	ug/L	98
8) Trichlorofluoromethane	5.38	101	745529	48.2203	ug/L	100
9) Diethyl ether	5.91	59	670925	107.6316	ug/L	93
10) Isoprene	5.95	67	635763	53.9615	ug/L	92
11) Acrolein	6.15	56	59000	75.7651	ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	434011	51.6677	ug/L	94
13) Acetone	6.25	43	79731	49.6551	ug/L	92
14) 1,1-Dichloroethene	6.47	61	779203	48.7508	ug/L	94
15) Tert-Butyl Alcohol	6.59	59	75303	200.7859	ug/L	95
16) Dimethyl Sulfide	6.74	62	513291	70.5588	ug/L	93
17) Iodomethane	7.00	142	145937	38.6054	ug/L	98
18) Methyl acetate	7.01	43	250291	44.2443	ug/L	96
19) Methylene Chloride	7.25	84	448283	50.9163	ug/L	79
20) Carbon Disulfide	7.30	76	1203389	41.0576	ug/L	99
21) Acrylonitrile	7.44	53	129488	53.4514	ug/L	100
22) Methyl Tert Butyl Ether	7.47	73	906342	50.9270	ug/L	92
23) trans-1,2-Dichloroethene	7.71	61	785723	51.5496	ug/L	89
24) n-Hexane	7.79	57	709234	47.7734	ug/L	99
25) Diisopropyl ether	8.13	45	3934333	102.9332	ug/L	95
26) Vinyl Acetate	8.30	43	965681	68.6085	ug/L	98
27) 1,1-Dichloroethane	8.33	63	925953	48.3824	ug/L	97
28) Ethyl-Tert-Butyl ether	8.70	59	2708927	96.8716	ug/L	96
29) 2-Butanone	8.89	43	143798	54.0019	ug/L	93
30) Propionitrile	8.99	54	81471	105.2975	ug/L	98
31) 2,2-Dichloropropane	9.10	77	740979	52.0157	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	492000	51.6939	ug/L	84
33) Chloroform	9.37	83	811059	50.3859	ug/L	100
34) 1-Bromopropane	9.52	122	99712	70.7399	ug/L	100
35) Bromochloromethane	9.61	130	242031	50.1448	ug/L	81
36) Tetrahydrofuran	9.63	42	181510	92.3700	ug/L	91
38) 1,1,1-Trichloroethane	9.91	97	702181	49.2672	ug/L	100
39) Cyclohexane	9.94	56	976323	49.6529	ug/L	89
40) 1,1-Dichloropropene	10.11	75	617203	49.0974	ug/L	97
41) Tert-Amyl-Methyl ether	10.21	73	1912007	101.3416	ug/L	92
42) Carbon Tetrachloride	10.25	117	632486	50.0050	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M411413.D 8260WT.M Thu Apr 14 13:08:27 2016 Page 1

Data File : C:\MSDchem\2\data\041416\8M411413.D Vial: 6
Acq On : 14 Apr 2016 12:46 Operator: TMB
Sample : WG564484-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 13:08:27 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

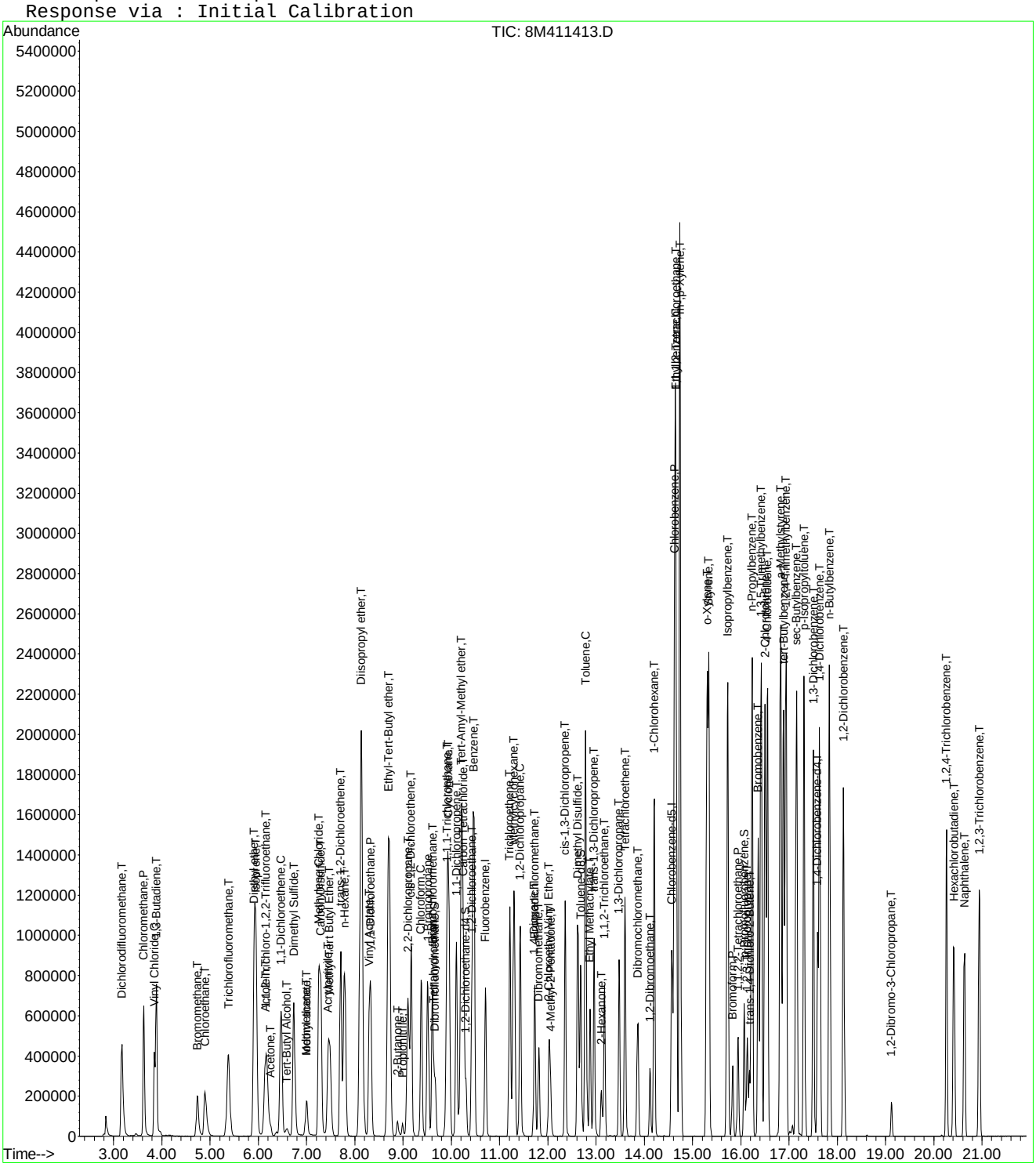
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	613367	50.2256	ug/L		97
46)	Benzene	10.47	78	1761985	51.5348	ug/L		92
47)	Trichloroethene	11.21	130	454992	52.8552	ug/L		97
48)	Methylcyclohexane	11.30	83	689599	50.4075	ug/L		88
49)	1,2-Dichloropropane	11.43	63	545752	53.3432	ug/L		91
50)	Bromodichloromethane	11.73	83	605345	49.9448	ug/L		100
51)	1,4-Dioxane	11.72	88	7270	204.3901	ug/L		99
52)	Dibromomethane	11.81	93	211272	49.4160	ug/L		96
53)	2-Chloroethyl Vinyl Ether	12.02	63	224106	53.6956	ug/L		96
54)	4-Methyl-2-Pentanone	12.06	58	116125	51.4651	ug/L		91
55)	cis-1,3-Dichloropropene	12.36	75	755848	56.4876	ug/L		100
56)	Dimethyl Disulfide	12.62	79	374366	52.7673	ug/L		98
59)	Toluene	12.78	91	1820275	51.8252	ug/L		99
60)	Ethyl Methacrylate	12.88	69	404060	54.5786	ug/L		92
62)	trans-1,3-Dichloropropene	12.96	75	595209	50.5020	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	291611	51.9109	ug/L		98
64)	2-Hexanone	13.11	58	108315	51.9838	ug/L	#	96
65)	1,3-Dichloropropane	13.48	76	559267	53.2052	ug/L		89
66)	Tetrachloroethene	13.60	164	344788	51.2489	ug/L		95
67)	Dibromochloromethane	13.87	129	385826	52.1146	ug/L		100
68)	1,2-Dibromoethane	14.12	107	292345	50.9915	ug/L		99
69)	1-Chlorohexane	14.21	91	635480	53.4114	ug/L		86
70)	Chlorobenzene	14.62	112	1221878	51.5586	ug/L		100
71)	1,1,1,2-Tetrachloroethane	14.65	131	430351	52.0808	ug/L		97
72)	Ethylbenzene	14.65	106	669891	51.0308	ug/L		100
73)	m-,p-Xylene	14.74	106	1628459	106.1896	ug/L		98
74)	o-Xylene	15.31	106	816904	52.4444	ug/L		99
75)	Styrene	15.34	104	1332224	53.8945	ug/L		98
76)	Bromoform	15.83	173	209126	46.1812	ug/L		100
77)	Isopropylbenzene	15.73	105	2016375	53.7925	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	338191	50.7192	ug/L		100
81)	1,2,3-Trichloropropane	16.13	110	91713	50.5784	ug/L		88
82)	trans-1,4-Dichloro-2-Buten	16.18	53	119726	44.8353	ug/L		80
83)	n-Propylbenzene	16.24	91	2510213	55.2077	ug/L		100
84)	Bromobenzene	16.36	156	454634	50.2834	ug/L		87
85)	1,3,5-Trimethylbenzene	16.42	105	1729483	54.1974	ug/L		99
86)	2-Chlorotoluene	16.50	91	1562828	52.8310	ug/L		100
87)	4-Chlorotoluene	16.56	91	1611093	52.2907	ug/L		98
88)	a-Methylstyrene	16.82	118	987490	56.8237	ug/L		99
89)	tert-Butylbenzene	16.89	134	348270	53.5823	ug/L		91
90)	1,2,4-Trimethylbenzene	16.94	105	1737693	51.8701	ug/L		98
91)	sec-Butylbenzene	17.16	105	2129898	53.7637	ug/L		97
92)	p-Isopropyltoluene	17.31	119	1721619	53.3121	ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	946606	51.4587	ug/L		94
94)	1,4-Dichlorobenzene	17.63	146	940316	51.0636	ug/L		94
95)	n-Butylbenzene	17.84	91	1717092	52.2438	ug/L		98
96)	1,2-Dichlorobenzene	18.13	146	834405	51.2578	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	57264	47.5470	ug/L		87
98)	1,2,4-Trichlorobenzene	20.27	180	584018	50.9840	ug/L		100
99)	Hexachlorobutadiene	20.42	225	253083	56.1335	ug/L		97
100)	Naphthalene	20.64	128	870736	45.3865	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	467637	48.9190	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411413.D 8260WT.M Thu Apr 14 13:08:28 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041416\8M411413.D Vial: 6
Acq On : 14 Apr 2016 12:46 Operator: TMB
Sample : WG564484-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 14 13:08 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\2\DATA\041416\8M411413.D Vial: 6
Acq On : 14 Apr 2016 12:46 Operator: TMB
Sample : WG564484-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	120	0.00
2	T	Dichlorodifluoromethane	50.0000	52.9678	-5.9	111	0.00
3	P	Chloromethane	50.0000	45.3382	9.3	102	0.00
4	C	Vinyl Chloride	50.0000	42.8118	14.4	102	0.00
5	T	1,3-Butadiene	50.0000	28.4561	43.1#	65	0.00
6	T	Bromomethane	50.0000	47.7799	4.4	119	0.00
7	T	Chloroethane	50.0000	57.6669	-15.3	133	0.00
8	T	Trichlorofluoromethane	50.0000	48.2203	3.6	112	0.00
9	T	Diethyl ether	100.0000	107.6316	-7.6	136	0.00
10	T	Isoprene	50.0000	53.9615	-7.9	124	0.00
11	T	Acrolein	50.0000	75.7651	-51.5#	201	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	51.6677	-3.3	120	0.00
13	T	Acetone	50.0000	49.6551	0.7	111	0.00
14	C	1,1-Dichloroethene	50.0000	48.7508	2.5	112	0.00
15	T	Tert-Butyl Alcohol	200.0000	200.7859	-0.4	130	0.00
16	T	Dimethyl Sulfide	50.0000	70.5588	-41.1#	160	0.00
17	T	Iodomethane	50.0000	38.6054	22.8	94	0.00
18	T	Methyl acetate	50.0000	44.2443	11.5	106	0.00
19	T	Methylene Chloride	50.0000	50.9163	-1.8	121	0.00
20	T	Carbon Disulfide	50.0000	41.0576	17.9	97	0.00
21	T	Acrylonitrile	50.0000	53.4514	-6.9	129	0.00
22	T	Methyl Tert Butyl Ether	50.0000	50.9270	-1.9	116	0.00
23	T	trans-1,2-Dichloroethene	50.0000	51.5496	-3.1	119	0.00
24	T	n-Hexane	50.0000	47.7734	4.5	120	0.00
25	T	Diisopropyl ether	100.0000	102.9332	-2.9	126	0.00
26	T	Vinyl Acetate	50.0000	68.6085	-37.2#	170	0.00
27	P	1,1-Dichloroethane	50.0000	48.3824	3.2	112	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	96.8716	3.1	119	-0.01
29	T	2-Butanone	50.0000	54.0019	-8.0	126	0.00
30	T	Propionitrile	100.0000	105.2975	-5.3	132	0.00
31	T	2,2-Dichloropropane	50.0000	52.0157	-4.0	128	0.00
32	T	cis-1,2-Dichloroethene	50.0000	51.6939	-3.4	120	0.00
33	C	Chloroform	50.0000	50.3859	-0.8	115	-0.01
34		1-Bromopropane	50.0000	70.7399	-41.5#	160	0.00
35	T	Bromochloromethane	50.0000	50.1448	-0.3	115	0.00
36	T	Tetrahydrofuran	100.0000	92.3700	7.6	122	0.00
37	S	Dibromofluoromethane	25.0000	22.8974	8.4	108	0.00
38	T	1,1,1-Trichloroethane	50.0000	49.2672	1.5	113	0.00
39	T	Cyclohexane	50.0000	49.6529	0.7	120	0.00
40	T	1,1-Dichloropropene	50.0000	49.0974	1.8	114	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	101.3416	-1.3	125	0.00
42	T	Carbon Tetrachloride	50.0000	50.0050	-0.0	114	0.00
43	S	1,2-Dichloroethane-d4	25.0000	22.5813	9.7	105	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	50.2256	-0.5	114	0.00
46	T	Benzene	50.0000	51.5348	-3.1	116	0.00
47	T	Trichloroethene	50.0000	52.8552	-5.7	121	0.00
48	T	Methylcyclohexane	50.0000	50.4075	-0.8	122	0.00
49	C	1,2-Dichloropropane	50.0000	53.3432	-6.7	122	0.00
50	T	Bromodichloromethane	50.0000	49.9448	0.1	113	0.00
51	T	1,4-Dioxane	200.0000	204.3901	-2.2	119	0.00
52	T	Dibromomethane	50.0000	49.4160	1.2	106	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	53.6956	-7.4	122	-0.01
54	T	4-Methyl-2-Pentanone	50.0000	51.4651	-2.9	123	0.00

(#) = Out of Range
8M411413.D 8260WT.M Thu Apr 14 13:11:21 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041416\8M411413.D Vial: 6
Acq On : 14 Apr 2016 12:46 Operator: TMB
Sample : WG564484-12 50ug/L ALT SRC STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	50.0000	56.4876	-13.0	125	0.00
56	T	Dimethyl Disulfide	50.0000	52.7673	-5.5	124	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	119	0.00
58	S	Toluene-d8	25.0000	24.2785	2.9	114	0.00
59	C	Toluene	50.0000	51.8252	-3.7	116	0.00
60	T	Ethyl Methacrylate	50.0000	54.5786	-9.2	120	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	50.5020	-1.0	114	0.00
63	T	1,1,2-Trichloroethane	50.0000	51.9109	-3.8	115	0.00
64	T	2-Hexanone	50.0000	51.9838	-4.0	122	0.00
65	T	1,3-Dichloropropane	50.0000	53.2052	-6.4	120	0.00
66	T	Tetrachloroethene	50.0000	51.2489	-2.5	117	0.00
67	T	Dibromochloromethane	50.0000	52.1146	-4.2	114	0.00
68	T	1,2-Dibromoethane	50.0000	50.9915	-2.0	114	0.00
69	T	1-Chlorohexane	50.0000	53.4114	-6.8	121	0.00
70	P	Chlorobenzene	50.0000	51.5586	-3.1	117	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	52.0808	-4.2	115	0.00
72	C	Ethylbenzene	50.0000	51.0307	-2.1	116	0.00
73	T	m-,p-Xylene	100.0000	106.1896	-6.2	119	-0.01
74	T	o-Xylene	50.0000	52.4444	-4.9	121	0.00
75	T	Styrene	50.0000	53.8945	-7.8	114	0.00
76	P	Bromoform	50.0000	46.1812	7.6	105	0.00
77	T	Isopropylbenzene	50.0000	53.7925	-7.6	116	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	115	-0.01
79	P	1,1,2,2-Tetrachloroethane	50.0000	50.7192	-1.4	111	0.00
80	S	p-Bromofluorobenzene	25.0000	24.5429	1.8	114	0.00
81	T	1,2,3-Trichloropropane	50.0000	50.5784	-1.2	111	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	44.8353	10.3	98	0.00
83	T	n-Propylbenzene	50.0000	55.2077	-10.4	118	0.00
84	T	Bromobenzene	50.0000	50.2833	-0.6	112	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	54.1974	-8.4	117	0.00
86	T	2-Chlorotoluene	50.0000	52.8310	-5.7	115	0.00
87	T	4-Chlorotoluene	50.0000	52.2907	-4.6	118	0.00
88	T	a-Methylstyrene	50.0000	56.8237	-13.6	126	0.00
89	T	tert-Butylbenzene	50.0000	53.5823	-7.2	118	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	51.8701	-3.7	112	0.00
91	T	sec-Butylbenzene	50.0000	53.7637	-7.5	115	0.00
92	T	p-Isopropyltoluene	50.0000	53.3121	-6.6	114	0.00
93	T	1,3-Dichlorobenzene	50.0000	51.4587	-2.9	113	0.00
94	T	1,4-Dichlorobenzene	50.0000	51.0636	-2.1	114	-0.01
95	T	n-Butylbenzene	50.0000	52.2438	-4.5	111	0.00
96	T	1,2-Dichlorobenzene	50.0000	51.2578	-2.5	113	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	47.5470	4.9	104	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	50.9840	-2.0	110	0.00
99	T	Hexachlorobutadiene	50.0000	56.1335	-12.3	119	0.00
100	T	Naphthalene	50.0000	45.3865	9.2	95	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	48.9190	2.2	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411413.D 8260WT.M Thu Apr 14 13:11:21 2016 Page 2

Data File : C:\MSDchem\1\data\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 13:34:58 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	716218	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.08	117	553486	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	318844	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.39	111	191534	26.1122 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 104.44%		
43) 1,2-Dichloroethane-d4	11.11	65	221816	24.9169 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.68%		
58) Toluene-d8	13.86	98	653901	26.2421 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.96%		
80) p-Bromofluorobenzene	17.85	95	282919	26.5779 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.32%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.44	85	695554	56.5158 ug/L	97
3) Chloromethane	3.93	50	464661	53.9613 ug/L	98
4) Vinyl Chloride	4.17	62	363855	52.2299 ug/L	99
5) 1,3-Butadiene	4.21	54	287614	60.7184 ug/L	94
6) Bromomethane	5.08	94	176406	51.7390 ug/L	99
7) Chloroethane	5.24	64	198557	49.1729 ug/L	93
8) Trichlorofluoromethane	5.74	101	694083	48.7354 ug/L	100
9) Diethyl ether	6.29	59	647190	102.9540 ug/L	92
10) Isoprene	6.33	67	502375	55.7803 ug/L	92
11) Acrolein	6.55	56	48483	43.6300 ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.55	101	414303	54.1898 ug/L	97
13) Acetone	6.66	43	96175	43.3038 ug/L	97
14) 1,1-Dichloroethene	6.88	61	699240	54.1554 ug/L	95
15) Tert-Butyl Alcohol	7.02	59	112708	176.6523 ug/L	91
16) Dimethyl Sulfide	7.17	62	323723	53.5858 ug/L	88
17) Iodomethane	7.45	142	277035	56.5315 ug/L	90
18) Methyl acetate	7.46	43	318457	51.6335 ug/L	92
19) Methylene Chloride	7.72	84	405207	51.5836 ug/L	73
20) Carbon Disulfide	7.77	76	1257701	55.0774 ug/L	100
21) Acrylonitrile	7.93	53	134838	51.6937 ug/L	100
22) Methyl Tert Butyl Ether	7.96	73	959021	49.4427 ug/L	93
23) trans-1,2-Dichloroethene	8.21	96	391202	54.4305 ug/L	82
24) n-Hexane	8.29	57	628822	61.2016 ug/L	91
25) Diisopropyl ether	8.67	45	3201773	108.6545 ug/L	96
26) Vinyl Acetate	8.87	43	570252	49.6938 ug/L	96
27) 1,1-Dichloroethane	8.90	63	806584	53.1581 ug/L	100
28) Ethyl-Tert-Butyl ether	9.30	59	2530444	102.7646 ug/L	96
29) 2-Butanone	9.52	43	149043	45.4660 ug/L	92
30) Propionitrile	9.64	54	88736	94.2248 ug/L	98
31) 2,2-Dichloropropane	9.75	77	671080	56.6453 ug/L	93
32) cis-1,2-Dichloroethene	9.84	96	423248	53.8551 ug/L	98
33) Chloroform	10.06	83	737664	52.2932 ug/L	96
34) 1-Bromopropane	10.21	122	70417	57.2048 ug/L	97
35) Bromochloromethane	10.33	130	242535	51.4682 ug/L	98
36) Tetrahydrofuran	10.36	42	193302	90.5127 ug/L	84
38) 1,1,1-Trichloroethane	10.66	97	682234	52.5193 ug/L	97
39) Cyclohexane	10.69	56	752542	56.7411 ug/L	89
40) 1,1-Dichloropropene	10.89	75	551532	53.8170 ug/L	92
41) Tert-Amyl-Methyl ether	11.00	73	1908700	100.5528 ug/L	92
42) Carbon Tetrachloride	11.05	117	650743	53.3350 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138589.D 8260WTR.M Mon Apr 18 13:34:58 2016 Page 1

Data File : C:\MSDchem\1\data\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 13:34:58 2016 Quant Results File: 8260WTR.RES

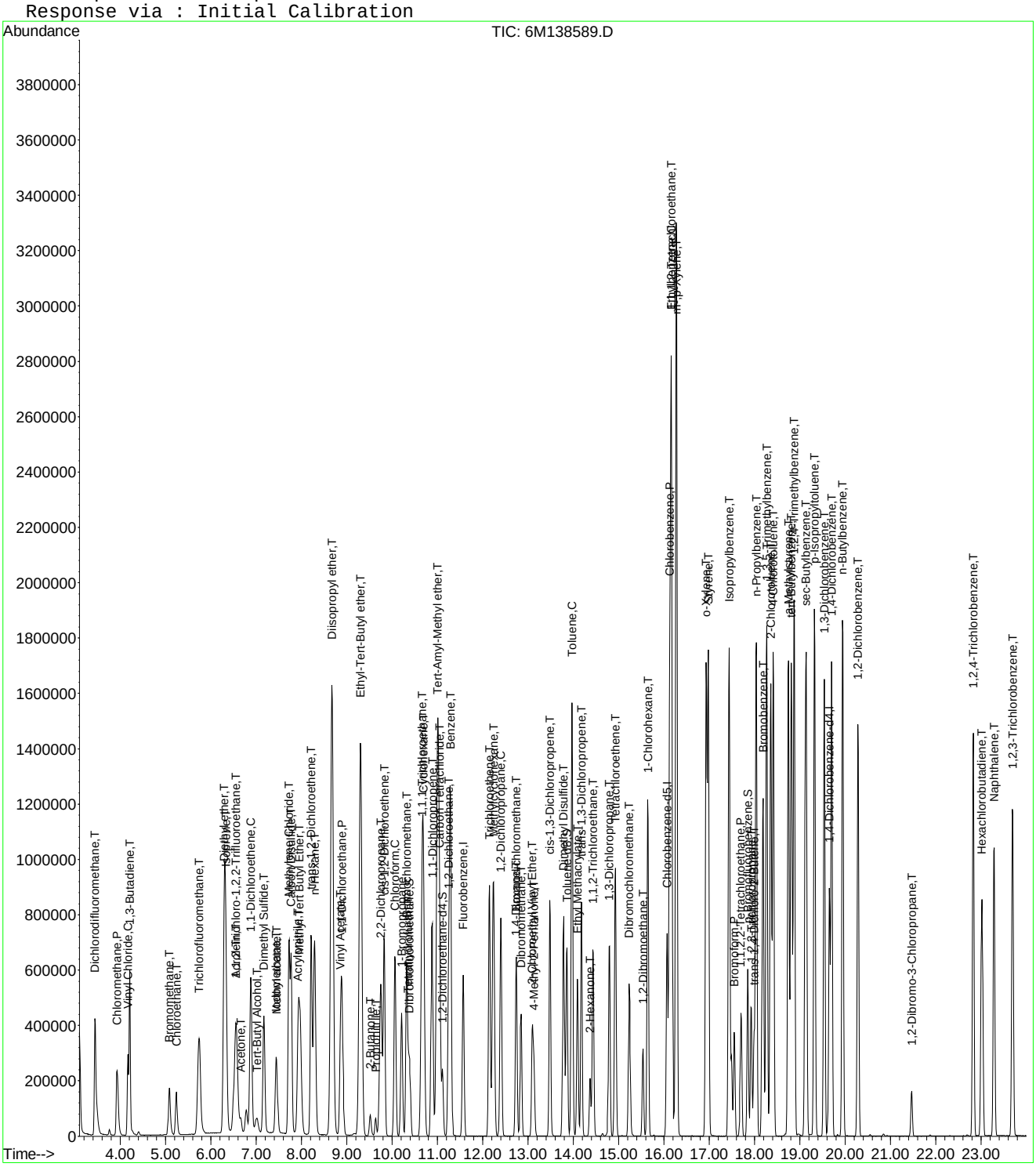
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.26	62	572315	50.8312	ug/L	97
46)	Benzene	11.30	78	1551876	52.1594	ug/L	91
47)	Trichloroethene	12.15	130	411846	52.9173	ug/L	94
48)	Methylcyclohexane	12.25	83	596647	57.4138	ug/L	87
49)	1,2-Dichloropropane	12.40	63	429248	52.7605	ug/L	100
50)	1,4-Dioxane	12.74	88	11113	179.4625	ug/L	90
51)	Bromodichloromethane	12.75	83	566267	51.8671	ug/L	98
52)	Dibromomethane	12.85	93	222310	51.2213	ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.09	63	193810	51.3250	ug/L	99
54)	4-Methyl-2-Pentanone	13.13	58	114735	45.6217	ug/L	95
55)	cis-1,3-Dichloropropene	13.48	75	631731	54.8203	ug/L	96
56)	Dimethyl Disulfide	13.79	79	311188	51.4926	ug/L	90
59)	Toluene	13.97	91	1586208	51.4921	ug/L	99
60)	Ethyl Methacrylate	14.09	69	403663	48.7482	ug/L	83
62)	trans-1,3-Dichloropropene	14.19	75	581219	49.9425	ug/L	99
63)	1,1,2-Trichloroethane	14.43	97	294701	47.9947	ug/L	99
64)	2-Hexanone	14.37	43	214093	42.8938	ug/L	93
65)	1,3-Dichloropropane	14.80	76	525684	48.1712	ug/L	80
66)	Tetrachloroethene	14.93	166	411452	48.8189	ug/L	97
67)	Dibromochloromethane	15.24	129	404598	48.8218	ug/L	99
68)	1,2-Dibromoethane	15.54	107	288106	47.8385	ug/L	100
69)	1-Chlorohexane	15.66	91	519124	53.0612	ug/L	82
70)	Chlorobenzene	16.14	112	1024218	48.4854	ug/L	95
71)	1,1,1,2-Tetrachloroethane	16.17	131	420119	50.1648	ug/L	97
72)	Ethylbenzene	16.17	106	570951	51.5885	ug/L	94
73)	m-,p-Xylene	16.28	106	1372631	104.5353	ug/L	91
74)	o-Xylene	16.93	106	676461	53.2971	ug/L	92
75)	Styrene	16.98	104	1189019	55.8274	ug/L	95
76)	Bromoform	17.56	173	252658	45.5311	ug/L	99
77)	Isopropylbenzene	17.44	105	1782808	55.7986	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.70	83	319520	41.1553	ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	109636	45.1480	ug/L	99
82)	trans-1,4-Dichloro-2-Buten	17.99	53	126882	45.6728	ug/L	81
83)	n-Propylbenzene	18.05	91	2164360	56.4918	ug/L	99
84)	Bromobenzene	18.19	156	469748	48.9391	ug/L	96
85)	1,3,5-Trimethylbenzene	18.27	105	1569710	53.9935	ug/L	98
86)	2-Chlorotoluene	18.36	91	1477879	53.9013	ug/L	98
87)	4-Chlorotoluene	18.41	91	1297557	49.2358	ug/L	97
88)	a-Methylstyrene	18.75	118	777867	52.8538	ug/L	99
89)	tert-Butylbenzene	18.81	134	320874	52.6375	ug/L	98
90)	1,2,4-Trimethylbenzene	18.87	105	1646167	53.1236	ug/L	99
91)	sec-Butylbenzene	19.14	105	1905216	54.6617	ug/L	100
92)	p-Isopropyltoluene	19.32	119	1643583	55.5390	ug/L	98
93)	1,3-Dichlorobenzene	19.55	146	930591	49.6329	ug/L	99
94)	1,4-Dichlorobenzene	19.70	146	929897	47.4763	ug/L	99
95)	n-Butylbenzene	19.95	91	1577700	56.9539	ug/L	98
96)	1,2-Dichlorobenzene	20.28	146	863357	48.5179	ug/L	98
97)	1,2-Dibromo-3-Chloropropan	21.48	75	60954	38.7186	ug/L	91
98)	1,2,4-Trichlorobenzene	22.84	180	636592	50.6407	ug/L	99
99)	Hexachlorobutadiene	23.02	225	272714	53.3534	ug/L	99
100)	Naphthalene	23.29	128	1230518	49.5624	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	581556	49.4214	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138589.D 8260WTR.M Mon Apr 18 13:34:58 2016 Page 2

Data File : C:\MSDchem\1\data\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 13:34 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Continuing Calibration Area and RT check

Instrument: HPMS6
Initial cal date: 11 Apr 2016 18:45
CCV date: 18 Apr 2016 13:10
CCV Filename: 6M138589.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	732076	11.57	539131	16.07	307429	19.66
CCV	716218	11.57	553486	16.08	318844	19.65

Data File : C:\MSDCHEM\1\DATA\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.0000	1.0000	0.0	98	0.00
2	T	Dichlorodifluoromethane	0.4296	0.4856	-13.0	101	0.00
3	P	Chloromethane	0.3006	0.3244	-7.9	95	0.00
4	C	Vinyl Chloride	0.2432	0.2540	-4.5	99	0.00
5	T	1,3-Butadiene	0.1653	0.2008	-21.4#	126	0.01
6	T	Bromomethane	0.1190	0.1232	-3.5	102	0.01
7	T	Chloroethane	0.1409	0.1386	1.7	89	0.01
8	T	Trichlorofluoromethane	0.4971	0.4845	2.5	107	0.01
9	T	Diethyl ether	0.2194	0.2259	-3.0	105	0.00
10	T	Isoprene	0.3144	0.3507	-11.6	111	0.01
11	T	Acrolein	0.0388	0.0338	12.7	86	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2669	0.2892	-8.4	104	0.00
13	T	Acetone	0.0775	0.0671	13.4	82	0.00
14	C	1,1-Dichloroethene	0.4507	0.4881	-8.3	102	0.00
15	T	Tert-Butyl Alcohol	0.0223	0.0197	11.7	84	-0.04
16	T	Dimethyl Sulfide	0.2109	0.2260	-7.2	108	0.00
17	T	Iodomethane	0.1402	0.1934	-38.0#	101	0.00
18	T	Methyl acetate	0.2153	0.2223	-3.3	104	0.00
19	T	Methylene Chloride	0.2742	0.2829	-3.2	102	0.00
20	T	Carbon Disulfide	0.7971	0.8780	-10.2	114	0.00
21	T	Acrylonitrile	0.0911	0.0941	-3.4	98	0.00
22	T	Methyl Tert Butyl Ether	0.6771	0.6695	1.1	90	0.00
23	T	trans-1,2-Dichloroethene	0.2509	0.2731	-8.9	102	0.00
24	T	n-Hexane	0.3586	0.4390	-22.4#	123	0.00
25	T	Diisopropyl ether	1.0286	1.1176	-8.7	112	0.00
26	T	Vinyl Acetate	0.4006	0.3981	0.6	96	0.00
27	P	1,1-Dichloroethane	0.5296	0.5631	-6.3	103	0.00
28	T	Ethyl-Tert-Butyl ether	0.8595	0.8833	-2.8	101	0.00
29	T	2-Butanone	0.1144	0.1041	9.1	85	0.00
30	T	Propionitrile	0.0329	0.0310	5.8	92	0.00
31	T	2,2-Dichloropropane	0.4135	0.4685	-13.3	110	0.00
32	T	cis-1,2-Dichloroethene	0.2743	0.2955	-7.7	101	0.00
33	C	Chloroform	0.4924	0.5150	-4.6	101	0.00
34		1-Bromopropane	0.0430	0.0492	-14.4	108	0.00
35	T	Bromochloromethane	0.1645	0.1693	-2.9	97	0.00
36	T	Tetrahydrofuran	0.0746	0.0675	9.5	91	0.00
37	S	Dibromofluoromethane	0.2560	0.2674	-4.4	99	0.00
38	T	1,1,1-Trichloroethane	0.4534	0.4763	-5.0	100	0.00
39	T	Cyclohexane	0.4629	0.5254	-13.5	113	0.00
40	T	1,1-Dichloropropene	0.3577	0.3850	-7.6	100	0.00
41	T	Tert-Amyl-Methyl ether	0.6626	0.6662	-0.6	101	0.00
42	T	Carbon Tetrachloride	0.4259	0.4543	-6.7	100	0.00
43	S	1,2-Dichloroethane-d4	0.3107	0.3097	0.3	97	0.00
44		Heptane	0.0000	0.0000	0.0	101	0.00
45	T	1,2-Dichloroethane	0.3930	0.3995	-1.7	97	0.00
46	T	Benzene	1.0385	1.0834	-4.3	101	0.00
47	T	Trichloroethene	0.2717	0.2875	-5.8	104	0.00
48	T	Methylcyclohexane	0.3627	0.4165	-14.8	115	0.00
49	C	1,2-Dichloropropane	0.2840	0.2997	-5.5	101	0.00
50	T	1,4-Dioxane	0.0022	0.0019	10.2	87	0.00
51	T	Bromodichloromethane	0.3811	0.3953	-3.7	98	0.00
52	T	Dibromomethane	0.1515	0.1552	-2.4	96	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1318	0.1353	-2.6	88	0.00
54	T	4-Methyl-2-Pentanone	0.0878	0.0801	8.7	84	0.00

(#) = Out of Range
6M138589.D 8260WTR.M Mon Apr 18 14:28:56 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	0.4022	0.4410	-9.6	98	0.00
56	T	Dimethyl Disulfide	0.2110	0.2172	-3.0	103	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	103	0.00
58	S	Toluene-d8	1.1255	1.1814	-5.0	105	0.00
59	C	Toluene	1.3914	1.4329	-3.0	101	0.00
60	T	Ethyl Methacrylate	0.3740	0.3647	2.5	94	0.00
61		Paraldehyde	0.0000	0.0000	0.0	101	0.00
62	T	trans-1,3-Dichloropropene	0.5257	0.5251	0.1	97	0.00
63	T	1,1,2-Trichloroethane	0.2773	0.2662	4.0	96	0.00
64	T	2-Hexanone	0.2255	0.1934	14.2	83	0.00
65	T	1,3-Dichloropropane	0.4929	0.4749	3.7	96	0.00
66	T	Tetrachloroethene	0.3807	0.3717	2.4	99	0.00
67	T	Dibromochloromethane	0.3743	0.3655	2.4	94	0.00
68	T	1,2-Dibromoethane	0.2720	0.2603	4.3	91	0.00
69	T	1-Chlorohexane	0.3925	0.4690	-19.5	113	0.00
70	P	Chlorobenzene	0.9542	0.9252	3.0	99	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3783	0.3795	-0.3	99	0.00
72	C	Ethylbenzene	0.4999	0.5158	-3.2	102	0.00
73	T	m-,p-Xylene	0.5931	0.6200	-4.5	101	0.00
74	T	o-Xylene	0.5733	0.6111	-6.6	101	0.00
75	T	Styrene	0.9620	1.0741	-11.7	101	0.00
76	P	Bromoform	0.2506	0.2282	8.9	89	0.00
77	T	Isopropylbenzene	1.4432	1.6105	-11.6	102	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	104	0.00
79	P	1,1,2,2-Tetrachloroethane	0.6087	0.5011	17.7	83	0.00
80	S	p-Bromofluorobenzene	0.8347	0.8873	-6.3	107	0.00
81	T	1,2,3-Trichloropropane	0.1904	0.1719	9.7	90	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.1944	0.1990	-2.3	99	0.00
83	T	n-Propylbenzene	3.0040	3.3941	-13.0	104	0.00
84	T	Bromobenzene	0.7526	0.7366	2.1	98	0.00
85	T	1,3,5-Trimethylbenzene	2.2795	2.4616	-8.0	102	0.00
86	T	2-Chlorotoluene	2.1498	2.3176	-7.8	106	0.00
87	T	4-Chlorotoluene	2.0664	2.0348	1.5	100	0.00
88	T	a-Methylstyrene	1.1540	1.2198	-5.7	109	0.00
89	T	tert-Butylbenzene	0.4780	0.5032	-5.3	102	0.00
90	T	1,2,4-Trimethylbenzene	2.4297	2.5815	-6.2	103	0.00
91	T	sec-Butylbenzene	2.7329	2.9877	-9.3	105	0.00
92	T	p-Isopropyltoluene	2.3204	2.5774	-11.1	104	0.00
93	T	1,3-Dichlorobenzene	1.4701	1.4593	0.7	101	0.00
94	T	1,4-Dichlorobenzene	1.5357	1.4582	5.0	101	0.00
95	T	n-Butylbenzene	2.1720	2.4741	-13.9	109	0.00
96	T	1,2-Dichlorobenzene	1.3952	1.3539	3.0	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.1234	0.0956	22.6#	76	0.00
98	T	1,2,4-Trichlorobenzene	0.9857	0.9983	-1.3	99	0.00
99	T	Hexachlorobutadiene	0.4008	0.4277	-6.7	106	0.00
100	T	Naphthalene	1.9467	1.9297	0.9	90	0.00
101	T	1,2,3-Trichlorobenzene	0.9226	0.9120	1.2	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138589.D 8260WTR.M Mon Apr 18 14:28:56 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	98	0.00
2	T	Dichlorodifluoromethane	50.0000	56.5158	-13.0	101	0.00
3	P	Chloromethane	50.0000	53.9613	-7.9	95	0.00
4	C	Vinyl Chloride	50.0000	52.2299	-4.5	99	0.00
5	T	1,3-Butadiene	50.0000	60.7184	-21.4#	126	0.01
6	T	Bromomethane	50.0000	51.7390	-3.5	102	0.01
7	T	Chloroethane	50.0000	49.1729	1.7	89	0.01
8	T	Trichlorofluoromethane	50.0000	48.7354	2.5	107	0.01
9	T	Diethyl ether	100.0000	102.9540	-3.0	105	0.00
10	T	Isoprene	50.0000	55.7803	-11.6	111	0.01
11	T	Acrolein	50.0000	43.6300	12.7	86	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	54.1898	-8.4	104	0.00
13	T	Acetone	50.0000	43.3038	13.4	82	0.00
14	C	1,1-Dichloroethene	50.0000	54.1554	-8.3	102	0.00
15	T	Tert-Butyl Alcohol	200.0000	176.6523	11.7	84	-0.04
16	T	Dimethyl Sulfide	50.0000	53.5858	-7.2	108	0.00
17	T	Iodomethane	50.0000	56.5315	-13.1	101	0.00
18	T	Methyl acetate	50.0000	51.6335	-3.3	104	0.00
19	T	Methylene Chloride	50.0000	51.5836	-3.2	102	0.00
20	T	Carbon Disulfide	50.0000	55.0774	-10.2	114	0.00
21	T	Acrylonitrile	50.0000	51.6937	-3.4	98	0.00
22	T	Methyl Tert Butyl Ether	50.0000	49.4427	1.1	90	0.00
23	T	trans-1,2-Dichloroethene	50.0000	54.4305	-8.9	102	0.00
24	T	n-Hexane	50.0000	61.2016	-22.4#	123	0.00
25	T	Diisopropyl ether	100.0000	108.6545	-8.7	112	0.00
26	T	Vinyl Acetate	50.0000	49.6938	0.6	96	0.00
27	P	1,1-Dichloroethane	50.0000	53.1581	-6.3	103	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	102.7646	-2.8	101	0.00
29	T	2-Butanone	50.0000	45.4660	9.1	85	0.00
30	T	Propionitrile	100.0000	94.2248	5.8	92	0.00
31	T	2,2-Dichloropropane	50.0000	56.6453	-13.3	110	0.00
32	T	cis-1,2-Dichloroethene	50.0000	53.8552	-7.7	101	0.00
33	C	Chloroform	50.0000	52.2932	-4.6	101	0.00
34		1-Bromopropane	50.0000	57.2048	-14.4	108	0.00
35	T	Bromochloromethane	50.0000	51.4682	-2.9	97	0.00
36	T	Tetrahydrofuran	100.0000	90.5127	9.5	91	0.00
37	S	Dibromofluoromethane	25.0000	26.1122	-4.4	99	0.00
38	T	1,1,1-Trichloroethane	50.0000	52.5193	-5.0	100	0.00
39	T	Cyclohexane	50.0000	56.7411	-13.5	113	0.00
40	T	1,1-Dichloropropene	50.0000	53.8170	-7.6	100	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	100.5528	-0.6	101	0.00
42	T	Carbon Tetrachloride	50.0000	53.3350	-6.7	100	0.00
43	S	1,2-Dichloroethane-d4	25.0000	24.9169	0.3	97	0.00
44		Heptane	-1.0000	0.0000	0.0	101	0.00
45	T	1,2-Dichloroethane	50.0000	50.8312	-1.7	97	0.00
46	T	Benzene	50.0000	52.1594	-4.3	101	0.00
47	T	Trichloroethene	50.0000	52.9173	-5.8	104	0.00
48	T	Methylcyclohexane	50.0000	57.4138	-14.8	115	0.00
49	C	1,2-Dichloropropane	50.0000	52.7605	-5.5	101	0.00
50	T	1,4-Dioxane	200.0000	179.4625	10.3	87	0.00
51	T	Bromodichloromethane	50.0000	51.8671	-3.7	98	0.00
52	T	Dibromomethane	50.0000	51.2213	-2.4	96	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	51.3250	-2.7	88	0.00
54	T	4-Methyl-2-Pentanone	50.0000	45.6217	8.8	84	0.00

(#) = Out of Range
6M138589.D 8260WTR.M Mon Apr 18 14:28:57 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041816\6M138589.D Vial: 2
Acq On : 18 Apr 2016 13:10 Operator: TMB
Sample : WG565327-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75586 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	50.0000	54.8203	-9.6	98	0.00
56	T	Dimethyl Disulfide	50.0000	51.4926	-3.0	103	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	103	0.00
58	S	Toluene-d8	25.0000	26.2421	-5.0	105	0.00
59	C	Toluene	50.0000	51.4921	-3.0	101	0.00
60	T	Ethyl Methacrylate	50.0000	48.7482	2.5	94	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	101	0.00
62	T	trans-1,3-Dichloropropene	50.0000	49.9425	0.1	97	0.00
63	T	1,1,2-Trichloroethane	50.0000	47.9947	4.0	96	0.00
64	T	2-Hexanone	50.0000	42.8938	14.2	83	0.00
65	T	1,3-Dichloropropane	50.0000	48.1712	3.7	96	0.00
66	T	Tetrachloroethene	50.0000	48.8189	2.4	99	0.00
67	T	Dibromochloromethane	50.0000	48.8218	2.4	94	0.00
68	T	1,2-Dibromoethane	50.0000	47.8385	4.3	91	0.00
69	T	1-Chlorohexane	50.0000	53.0612	-6.1	113	0.00
70	P	Chlorobenzene	50.0000	48.4854	3.0	99	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	50.1648	-0.3	99	0.00
72	C	Ethylbenzene	50.0000	51.5885	-3.2	102	0.00
73	T	m-,p-Xylene	100.0000	104.5353	-4.5	101	0.00
74	T	o-Xylene	50.0000	53.2971	-6.6	101	0.00
75	T	Styrene	50.0000	55.8274	-11.7	101	0.00
76	P	Bromoform	50.0000	45.5311	8.9	89	0.00
77	T	Isopropylbenzene	50.0000	55.7986	-11.6	102	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	104	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	41.1553	17.7	83	0.00
80	S	p-Bromofluorobenzene	25.0000	26.5779	-6.3	107	0.00
81	T	1,2,3-Trichloropropane	50.0000	45.1480	9.7	90	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	45.6728	8.7	99	0.00
83	T	n-Propylbenzene	50.0000	56.4918	-13.0	104	0.00
84	T	Bromobenzene	50.0000	48.9391	2.1	98	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	53.9935	-8.0	102	0.00
86	T	2-Chlorotoluene	50.0000	53.9013	-7.8	106	0.00
87	T	4-Chlorotoluene	50.0000	49.2358	1.5	100	0.00
88	T	a-Methylstyrene	50.0000	52.8538	-5.7	109	0.00
89	T	tert-Butylbenzene	50.0000	52.6375	-5.3	102	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	53.1236	-6.2	103	0.00
91	T	sec-Butylbenzene	50.0000	54.6617	-9.3	105	0.00
92	T	p-Isopropyltoluene	50.0000	55.5390	-11.1	104	0.00
93	T	1,3-Dichlorobenzene	50.0000	49.6329	0.7	101	0.00
94	T	1,4-Dichlorobenzene	50.0000	47.4763	5.0	101	0.00
95	T	n-Butylbenzene	50.0000	56.9539	-13.9	109	0.00
96	T	1,2-Dichlorobenzene	50.0000	48.5179	3.0	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	38.7186	22.6#	76	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	50.6407	-1.3	99	0.00
99	T	Hexachlorobutadiene	50.0000	53.3534	-6.7	106	0.00
100	T	Naphthalene	50.0000	49.5624	0.9	90	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	49.4214	1.2	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138589.D 8260WTR.M Mon Apr 18 14:28:57 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\041816\6M138590.D Vial: 3
Acq On : 18 Apr 2016 13:43 Operator: TMB
Sample : WG565369-01 100ug/L A9 CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 14:58:56 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

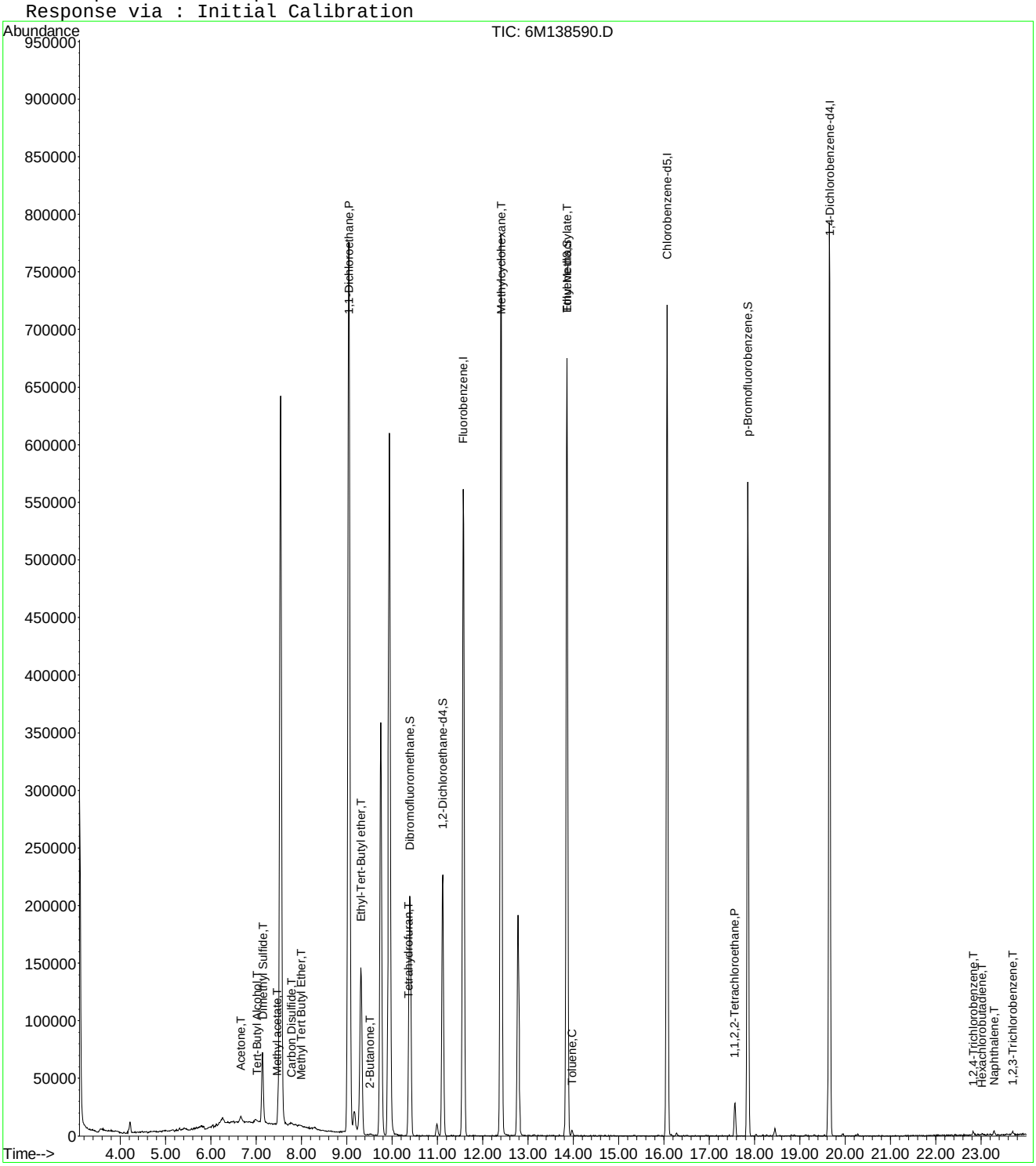
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	701877	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	531061	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	290195	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	188659	26.2458	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 105.00%			
43) 1,2-Dichloroethane-d4	11.12	65	225145	25.8076	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 103.24%			
58) Toluene-d8	13.86	98	624560	26.1230	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.48%			
80) p-Bromofluorobenzene	17.85	95	262240	27.0674	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 108.28%			
Target Compounds						Qvalue
13) Acetone	6.66	43	12568	5.7745	ug/L	95
15) Tert-Butyl Alcohol	7.02	59	4495	7.1892	ug/L #	65
16) Dimethyl Sulfide	7.15	62	823	0.1390	ug/L #	1
18) Methyl acetate	7.46	43	2422	0.4007	ug/L #	52
20) Carbon Disulfide	7.78	76	2812	0.1257	ug/L #	74
22) Methyl Tert Butyl Ether	7.99	73	2597	0.1366	ug/L #	53
27) 1,1-Dichloroethane	9.05	63	13064	0.8786	ug/L #	42
28) Ethyl-Tert-Butyl ether	9.31	59	24528	1.0165	ug/L #	43
29) 2-Butanone	9.51	43	1908	0.5939	ug/L #	52
36) Tetrahydrofuran	10.36	42	4958	2.3690	ug/L #	69
48) Methylcyclohexane	12.41	83	1411	0.1386	ug/L #	1
59) Toluene	13.97	91	6343	0.2146	ug/L	95
60) Ethyl Methacrylate	13.86	69	1589	0.2000	ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.56	83	1352	0.1913	ug/L #	18
98) 1,2,4-Trichlorobenzene	22.83	180	2220	0.1940	ug/L	91
99) Hexachlorobutadiene	23.03	225	1019	0.2190	ug/L #	64
100) Naphthalene	23.29	128	5561	0.2461	ug/L #	78
101) 1,2,3-Trichlorobenzene	23.70	180	2713	0.2533	ug/L #	82

(#) = qualifier out of range (m) = manual integration
6M138590.D 8260WTR.M Mon Apr 18 14:58:56 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138590.D Vial: 3
Acq On : 18 Apr 2016 13:43 Operator: TMB
Sample : WG565369-01 100ug/L A9 CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 14:58 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



6M138590.D 8260WTR.M Mon Apr 18 14:58:56 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138590.D Vial: 3
Acq On : 18 Apr 2016 13:43 Operator: TMB
Sample : WG565369-01 100ug/L A9 CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 18 14:59:23 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

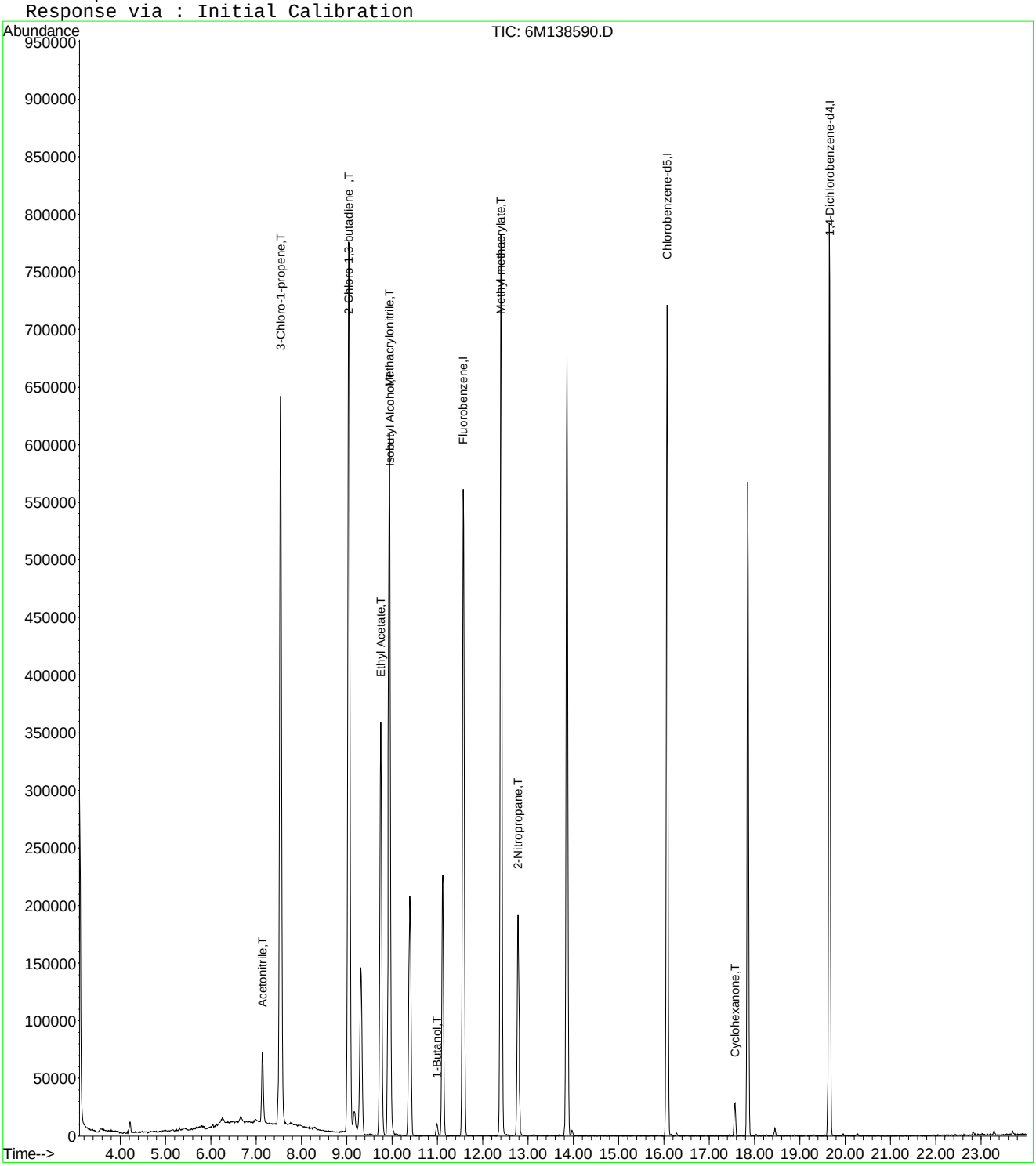
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	701877	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	531061	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	290195	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	88725	65.8368	ug/L		92
3) 3-Chloro-1-propene	7.54	41	753130	40.0452	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	854073	52.7508	ug/L		86
5) Ethyl Acetate	9.75	43	672511	90.8308	ug/L		94
6) Methacrylonitrile	9.94	67	247523	86.9206	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	50585	124.1911	ug/L	#	92
8) 1-Butanol	10.99	41	7144	40.7700	ug/L		69
9) Methyl methacrylate	12.40	41	633569	85.9393	ug/L		81
10) 2-Nitropropane	12.78	43	204307	94.0014	ug/L		97
13) Cyclohexanone	17.57	55	18657	18.8257	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138590.D A9FOOWT.M Mon Apr 18 14:59:23 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138590.D Vial: 3
Acq On : 18 Apr 2016 13:43 Operator: TMB
Sample : WG565369-01 100ug/L A9 CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 18 14:59 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041816\6M138590.D Vial: 3
Acq On : 18 Apr 2016 13:43 Operator: TMB
Sample : WG565369-01 100ug/L A9 CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 10/06/15 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
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	25.0000	25.0000	0.0	93	-0.03
2	T	Acetonitrile	100.0000	65.8368	34.2	61	-0.02
3	T	3-Chloro-1-propene	100.0000	40.0452	60.0	36	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	52.7508	47.2	46	-0.02
5	T	Ethyl Acetate	100.0000	90.8308	9.2	82	-0.02
6	T	Methacrylonitrile	100.0000	86.9206	13.1	77	-0.02
7	T	Isobutyl Alcohol	200.0000	124.1911	37.9	57	-0.02
8	T	1-Butanol	100.0000	40.7700	59.2	42	-0.02
9	T	Methyl methacrylate	100.0000	85.9393	14.1	76	-0.03
10	T	2-Nitropropane	100.0000	94.0014	6.0	90	-0.02
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	97	-0.03
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	91	-0.02
13	T	Cyclohexanone	100.0000	18.8257	81.2#	18	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138590.D A9FOOWT.M Mon Apr 18 14:59:27 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 12:47:30 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	693312	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	534098	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	309434	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	190454	26.8228	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 107.28%			
43) 1,2-Dichloroethane-d4	11.11	65	230427	26.7393	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 106.96%			
58) Toluene-d8	13.86	98	637911	26.5297	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 106.12%			
80) p-Bromofluorobenzene	17.85	95	281706	27.2688	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 109.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.45	85	650282	54.5830	ug/L	98
3) Chloromethane	3.93	50	429944	51.5792	ug/L	99
4) Vinyl Chloride	4.17	62	346204	51.3381	ug/L	100
5) 1,3-Butadiene	4.21	54	300139	65.4560	ug/L	94
6) Bromomethane	5.09	94	181949	55.1278	ug/L	100
7) Chloroethane	5.24	64	189871	48.5754	ug/L	95
8) Trichlorofluoromethane	5.74	101	631978	45.8408	ug/L	100
9) Diethyl ether	6.30	59	652221	107.1823	ug/L	92
10) Isoprene	6.33	67	508396	58.3138	ug/L	91
11) Acrolein	6.55	56	50261	46.7244	ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	393119	53.1178	ug/L	98
13) Acetone	6.66	43	100529	46.7597	ug/L	97
14) 1,1-Dichloroethene	6.88	61	684925	54.7993	ug/L	93
15) Tert-Butyl Alcohol	7.02	59	118197	191.3760	ug/L	93
16) Dimethyl Sulfide	7.17	62	299784	51.2627	ug/L	87
17) Iodomethane	7.44	142	280342	59.0128	ug/L	90
18) Methyl acetate	7.45	43	334170	55.9712	ug/L	92
19) Methylene Chloride	7.73	84	390564	51.3621	ug/L	72
20) Carbon Disulfide	7.77	76	1198272	54.2086	ug/L	100
21) Acrylonitrile	7.93	53	141001	55.8424	ug/L	99
22) Methyl Tert Butyl Ether	7.96	73	1025477	54.6156	ug/L	94
23) trans-1,2-Dichloroethene	8.22	96	374208	53.7862	ug/L	81
24) n-Hexane	8.29	57	559747	56.2786	ug/L	92
25) Diisopropyl ether	8.68	45	3155846	110.6342	ug/L	96
26) Vinyl Acetate	8.86	43	574966	51.7600	ug/L	96
27) 1,1-Dichloroethane	8.89	63	790388	53.8117	ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	2587920	108.5711	ug/L	96
29) 2-Butanone	9.52	43	153776	48.4596	ug/L	91
30) Propionitrile	9.64	54	92268	101.2123	ug/L	98
31) 2,2-Dichloropropane	9.75	77	670587	58.4738	ug/L	93
32) cis-1,2-Dichloroethene	9.83	96	413351	54.3335	ug/L	95
33) Chloroform	10.07	83	738882	54.1101	ug/L	97
34) 1-Bromopropane	10.21	122	64233	53.9051	ug/L	98
35) Bromochloromethane	10.32	130	242961	53.2621	ug/L	100
36) Tetrahydrofuran	10.35	42	206060	99.6744	ug/L	85
38) 1,1,1-Trichloroethane	10.66	97	681625	54.2061	ug/L	96
39) Cyclohexane	10.69	56	689978	53.7427	ug/L	89
40) 1,1-Dichloropropene	10.89	75	544257	54.8617	ug/L	91
41) Tert-Amyl-Methyl ether	11.01	73	1969958	107.2087	ug/L	92
42) Carbon Tetrachloride	11.05	117	652760	55.2678	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138657.D 8260WTR.M Wed Apr 20 12:47:31 2016 Page 1

Data File : C:\MSDchem\1\data\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 12:47:30 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

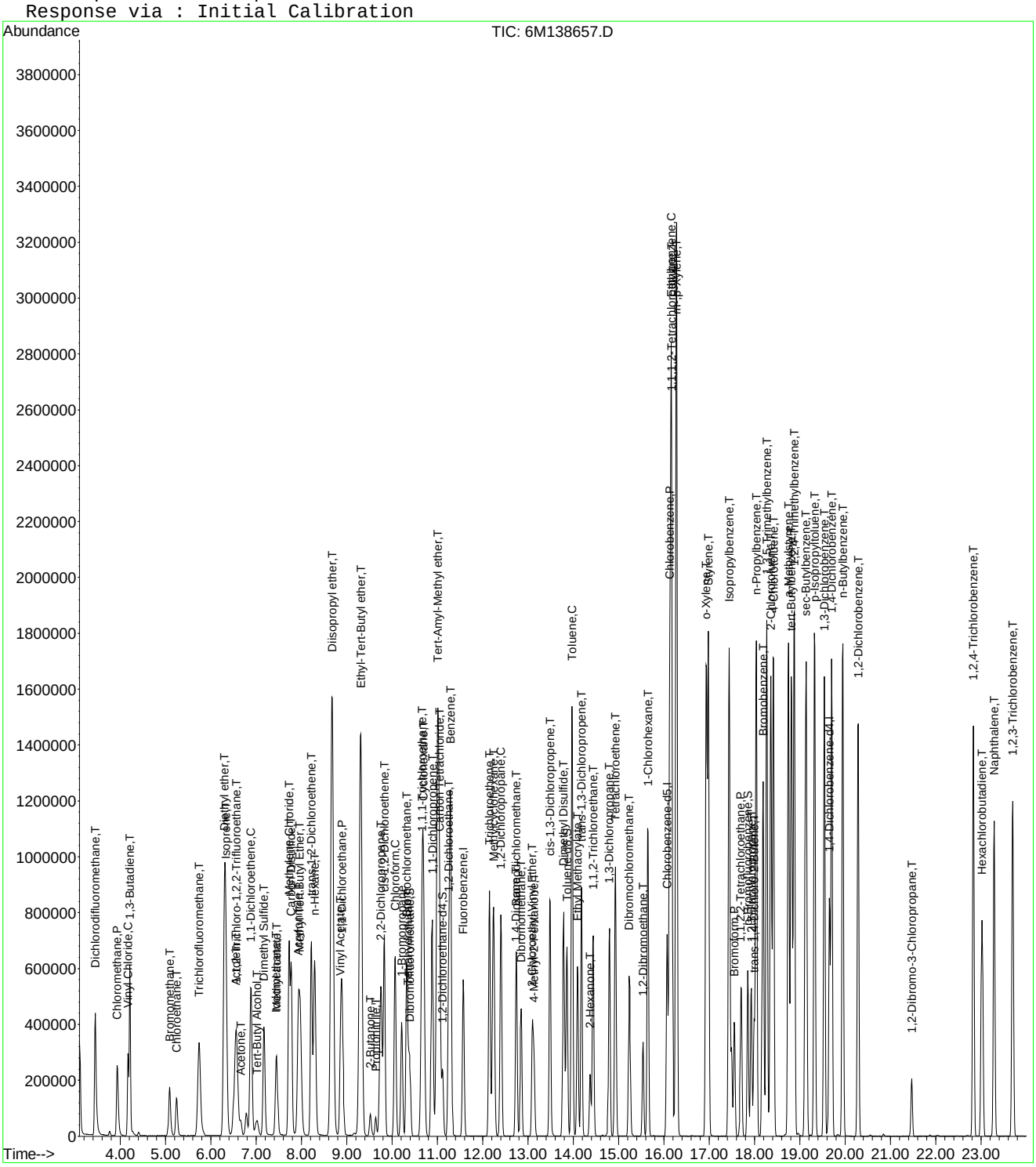
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	598844	54.9447	ug/L	98
46)	Benzene	11.29	78	1525609	52.9706	ug/L	90
47)	Trichloroethene	12.15	130	387021	51.3705	ug/L	91
48)	Methylcyclohexane	12.24	83	528538	52.5401	ug/L	86
49)	1,2-Dichloropropane	12.40	63	432652	54.9359	ug/L	99
50)	1,4-Dioxane	12.73	88	10254	171.0615	ug/L	86
51)	Bromodichloromethane	12.74	83	583184	55.1814	ug/L	98
52)	Dibromomethane	12.85	93	231750	55.1605	ug/L	100
53)	2-Chloroethyl Vinyl Ether	13.09	63	196480	53.7512	ug/L	99
54)	4-Methyl-2-Pentanone	13.13	58	123509	50.7330	ug/L	96
55)	cis-1,3-Dichloropropene	13.49	75	647355	58.0321	ug/L	97
56)	Dimethyl Disulfide	13.79	79	322417	55.1133	ug/L	92
59)	Toluene	13.97	91	1556159	52.3504	ug/L	99
60)	Ethyl Methacrylate	14.09	69	439058	54.9474	ug/L	83
62)	trans-1,3-Dichloropropene	14.18	75	610724	54.3828	ug/L	97
63)	1,1,2-Trichloroethane	14.44	97	307592	51.9126	ug/L	100
64)	2-Hexanone	14.37	43	233637	48.5087	ug/L	94
65)	1,3-Dichloropropane	14.80	76	547840	52.0238	ug/L	78
66)	Tetrachloroethene	14.93	166	401731	49.3958	ug/L	96
67)	Dibromochloromethane	15.24	129	426753	53.3645	ug/L	100
68)	1,2-Dibromoethane	15.54	107	308486	53.0819	ug/L	99
69)	1-Chlorohexane	15.65	91	477670	50.6077	ug/L	81
70)	Chlorobenzene	16.13	112	1015730	49.8291	ug/L	94
71)	1,1,1,2-Tetrachloroethane	16.17	131	424473	52.5246	ug/L	96
72)	Ethylbenzene	16.16	106	559974	52.4334	ug/L	93
73)	m-,p-Xylene	16.28	106	1359456	107.2902	ug/L	90
74)	o-Xylene	16.93	106	671831	54.8538	ug/L	91
75)	Styrene	16.98	104	1194175	58.1048	ug/L	94
76)	Bromoform	17.55	173	280273	52.3410	ug/L	99
77)	Isopropylbenzene	17.44	105	1750788	56.7856	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.70	83	389268	51.6639	ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	124270	52.7305	ug/L	98
82)	trans-1,4-Dichloro-2-Buten	17.99	53	140108	51.8949	ug/L	81
83)	n-Propylbenzene	18.04	91	2110436	56.7595	ug/L	100
84)	Bromobenzene	18.19	156	479893	51.5164	ug/L	96
85)	1,3,5-Trimethylbenzene	18.27	105	1552413	55.0224	ug/L	98
86)	2-Chlorotoluene	18.36	91	1447762	54.4086	ug/L	97
87)	4-Chlorotoluene	18.42	91	1332267	52.0902	ug/L	97
88)	a-Methylstyrene	18.75	118	778804	54.5267	ug/L	99
89)	tert-Butylbenzene	18.81	134	311011	52.5711	ug/L	97
90)	1,2,4-Trimethylbenzene	18.88	105	1632298	54.2779	ug/L	98
91)	sec-Butylbenzene	19.14	105	1818654	53.7650	ug/L	100
92)	p-Isopropyltoluene	19.33	119	1571736	54.7263	ug/L	98
93)	1,3-Dichlorobenzene	19.54	146	927367	50.9651	ug/L	98
94)	1,4-Dichlorobenzene	19.70	146	936270	49.2553	ug/L	99
95)	n-Butylbenzene	19.95	91	1485347	55.2506	ug/L	98
96)	1,2-Dichlorobenzene	20.29	146	870272	50.3938	ug/L	97
97)	1,2-Dibromo-3-Chloropropan	21.47	75	78010	51.0596	ug/L	88
98)	1,2,4-Trichlorobenzene	22.83	180	629171	51.5724	ug/L	99
99)	Hexachlorobutadiene	23.03	225	249534	50.3031	ug/L	99
100)	Naphthalene	23.29	128	1293380	53.6786	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	574784	50.3313	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138657.D 8260WTR.M Wed Apr 20 12:47:31 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 12:47 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Continuing Calibration Area and RT check

Instrument: HPMS6
Initial cal date: 11 Apr 2016 18:45
CCV date: 20 Apr 2016 12:23
CCV Filename: 6M138657.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	732076	11.57	539131	16.07	307429	19.66
CCV	693312	11.57	534098	16.07	309434	19.65

Data File : C:\MSDCHEM\1\DATA\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.0000	1.0000	0.0	95	0.00
2	T	Dichlorodifluoromethane	0.4296	0.4690	-9.2	95	0.01
3	P	Chloromethane	0.3006	0.3101	-3.2	88	0.00
4	C	Vinyl Chloride	0.2432	0.2497	-2.7	94	0.00
5	T	1,3-Butadiene	0.1653	0.2165	-30.9#	131	0.01
6	T	Bromomethane	0.1190	0.1312	-10.3	105	0.02
7	T	Chloroethane	0.1409	0.1369	2.9	85	0.01
8	T	Trichlorofluoromethane	0.4971	0.4558	8.3	98	0.01
9	T	Diethyl ether	0.2194	0.2352	-7.2	105	0.00
10	T	Isoprene	0.3144	0.3666	-16.6	112	0.01
11	T	Acrolein	0.0388	0.0362	6.5	89	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2669	0.2835	-6.2	99	0.01
13	T	Acetone	0.0775	0.0725	6.5	86	0.00
14	C	1,1-Dichloroethene	0.4507	0.4940	-9.6	99	0.00
15	T	Tert-Butyl Alcohol	0.0223	0.0213	4.3	88	-0.04
16	T	Dimethyl Sulfide	0.2109	0.2162	-2.5	100	0.00
17	T	Iodomethane	0.1402	0.2022	-44.2#	102	0.00
18	T	Methyl acetate	0.2153	0.2410	-11.9	109	0.00
19	T	Methylene Chloride	0.2742	0.2817	-2.7	98	0.00
20	T	Carbon Disulfide	0.7971	0.8642	-8.4	109	0.00
21	T	Acrylonitrile	0.0911	0.1017	-11.7	102	0.00
22	T	Methyl Tert Butyl Ether	0.6771	0.7396	-9.2	96	0.00
23	T	trans-1,2-Dichloroethene	0.2509	0.2699	-7.6	98	0.00
24	T	n-Hexane	0.3586	0.4037	-12.6	110	0.00
25	T	Diisopropyl ether	1.0286	1.1380	-10.6	111	0.00
26	T	Vinyl Acetate	0.4006	0.4147	-3.5	97	0.00
27	P	1,1-Dichloroethane	0.5296	0.5700	-7.6	101	0.00
28	T	Ethyl-Tert-Butyl ether	0.8595	0.9332	-8.6	103	0.00
29	T	2-Butanone	0.1144	0.1109	3.1	87	0.00
30	T	Propionitrile	0.0329	0.0333	-1.2	96	0.00
31	T	2,2-Dichloropropane	0.4135	0.4836	-16.9	110	0.00
32	T	cis-1,2-Dichloroethene	0.2743	0.2981	-8.7	98	0.00
33	C	Chloroform	0.4924	0.5329	-8.2	101	0.00
34		1-Bromopropane	0.0430	0.0463	-7.8	99	0.00
35	T	Bromochloromethane	0.1645	0.1752	-6.5	97	0.00
36	T	Tetrahydrofuran	0.0746	0.0743	0.3	98	0.00
37	S	Dibromofluoromethane	0.2560	0.2747	-7.3	98	0.00
38	T	1,1,1-Trichloroethane	0.4534	0.4916	-8.4	100	0.00
39	T	Cyclohexane	0.4629	0.4976	-7.5	104	0.00
40	T	1,1-Dichloropropene	0.3577	0.3925	-9.7	99	0.00
41	T	Tert-Amyl-Methyl ether	0.6626	0.7103	-7.2	104	0.00
42	T	Carbon Tetrachloride	0.4259	0.4708	-10.5	101	0.00
43	S	1,2-Dichloroethane-d4	0.3107	0.3324	-7.0	101	0.00
44		Heptane	0.0000	0.0000	0.0	106	0.00
45	T	1,2-Dichloroethane	0.3930	0.4319	-9.9	101	0.00
46	T	Benzene	1.0385	1.1002	-5.9	100	0.00
47	T	Trichloroethene	0.2717	0.2791	-2.7	97	0.00
48	T	Methylcyclohexane	0.3627	0.3812	-5.1	102	0.00
49	C	1,2-Dichloropropane	0.2840	0.3120	-9.9	102	0.00
50	T	1,4-Dioxane	0.0022	0.0019	14.4	81	0.00
51	T	Bromodichloromethane	0.3811	0.4206	-10.4	101	0.00
52	T	Dibromomethane	0.1515	0.1671	-10.3	100	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1318	0.1417	-7.5	90	0.00
54	T	4-Methyl-2-Pentanone	0.0878	0.0891	-1.5	91	0.00

(#) = Out of Range
6M138657.D 8260WTR.M Wed Apr 20 12:52:41 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	0.4022	0.4669	-16.1	101	0.00
56	T	Dimethyl Disulfide	0.2110	0.2325	-10.2	107	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	99	0.00
58	S	Toluene-d8	1.1255	1.1944	-6.1	102	0.00
59	C	Toluene	1.3914	1.4568	-4.7	99	0.00
60	T	Ethyl Methacrylate	0.3740	0.4110	-9.9	102	0.00
61		Paraldehyde	0.0000	0.0000	0.0	98	0.00
62	T	trans-1,3-Dichloropropene	0.5257	0.5717	-8.8	102	0.00
63	T	1,1,2-Trichloroethane	0.2773	0.2879	-3.8	100	0.00
64	T	2-Hexanone	0.2255	0.2187	3.0	91	0.00
65	T	1,3-Dichloropropane	0.4929	0.5129	-4.0	100	0.00
66	T	Tetrachloroethene	0.3807	0.3761	1.2	96	0.00
67	T	Dibromochloromethane	0.3743	0.3995	-6.7	99	0.00
68	T	1,2-Dibromoethane	0.2720	0.2888	-6.2	98	0.00
69	T	1-Chlorohexane	0.3925	0.4472	-13.9	104	0.00
70	P	Chlorobenzene	0.9542	0.9509	0.3	99	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3783	0.3974	-5.0	100	0.00
72	C	Ethylbenzene	0.4999	0.5242	-4.9	100	0.00
73	T	m-,p-Xylene	0.5931	0.6363	-7.3	100	0.00
74	T	o-Xylene	0.5733	0.6289	-9.7	101	0.00
75	T	Styrene	0.9620	1.1179	-16.2	102	0.00
76	P	Bromoform	0.2506	0.2624	-4.7	99	0.00
77	T	Isopropylbenzene	1.4432	1.6390	-13.6	100	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	101	0.00
79	P	1,1,2,2-Tetrachloroethane	0.6087	0.6290	-3.3	101	0.00
80	S	p-Bromofluorobenzene	0.8347	0.9104	-9.1	106	0.00
81	T	1,2,3-Trichloropropane	0.1904	0.2008	-5.5	102	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.1944	0.2264	-16.4	109	0.00
83	T	n-Propylbenzene	3.0040	3.4102	-13.5	102	0.00
84	T	Bromobenzene	0.7526	0.7754	-3.0	100	0.00
85	T	1,3,5-Trimethylbenzene	2.2795	2.5085	-10.0	101	0.00
86	T	2-Chlorotoluene	2.1498	2.3394	-8.8	104	0.00
87	T	4-Chlorotoluene	2.0664	2.1528	-4.2	102	0.00
88	T	a-Methylstyrene	1.1540	1.2584	-9.1	110	0.00
89	T	tert-Butylbenzene	0.4780	0.5026	-5.1	99	0.00
90	T	1,2,4-Trimethylbenzene	2.4297	2.6376	-8.6	102	0.00
91	T	sec-Butylbenzene	2.7329	2.9387	-7.5	100	0.00
92	T	p-Isopropyltoluene	2.3204	2.5397	-9.5	100	0.00
93	T	1,3-Dichlorobenzene	1.4701	1.4985	-1.9	101	0.00
94	T	1,4-Dichlorobenzene	1.5357	1.5129	1.5	102	0.00
95	T	n-Butylbenzene	2.1720	2.4001	-10.5	103	0.00
96	T	1,2-Dichlorobenzene	1.3952	1.4062	-0.8	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.1234	0.1261	-2.1	97	0.00
98	T	1,2,4-Trichlorobenzene	0.9857	1.0167	-3.1	98	0.00
99	T	Hexachlorobutadiene	0.4008	0.4032	-0.6	97	0.00
100	T	Naphthalene	1.9467	2.0899	-7.4	94	0.00
101	T	1,2,3-Trichlorobenzene	0.9226	0.9288	-0.7	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138657.D 8260WTR.M Wed Apr 20 12:52:41 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	95	0.00
2	T	Dichlorodifluoromethane	50.0000	54.5830	-9.2	95	0.01
3	P	Chloromethane	50.0000	51.5792	-3.2	88	0.00
4	C	Vinyl Chloride	50.0000	51.3381	-2.7	94	0.00
5	T	1,3-Butadiene	50.0000	65.4560	-30.9#	131	0.01
6	T	Bromomethane	50.0000	55.1278	-10.3	105	0.02
7	T	Chloroethane	50.0000	48.5754	2.8	85	0.01
8	T	Trichlorofluoromethane	50.0000	45.8408	8.3	98	0.01
9	T	Diethyl ether	100.0000	107.1823	-7.2	105	0.00
10	T	Isoprene	50.0000	58.3138	-16.6	112	0.01
11	T	Acrolein	50.0000	46.7244	6.6	89	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	53.1178	-6.2	99	0.01
13	T	Acetone	50.0000	46.7597	6.5	86	0.00
14	C	1,1-Dichloroethene	50.0000	54.7993	-9.6	99	0.00
15	T	Tert-Butyl Alcohol	200.0000	191.3760	4.3	88	-0.04
16	T	Dimethyl Sulfide	50.0000	51.2627	-2.5	100	0.00
17	T	Iodomethane	50.0000	59.0128	-18.0	102	0.00
18	T	Methyl acetate	50.0000	55.9712	-11.9	109	0.00
19	T	Methylene Chloride	50.0000	51.3621	-2.7	98	0.00
20	T	Carbon Disulfide	50.0000	54.2086	-8.4	109	0.00
21	T	Acrylonitrile	50.0000	55.8424	-11.7	102	0.00
22	T	Methyl Tert Butyl Ether	50.0000	54.6156	-9.2	96	0.00
23	T	trans-1,2-Dichloroethene	50.0000	53.7863	-7.6	98	0.00
24	T	n-Hexane	50.0000	56.2786	-12.6	110	0.00
25	T	Diisopropyl ether	100.0000	110.6342	-10.6	111	0.00
26	T	Vinyl Acetate	50.0000	51.7600	-3.5	97	0.00
27	P	1,1-Dichloroethane	50.0000	53.8117	-7.6	101	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	108.5711	-8.6	103	0.00
29	T	2-Butanone	50.0000	48.4596	3.1	87	0.00
30	T	Propionitrile	100.0000	101.2123	-1.2	96	0.00
31	T	2,2-Dichloropropane	50.0000	58.4738	-16.9	110	0.00
32	T	cis-1,2-Dichloroethene	50.0000	54.3335	-8.7	98	0.00
33	C	Chloroform	50.0000	54.1101	-8.2	101	0.00
34		1-Bromopropane	50.0000	53.9051	-7.8	99	0.00
35	T	Bromochloromethane	50.0000	53.2621	-6.5	97	0.00
36	T	Tetrahydrofuran	100.0000	99.6744	0.3	98	0.00
37	S	Dibromofluoromethane	25.0000	26.8228	-7.3	98	0.00
38	T	1,1,1-Trichloroethane	50.0000	54.2061	-8.4	100	0.00
39	T	Cyclohexane	50.0000	53.7427	-7.5	104	0.00
40	T	1,1-Dichloropropene	50.0000	54.8617	-9.7	99	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	107.2087	-7.2	104	0.00
42	T	Carbon Tetrachloride	50.0000	55.2679	-10.5	101	0.00
43	S	1,2-Dichloroethane-d4	25.0000	26.7393	-7.0	101	0.00
44		Heptane	-1.0000	0.0000	0.0	106	0.00
45	T	1,2-Dichloroethane	50.0000	54.9447	-9.9	101	0.00
46	T	Benzene	50.0000	52.9706	-5.9	100	0.00
47	T	Trichloroethene	50.0000	51.3705	-2.7	97	0.00
48	T	Methylcyclohexane	50.0000	52.5401	-5.1	102	0.00
49	C	1,2-Dichloropropane	50.0000	54.9359	-9.9	102	0.00
50	T	1,4-Dioxane	200.0000	171.0615	14.5	81	0.00
51	T	Bromodichloromethane	50.0000	55.1814	-10.4	101	0.00
52	T	Dibromomethane	50.0000	55.1605	-10.3	100	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	53.7512	-7.5	90	0.00
54	T	4-Methyl-2-Pentanone	50.0000	50.7330	-1.5	91	0.00

(#) = Out of Range
6M138657.D 8260WTR.M Wed Apr 20 12:52:42 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042016\6M138657.D Vial: 3
Acq On : 20 Apr 2016 12:23 Operator: TMB
Sample : WG565672-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	50.0000	58.0321	-16.1	101	0.00
56	T	Dimethyl Disulfide	50.0000	55.1133	-10.2	107	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	99	0.00
58	S	Toluene-d8	25.0000	26.5297	-6.1	102	0.00
59	C	Toluene	50.0000	52.3505	-4.7	99	0.00
60	T	Ethyl Methacrylate	50.0000	54.9474	-9.9	102	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	98	0.00
62	T	trans-1,3-Dichloropropene	50.0000	54.3828	-8.8	102	0.00
63	T	1,1,2-Trichloroethane	50.0000	51.9126	-3.8	100	0.00
64	T	2-Hexanone	50.0000	48.5087	3.0	91	0.00
65	T	1,3-Dichloropropane	50.0000	52.0238	-4.0	100	0.00
66	T	Tetrachloroethene	50.0000	49.3958	1.2	96	0.00
67	T	Dibromochloromethane	50.0000	53.3644	-6.7	99	0.00
68	T	1,2-Dibromoethane	50.0000	53.0819	-6.2	98	0.00
69	T	1-Chlorohexane	50.0000	50.6077	-1.2	104	0.00
70	P	Chlorobenzene	50.0000	49.8291	0.3	99	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	52.5246	-5.0	100	0.00
72	C	Ethylbenzene	50.0000	52.4334	-4.9	100	0.00
73	T	m-,p-Xylene	100.0000	107.2902	-7.3	100	0.00
74	T	o-Xylene	50.0000	54.8538	-9.7	101	0.00
75	T	Styrene	50.0000	58.1048	-16.2	102	0.00
76	P	Bromoform	50.0000	52.3410	-4.7	99	0.00
77	T	Isopropylbenzene	50.0000	56.7856	-13.6	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	101	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	51.6638	-3.3	101	0.00
80	S	p-Bromofluorobenzene	25.0000	27.2688	-9.1	106	0.00
81	T	1,2,3-Trichloropropane	50.0000	52.7305	-5.5	102	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	51.8949	-3.8	109	0.00
83	T	n-Propylbenzene	50.0000	56.7595	-13.5	102	0.00
84	T	Bromobenzene	50.0000	51.5164	-3.0	100	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	55.0224	-10.0	101	0.00
86	T	2-Chlorotoluene	50.0000	54.4086	-8.8	104	0.00
87	T	4-Chlorotoluene	50.0000	52.0902	-4.2	102	0.00
88	T	a-Methylstyrene	50.0000	54.5267	-9.1	110	0.00
89	T	tert-Butylbenzene	50.0000	52.5711	-5.1	99	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	54.2779	-8.6	102	0.00
91	T	sec-Butylbenzene	50.0000	53.7650	-7.5	100	0.00
92	T	p-Isopropyltoluene	50.0000	54.7263	-9.5	100	0.00
93	T	1,3-Dichlorobenzene	50.0000	50.9651	-1.9	101	0.00
94	T	1,4-Dichlorobenzene	50.0000	49.2553	1.5	102	0.00
95	T	n-Butylbenzene	50.0000	55.2506	-10.5	103	0.00
96	T	1,2-Dichlorobenzene	50.0000	50.3938	-0.8	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	51.0596	-2.1	97	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	51.5724	-3.1	98	0.00
99	T	Hexachlorobutadiene	50.0000	50.3031	-0.6	97	0.00
100	T	Naphthalene	50.0000	53.6786	-7.4	94	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	50.3313	-0.7	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138657.D 8260WTR.M Wed Apr 20 12:52:42 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 16:24:59 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	578896	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	419847	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	230082	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	135707	22.9274	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 91.72%			
43) 1,2-Dichloroethane-d4	10.31	65	142491	22.9291	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 91.72%			
58) Toluene-d8	12.68	98	499390	23.7692	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.08%			
80) p-Bromofluorobenzene	16.07	95	204465	22.7454	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.18	85	527308	56.6336	ug/L	99
3) Chloromethane	3.63	50	831707	57.8158	ug/L	97
4) Vinyl Chloride	3.85	62	496186	57.9073	ug/L	98
5) 1,3-Butadiene	3.90	54	509256	63.7482	ug/L	94
6) Bromomethane	4.75	94	210761	56.4064	ug/L	98
7) Chloroethane	4.90	64	250726	53.1614	ug/L	96
8) Trichlorofluoromethane	5.39	101	562706	53.1021	ug/L	99
9) Diethyl ether	5.91	59	409773	95.9124	ug/L	93
10) Isoprene	5.95	67	431675	53.4578	ug/L	92
11) Acrolein	6.14	56	25912	52.0758	ug/L	92
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	313409	54.4372	ug/L	90
13) Acetone	6.25	43	50492	45.8801	ug/L	100
14) 1,1-Dichloroethene	6.47	61	595835	54.3904	ug/L	92
15) Tert-Butyl Alcohol	6.58	59	48904	190.2526	ug/L	98
16) Dimethyl Sulfide	6.74	62	255151	51.1741	ug/L	90
17) Iodomethane	6.99	142	153337	56.9936	ug/L	96
18) Methyl acetate	7.00	43	192562	49.6647	ug/L	94
19) Methylene Chloride	7.26	84	303177	50.2419	ug/L	76
20) Carbon Disulfide	7.30	76	1047248	52.1317	ug/L	100
21) Acrylonitrile	7.43	53	79998	48.1808	ug/L	99
22) Methyl Tert Butyl Ether	7.48	73	574517	47.1004	ug/L	92
23) trans-1,2-Dichloroethene	7.71	61	551120	52.7554	ug/L	90
24) n-Hexane	7.79	57	543906	53.4547	ug/L	97
25) Diisopropyl ether	8.14	45	2739130	104.5592	ug/L	97
26) Vinyl Acetate	8.30	43	450524	46.7012	ug/L	97
27) 1,1-Dichloroethane	8.33	63	697754	53.1945	ug/L	98
28) Ethyl-Tert-Butyl ether	8.71	59	1932617	100.8347	ug/L	96
29) 2-Butanone	8.88	43	86004	47.1238	ug/L	92
30) Propionitrile	8.99	54	51775	97.6339	ug/L	95
31) 2,2-Dichloropropane	9.11	77	542231	55.5365	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	341008	52.2763	ug/L	81
33) Chloroform	9.38	83	602921	54.6490	ug/L	99
34) 1-Bromopropane	9.52	122	53990	55.8850	ug/L	99
35) Bromochloromethane	9.61	130	168993	51.0845	ug/L	80
36) Tetrahydrofuran	9.64	42	120991	89.8357	ug/L	90
38) 1,1,1-Trichloroethane	9.91	97	523478	53.5886	ug/L	100
39) Cyclohexane	9.95	56	702081	52.0959	ug/L	89
40) 1,1-Dichloropropene	10.10	75	463217	53.7626	ug/L	95
41) Tert-Amyl-Methyl ether	10.21	73	1256125	97.1397	ug/L	93
42) Carbon Tetrachloride	10.26	117	477447	55.0748	ug/L	100

(#) = qualifier out of range (m) = manual integration
8M411511.D 8260WT.M Mon Apr 18 16:25:00 2016 Page 1

Data File : C:\MSDchem\2\data\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 16:24:59 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

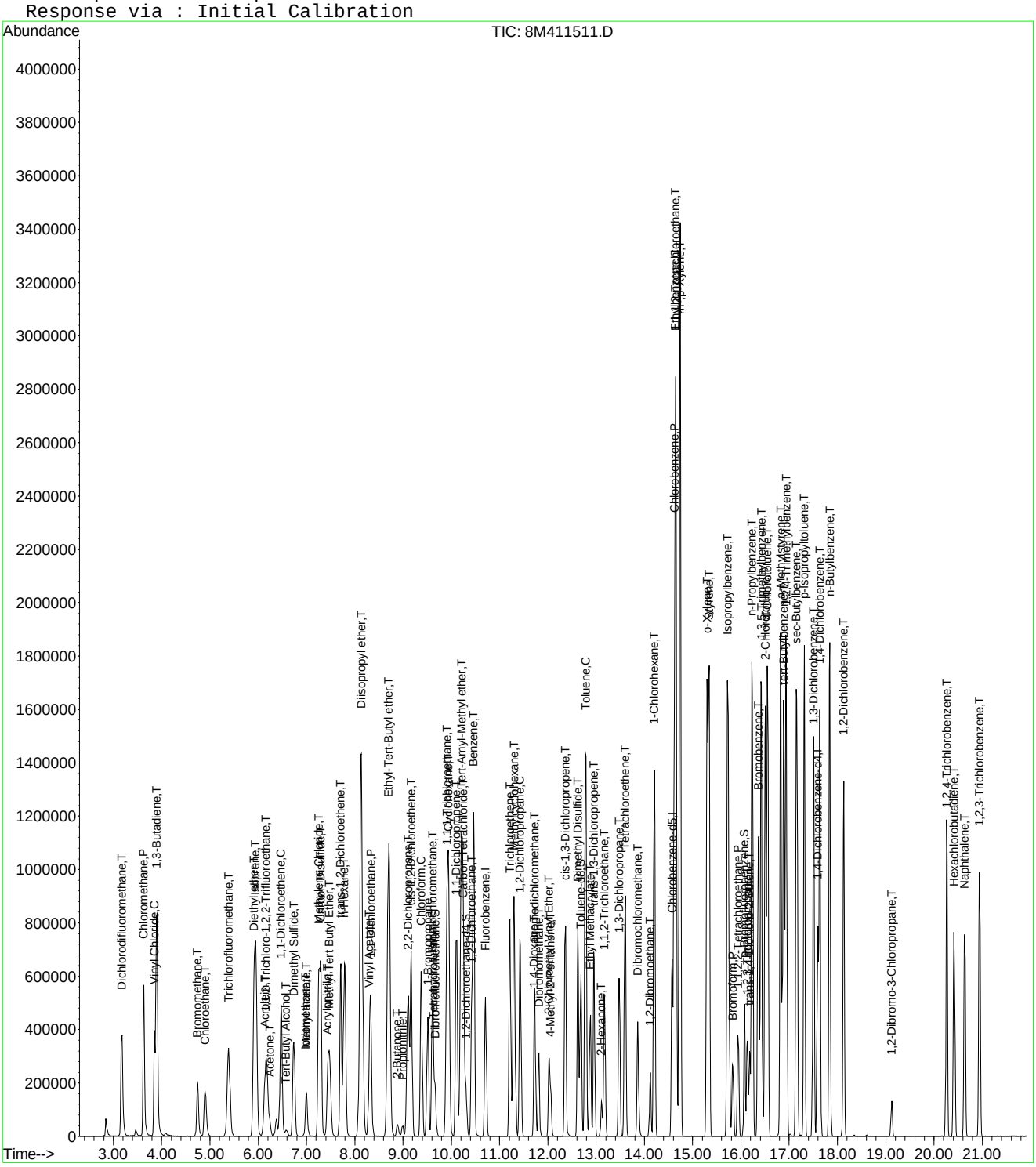
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.42	62	432077	51.6215	ug/L		96
46)	Benzene	10.46	78	1281613	54.6917	ug/L		93
47)	Trichloroethene	11.22	130	317418	53.7998	ug/L		97
48)	Methylcyclohexane	11.30	83	495955	52.8940	ug/L		89
49)	1,2-Dichloropropane	11.42	63	368512	52.5534	ug/L		93
50)	Bromodichloromethane	11.72	83	437028	52.6092	ug/L		100
51)	1,4-Dioxane	11.71	88	5070	207.9691	ug/L		94
52)	Dibromomethane	11.82	93	152916	52.1848	ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	128849	45.0435	ug/L		94
54)	4-Methyl-2-Pentanone	12.05	58	67001	43.3246	ug/L		92
55)	cis-1,3-Dichloropropene	12.36	75	496849	54.1762	ug/L		98
56)	Dimethyl Disulfide	12.62	79	261800	53.8399	ug/L		98
59)	Toluene	12.79	91	1326109	53.7012	ug/L		99
60)	Ethyl Methacrylate	12.88	69	280124	53.8180	ug/L		85
62)	trans-1,3-Dichloropropene	12.95	75	418574	50.5141	ug/L		99
63)	1,1,2-Trichloroethane	13.17	97	197964	50.1235	ug/L		96
64)	2-Hexanone	13.11	58	64427	43.9793	ug/L	#	100
65)	1,3-Dichloropropane	13.48	76	362061	48.9911	ug/L		85
66)	Tetrachloroethene	13.60	164	247995	52.4296	ug/L		91
67)	Dibromochloromethane	13.86	129	270950	52.0545	ug/L		99
68)	1,2-Dibromoethane	14.12	107	196856	48.8421	ug/L		99
69)	1-Chlorohexane	14.20	91	483760	57.8313	ug/L		85
70)	Chlorobenzene	14.63	112	875552	52.5481	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.65	131	307552	52.9388	ug/L		99
72)	Ethylbenzene	14.65	106	486658	52.7294	ug/L		97
73)	m-,p-Xylene	14.74	106	1184941	109.9013	ug/L		98
74)	o-Xylene	15.30	106	576644	52.6547	ug/L		98
75)	Styrene	15.34	104	982979	56.5604	ug/L		98
76)	Bromoform	15.84	173	158120	49.6416	ug/L		100
77)	Isopropylbenzene	15.72	105	1505966	57.1434	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.94	83	247283	48.9065	ug/L		99
81)	1,2,3-Trichloropropane	16.14	110	63215	45.9744	ug/L	#	47
82)	trans-1,4-Dichloro-2-Buten	16.18	53	110380	54.5109	ug/L	#	62
83)	n-Propylbenzene	16.23	91	1893870	54.9289	ug/L		99
84)	Bromobenzene	16.36	156	340699	49.6929	ug/L		89
85)	1,3,5-Trimethylbenzene	16.43	105	1289947	53.3084	ug/L		100
86)	2-Chlorotoluene	16.51	91	1247058	55.5937	ug/L		98
87)	4-Chlorotoluene	16.55	91	1127571	48.2625	ug/L		98
88)	a-Methylstyrene	16.83	118	744440	56.4921	ug/L		100
89)	tert-Butylbenzene	16.89	134	260841	52.9228	ug/L		91
90)	1,2,4-Trimethylbenzene	16.94	105	1369291	53.9016	ug/L		99
91)	sec-Butylbenzene	17.15	105	1655602	55.1122	ug/L		97
92)	p-Isopropyltoluene	17.31	119	1353208	55.2605	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	714107	51.1935	ug/L		92
94)	1,4-Dichlorobenzene	17.63	146	712597	51.0321	ug/L		94
95)	n-Butylbenzene	17.84	91	1410856	56.6090	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	624235	50.5700	ug/L		93
97)	1,2-Dibromo-3-Chloropropan	19.12	75	43149	47.2469	ug/L		88
98)	1,2,4-Trichlorobenzene	20.27	180	432394	49.7793	ug/L		99
99)	Hexachlorobutadiene	20.42	225	189547	55.4418	ug/L		99
100)	Naphthalene	20.63	128	711836	48.9307	ug/L		99
101)	1,2,3-Trichlorobenzene	20.94	180	358451	49.4493	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411511.D 8260WT.M Mon Apr 18 16:25:00 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 16:25 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



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Continuing Calibration Area and RT check

Instrument: HPMS8
Initial cal date: 13 Apr 2016 15:41
CCV date: 18 Apr 2016 16:03
CCV Filename: 8M411511.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	706197	10.71	501557	14.57	264713	17.59
CCV	578896	10.71	419847	14.58	230082	17.59

Data File : C:\MSDCHEM\2\DATA\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	82	0.00
2	T	Dichlorodifluoromethane	0.4021	0.4554	-13.3	81	0.00
3	P	Chloromethane	0.6212	0.7184	-15.6	89	0.00
4	C	Vinyl Chloride	0.3700	0.4286	-15.8	95	0.00
5	T	1,3-Butadiene	0.3469	0.4399	-26.8#	94	0.01
6	T	Bromomethane	0.1482	0.1820	-22.9	98	0.00
7	T	Chloroethane	0.2037	0.2166	-6.3	84	0.00
8	T	Trichlorofluoromethane	0.4576	0.4860	-6.2	85	0.00
9	T	Diethyl ether	0.1845	0.1770	4.1	83	0.00
10	T	Isoprene	0.3487	0.3728	-6.9	84	0.00
11	T	Acrolein	0.0209	0.0224	-7.1	88	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2486	0.2707	-8.9	87	0.00
13	T	Acetone	0.0475	0.0436	8.2	70	0.00
14	C	1,1-Dichloroethene	0.4731	0.5146	-8.8	86	0.00
15	T	Tert-Butyl Alcohol	0.0111	0.0106	4.9	84	-0.02
16	T	Dimethyl Sulfide	0.2153	0.2204	-2.3	80	0.00
17	T	Iodomethane	0.1005	0.1324	-31.8#	98	0.00
18	T	Methyl acetate	0.1674	0.1663	0.7	81	0.00
19	T	Methylene Chloride	0.2606	0.2619	-0.5	82	0.00
20	T	Carbon Disulfide	0.8675	0.9045	-4.3	84	0.00
21	T	Acrylonitrile	0.0717	0.0691	3.6	80	0.00
22	T	Methyl Tert Butyl Ether	0.5268	0.4962	5.8	74	0.00
23	T	trans-1,2-Dichloroethene	0.4512	0.4760	-5.5	83	0.00
24	T	n-Hexane	0.4394	0.4698	-6.9	92	0.00
25	T	Diisopropyl ether	1.1313	1.1829	-4.6	88	0.00
26	T	Vinyl Acetate	0.4166	0.3891	6.6	79	0.00
27	P	1,1-Dichloroethane	0.5665	0.6027	-6.4	85	0.00
28	T	Ethyl-Tert-Butyl ether	0.8277	0.8346	-0.8	85	0.00
29	T	2-Butanone	0.0788	0.0743	5.8	75	0.00
30	T	Propionitrile	0.0229	0.0224	2.4	84	0.00
31	T	2,2-Dichloropropane	0.4216	0.4683	-11.1	93	0.00
32	T	cis-1,2-Dichloroethene	0.2817	0.2945	-4.6	83	0.00
33	C	Chloroform	0.4764	0.5208	-9.3	86	0.00
34		1-Bromopropane	0.0417	0.0466	-11.8	87	0.00
35	T	Bromochloromethane	0.1429	0.1460	-2.2	80	0.00
36	T	Tetrahydrofuran	0.0582	0.0522	10.2	81	0.00
37	S	Dibromofluoromethane	0.2556	0.2344	8.3	74	0.00
38	T	1,1,1-Trichloroethane	0.4219	0.4521	-7.2	84	0.00
39	T	Cyclohexane	0.5820	0.6064	-4.2	86	0.00
40	T	1,1-Dichloropropene	0.3721	0.4001	-7.5	85	0.00
41	T	Tert-Amyl-Methyl ether	0.5584	0.5425	2.9	82	0.00
42	T	Carbon Tetrachloride	0.3744	0.4124	-10.2	86	0.00
43	S	1,2-Dichloroethane-d4	0.2684	0.2461	8.3	73	0.00
44		Heptane	0.0000	0.0000	0.0	0#	-2.54#
45	T	1,2-Dichloroethane	0.3615	0.3732	-3.2	80	0.00
46	T	Benzene	1.0120	1.1070	-9.4	84	0.00
47	T	Trichloroethene	0.2548	0.2742	-7.6	84	0.00
48	T	Methylcyclohexane	0.4049	0.4284	-5.8	88	0.00
49	C	1,2-Dichloropropane	0.3028	0.3183	-5.1	82	0.00
50	T	Bromodichloromethane	0.3588	0.3775	-5.2	81	0.00
51	T	1,4-Dioxane	0.0010	0.0011	-3.8	83	0.00
52	T	Dibromomethane	0.1266	0.1321	-4.4	77	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1235	0.1113	9.9	70	0.00
54	T	4-Methyl-2-Pentanone	0.0668	0.0579	13.4	71	0.00

(#) = Out of Range
8M411511.D 8260WT.M Mon Apr 18 16:26:09 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	0.3961	0.4291	-8.4	82	0.00
56	T	Dimethyl Disulfide	0.2100	0.2261	-7.7	86	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	84	0.00
58	S	Toluene-d8	1.2511	1.1895	4.9	79	0.00
59	C	Toluene	1.4704	1.5793	-7.4	85	0.00
60	T	Ethyl Methacrylate	0.3099	0.3336	-7.6	83	0.00
61		Paraldehyde	0.0000	0.0000	0.0	0#	-13.14#
62	T	trans-1,3-Dichloropropene	0.4934	0.4985	-1.0	80	0.00
63	T	1,1,2-Trichloroethane	0.2352	0.2358	-0.2	78	0.00
64	T	2-Hexanone	0.0872	0.0767	12.0	72	0.00
65	T	1,3-Dichloropropane	0.4401	0.4312	2.0	78	0.00
66	T	Tetrachloroethene	0.2817	0.2953	-4.9	84	0.00
67	T	Dibromochloromethane	0.3099	0.3227	-4.1	80	0.00
68	T	1,2-Dibromoethane	0.2276	0.2344	-3.0	77	0.00
69	T	1-Chlorohexane	0.4981	0.5761	-15.7	92	0.00
70	P	Chlorobenzene	0.9921	1.0427	-5.1	84	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3459	0.3663	-5.9	82	0.00
72	C	Ethylbenzene	0.5496	0.5796	-5.5	84	0.00
73	T	m-,p-Xylene	0.6420	0.7056	-9.9	86	0.00
74	T	o-Xylene	0.6521	0.6867	-5.3	85	0.00
75	T	Styrene	1.0349	1.1706	-13.1	84	0.00
76	P	Bromoform	0.1779	0.1883	-5.8	79	0.00
77	T	Isopropylbenzene	1.5693	1.7935	-14.3	87	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	87	0.00
79	P	1,1,2,2-Tetrachloroethane	0.5494	0.5374	2.2	81	0.00
80	S	p-Bromofluorobenzene	0.9768	0.8887	9.0	80	0.00
81	T	1,2,3-Trichloropropane	0.1494	0.1374	8.1	76	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.2200	0.2399	-9.0	90	0.00
83	T	n-Propylbenzene	3.7463	4.1156	-9.9	89	0.00
84	T	Bromobenzene	0.7450	0.7404	0.6	84	0.00
85	T	1,3,5-Trimethylbenzene	2.6293	2.8032	-6.6	87	0.00
86	T	2-Chlorotoluene	2.4373	2.7100	-11.2	92	0.00
87	T	4-Chlorotoluene	2.5386	2.4504	3.5	83	0.00
88	T	a-Methylstyrene	1.4319	1.6178	-13.0	95	0.00
89	T	tert-Butylbenzene	0.5355	0.5668	-5.8	88	0.00
90	T	1,2,4-Trimethylbenzene	2.7603	2.9757	-7.8	89	0.00
91	T	sec-Butylbenzene	3.2641	3.5979	-10.2	90	0.00
92	T	p-Isopropyltoluene	2.6608	2.9407	-10.5	89	0.00
93	T	1,3-Dichlorobenzene	1.5157	1.5519	-2.4	86	0.00
94	T	1,4-Dichlorobenzene	1.5173	1.5486	-2.1	87	0.00
95	T	n-Butylbenzene	2.7080	3.0660	-13.2	91	0.00
96	T	1,2-Dichlorobenzene	1.3413	1.3565	-1.1	85	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.0992	0.0938	5.5	79	0.00
98	T	1,2,4-Trichlorobenzene	0.9438	0.9396	0.4	82	0.00
99	T	Hexachlorobutadiene	0.3715	0.4119	-10.9	89	0.00
100	T	Naphthalene	1.5807	1.5469	2.1	77	0.00
101	T	1,2,3-Trichlorobenzene	0.7876	0.7790	1.1	80	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411511.D 8260WT.M Mon Apr 18 16:26:10 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	82	0.00
2	T	Dichlorodifluoromethane	50.0000	56.6336	-13.3	81	0.00
3	P	Chloromethane	50.0000	57.8158	-15.6	89	0.00
4	C	Vinyl Chloride	50.0000	57.9073	-15.8	95	0.00
5	T	1,3-Butadiene	50.0000	63.7482	-27.5#	94	0.01
6	T	Bromomethane	50.0000	56.4064	-12.8	98	0.00
7	T	Chloroethane	50.0000	53.1615	-6.3	84	0.00
8	T	Trichlorofluoromethane	50.0000	53.1021	-6.2	85	0.00
9	T	Diethyl ether	100.0000	95.9124	4.1	83	0.00
10	T	Isoprene	50.0000	53.4578	-6.9	84	0.00
11	T	Acrolein	50.0000	52.0759	-4.2	88	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	54.4372	-8.9	87	0.00
13	T	Acetone	50.0000	45.8801	8.2	70	0.00
14	C	1,1-Dichloroethene	50.0000	54.3904	-8.8	86	0.00
15	T	Tert-Butyl Alcohol	200.0000	190.2526	4.9	84	-0.02
16	T	Dimethyl Sulfide	50.0000	51.1741	-2.3	80	0.00
17	T	Iodomethane	50.0000	56.9936	-14.0	98	0.00
18	T	Methyl acetate	50.0000	49.6647	0.7	81	0.00
19	T	Methylene Chloride	50.0000	50.2419	-0.5	82	0.00
20	T	Carbon Disulfide	50.0000	52.1317	-4.3	84	0.00
21	T	Acrylonitrile	50.0000	48.1808	3.6	80	0.00
22	T	Methyl Tert Butyl Ether	50.0000	47.1004	5.8	74	0.00
23	T	trans-1,2-Dichloroethene	50.0000	52.7554	-5.5	83	0.00
24	T	n-Hexane	50.0000	53.4547	-6.9	92	0.00
25	T	Diisopropyl ether	100.0000	104.5593	-4.6	88	0.00
26	T	Vinyl Acetate	50.0000	46.7012	6.6	79	0.00
27	P	1,1-Dichloroethane	50.0000	53.1945	-6.4	85	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	100.8348	-0.8	85	0.00
29	T	2-Butanone	50.0000	47.1238	5.8	75	0.00
30	T	Propionitrile	100.0000	97.6338	2.4	84	0.00
31	T	2,2-Dichloropropane	50.0000	55.5365	-11.1	93	0.00
32	T	cis-1,2-Dichloroethene	50.0000	52.2763	-4.6	83	0.00
33	C	Chloroform	50.0000	54.6490	-9.3	86	0.00
34		1-Bromopropane	50.0000	55.8850	-11.8	87	0.00
35	T	Bromochloromethane	50.0000	51.0845	-2.2	80	0.00
36	T	Tetrahydrofuran	100.0000	89.8357	10.2	81	0.00
37	S	Dibromofluoromethane	25.0000	22.9274	8.3	74	0.00
38	T	1,1,1-Trichloroethane	50.0000	53.5886	-7.2	84	0.00
39	T	Cyclohexane	50.0000	52.0959	-4.2	86	0.00
40	T	1,1-Dichloropropene	50.0000	53.7626	-7.5	85	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	97.1397	2.9	82	0.00
42	T	Carbon Tetrachloride	50.0000	55.0748	-10.1	86	0.00
43	S	1,2-Dichloroethane-d4	25.0000	22.9291	8.3	73	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	51.6215	-3.2	80	0.00
46	T	Benzene	50.0000	54.6917	-9.4	84	0.00
47	T	Trichloroethene	50.0000	53.7998	-7.6	84	0.00
48	T	Methylcyclohexane	50.0000	52.8940	-5.8	88	0.00
49	C	1,2-Dichloropropane	50.0000	52.5534	-5.1	82	0.00
50	T	Bromodichloromethane	50.0000	52.6092	-5.2	81	0.00
51	T	1,4-Dioxane	200.0000	207.9691	-4.0	83	0.00
52	T	Dibromomethane	50.0000	52.1848	-4.4	77	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	45.0435	9.9	70	0.00
54	T	4-Methyl-2-Pentanone	50.0000	43.3246	13.4	71	0.00

(#) = Out of Range
8M411511.D 8260WT.M Mon Apr 18 16:26:11 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041816\8M411511.D Vial: 2
Acq On : 18 Apr 2016 16:03 Operator: TMB
Sample : WG565384-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75617 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	50.0000	54.1762	-8.4	82	0.00
56	T	Dimethyl Disulfide	50.0000	53.8399	-7.7	86	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	84	0.00
58	S	Toluene-d8	25.0000	23.7692	4.9	79	0.00
59	C	Toluene	50.0000	53.7012	-7.4	85	0.00
60	T	Ethyl Methacrylate	50.0000	53.8180	-7.6	83	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	50.5141	-1.0	80	0.00
63	T	1,1,2-Trichloroethane	50.0000	50.1236	-0.2	78	0.00
64	T	2-Hexanone	50.0000	43.9793	12.0	72	0.00
65	T	1,3-Dichloropropane	50.0000	48.9911	2.0	78	0.00
66	T	Tetrachloroethene	50.0000	52.4296	-4.9	84	0.00
67	T	Dibromochloromethane	50.0000	52.0545	-4.1	80	0.00
68	T	1,2-Dibromoethane	50.0000	48.8421	2.3	77	0.00
69	T	1-Chlorohexane	50.0000	57.8313	-15.7	92	0.00
70	P	Chlorobenzene	50.0000	52.5481	-5.1	84	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	52.9388	-5.9	82	0.00
72	C	Ethylbenzene	50.0000	52.7294	-5.5	84	0.00
73	T	m-,p-Xylene	100.0000	109.9013	-9.9	86	0.00
74	T	o-Xylene	50.0000	52.6546	-5.3	85	0.00
75	T	Styrene	50.0000	56.5604	-13.1	84	0.00
76	P	Bromoform	50.0000	49.6416	0.7	79	0.00
77	T	Isopropylbenzene	50.0000	57.1435	-14.3	87	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	87	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	48.9065	2.2	81	0.00
80	S	p-Bromofluorobenzene	25.0000	22.7454	9.0	80	0.00
81	T	1,2,3-Trichloropropane	50.0000	45.9744	8.1	76	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	54.5109	-9.0	90	0.00
83	T	n-Propylbenzene	50.0000	54.9288	-9.9	89	0.00
84	T	Bromobenzene	50.0000	49.6929	0.6	84	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	53.3084	-6.6	87	0.00
86	T	2-Chlorotoluene	50.0000	55.5937	-11.2	92	0.00
87	T	4-Chlorotoluene	50.0000	48.2625	3.5	83	0.00
88	T	a-Methylstyrene	50.0000	56.4922	-13.0	95	0.00
89	T	tert-Butylbenzene	50.0000	52.9228	-5.8	88	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	53.9016	-7.8	89	0.00
91	T	sec-Butylbenzene	50.0000	55.1122	-10.2	90	0.00
92	T	p-Isopropyltoluene	50.0000	55.2605	-10.5	89	0.00
93	T	1,3-Dichlorobenzene	50.0000	51.1935	-2.4	86	0.00
94	T	1,4-Dichlorobenzene	50.0000	51.0320	-2.1	87	0.00
95	T	n-Butylbenzene	50.0000	56.6090	-13.2	91	0.00
96	T	1,2-Dichlorobenzene	50.0000	50.5700	-1.1	85	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	47.2469	5.5	79	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	49.7793	0.4	82	0.00
99	T	Hexachlorobutadiene	50.0000	55.4418	-10.9	89	0.00
100	T	Naphthalene	50.0000	48.9307	2.1	77	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	49.4493	1.1	80	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411511.D 8260WT.M Mon Apr 18 16:26:11 2016 Page 2

Data File : C:\MSDchem\2\data\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 15:05:09 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	832164	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	581989	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	299170	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	196037	23.0400	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 92.16%			
43) 1,2-Dichloroethane-d4	10.30	65	200294	22.4212	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 89.68%			
58) Toluene-d8	12.68	98	719786	24.7146	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.84%			
80) p-Bromofluorobenzene	16.07	95	275023	23.5292	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 94.12%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	735176	54.9279	ug/L	100
3) Chloromethane	3.63	50	1086752	52.5531	ug/L	98
4) Vinyl Chloride	3.85	62	641741	52.1003	ug/L	98
5) 1,3-Butadiene	3.90	54	671563	57.9253	ug/L	95
6) Bromomethane	4.74	94	340426	62.7261	ug/L	100
7) Chloroethane	4.90	64	370883	54.7049	ug/L	98
8) Trichlorofluoromethane	5.38	101	801806	52.6370	ug/L	98
9) Diethyl ether	5.91	59	615663	100.2457	ug/L	92
10) Isoprene	5.95	67	620363	53.4431	ug/L	90
11) Acrolein	6.15	56	39815	55.1376	ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	6.16	101	443800	53.6245	ug/L	94
13) Acetone	6.25	43	71601	45.2598	ug/L	96
14) 1,1-Dichloroethene	6.48	61	871942	55.3702	ug/L	93
15) Tert-Butyl Alcohol	6.58	59	65349	176.8548	ug/L	98
16) Dimethyl Sulfide	6.74	62	370065	51.6325	ug/L	91
17) Iodomethane	7.00	142	229408	59.1496	ug/L	97
18) Methyl acetate	7.01	43	275887	49.4994	ug/L	95
19) Methylene Chloride	7.25	84	455424	52.5022	ug/L	77
20) Carbon Disulfide	7.30	76	1531611	53.0387	ug/L	99
21) Acrylonitrile	7.44	53	118709	49.7359	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	850326	48.4952	ug/L	92
23) trans-1,2-Dichloroethene	7.71	61	823283	54.8229	ug/L	90
24) n-Hexane	7.79	57	801582	54.8027	ug/L	97
25) Diisopropyl ether	8.13	45	4029020	106.9894	ug/L	96
26) Vinyl Acetate	8.30	43	646024	46.5854	ug/L	96
27) 1,1-Dichloroethane	8.33	63	1031157	54.6866	ug/L	98
28) Ethyl-Tert-Butyl ether	8.70	59	2806735	101.8726	ug/L	96
29) 2-Butanone	8.89	43	126207	48.1057	ug/L	93
30) Propionitrile	8.99	54	74046	97.1345	ug/L	97
31) 2,2-Dichloropropane	9.10	77	791587	56.4007	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	508969	54.2779	ug/L	84
33) Chloroform	9.38	83	870186	54.8688	ug/L	100
34) 1-Bromopropane	9.52	122	76983	55.4330	ug/L	99
35) Bromochloromethane	9.61	130	248981	52.3574	ug/L	78
36) Tetrahydrofuran	9.63	42	177612	91.7402	ug/L	92
38) 1,1,1-Trichloroethane	9.91	97	765026	54.4806	ug/L	99
39) Cyclohexane	9.94	56	1003076	51.7776	ug/L	90
40) 1,1-Dichloropropene	10.11	75	667106	53.8619	ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	1844077	99.2052	ug/L	94
42) Carbon Tetrachloride	10.25	117	691508	55.4902	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M411545.D 8260WT.M Tue Apr 19 15:05:09 2016 Page 1

Data File : C:\MSDchem\2\data\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 15:05:09 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

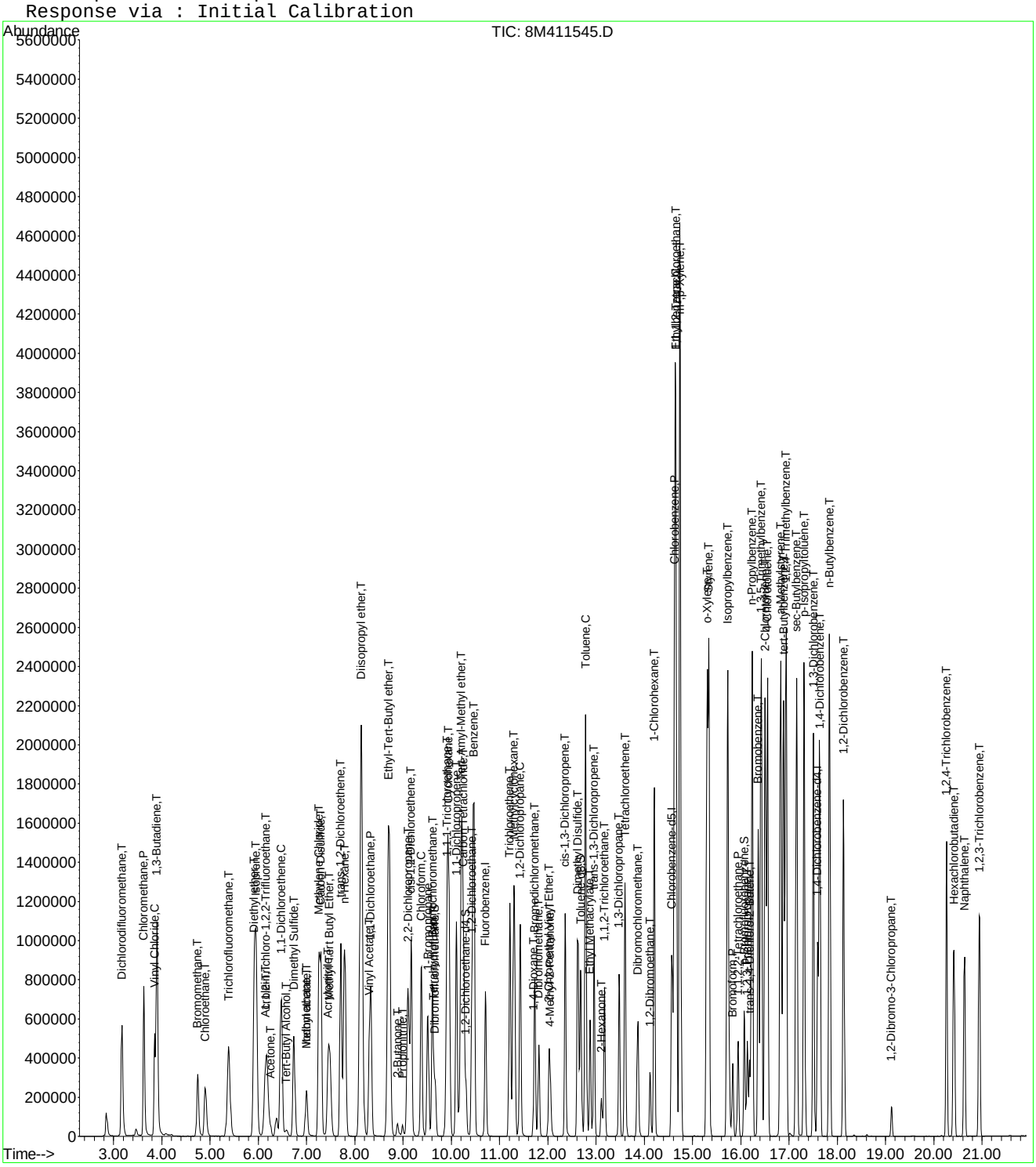
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	622526	51.7391	ug/L		96
46)	Benzene	10.47	78	1857019	55.1280	ug/L		92
47)	Trichloroethene	11.21	130	451941	53.2871	ug/L		97
48)	Methylcyclohexane	11.30	83	709649	52.6501	ug/L		89
49)	1,2-Dichloropropane	11.43	63	536495	53.2239	ug/L		92
50)	Bromodichloromethane	11.73	83	630262	52.7795	ug/L		100
51)	1,4-Dioxane	11.71	88	7549	215.4130	ug/L		95
52)	Dibromomethane	11.81	93	221451	52.5727	ug/L		95
53)	2-Chloroethyl Vinyl Ether	12.03	63	200659	48.7979	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	101356	45.5926	ug/L		91
55)	cis-1,3-Dichloropropene	12.36	75	717146	54.3980	ug/L		98
56)	Dimethyl Disulfide	12.62	79	359757	51.4677	ug/L		99
59)	Toluene	12.78	91	1904387	55.6335	ug/L		100
60)	Ethyl Methacrylate	12.88	69	356530	49.4140	ug/L		85
62)	trans-1,3-Dichloropropene	12.96	75	595222	51.8198	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	283254	51.7378	ug/L		97
64)	2-Hexanone	13.11	58	91961	45.2856	ug/L	#	97
65)	1,3-Dichloropropane	13.48	76	515678	50.3374	ug/L		86
66)	Tetrachloroethene	13.60	164	360346	54.9578	ug/L		93
67)	Dibromochloromethane	13.87	129	385264	53.3954	ug/L		99
68)	1,2-Dibromoethane	14.12	107	280972	50.2870	ug/L		99
69)	1-Chlorohexane	14.21	91	641695	55.3399	ug/L		84
70)	Chlorobenzene	14.62	112	1231716	53.3288	ug/L		97
71)	1,1,1,2-Tetrachloroethane	14.65	131	437777	54.3607	ug/L		97
72)	Ethylbenzene	14.65	106	698542	54.6006	ug/L		99
73)	m-,p-Xylene	14.74	106	1651319	110.4876	ug/L		99
74)	o-Xylene	15.31	106	806903	53.1529	ug/L		99
75)	Styrene	15.34	104	1360300	56.4650	ug/L		98
76)	Bromoform	15.83	173	216701	49.0825	ug/L		99
77)	Isopropylbenzene	15.73	105	2063408	56.4823	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.95	83	324644	49.3792	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	85457	47.7979	ug/L	#	47
82)	trans-1,4-Dichloro-2-Buten	16.18	53	135478	51.4549	ug/L		66
83)	n-Propylbenzene	16.24	91	2569021	57.3037	ug/L		99
84)	Bromobenzene	16.36	156	461234	51.7380	ug/L		86
85)	1,3,5-Trimethylbenzene	16.42	105	1752979	55.7141	ug/L		100
86)	2-Chlorotoluene	16.50	91	1526620	52.3401	ug/L		90
87)	4-Chlorotoluene	16.56	91	1640956	54.0166	ug/L		89
88)	a-Methylstyrene	16.82	118	910446	53.1346	ug/L		99
89)	tert-Butylbenzene	16.89	134	347282	54.1893	ug/L		87
90)	1,2,4-Trimethylbenzene	16.94	105	1820875	55.1253	ug/L		99
91)	sec-Butylbenzene	17.16	105	2203156	56.4030	ug/L		97
92)	p-Isopropyltoluene	17.31	119	1795821	56.3998	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	948802	52.3108	ug/L		93
94)	1,4-Dichlorobenzene	17.64	146	931650	51.3117	ug/L		94
95)	n-Butylbenzene	17.84	91	1868643	57.6625	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	807255	50.2944	ug/L		93
97)	1,2-Dibromo-3-Chloropropan	19.12	75	51921	43.7230	ug/L		85
98)	1,2,4-Trichlorobenzene	20.27	180	546982	48.4292	ug/L		99
99)	Hexachlorobutadiene	20.42	225	251081	56.4806	ug/L		99
100)	Naphthalene	20.64	128	854767	45.1870	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	433229	45.9634	ug/L		100

(#) = qualifier out of range (m) = manual integration
8M411545.D 8260WT.M Tue Apr 19 15:05:09 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 15:05 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Continuing Calibration Area and RT check

Instrument: HPMS8
Initial cal date: 13 Apr 2016 15:41
CCV date: 19 Apr 2016 14:43
CCV Filename: 8M411545.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	706197	10.71	501557	14.57	264713	17.59
CCV	832164	10.71	581989	14.57	299170	17.59

Data File : C:\MSDCHEM\2\DATA\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	118	0.00
2	T	Dichlorodifluoromethane	0.4021	0.4417	-9.9	113	0.00
3	P	Chloromethane	0.6212	0.6530	-5.1	117	0.00
4	C	Vinyl Chloride	0.3700	0.3856	-4.2	122	0.00
5	T	1,3-Butadiene	0.3469	0.4035	-16.3	124	0.01
6	T	Bromomethane	0.1482	0.2045	-38.0#	158#	0.00
7	T	Chloroethane	0.2037	0.2228	-9.4	124	0.00
8	T	Trichlorofluoromethane	0.4576	0.4818	-5.3	121	0.00
9	T	Diethyl ether	0.1845	0.1850	-0.2	124	0.00
10	T	Isoprene	0.3487	0.3727	-6.9	121	0.00
11	T	Acrolein	0.0209	0.0239	-14.5	135	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2486	0.2667	-7.2	123	0.00
13	T	Acetone	0.0475	0.0430	9.5	99	0.00
14	C	1,1-Dichloroethene	0.4731	0.5239	-10.7	126	0.00
15	T	Tert-Butyl Alcohol	0.0111	0.0098	11.5	113	-0.01
16	T	Dimethyl Sulfide	0.2153	0.2223	-3.3	115	0.00
17	T	Iodomethane	0.1005	0.1378	-37.2#	147	0.00
18	T	Methyl acetate	0.1674	0.1658	1.0	116	0.00
19	T	Methylene Chloride	0.2606	0.2736	-5.0	123	0.00
20	T	Carbon Disulfide	0.8675	0.9203	-6.1	123	0.00
21	T	Acrylonitrile	0.0717	0.0713	0.5	118	0.00
22	T	Methyl Tert Butyl Ether	0.5268	0.5109	3.0	109	0.00
23	T	trans-1,2-Dichloroethene	0.4512	0.4947	-9.6	125	0.00
24	T	n-Hexane	0.4394	0.4816	-9.6	135	0.00
25	T	Diisopropyl ether	1.1313	1.2104	-7.0	130	0.00
26	T	Vinyl Acetate	0.4166	0.3882	6.8	114	0.00
27	P	1,1-Dichloroethane	0.5665	0.6196	-9.4	125	0.00
28	T	Ethyl-Tert-Butyl ether	0.8277	0.8432	-1.9	124	-0.01
29	T	2-Butanone	0.0788	0.0758	3.8	111	0.00
30	T	Propionitrile	0.0229	0.0222	2.8	120	0.00
31	T	2,2-Dichloropropane	0.4216	0.4756	-12.8	136	0.00
32	T	cis-1,2-Dichloroethene	0.2817	0.3058	-8.6	124	0.00
33	C	Chloroform	0.4764	0.5229	-9.7	124	0.00
34		1-Bromopropane	0.0417	0.0462	-10.9	124	0.00
35	T	Bromochloromethane	0.1429	0.1496	-4.7	118	0.00
36	T	Tetrahydrofuran	0.0582	0.0534	8.3	119	0.00
37	S	Dibromofluoromethane	0.2556	0.2356	7.8	108	0.00
38	T	1,1,1-Trichloroethane	0.4219	0.4597	-9.0	123	0.00
39	T	Cyclohexane	0.5820	0.6027	-3.6	123	0.00
40	T	1,1-Dichloropropene	0.3721	0.4008	-7.7	123	0.00
41	T	Tert-Amyl-Methyl ether	0.5584	0.5540	0.8	120	0.00
42	T	Carbon Tetrachloride	0.3744	0.4155	-11.0	125	0.00
43	S	1,2-Dichloroethane-d4	0.2684	0.2407	10.3	103	0.00
44		Heptane	0.0000	0.0000	0.0	0#	-2.54#
45	T	1,2-Dichloroethane	0.3615	0.3740	-3.5	115	0.00
46	T	Benzene	1.0120	1.1158	-10.3	122	0.00
47	T	Trichloroethene	0.2548	0.2716	-6.6	120	0.00
48	T	Methylcyclohexane	0.4049	0.4264	-5.3	125	0.00
49	C	1,2-Dichloropropane	0.3028	0.3224	-6.4	120	0.00
50	T	Bromodichloromethane	0.3588	0.3787	-5.6	117	0.00
51	T	1,4-Dioxane	0.0010	0.0011	-7.6	124	-0.01
52	T	Dibromomethane	0.1266	0.1331	-5.1	111	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1235	0.1206	2.4	109	0.00
54	T	4-Methyl-2-Pentanone	0.0668	0.0609	8.8	107	0.00

(#) = Out of Range
8M411545.D 8260WT.M Tue Apr 19 15:05:36 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	0.3961	0.4309	-8.8	119	0.00
56	T	Dimethyl Disulfide	0.2100	0.2162	-2.9	119	-0.01
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	116	0.00
58	S	Toluene-d8	1.2511	1.2368	1.1	113	0.00
59	C	Toluene	1.4704	1.6361	-11.3	121	0.00
60	T	Ethyl Methacrylate	0.3099	0.3063	1.2	106	0.00
61		Paraldehyde	0.0000	0.0000	0.0	0#	-13.14#
62	T	trans-1,3-Dichloropropene	0.4934	0.5114	-3.6	114	0.00
63	T	1,1,2-Trichloroethane	0.2352	0.2434	-3.5	111	0.00
64	T	2-Hexanone	0.0872	0.0790	9.4	103	0.00
65	T	1,3-Dichloropropane	0.4401	0.4430	-0.7	111	0.00
66	T	Tetrachloroethene	0.2817	0.3096	-9.9	122	0.00
67	T	Dibromochloromethane	0.3099	0.3310	-6.8	114	0.00
68	T	1,2-Dibromoethane	0.2276	0.2414	-6.1	109	0.00
69	T	1-Chlorohexane	0.4981	0.5513	-10.7	122	0.00
70	P	Chlorobenzene	0.9921	1.0582	-6.7	118	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3459	0.3761	-8.7	117	0.00
72	C	Ethylbenzene	0.5496	0.6001	-9.2	121	0.00
73	T	m-,p-Xylene	0.6420	0.7093	-10.5	120	-0.01
74	T	o-Xylene	0.6521	0.6932	-6.3	119	0.00
75	T	Styrene	1.0349	1.1687	-12.9	117	0.00
76	P	Bromoform	0.1779	0.1862	-4.6	108	0.00
77	T	Isopropylbenzene	1.5693	1.7727	-13.0	119	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	113	-0.01
79	P	1,1,2,2-Tetrachloroethane	0.5494	0.5426	1.2	106	0.00
80	S	p-Bromofluorobenzene	0.9768	0.9193	5.9	108	0.00
81	T	1,2,3-Trichloropropane	0.1494	0.1428	4.4	103	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.2200	0.2264	-2.9	110	0.00
83	T	n-Propylbenzene	3.7463	4.2936	-14.6	121	0.00
84	T	Bromobenzene	0.7450	0.7709	-3.5	114	0.00
85	T	1,3,5-Trimethylbenzene	2.6293	2.9297	-11.4	119	0.00
86	T	2-Chlorotoluene	2.4373	2.5514	-4.7	112	0.00
87	T	4-Chlorotoluene	2.5386	2.7425	-8.0	120	0.00
88	T	a-Methylstyrene	1.4319	1.5216	-6.3	116	0.00
89	T	tert-Butylbenzene	0.5355	0.5804	-8.4	117	0.00
90	T	1,2,4-Trimethylbenzene	2.7603	3.0432	-10.3	118	0.00
91	T	sec-Butylbenzene	3.2641	3.6821	-12.8	119	0.00
92	T	p-Isopropyltoluene	2.6608	3.0013	-12.8	119	0.00
93	T	1,3-Dichlorobenzene	1.5157	1.5857	-4.6	114	0.00
94	T	1,4-Dichlorobenzene	1.5173	1.5571	-2.6	113	0.00
95	T	n-Butylbenzene	2.7080	3.1231	-15.3	121	0.00
96	T	1,2-Dichlorobenzene	1.3413	1.3492	-0.6	109	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.0992	0.0868	12.5	95	0.00
98	T	1,2,4-Trichlorobenzene	0.9438	0.9142	3.1	103	0.00
99	T	Hexachlorobutadiene	0.3715	0.4196	-13.0	119	0.00
100	T	Naphthalene	1.5807	1.4286	9.6	93	0.00
101	T	1,2,3-Trichlorobenzene	0.7876	0.7240	8.1	97	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411545.D 8260WT.M Tue Apr 19 15:05:36 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	118	0.00
2	T	Dichlorodifluoromethane	50.0000	54.9279	-9.9	113	0.00
3	P	Chloromethane	50.0000	52.5531	-5.1	117	0.00
4	C	Vinyl Chloride	50.0000	52.1003	-4.2	122	0.00
5	T	1,3-Butadiene	50.0000	57.9253	-15.9	124	0.01
6	T	Bromomethane	50.0000	62.7261	-25.5#	158	0.00
7	T	Chloroethane	50.0000	54.7049	-9.4	124	0.00
8	T	Trichlorofluoromethane	50.0000	52.6370	-5.3	121	0.00
9	T	Diethyl ether	100.0000	100.2458	-0.2	124	0.00
10	T	Isoprene	50.0000	53.4431	-6.9	121	0.00
11	T	Acrolein	50.0000	55.1377	-10.3	135	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	53.6245	-7.2	123	0.00
13	T	Acetone	50.0000	45.2598	9.5	99	0.00
14	C	1,1-Dichloroethene	50.0000	55.3702	-10.7	126	0.00
15	T	Tert-Butyl Alcohol	200.0000	176.8548	11.6	113	-0.01
16	T	Dimethyl Sulfide	50.0000	51.6324	-3.3	115	0.00
17	T	Iodomethane	50.0000	59.1496	-18.3	147	0.00
18	T	Methyl acetate	50.0000	49.4994	1.0	116	0.00
19	T	Methylene Chloride	50.0000	52.5022	-5.0	123	0.00
20	T	Carbon Disulfide	50.0000	53.0387	-6.1	123	0.00
21	T	Acrylonitrile	50.0000	49.7359	0.5	118	0.00
22	T	Methyl Tert Butyl Ether	50.0000	48.4952	3.0	109	0.00
23	T	trans-1,2-Dichloroethene	50.0000	54.8229	-9.6	125	0.00
24	T	n-Hexane	50.0000	54.8027	-9.6	135	0.00
25	T	Diisopropyl ether	100.0000	106.9894	-7.0	130	0.00
26	T	Vinyl Acetate	50.0000	46.5854	6.8	114	0.00
27	P	1,1-Dichloroethane	50.0000	54.6866	-9.4	125	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	101.8726	-1.9	124	-0.01
29	T	2-Butanone	50.0000	48.1057	3.8	111	0.00
30	T	Propionitrile	100.0000	97.1345	2.9	120	0.00
31	T	2,2-Dichloropropane	50.0000	56.4007	-12.8	136	0.00
32	T	cis-1,2-Dichloroethene	50.0000	54.2779	-8.6	124	0.00
33	C	Chloroform	50.0000	54.8688	-9.7	124	0.00
34		1-Bromopropane	50.0000	55.4330	-10.9	124	0.00
35	T	Bromochloromethane	50.0000	52.3574	-4.7	118	0.00
36	T	Tetrahydrofuran	100.0000	91.7402	8.3	119	0.00
37	S	Dibromofluoromethane	25.0000	23.0400	7.8	108	0.00
38	T	1,1,1-Trichloroethane	50.0000	54.4806	-9.0	123	0.00
39	T	Cyclohexane	50.0000	51.7776	-3.6	123	0.00
40	T	1,1-Dichloropropene	50.0000	53.8620	-7.7	123	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	99.2052	0.8	120	0.00
42	T	Carbon Tetrachloride	50.0000	55.4902	-11.0	125	0.00
43	S	1,2-Dichloroethane-d4	25.0000	22.4212	10.3	103	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	51.7391	-3.5	115	0.00
46	T	Benzene	50.0000	55.1280	-10.3	122	0.00
47	T	Trichloroethene	50.0000	53.2871	-6.6	120	0.00
48	T	Methylcyclohexane	50.0000	52.6501	-5.3	125	0.00
49	C	1,2-Dichloropropane	50.0000	53.2239	-6.4	120	0.00
50	T	Bromodichloromethane	50.0000	52.7795	-5.6	117	0.00
51	T	1,4-Dioxane	200.0000	215.4130	-7.7	124	-0.01
52	T	Dibromomethane	50.0000	52.5727	-5.1	111	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	48.7979	2.4	109	0.00
54	T	4-Methyl-2-Pentanone	50.0000	45.5926	8.8	107	0.00

(#) = Out of Range
8M411545.D 8260WT.M Tue Apr 19 15:05:37 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\041916\8M411545.D Vial: 2
Acq On : 19 Apr 2016 14:43 Operator: TMB
Sample : WG565516-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75740 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	50.0000	54.3980	-8.8	119	0.00
56	T	Dimethyl Disulfide	50.0000	51.4677	-2.9	119	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	116	0.00
58	S	Toluene-d8	25.0000	24.7146	1.1	113	0.00
59	C	Toluene	50.0000	55.6335	-11.3	121	0.00
60	T	Ethyl Methacrylate	50.0000	49.4140	1.2	106	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	51.8198	-3.6	114	0.00
63	T	1,1,2-Trichloroethane	50.0000	51.7378	-3.5	111	0.00
64	T	2-Hexanone	50.0000	45.2856	9.4	103	0.00
65	T	1,3-Dichloropropane	50.0000	50.3374	-0.7	111	0.00
66	T	Tetrachloroethene	50.0000	54.9578	-9.9	122	0.00
67	T	Dibromochloromethane	50.0000	53.3954	-6.8	114	0.00
68	T	1,2-Dibromoethane	50.0000	50.2870	-0.6	109	0.00
69	T	1-Chlorohexane	50.0000	55.3399	-10.7	122	0.00
70	P	Chlorobenzene	50.0000	53.3288	-6.7	118	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	54.3607	-8.7	117	0.00
72	C	Ethylbenzene	50.0000	54.6006	-9.2	121	0.00
73	T	m-,p-Xylene	100.0000	110.4876	-10.5	120	-0.01
74	T	o-Xylene	50.0000	53.1529	-6.3	119	0.00
75	T	Styrene	50.0000	56.4650	-12.9	117	0.00
76	P	Bromoform	50.0000	49.0825	1.8	108	0.00
77	T	Isopropylbenzene	50.0000	56.4823	-13.0	119	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	113	-0.01
79	P	1,1,2,2-Tetrachloroethane	50.0000	49.3792	1.2	106	0.00
80	S	p-Bromofluorobenzene	25.0000	23.5292	5.9	108	0.00
81	T	1,2,3-Trichloropropane	50.0000	47.7978	4.4	103	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	51.4549	-2.9	110	0.00
83	T	n-Propylbenzene	50.0000	57.3037	-14.6	121	0.00
84	T	Bromobenzene	50.0000	51.7380	-3.5	114	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	55.7141	-11.4	119	0.00
86	T	2-Chlorotoluene	50.0000	52.3401	-4.7	112	0.00
87	T	4-Chlorotoluene	50.0000	54.0166	-8.0	120	0.00
88	T	a-Methylstyrene	50.0000	53.1346	-6.3	116	0.00
89	T	tert-Butylbenzene	50.0000	54.1893	-8.4	117	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	55.1253	-10.3	118	0.00
91	T	sec-Butylbenzene	50.0000	56.4029	-12.8	119	0.00
92	T	p-Isopropyltoluene	50.0000	56.3998	-12.8	119	0.00
93	T	1,3-Dichlorobenzene	50.0000	52.3108	-4.6	114	0.00
94	T	1,4-Dichlorobenzene	50.0000	51.3117	-2.6	113	0.00
95	T	n-Butylbenzene	50.0000	57.6625	-15.3	121	0.00
96	T	1,2-Dichlorobenzene	50.0000	50.2944	-0.6	109	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	43.7230	12.6	95	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	48.4292	3.1	103	0.00
99	T	Hexachlorobutadiene	50.0000	56.4806	-13.0	119	0.00
100	T	Naphthalene	50.0000	45.1870	9.6	93	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	45.9635	8.1	97	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411545.D 8260WT.M Tue Apr 19 15:05:37 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 13:54:49 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	690571	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	510785	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	274044	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	173794	24.6139	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 98.44%			
43) 1,2-Dichloroethane-d4	10.30	65	201924	27.2383	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 108.96%			
58) Toluene-d8	12.68	98	605099	23.6730	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.68%			
80) p-Bromofluorobenzene	16.07	95	248643	23.2227	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 92.88%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	662717	59.6664	ug/L	100
3) Chloromethane	3.63	50	603688	35.1788	ug/L	97
4) Vinyl Chloride	3.85	62	414916	40.5921	ug/L	97
5) 1,3-Butadiene	3.90	54	434922	44.1747	ug/L	96
6) Bromomethane	4.74	94	315186	69.2585	ug/L	99
7) Chloroethane	4.90	64	292678	52.0211	ug/L	90
8) Trichlorofluoromethane	5.38	101	806267	63.7825	ug/L	99
9) Diethyl ether	5.91	59	536462	105.2598	ug/L	84
10) Isoprene	5.95	67	477106	49.5292	ug/L	73
11) Acrolein	6.15	56	30487	51.4611	ug/L	88
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	376659	54.8434	ug/L	99
13) Acetone	6.24	43	74345	56.6299	ug/L	95
14) 1,1-Dichloroethene	6.48	61	745155	57.0211	ug/L	88
15) Tert-Butyl Alcohol	6.58	59	74046	241.4794	ug/L	98
16) Dimethyl Sulfide	6.74	62	299964	50.4330	ug/L	75
17) Iodomethane	6.99	142	254817	77.7819	ug/L	87
18) Methyl acetate	7.01	43	237412	51.3301	ug/L	91
19) Methylene Chloride	7.25	84	353341	49.0858	ug/L	53
20) Carbon Disulfide	7.30	76	1162921	48.5283	ug/L	99
21) Acrylonitrile	7.44	53	112830	56.9655	ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	812232	55.8205	ug/L	92
23) trans-1,2-Dichloroethene	7.71	61	681397	54.6781	ug/L	87
24) n-Hexane	7.79	57	683482	56.3095	ug/L	89
25) Diisopropyl ether	8.13	45	3700664	118.4191	ug/L	94
26) Vinyl Acetate	8.30	43	811407	70.5084	ug/L	94
27) 1,1-Dichloroethane	8.33	63	829476	53.0103	ug/L	97
28) Ethyl-Tert-Butyl ether	8.71	59	2516299	110.0573	ug/L	97
29) 2-Butanone	8.89	43	121162	55.6520	ug/L	92
30) Propionitrile	8.99	54	70299	111.1275	ug/L	96
31) 2,2-Dichloropropane	9.10	77	728959	62.5878	ug/L	99
32) cis-1,2-Dichloroethene	9.17	96	404249	51.9495	ug/L	74
33) Chloroform	9.38	83	747819	56.8212	ug/L	99
34) 1-Bromopropane	9.52	122	67471	58.5452	ug/L	99
35) Bromochloromethane	9.61	130	220309	55.8271	ug/L	74
36) Tetrahydrofuran	9.63	42	172750	107.5241	ug/L	83
38) 1,1,1-Trichloroethane	9.91	97	735529	63.1198	ug/L	99
39) Cyclohexane	9.94	56	867086	53.9350	ug/L	85
40) 1,1-Dichloropropene	10.11	75	552297	53.7354	ug/L	98
41) Tert-Amyl-Methyl ether	10.21	73	1616488	104.7921	ug/L	88
42) Carbon Tetrachloride	10.25	117	692147	66.9296	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411610.D 8260WT.M Thu Apr 21 13:54:50 2016 Page 1

Data File : C:\MSDchem\2\data\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 13:54:49 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

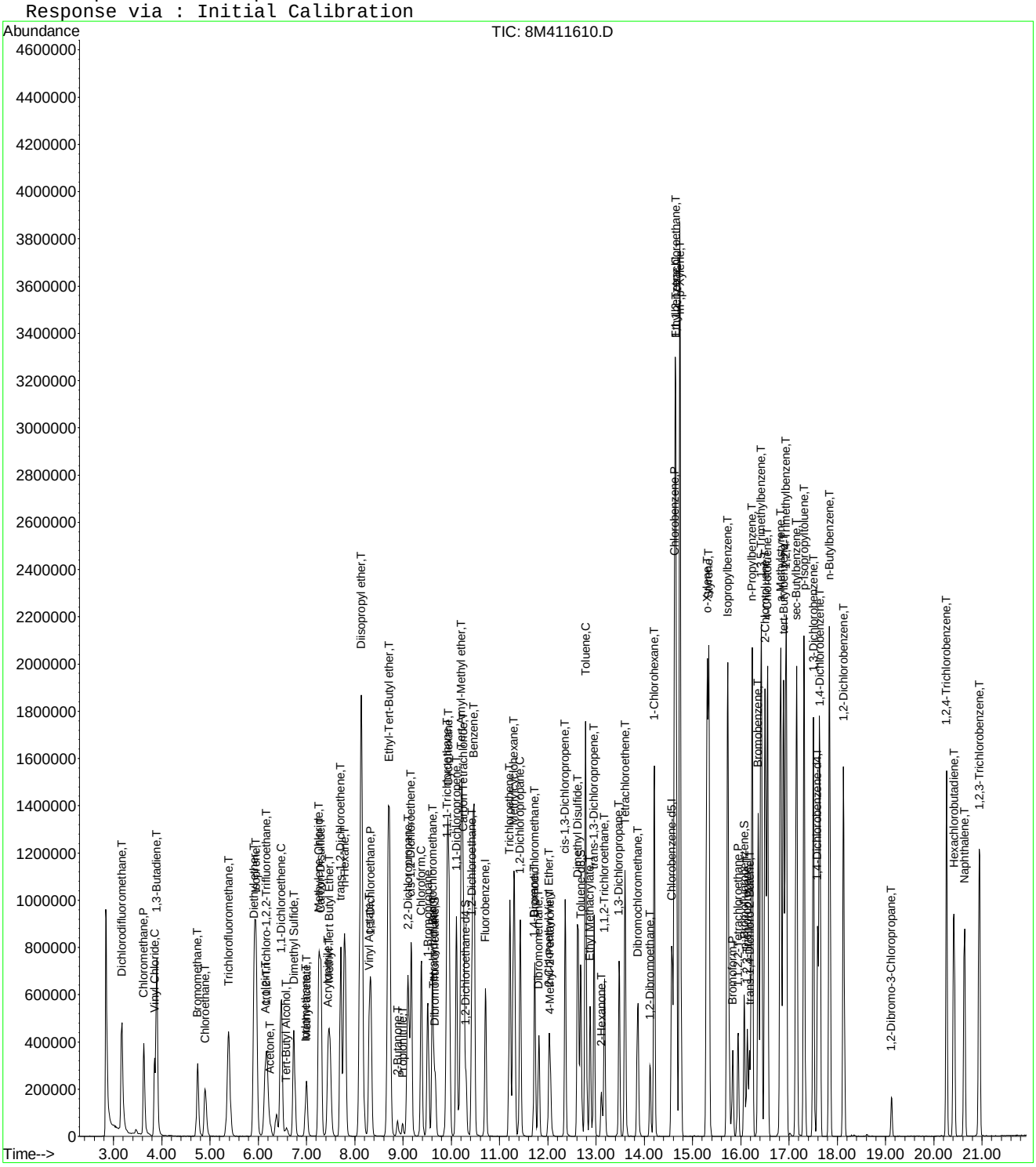
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	625302	62.6256	ug/L		98
46)	Benzene	10.47	78	1425841	51.0067	ug/L		84
47)	Trichloroethene	11.21	130	404739	57.5064	ug/L		96
48)	Methylcyclohexane	11.30	83	597951	53.4591	ug/L		81
49)	1,2-Dichloropropane	11.43	63	424600	50.7600	ug/L		92
50)	Bromodichloromethane	11.73	83	574742	57.9986	ug/L		99
51)	1,4-Dioxane	11.72	88	7371	253.4601	ug/L		87
52)	Dibromomethane	11.81	93	200258	57.2892	ug/L		99
53)	2-Chloroethyl Vinyl Ether	12.03	63	179265	52.5338	ug/L		98
54)	4-Methyl-2-Pentanone	12.05	58	93718	50.8005	ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	610000	55.7579	ug/L		98
56)	Dimethyl Disulfide	12.62	79	306979	52.9219	ug/L		98
59)	Toluene	12.78	91	1509789	50.2544	ug/L		98
60)	Ethyl Methacrylate	12.88	69	302565	47.7803	ug/L		66
62)	trans-1,3-Dichloropropene	12.96	75	545875	54.1485	ug/L		100
63)	1,1,2-Trichloroethane	13.18	97	244058	50.7927	ug/L		99
64)	2-Hexanone	13.11	58	86703	48.6483	ug/L	#	90
65)	1,3-Dichloropropane	13.48	76	446057	49.6111	ug/L		73
66)	Tetrachloroethene	13.60	164	324710	56.4264	ug/L		93
67)	Dibromochloromethane	13.87	129	379409	59.9141	ug/L		100
68)	1,2-Dibromoethane	14.12	107	259497	52.9119	ug/L		99
69)	1-Chlorohexane	14.21	91	528950	51.9758	ug/L		71
70)	Chlorobenzene	14.62	112	1027640	50.6954	ug/L		99
71)	1,1,1,2-Tetrachloroethane	14.65	131	401982	56.8742	ug/L		100
72)	Ethylbenzene	14.65	106	568574	50.6371	ug/L		100
73)	m-,p-Xylene	14.74	106	1366428	104.1708	ug/L		98
74)	o-Xylene	15.31	106	681175	51.1259	ug/L		99
75)	Styrene	15.34	104	1108778	52.4404	ug/L		92
76)	Bromoform	15.83	173	212576	54.8245	ug/L		100
77)	Isopropylbenzene	15.73	105	1765007	55.0492	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	276457	45.9052	ug/L		100
81)	1,2,3-Trichloropropane	16.13	110	85200	52.0233	ug/L		96
82)	trans-1,4-Dichloro-2-Buten	16.18	53	135136	56.0308	ug/L		88
83)	n-Propylbenzene	16.24	91	2087493	50.8321	ug/L		98
84)	Bromobenzene	16.36	156	419215	51.3361	ug/L		94
85)	1,3,5-Trimethylbenzene	16.42	105	1561739	54.1869	ug/L		100
86)	2-Chlorotoluene	16.50	91	1319147	49.3736	ug/L		100
87)	4-Chlorotoluene	16.56	91	1377545	49.5032	ug/L		98
88)	a-Methylstyrene	16.82	118	787099	50.1476	ug/L		98
89)	tert-Butylbenzene	16.89	134	297284	50.6408	ug/L		82
90)	1,2,4-Trimethylbenzene	16.94	105	1583152	52.3228	ug/L		100
91)	sec-Butylbenzene	17.16	105	1844707	51.5563	ug/L		98
92)	p-Isopropyltoluene	17.31	119	1587045	54.4129	ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	843130	50.7467	ug/L		93
94)	1,4-Dichlorobenzene	17.64	146	833673	50.1253	ug/L		94
95)	n-Butylbenzene	17.84	91	1527385	51.4533	ug/L		100
96)	1,2-Dichlorobenzene	18.13	146	747274	50.8261	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	60383	55.5111	ug/L		80
98)	1,2,4-Trichlorobenzene	20.27	180	563005	54.4182	ug/L		99
99)	Hexachlorobutadiene	20.42	225	262070	64.3577	ug/L		98
100)	Naphthalene	20.64	128	822692	47.4789	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	467073	54.0975	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411610.D 8260WT.M Thu Apr 21 13:54:50 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 13:54 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411610.D 8260WT.M Thu Apr 21 13:54:50 2016 Page 3

Continuing Calibration Area and RT check

Instrument: HPMS8
Initial cal date: 13 Apr 2016 15:41
CCV date: 21 Apr 2016 13:32
CCV Filename: 8M411610.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	706197	10.71	501557	14.57	264713	17.59
CCV	690571	10.71	510785	14.57	274044	17.59

Data File : C:\MSDCHEM\2\DATA\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	98	0.00
2	T	Dichlorodifluoromethane	0.4021	0.4798	-19.3	102	0.00
3	P	Chloromethane	0.6212	0.4371	29.6#	65	0.00
4	C	Vinyl Chloride	0.3700	0.3004	18.8	79	0.00
5	T	1,3-Butadiene	0.3469	0.3149	9.2	80	0.01
6	T	Bromomethane	0.1482	0.2282	-54.0#	146	0.00
7	T	Chloroethane	0.2037	0.2119	-4.0	98	0.00
8	T	Trichlorofluoromethane	0.4576	0.5838	-27.6#	121	0.00
9	T	Diethyl ether	0.1845	0.1942	-5.3	108	0.00
10	T	Isoprene	0.3487	0.3454	0.9	93	0.00
11	T	Acrolein	0.0209	0.0221	-5.6	104	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2486	0.2727	-9.7	104	0.00
13	T	Acetone	0.0475	0.0538	-13.3	103	-0.01
14	C	1,1-Dichloroethene	0.4731	0.5395	-14.0	108	0.00
15	T	Tert-Butyl Alcohol	0.0111	0.0134	-20.7	128	-0.01
16	T	Dimethyl Sulfide	0.2153	0.2172	-0.9	93	0.00
17	T	Iodomethane	0.1005	0.1845	-83.6#	163#	-0.01
18	T	Methyl acetate	0.1674	0.1719	-2.7	100	0.00
19	T	Methylene Chloride	0.2606	0.2558	1.8	96	0.00
20	T	Carbon Disulfide	0.8675	0.8420	2.9	93	0.00
21	T	Acrylonitrile	0.0717	0.0817	-13.9	113	0.00
22	T	Methyl Tert Butyl Ether	0.5268	0.5881	-11.6	104	0.00
23	T	trans-1,2-Dichloroethene	0.4512	0.4934	-9.4	103	0.00
24	T	n-Hexane	0.4394	0.4949	-12.6	115	0.00
25	T	Diisopropyl ether	1.1313	1.3397	-18.4	119	0.00
26	T	Vinyl Acetate	0.4166	0.5875	-41.0#	143	0.00
27	P	1,1-Dichloroethane	0.5665	0.6006	-6.0	101	0.00
28	T	Ethyl-Tert-Butyl ether	0.8277	0.9110	-10.1	111	0.00
29	T	2-Butanone	0.0788	0.0877	-11.3	106	0.00
30	T	Propionitrile	0.0229	0.0255	-11.1	114	0.00
31	T	2,2-Dichloropropane	0.4216	0.5278	-25.2#	125	0.00
32	T	cis-1,2-Dichloroethene	0.2817	0.2927	-3.9	99	0.00
33	C	Chloroform	0.4764	0.5414	-13.6	106	0.00
34		1-Bromopropane	0.0417	0.0488	-17.1	109	0.00
35	T	Bromochloromethane	0.1429	0.1595	-11.7	105	0.00
36	T	Tetrahydrofuran	0.0582	0.0625	-7.5	116	0.00
37	S	Dibromofluoromethane	0.2556	0.2517	1.5	95	0.00
38	T	1,1,1-Trichloroethane	0.4219	0.5325	-26.2#	118	0.00
39	T	Cyclohexane	0.5820	0.6278	-7.9	106	0.00
40	T	1,1-Dichloropropene	0.3721	0.3999	-7.5	102	0.00
41	T	Tert-Amyl-Methyl ether	0.5584	0.5852	-4.8	105	0.00
42	T	Carbon Tetrachloride	0.3744	0.5011	-33.9#	125	0.00
43	S	1,2-Dichloroethane-d4	0.2684	0.2924	-9.0	103	0.00
44		Heptane	0.0000	0.0000	0.0	0#	-2.54#
45	T	1,2-Dichloroethane	0.3615	0.4527	-25.2#	116	0.00
46	T	Benzene	1.0120	1.0324	-2.0	94	0.00
47	T	Trichloroethene	0.2548	0.2930	-15.0	107	0.00
48	T	Methylcyclohexane	0.4049	0.4329	-6.9	106	0.00
49	C	1,2-Dichloropropane	0.3028	0.3074	-1.5	95	0.00
50	T	Bromodichloromethane	0.3588	0.4161	-16.0	107	0.00
51	T	1,4-Dioxane	0.0010	0.0013	-26.7#	121	0.00
52	T	Dibromomethane	0.1266	0.1450	-14.6	101	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1235	0.1298	-5.1	98	0.00
54	T	4-Methyl-2-Pentanone	0.0668	0.0679	-1.6	99	0.00

(#) = Out of Range
8M411610.D 8260WT.M Thu Apr 21 14:03:47 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	0.3961	0.4417	-11.5	101	0.00
56	T	Dimethyl Disulfide	0.2100	0.2223	-5.8	101	-0.01
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	102	0.00
58	S	Toluene-d8	1.2511	1.1847	5.3	95	0.00
59	C	Toluene	1.4704	1.4779	-0.5	96	0.00
60	T	Ethyl Methacrylate	0.3099	0.2962	4.4	90	0.00
61		Paraldehyde	0.0000	0.0000	0.0	0#	-13.14#
62	T	trans-1,3-Dichloropropene	0.4934	0.5343	-8.3	105	0.00
63	T	1,1,2-Trichloroethane	0.2352	0.2389	-1.6	96	0.00
64	T	2-Hexanone	0.0872	0.0849	2.7	97	0.00
65	T	1,3-Dichloropropane	0.4401	0.4366	0.8	96	0.00
66	T	Tetrachloroethene	0.2817	0.3179	-12.9	110	0.00
67	T	Dibromochloromethane	0.3099	0.3714	-19.8	112	0.00
68	T	1,2-Dibromoethane	0.2276	0.2540	-11.6	101	0.00
69	T	1-Chlorohexane	0.4981	0.5178	-4.0	100	0.00
70	P	Chlorobenzene	0.9921	1.0059	-1.4	98	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3459	0.3935	-13.7	107	0.00
72	C	Ethylbenzene	0.5496	0.5566	-1.3	99	0.00
73	T	m-,p-Xylene	0.6420	0.6688	-4.2	99	-0.01
74	T	o-Xylene	0.6521	0.6668	-2.3	101	0.00
75	T	Styrene	1.0349	1.0854	-4.9	95	0.00
76	P	Bromoform	0.1779	0.2081	-16.9	106	0.00
77	T	Isopropylbenzene	1.5693	1.7277	-10.1	102	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	104	-0.01
79	P	1,1,2,2-Tetrachloroethane	0.5494	0.5044	8.2	91	0.00
80	S	p-Bromofluorobenzene	0.9768	0.9073	7.1	97	0.00
81	T	1,2,3-Trichloropropane	0.1494	0.1555	-4.0	103	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.2200	0.2466	-12.1	110	0.00
83	T	n-Propylbenzene	3.7463	3.8087	-1.7	98	0.00
84	T	Bromobenzene	0.7450	0.7649	-2.7	103	0.00
85	T	1,3,5-Trimethylbenzene	2.6293	2.8494	-8.4	106	0.00
86	T	2-Chlorotoluene	2.4373	2.4068	1.3	97	0.00
87	T	4-Chlorotoluene	2.5386	2.5134	1.0	101	0.00
88	T	a-Methylstyrene	1.4319	1.4361	-0.3	100	0.00
89	T	tert-Butylbenzene	0.5355	0.5424	-1.3	100	0.00
90	T	1,2,4-Trimethylbenzene	2.7603	2.8885	-4.6	102	0.00
91	T	sec-Butylbenzene	3.2641	3.3657	-3.1	100	0.00
92	T	p-Isopropyltoluene	2.6608	2.8956	-8.8	105	0.00
93	T	1,3-Dichlorobenzene	1.5157	1.5383	-1.5	101	0.00
94	T	1,4-Dichlorobenzene	1.5173	1.5211	-0.3	101	0.00
95	T	n-Butylbenzene	2.7080	2.7868	-2.9	99	0.00
96	T	1,2-Dichlorobenzene	1.3413	1.3634	-1.7	101	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.0992	0.1102	-11.0	110	0.00
98	T	1,2,4-Trichlorobenzene	0.9438	1.0272	-8.8	106	0.00
99	T	Hexachlorobutadiene	0.3715	0.4782	-28.7#	124	0.00
100	T	Naphthalene	1.5807	1.5010	5.0	89	0.00
101	T	1,2,3-Trichlorobenzene	0.7876	0.8522	-8.2	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411610.D 8260WT.M Thu Apr 21 14:03:48 2016 Page 2

Data File : C:\MSDCHEM\2\DATA\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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	98	0.00
2	T	Dichlorodifluoromethane	50.0000	59.6664	-19.3	102	0.00
3	P	Chloromethane	50.0000	35.1788	29.6#	65	0.00
4	C	Vinyl Chloride	50.0000	40.5921	18.8	79	0.00
5	T	1,3-Butadiene	50.0000	44.1747	11.7	80	0.01
6	T	Bromomethane	50.0000	69.2585	-38.5#	146	0.00
7	T	Chloroethane	50.0000	52.0211	-4.0	98	0.00
8	T	Trichlorofluoromethane	50.0000	63.7825	-27.6#	121	0.00
9	T	Diethyl ether	100.0000	105.2598	-5.3	108	0.00
10	T	Isoprene	50.0000	49.5292	0.9	93	0.00
11	T	Acrolein	50.0000	51.4611	-2.9	104	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	54.8434	-9.7	104	0.00
13	T	Acetone	50.0000	56.6299	-13.3	103	-0.01
14	C	1,1-Dichloroethene	50.0000	57.0211	-14.0	108	0.00
15	T	Tert-Butyl Alcohol	200.0000	241.4794	-20.7	128	-0.01
16	T	Dimethyl Sulfide	50.0000	50.4330	-0.9	93	0.00
17	T	Iodomethane	50.0000	77.7819	-55.6#	163	-0.01
18	T	Methyl acetate	50.0000	51.3301	-2.7	100	0.00
19	T	Methylene Chloride	50.0000	49.0858	1.8	96	0.00
20	T	Carbon Disulfide	50.0000	48.5283	2.9	93	0.00
21	T	Acrylonitrile	50.0000	56.9655	-13.9	113	0.00
22	T	Methyl Tert Butyl Ether	50.0000	55.8205	-11.6	104	0.00
23	T	trans-1,2-Dichloroethene	50.0000	54.6781	-9.4	103	0.00
24	T	n-Hexane	50.0000	56.3095	-12.6	115	0.00
25	T	Diisopropyl ether	100.0000	118.4191	-18.4	119	0.00
26	T	Vinyl Acetate	50.0000	70.5084	-41.0#	143	0.00
27	P	1,1-Dichloroethane	50.0000	53.0103	-6.0	101	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	110.0573	-10.1	111	0.00
29	T	2-Butanone	50.0000	55.6520	-11.3	106	0.00
30	T	Propionitrile	100.0000	111.1275	-11.1	114	0.00
31	T	2,2-Dichloropropane	50.0000	62.5878	-25.2#	125	0.00
32	T	cis-1,2-Dichloroethene	50.0000	51.9495	-3.9	99	0.00
33	C	Chloroform	50.0000	56.8212	-13.6	106	0.00
34		1-Bromopropane	50.0000	58.5453	-17.1	109	0.00
35	T	Bromochloromethane	50.0000	55.8271	-11.7	105	0.00
36	T	Tetrahydrofuran	100.0000	107.5241	-7.5	116	0.00
37	S	Dibromofluoromethane	25.0000	24.6139	1.5	95	0.00
38	T	1,1,1-Trichloroethane	50.0000	63.1198	-26.2#	118	0.00
39	T	Cyclohexane	50.0000	53.9350	-7.9	106	0.00
40	T	1,1-Dichloropropene	50.0000	53.7354	-7.5	102	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	104.7921	-4.8	105	0.00
42	T	Carbon Tetrachloride	50.0000	66.9296	-33.9#	125	0.00
43	S	1,2-Dichloroethane-d4	25.0000	27.2383	-9.0	103	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-2.54#
45	T	1,2-Dichloroethane	50.0000	62.6256	-25.3#	116	0.00
46	T	Benzene	50.0000	51.0067	-2.0	94	0.00
47	T	Trichloroethene	50.0000	57.5064	-15.0	107	0.00
48	T	Methylcyclohexane	50.0000	53.4591	-6.9	106	0.00
49	C	1,2-Dichloropropane	50.0000	50.7600	-1.5	95	0.00
50	T	Bromodichloromethane	50.0000	57.9986	-16.0	107	0.00
51	T	1,4-Dioxane	200.0000	253.4601	-26.7#	121	0.00
52	T	Dibromomethane	50.0000	57.2892	-14.6	101	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	52.5338	-5.1	98	0.00
54	T	4-Methyl-2-Pentanone	50.0000	50.8005	-1.6	99	0.00

(#) = Out of Range
8M411610.D 8260WT.M Thu Apr 21 14:03:50 2016 Page 1

Data File : C:\MSDCHEM\2\DATA\042116\8M411610.D Vial: 3
Acq On : 21 Apr 2016 13:32 Operator: TMB
Sample : WG565879-02 50ug/L CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75742 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
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)
55	T	cis-1,3-Dichloropropene	50.0000	55.7579	-11.5	101	0.00
56	T	Dimethyl Disulfide	50.0000	52.9219	-5.8	101	-0.01
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	102	0.00
58	S	Toluene-d8	25.0000	23.6730	5.3	95	0.00
59	C	Toluene	50.0000	50.2544	-0.5	96	0.00
60	T	Ethyl Methacrylate	50.0000	47.7803	4.4	90	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	50.0000	54.1485	-8.3	105	0.00
63	T	1,1,2-Trichloroethane	50.0000	50.7927	-1.6	96	0.00
64	T	2-Hexanone	50.0000	48.6483	2.7	97	0.00
65	T	1,3-Dichloropropane	50.0000	49.6111	0.8	96	0.00
66	T	Tetrachloroethene	50.0000	56.4264	-12.9	110	0.00
67	T	Dibromochloromethane	50.0000	59.9141	-19.8	112	0.00
68	T	1,2-Dibromoethane	50.0000	52.9119	-5.8	101	0.00
69	T	1-Chlorohexane	50.0000	51.9758	-4.0	100	0.00
70	P	Chlorobenzene	50.0000	50.6954	-1.4	98	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	56.8742	-13.7	107	0.00
72	C	Ethylbenzene	50.0000	50.6371	-1.3	99	0.00
73	T	m-,p-Xylene	100.0000	104.1708	-4.2	99	-0.01
74	T	o-Xylene	50.0000	51.1259	-2.3	101	0.00
75	T	Styrene	50.0000	52.4404	-4.9	95	0.00
76	P	Bromoform	50.0000	54.8245	-9.6	106	0.00
77	T	Isopropylbenzene	50.0000	55.0491	-10.1	102	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	104	-0.01
79	P	1,1,2,2-Tetrachloroethane	50.0000	45.9052	8.2	91	0.00
80	S	p-Bromofluorobenzene	25.0000	23.2227	7.1	97	0.00
81	T	1,2,3-Trichloropropane	50.0000	52.0233	-4.0	103	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	56.0308	-12.1	110	0.00
83	T	n-Propylbenzene	50.0000	50.8321	-1.7	98	0.00
84	T	Bromobenzene	50.0000	51.3361	-2.7	103	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	54.1869	-8.4	106	0.00
86	T	2-Chlorotoluene	50.0000	49.3736	1.3	97	0.00
87	T	4-Chlorotoluene	50.0000	49.5033	1.0	101	0.00
88	T	a-Methylstyrene	50.0000	50.1476	-0.3	100	0.00
89	T	tert-Butylbenzene	50.0000	50.6408	-1.3	100	0.00
90	T	1,2,4-Trimethylbenzene	50.0000	52.3228	-4.6	102	0.00
91	T	sec-Butylbenzene	50.0000	51.5563	-3.1	100	0.00
92	T	p-Isopropyltoluene	50.0000	54.4129	-8.8	105	0.00
93	T	1,3-Dichlorobenzene	50.0000	50.7467	-1.5	101	0.00
94	T	1,4-Dichlorobenzene	50.0000	50.1253	-0.3	101	0.00
95	T	n-Butylbenzene	50.0000	51.4533	-2.9	99	0.00
96	T	1,2-Dichlorobenzene	50.0000	50.8261	-1.7	101	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	55.5111	-11.0	110	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	54.4182	-8.8	106	0.00
99	T	Hexachlorobutadiene	50.0000	64.3577	-28.7#	124	0.00
100	T	Naphthalene	50.0000	47.4789	5.0	89	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	54.0975	-8.2	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411610.D 8260WT.M Thu Apr 21 14:03:50 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\042116\8M411611.D Vial: 4
Acq On : 21 Apr 2016 14:02 Operator: TMB
Sample : WG565881-01 100ug/L A9 CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 14:23:58 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

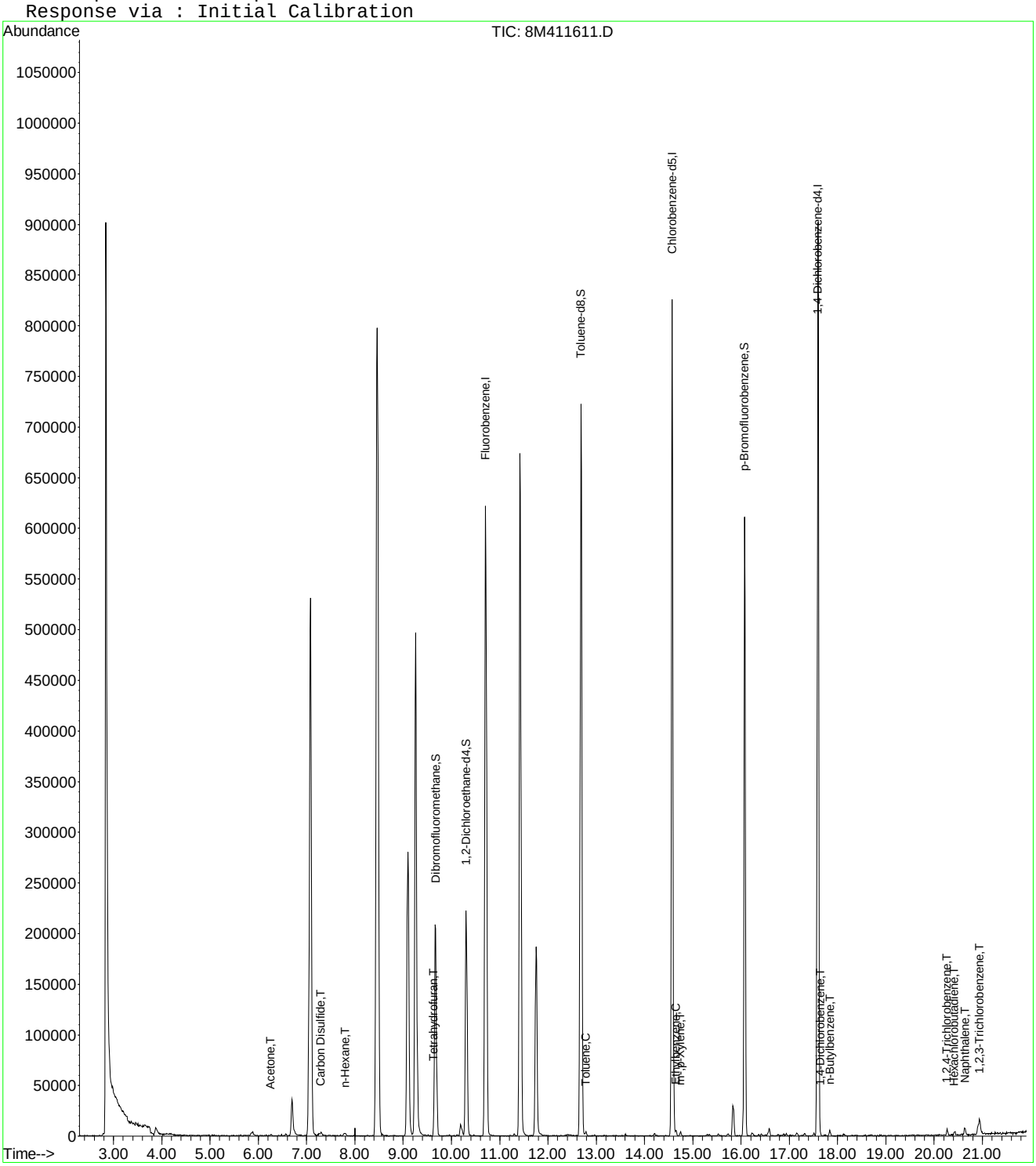
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	680607	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.57	117	518607	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	277463	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	179917	25.8541 ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 103.40%		
43) 1,2-Dichloroethane-d4	10.30	65	208767	28.5736 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 114.28%		
58) Toluene-d8	12.68	98	602022	23.1974 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 92.80%		
80) p-Bromofluorobenzene	16.07	95	253069	23.3448 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 93.36%		
Target Compounds					Qvalue
5) 1,3-Butadiene	3.92	54	393	Below Cal	# 1
13) Acetone	6.25	43	1422	1.0990 ug/L	# 48
20) Carbon Disulfide	7.30	76	6714	0.2843 ug/L	# 74
24) n-Hexane	7.80	57	2148	0.1796 ug/L	71
36) Tetrahydrofuran	9.63	42	4477	2.8274 ug/L	# 63
59) Toluene	12.78	91	3977	0.1304 ug/L	95
72) Ethylbenzene	14.66	106	1473	0.1292 ug/L	# 37
73) m-,p-Xylene	14.75	106	2120	0.1592 ug/L	97
94) 1,4-Dichlorobenzene	17.64	146	2304	0.1368 ug/L	# 1
95) n-Butylbenzene	17.84	91	5240	0.1743 ug/L	# 82
98) 1,2,4-Trichlorobenzene	20.27	180	3357	0.3205 ug/L	89
99) Hexachlorobutadiene	20.41	225	1695	0.4111 ug/L	# 47
100) Naphthalene	20.64	128	8435	0.4808 ug/L	# 87
101) 1,2,3-Trichlorobenzene	20.94	180	2818	0.3224 ug/L	89

(#) = qualifier out of range (m) = manual integration
8M411611.D 8260WT.M Thu Apr 21 14:23:58 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\042116\8M411611.D Vial: 4
Acq On : 21 Apr 2016 14:02 Operator: TMB
Sample : WG565881-01 100ug/L A9 CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 14:23 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411611.D 8260WT.M Thu Apr 21 14:23:58 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411611.D Vial: 4
Acq On : 21 Apr 2016 14:02 Operator: TMB
Sample : WG565881-01 100ug/L A9 CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 21 14:30:57 2016 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

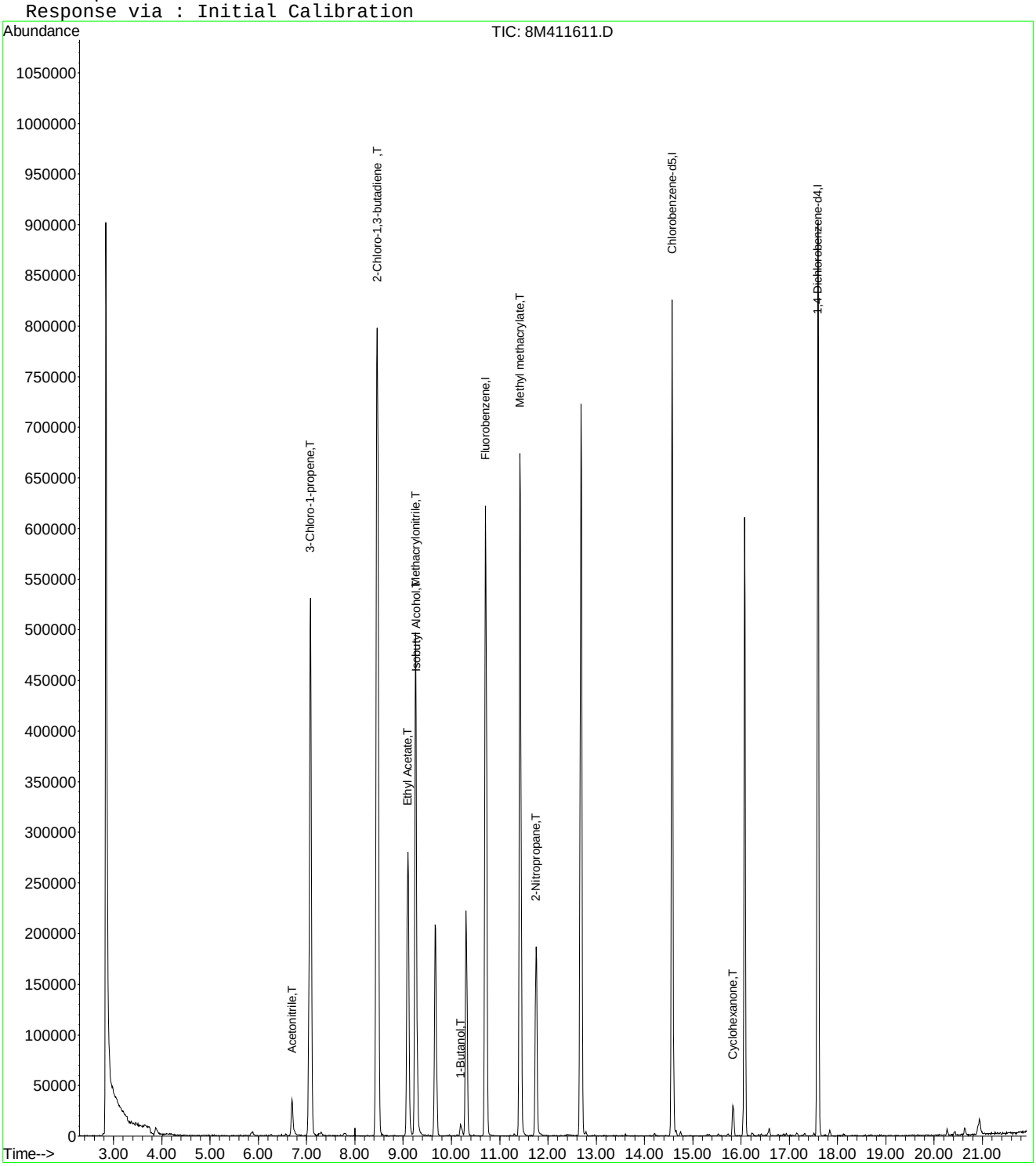
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	10.71	96	680607	25.00	ug/L		-0.01
11) Chlorobenzene-d5	14.57	117	518607	25.00	ug/L		-0.01
12) 1,4-Dichlorobenzene-d4	17.59	152	277463	25.00	ug/L		-0.01
Target Compounds							Qvalue
2) Acetonitrile	6.70	41	57002	108.8266	ug/L		97
3) 3-Chloro-1-propene	7.08	41	636708	49.9826	ug/L		93
4) 2-Chloro-1,3-butadiene	8.46	53	903407	68.9238	ug/L		84
5) Ethyl Acetate	9.09	43	524188	151.3880	ug/L		93
6) Methacrylonitrile	9.26	67	151359	99.5968	ug/L	#	49
7) Isobutyl Alcohol	9.27	43	50490	355.8546	ug/L	#	9
8) 1-Butanol	10.19	56	9593	137.1684	ug/L		100
9) Methyl methacrylate	11.42	41	564848	134.6888	ug/L		79
10) 2-Nitropropane	11.75	43	187284	266.0603	ug/L		92
13) Cyclohexanone	15.83	55	18051	30.5154	ug/L		97

(#) = qualifier out of range (m) = manual integration
8M411611.D A9FOOWTR.M Thu Apr 21 14:30:57 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411611.D Vial: 4
Acq On : 21 Apr 2016 14:02 Operator: TMB
Sample : WG565881-01 100ug/L A9 CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 21 14:30 2016 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



8M411611.D A9FOOWTR.M Thu Apr 21 14:30:57 2016 Page 2

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\042116\8M411611.D Vial: 4
Acq On : 21 Apr 2016 14:02 Operator: TMB
Sample : WG565881-01 100ug/L A9 CCV STD 8260 Inst : HPMS8
Misc : 1,1 STD75328 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
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%

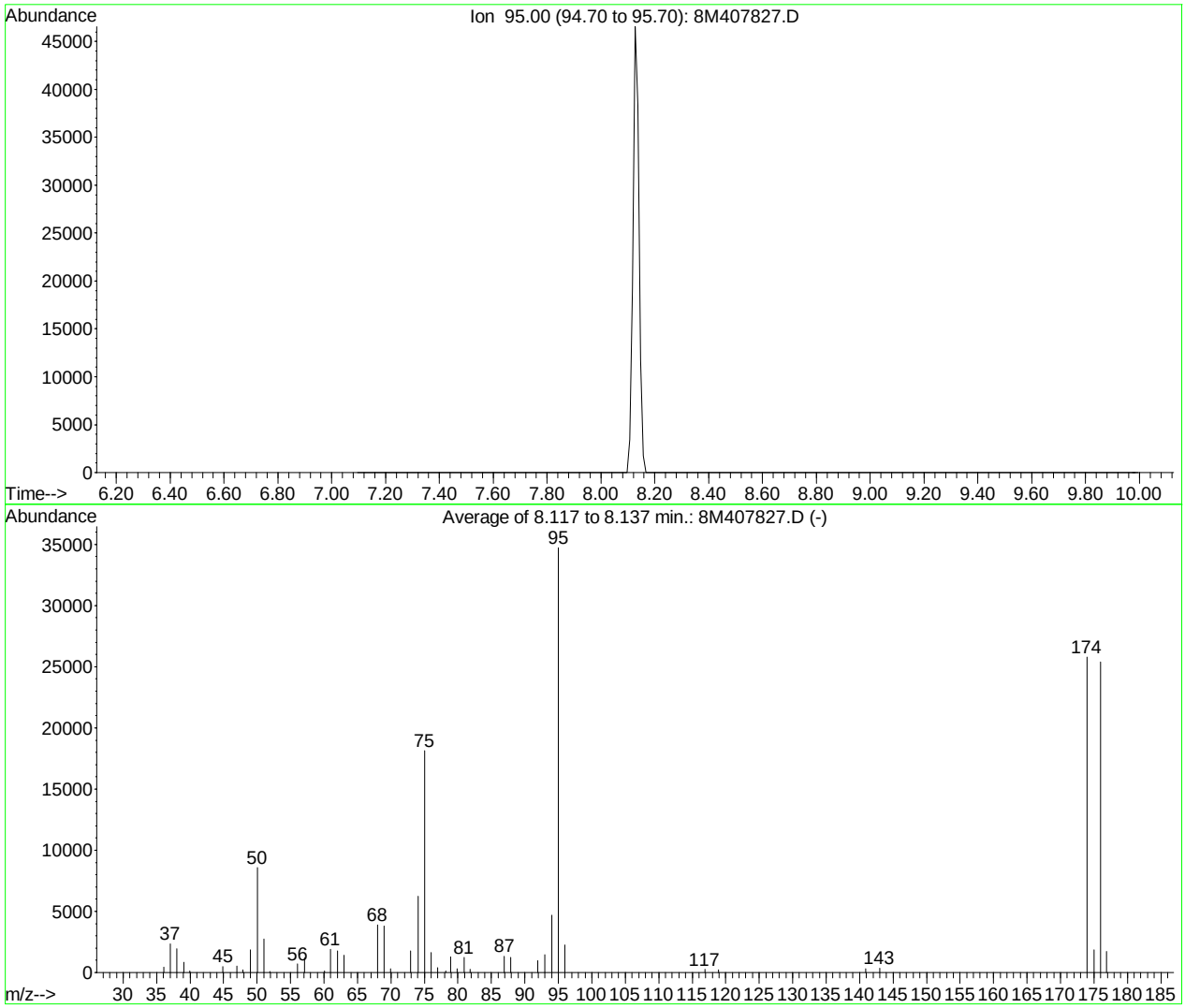
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	79	-0.01
2	T	Acetonitrile	100.0000	108.8266	-8.8	85	0.00
3	T	3-Chloro-1-propene	100.0000	49.9826	50.0	39	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	68.9238	31.1	54	0.00
5	T	Ethyl Acetate	100.0000	151.3880	-51.4	116	0.00
6	T	Methacrylonitrile	100.0000	99.5968	0.4	77	0.00
7	T	Isobutyl Alcohol	200.0000	355.8546	-77.9#	135	0.00
8	T	1-Butanol	100.0000	137.1684	-37.2	116	0.00
9	T	Methyl methacrylate	100.0000	134.6888	-34.7	100	-0.01
10	T	2-Nitropropane	100.0000	266.0603	-166.1#	241	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	78	-0.01
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	78	-0.01
13	T	Cyclohexanone	100.0000	30.5154	69.5	24	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8M411611.D A9FOOWTR.M Thu Apr 21 14:31:01 2016 Page 1

2.1.1.5 Raw QC Data

BFB

Data File : C:\MSDCHEM\2\DATA\100515\8M407827.D Vial: 1
Acq On : 5 Oct 2015 11:26 Operator: TMB
Sample : WG540826-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD72715 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



AutoFind: Scans 101, 102, 103; Background Corrected with Scan 97

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.7	8565	PASS
75	95	30	60	52.2	18121	PASS
95	95	100	100	100.0	34714	PASS
96	95	5	9	6.5	2262	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.2	25773	PASS
175	174	5	9	7.2	1845	PASS
176	174	95	101	98.5	25378	PASS
177	176	5	9	6.9	1746	PASS

8M407827.D BFB.M Mon Oct 05 12:46:56 2015

BFB

```
Data File : C:\MSDCHEM\1\DATA\100615\6M134942.D          Vial: 1
Acq On    :  6 Oct 2015  10:16                    Operator: TMB
Sample    : WG541654-01 50ng BFB STD A9/FOO       Inst    : HPMS6
Misc      : 1,1 STD72715                          Multiplr: 1.00
MS Integration Params: RTEINT.P
Method    : C:\MSDCHEM\1\METHODS\8260WT.M (RTE Integrator)
Title     : 8260B/624_WATER SOP:MSV01  09-30-15 - HPMS6
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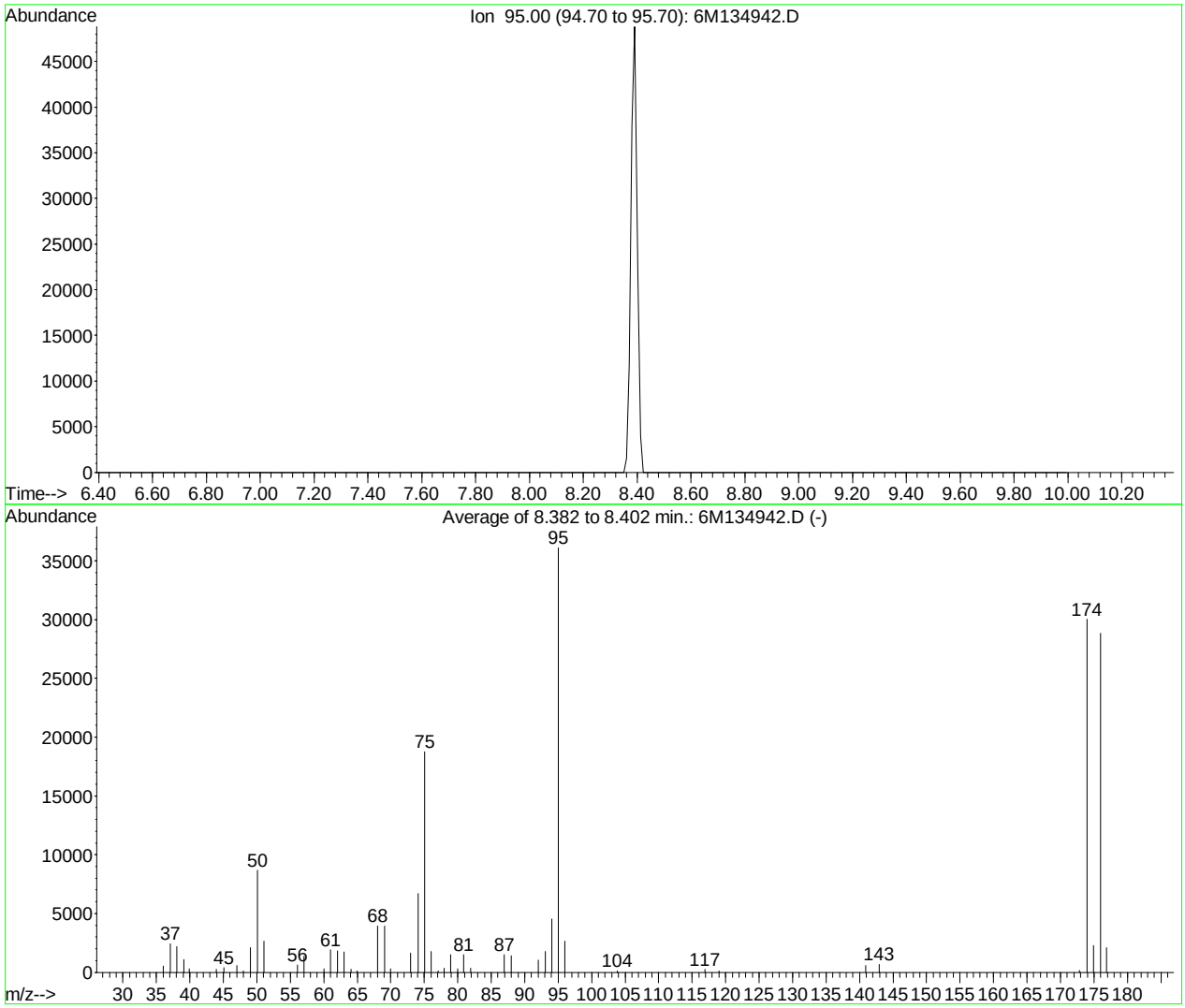


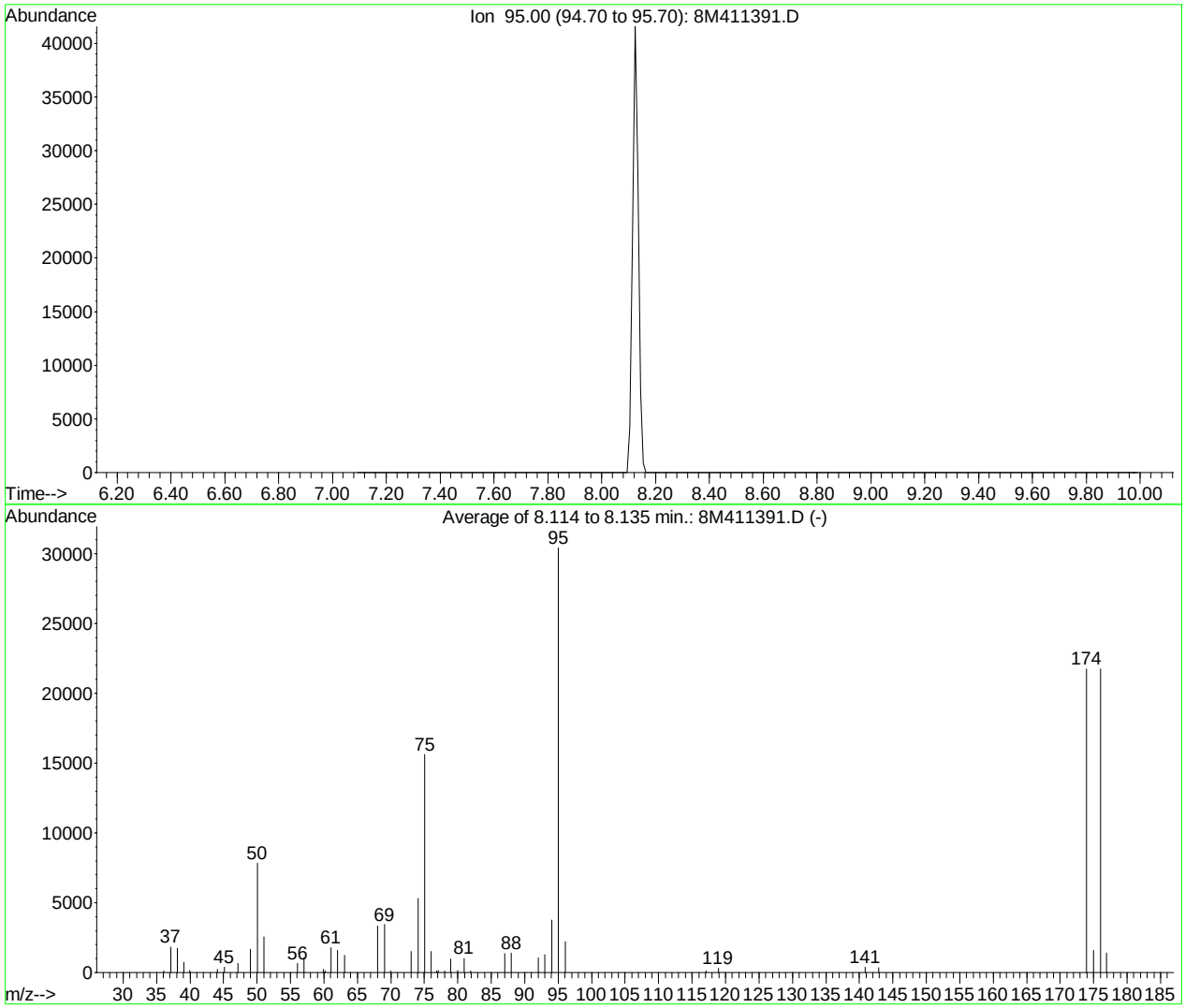
AutoFind: Scans 323, 324, 325; Background Corrected with Scan 318

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.0	8677	PASS
75	95	30	60	51.9	18743	PASS
95	95	100	100	100.0	36125	PASS
96	95	5	9	7.4	2666	PASS
173	174	0.00	2	0.5	151	PASS
174	95	50	100	83.2	30053	PASS
175	174	5	9	7.5	2268	PASS
176	174	95	101	95.9	28826	PASS
177	176	5	9	7.3	2095	PASS

6M134942.D 8260WT.M Tue Oct 06 10:27:38 2015

BFB

Data File : C:\MSDCHEM\2\DATA\041316\8M411391.D Vial: 1
Acq On : 13 Apr 2016 11:48 Operator: TMB
Sample : WG564484-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



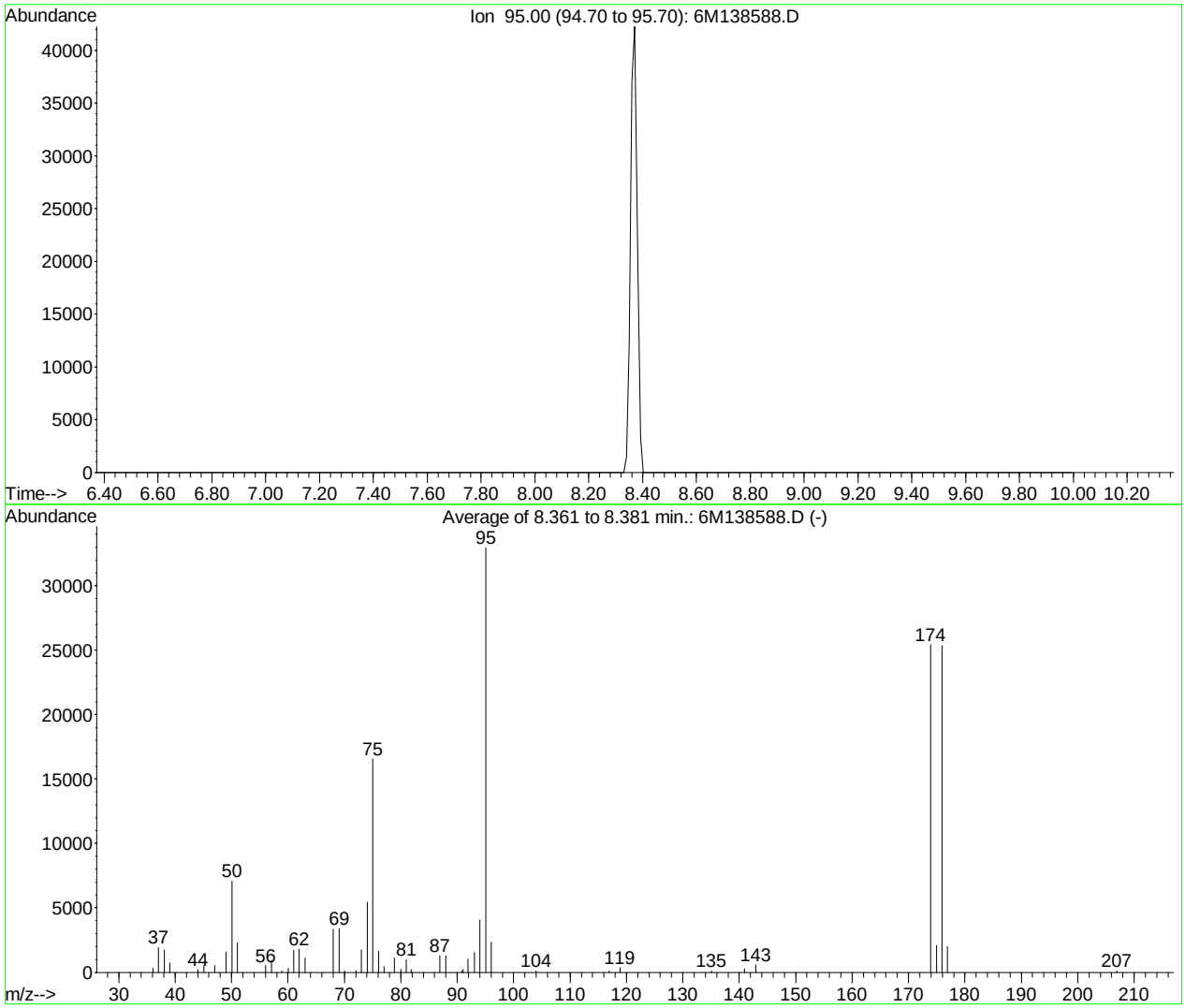
AutoFind: Scans 101, 102, 103; Background Corrected with Scan 97

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.8	7834	PASS
75	95	30	60	51.4	15628	PASS
95	95	100	100	100.0	30408	PASS
96	95	5	9	7.2	2191	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.5	21755	PASS
175	174	5	9	7.3	1589	PASS
176	174	95	101	99.9	21736	PASS
177	176	5	9	6.5	1414	PASS

8M411391.D BFB.M Wed Apr 13 12:04:40 2016

BFB

Data File : C:\MSDCHEM\1\DATA\041816\6M138588.D Vial: 1
Acq On : 18 Apr 2016 12:45 Operator: TMB
Sample : WG565327-01 50ng BFB STD 8260 Inst : HPMS6
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title : SOP: OVL MSV01



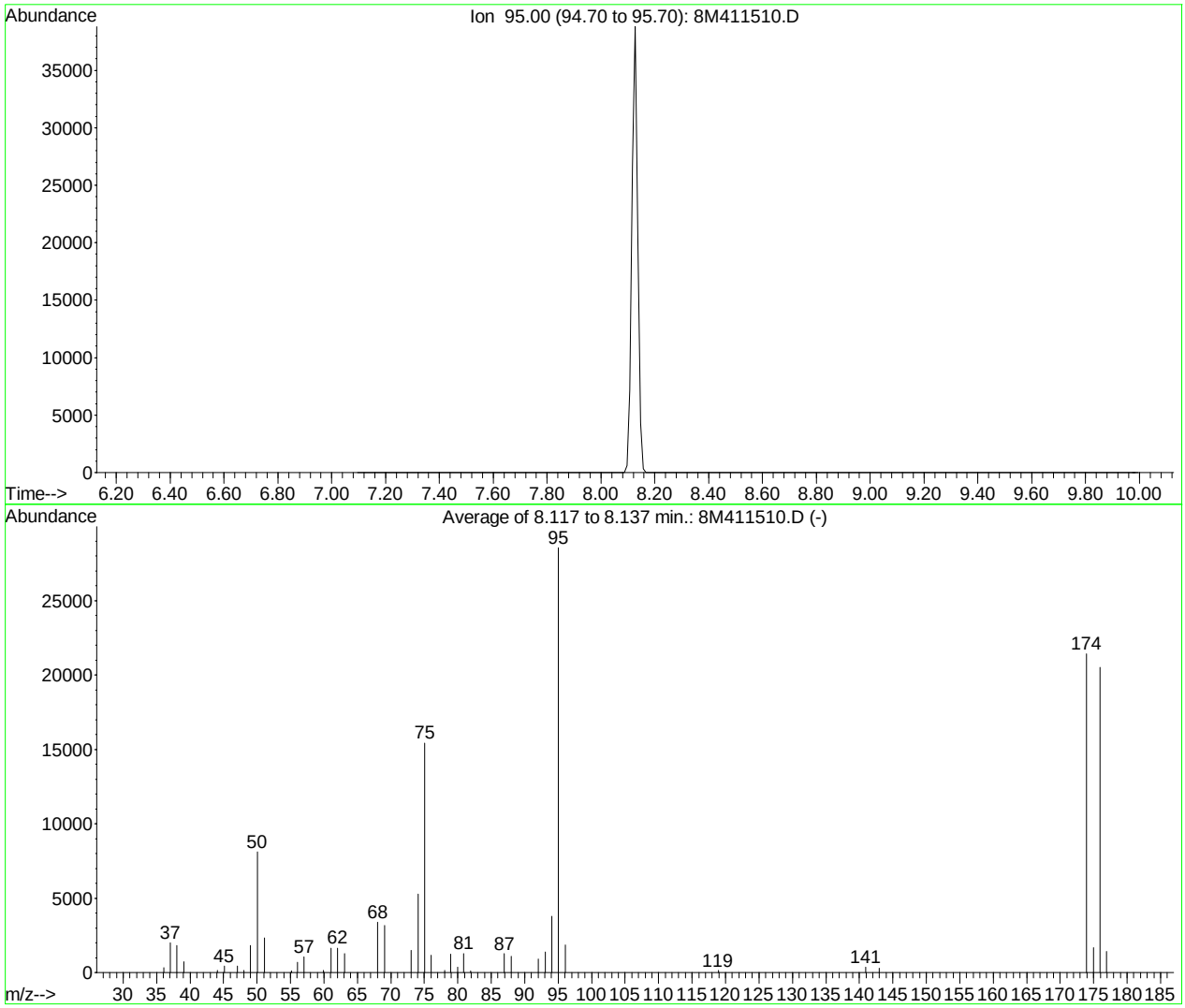
AutoFind: Scans 321, 322, 323; Background Corrected with Scan 316

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.4	7066	PASS
75	95	30	60	50.3	16590	PASS
95	95	100	100	100.0	32960	PASS
96	95	5	9	7.1	2324	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	77.1	25418	PASS
175	174	5	9	8.1	2069	PASS
176	174	95	101	99.7	25338	PASS
177	176	5	9	7.9	2000	PASS

6M138588.D BFB.M Mon Apr 18 13:07:33 2016

BFB

```
Data File : C:\MSDCHEM\2\DATA\041816\8M411510.D          Vial: 1
Acq On    : 18 Apr 2016  15:39                    Operator: TMB
Sample    : WG565384-01 50ng BFB STD 8260         Inst    : HPMS8
Misc      : 1,1 STD75485                          Multiplr: 1.00
MS Integration Params: rteint.p
Method    : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title     : SOP:OVL MSV01
```



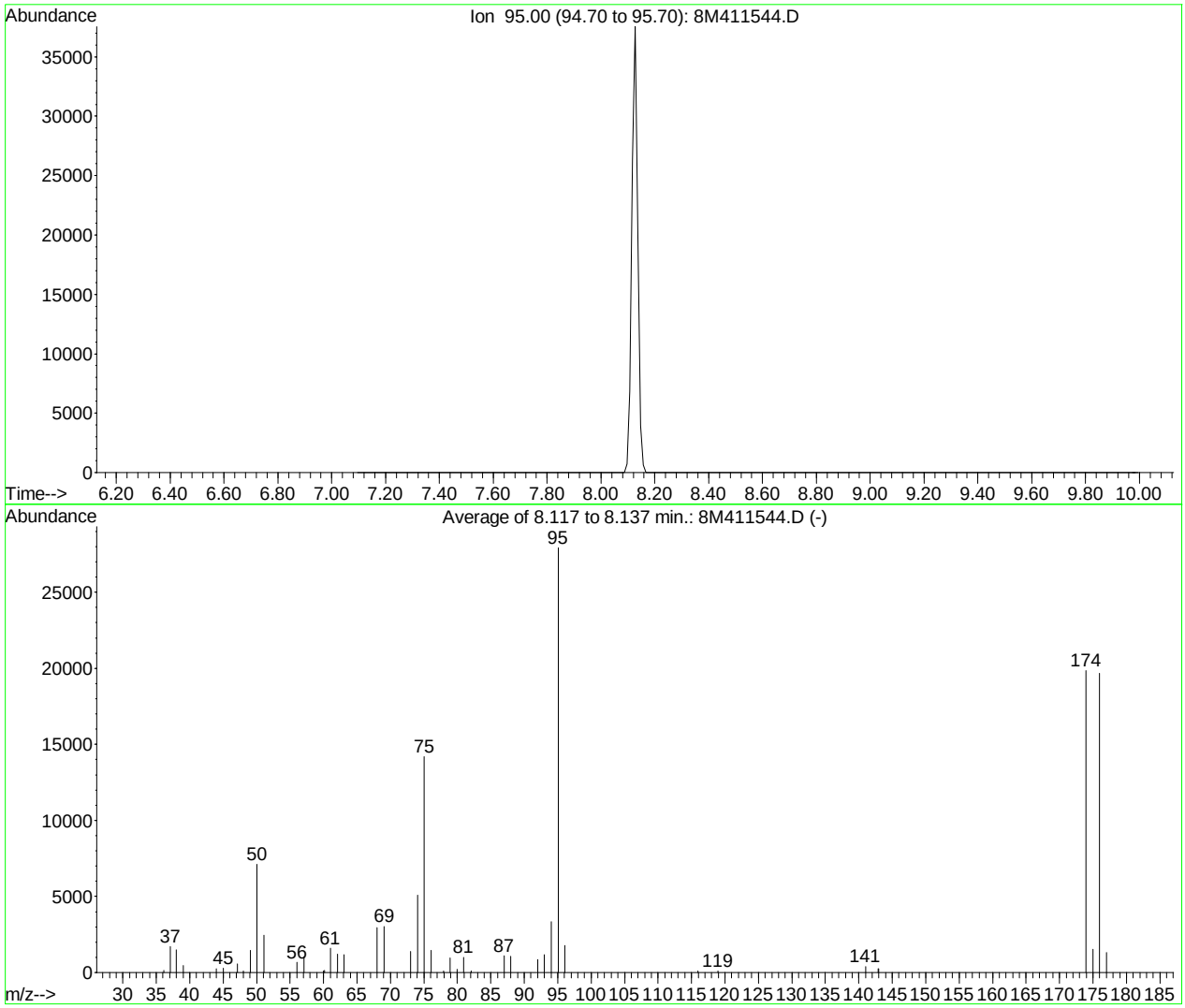
AutoFind: Scans 101, 102, 103; Background Corrected with Scan 96

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	28.4	8095	PASS
75	95	30	60	54.1	15436	PASS
95	95	100	100	100.0	28546	PASS
96	95	5	9	6.5	1863	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.1	21439	PASS
175	174	5	9	7.8	1664	PASS
176	174	95	101	95.7	20507	PASS
177	176	5	9	7.0	1437	PASS

8M411510.D BFB.M Mon Apr 18 15:50:07 2016

BFB

Data File : C:\MSDCHEM\2\DATA\041916\8M411544.D Vial: 1
Acq On : 19 Apr 2016 14:19 Operator: TMB
Sample : WG565516-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



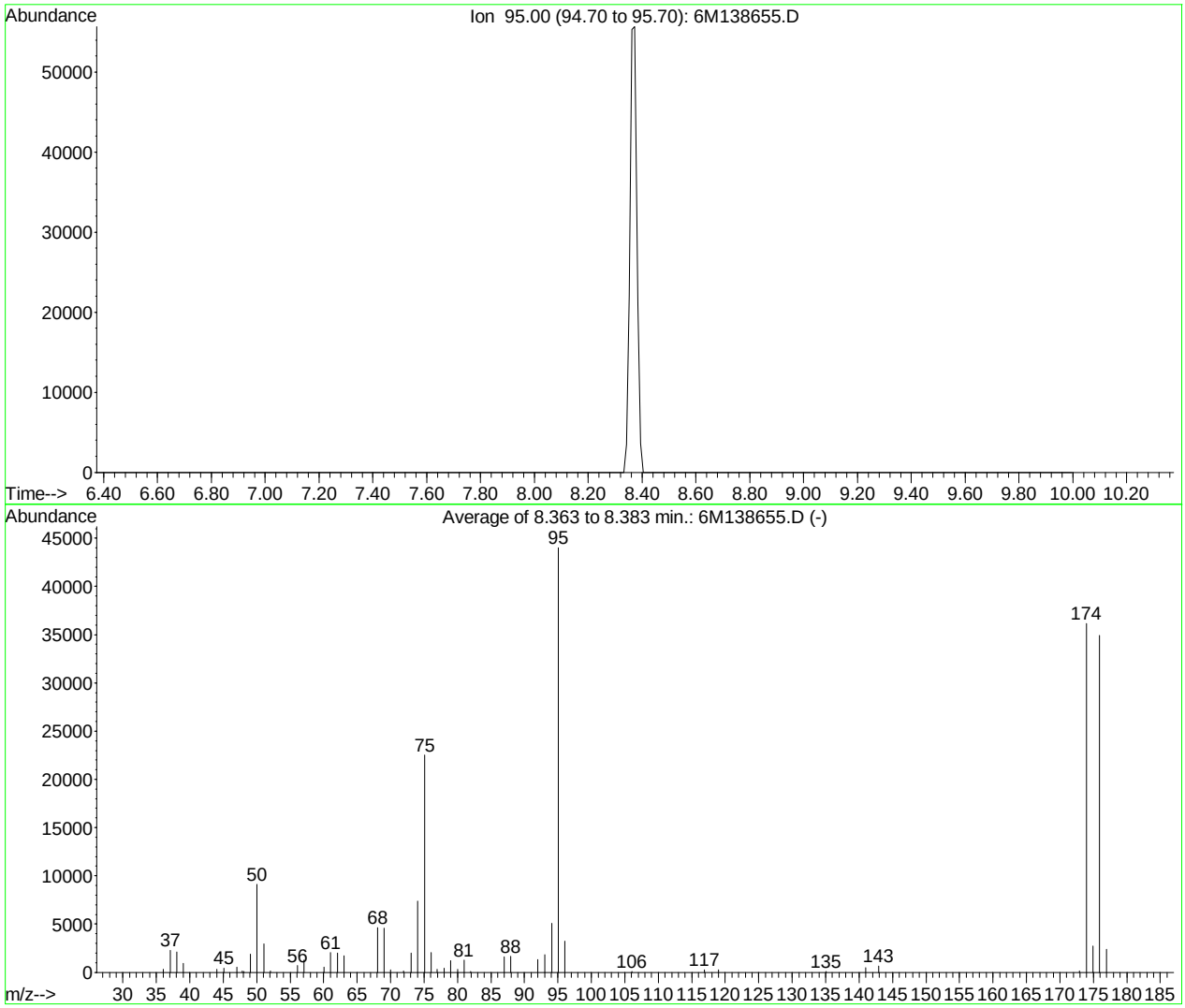
AutoFind: Scans 101, 102, 103; Background Corrected with Scan 96

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.5	7131	PASS
75	95	30	60	50.8	14188	PASS
95	95	100	100	100.0	27917	PASS
96	95	5	9	6.4	1774	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.1	19838	PASS
175	174	5	9	7.6	1514	PASS
176	174	95	101	99.2	19683	PASS
177	176	5	9	6.6	1301	PASS

8M411544.D BFB.M Tue Apr 19 14:57:38 2016

BFB

Data File : C:\MSDCHEM\1\DATA\042016\6M138655.D Vial: 1
Acq On : 20 Apr 2016 11:23 Operator: TMB
Sample : WG565672-01 50ng BFB STD 8260 Inst : HPMS6
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title : SOP: OVL MSV01



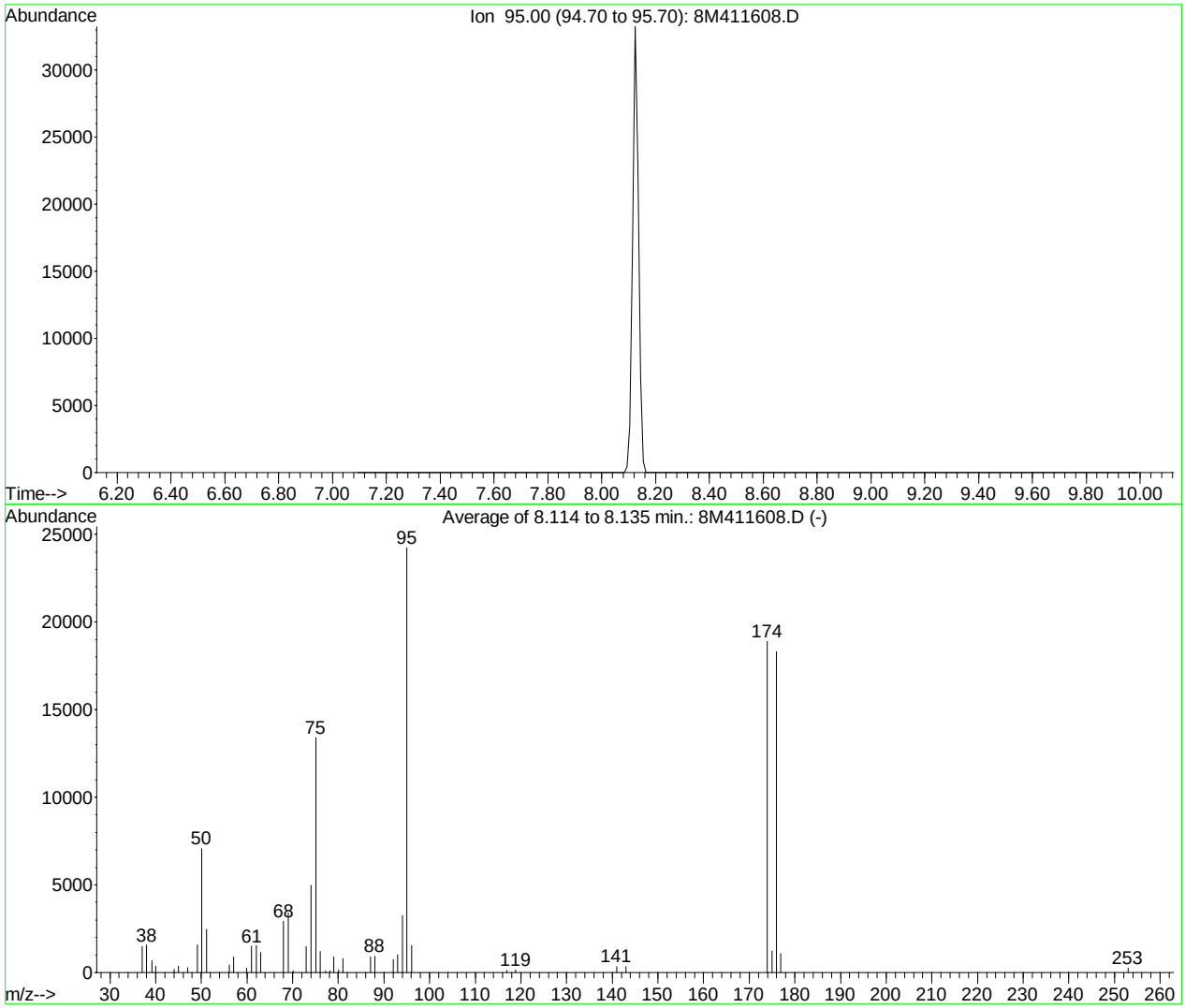
AutoFind: Scans 321, 322, 323; Background Corrected with Scan 316

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.7	9109	PASS
75	95	30	60	51.1	22507	PASS
95	95	100	100	100.0	44024	PASS
96	95	5	9	7.3	3212	PASS
173	174	0.00	2	0.3	117	PASS
174	95	50	100	82.2	36173	PASS
175	174	5	9	7.5	2721	PASS
176	174	95	101	96.6	34944	PASS
177	176	5	9	6.9	2410	PASS

6M138655.D BFB.M Wed Apr 20 11:33:44 2016

BFB

Data File : C:\MSDCHEM\2\DATA\042116\8M411608.D Vial: 3
Acq On : 21 Apr 2016 12:39 Operator: TMB
Sample : WG565879-01 50ng BFB STD 8260 Inst : HPMS8
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\2\METHODS\BFB.M (RTE Integrator)
Title : SOP:OVL MSV01



AutoFind: Scans 101, 102, 103; Background Corrected with Scan 96

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	29.2	7083	PASS
75	95	30	60	55.3	13386	PASS
95	95	100	100	100.0	24226	PASS
96	95	5	9	6.4	1557	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	78.0	18892	PASS
175	174	5	9	6.5	1232	PASS
176	174	95	101	96.9	18308	PASS
177	176	5	9	6.0	1090	PASS

8M411608.D BFB.M Thu Apr 21 12:49:50 2016

Data File : C:\MSDCHEM\1\DATA\041816\6M138592.D Vial: 5
Acq On : 18 Apr 2016 14:47 Operator: TMB
Sample : WG565328-01 VBLK0418 BLANK STD 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:07:38 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

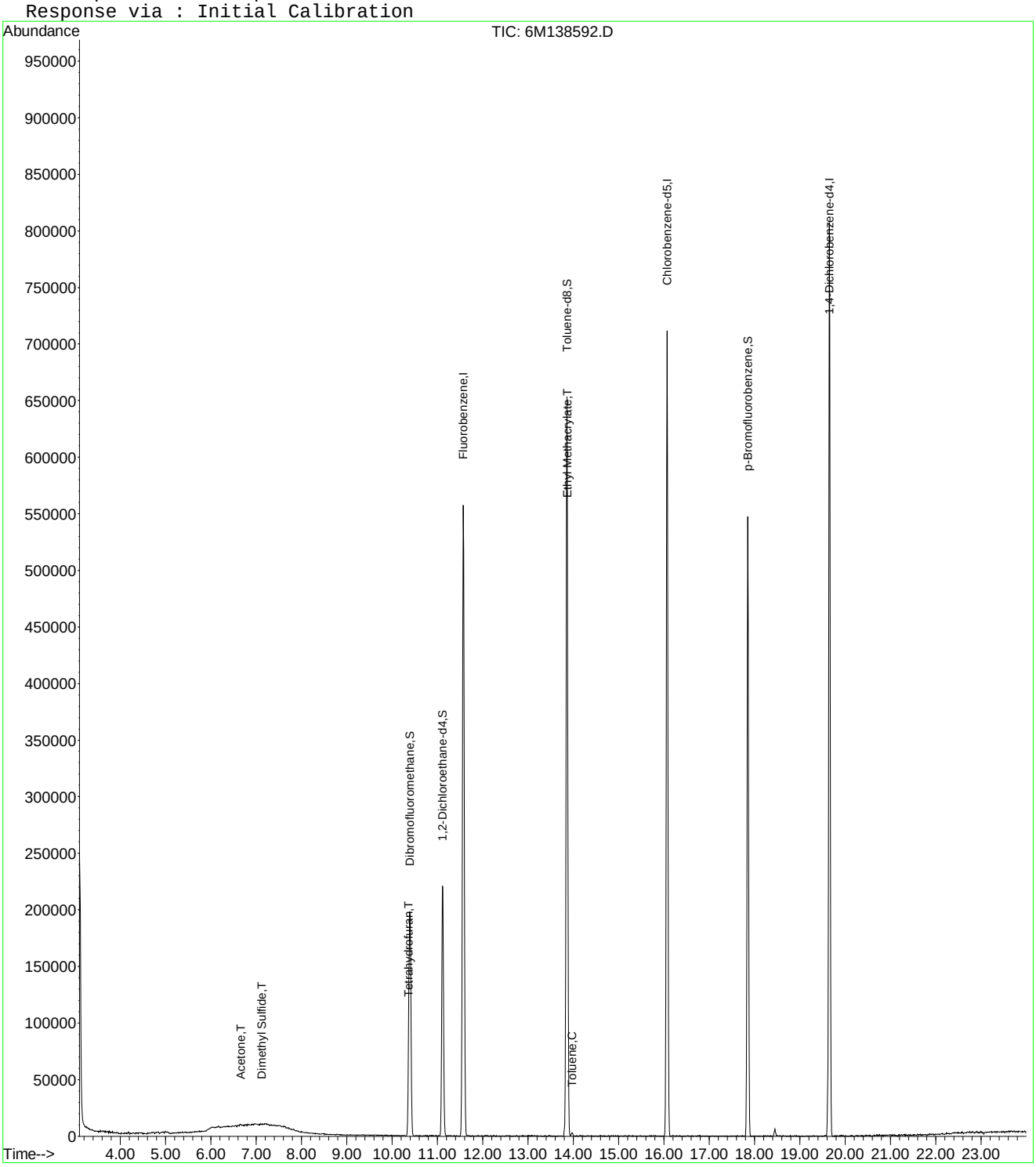
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	691976	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	520443	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	284534	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	182207	25.7109	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.84%			
43) 1,2-Dichloroethane-d4	11.11	65	222734	25.8965	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 103.60%			
58) Toluene-d8	13.86	98	603297	25.7485	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.00%			
80) p-Bromofluorobenzene	17.85	95	250077	26.3255	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 105.32%			
Target Compounds						Qvalue
13) Acetone	6.66	43	2419	1.1273	ug/L #	46
16) Dimethyl Sulfide	7.12	62	819	0.1403	ug/L #	1
36) Tetrahydrofuran	10.36	42	3268	1.5838	ug/L #	66
59) Toluene	13.97	91	4120	0.1422	ug/L	86
60) Ethyl Methacrylate	13.87	69	1001	0.1286	ug/L #	33

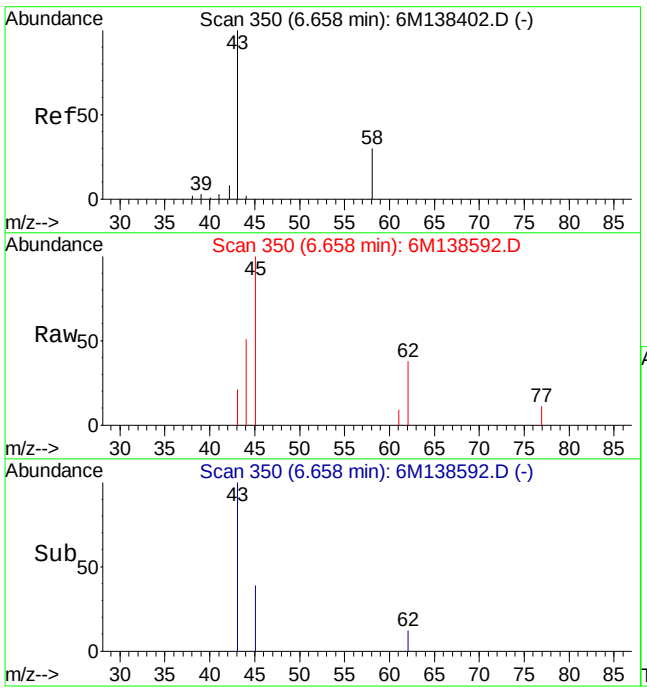
(#) = qualifier out of range (m) = manual integration
6M138592.D 8260WTR.M Tue Apr 19 09:07:38 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\041816\6M138592.D Vial: 5
Acq On : 18 Apr 2016 14:47 Operator: TMB
Sample : WG565328-01 VBLK0418 BLANK STD 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:07 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

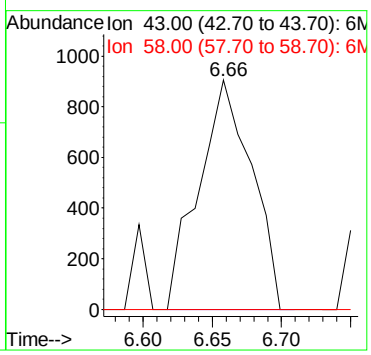


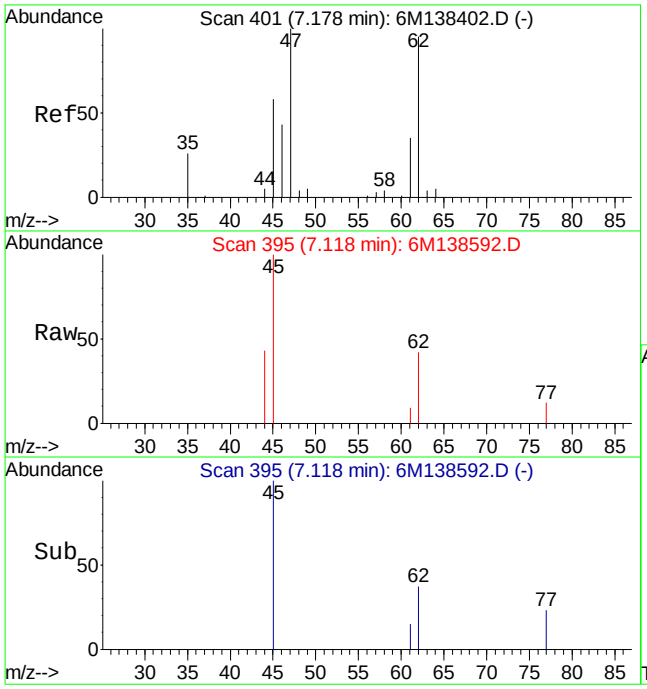


#13
Acetone
Concen: 1.13 ug/L
RT: 6.66 min Scan# 350
Delta R.T. -0.01 min
Lab File: 6M138592.D
Acq: 18 Apr 2016 14:47

Tgt Ion: 43 Resp: 2419

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

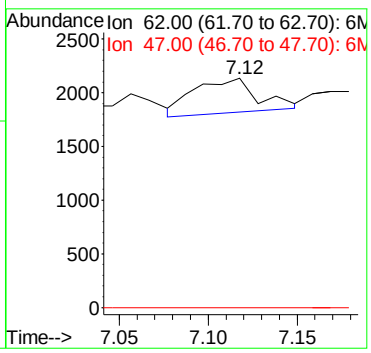


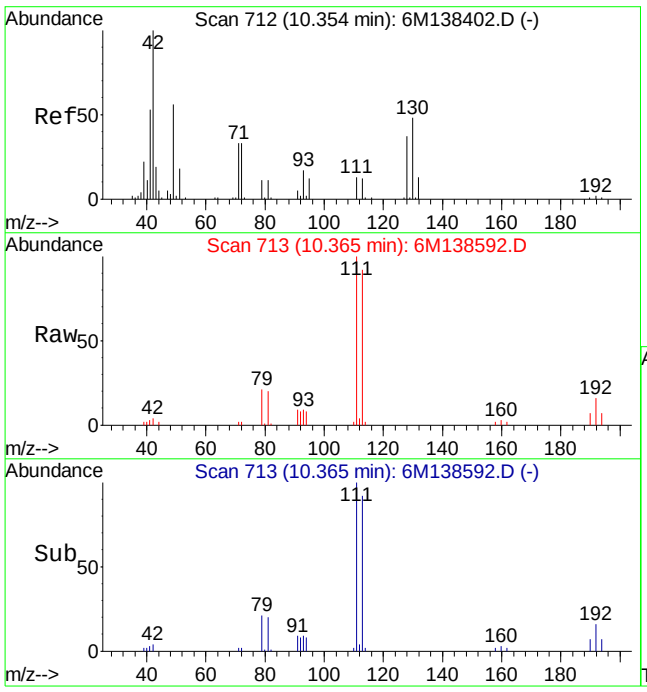


#16
Dimethyl Sulfide
Concen: 0.14 ug/L
RT: 7.12 min Scan# 395
Delta R.T. -0.05 min
Lab File: 6M138592.D
Acq: 18 Apr 2016 14:47

Tgt Ion: 62 Resp: 819

Ion	Ratio	Lower	Upper
62	100		
47	0.0	58.0	135.2#

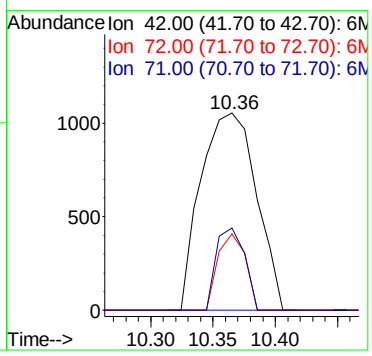


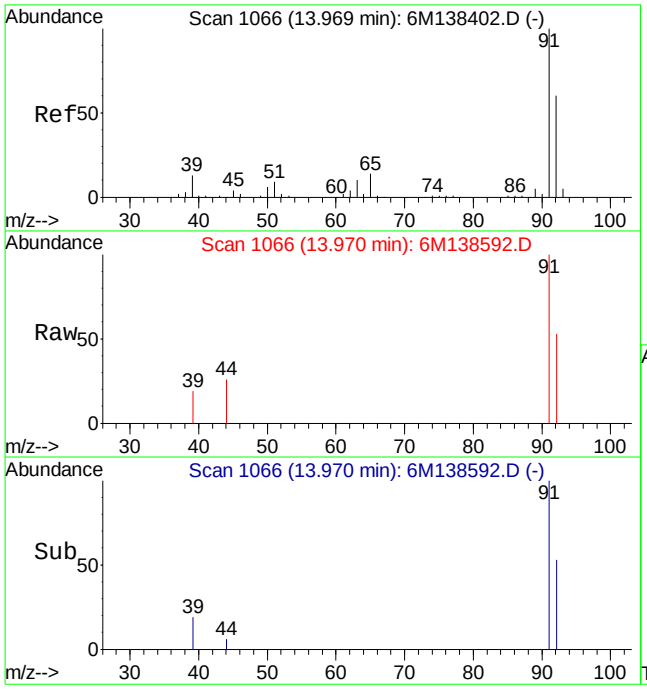


#36
Tetrahydrofuran
Concen: 1.58 ug/L
RT: 10.36 min Scan# 713
Delta R.T. 0.00 min
Lab File: 6M138592.D
Acq: 18 Apr 2016 14:47

Tgt Ion: 42 Resp: 3268

Ion	Ratio	Lower	Upper
42	100		
72	19.4	26.2	61.2#
71	21.4	24.2	56.6#

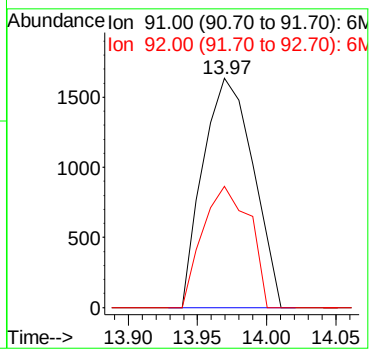


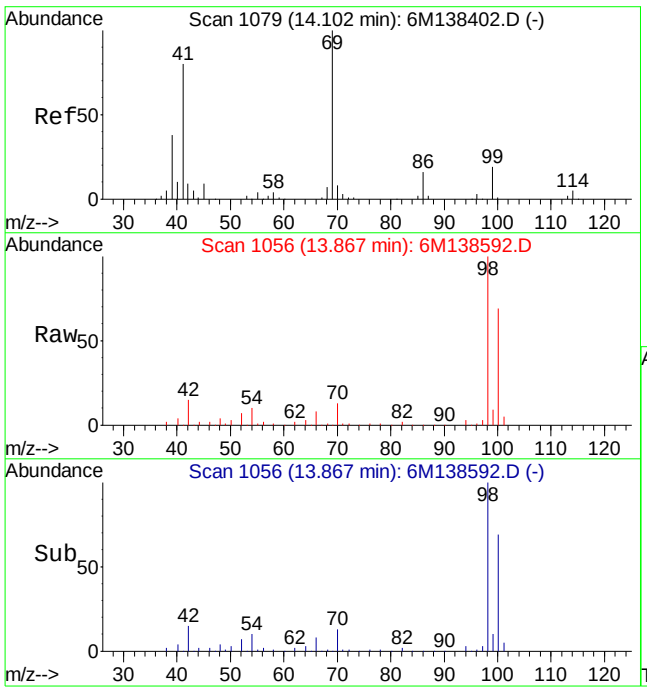


#59
Toluene
Concen: 0.14 ug/L
RT: 13.97 min Scan# 1066
Delta R.T. -0.01 min
Lab File: 6M138592.D
Acq: 18 Apr 2016 14:47

Tgt Ion: 91 Resp: 4120

Ion	Ratio	Lower	Upper
91	100		
92	49.6	36.3	84.7

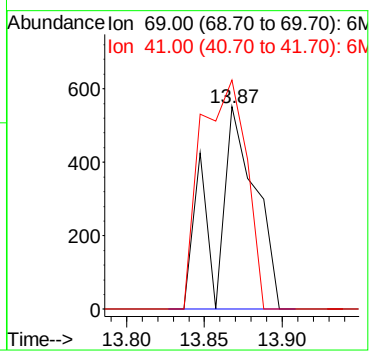




#60
Ethyl Methacrylate
Concen: 0.13 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138592.D
Acq: 18 Apr 2016 14:47

Tgt Ion: 69 Resp: 1001

Ion	Ratio	Lower	Upper
69	100		
41	127.1	42.9	100.1#



Data File : C:\MSDCHEM\1\DATA\042016\6M138659.D Vial: 5
Acq On : 20 Apr 2016 13:27 Operator: TMB
Sample : WG565673-01 VBLK0420 BLANK STD 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 09:21:49 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

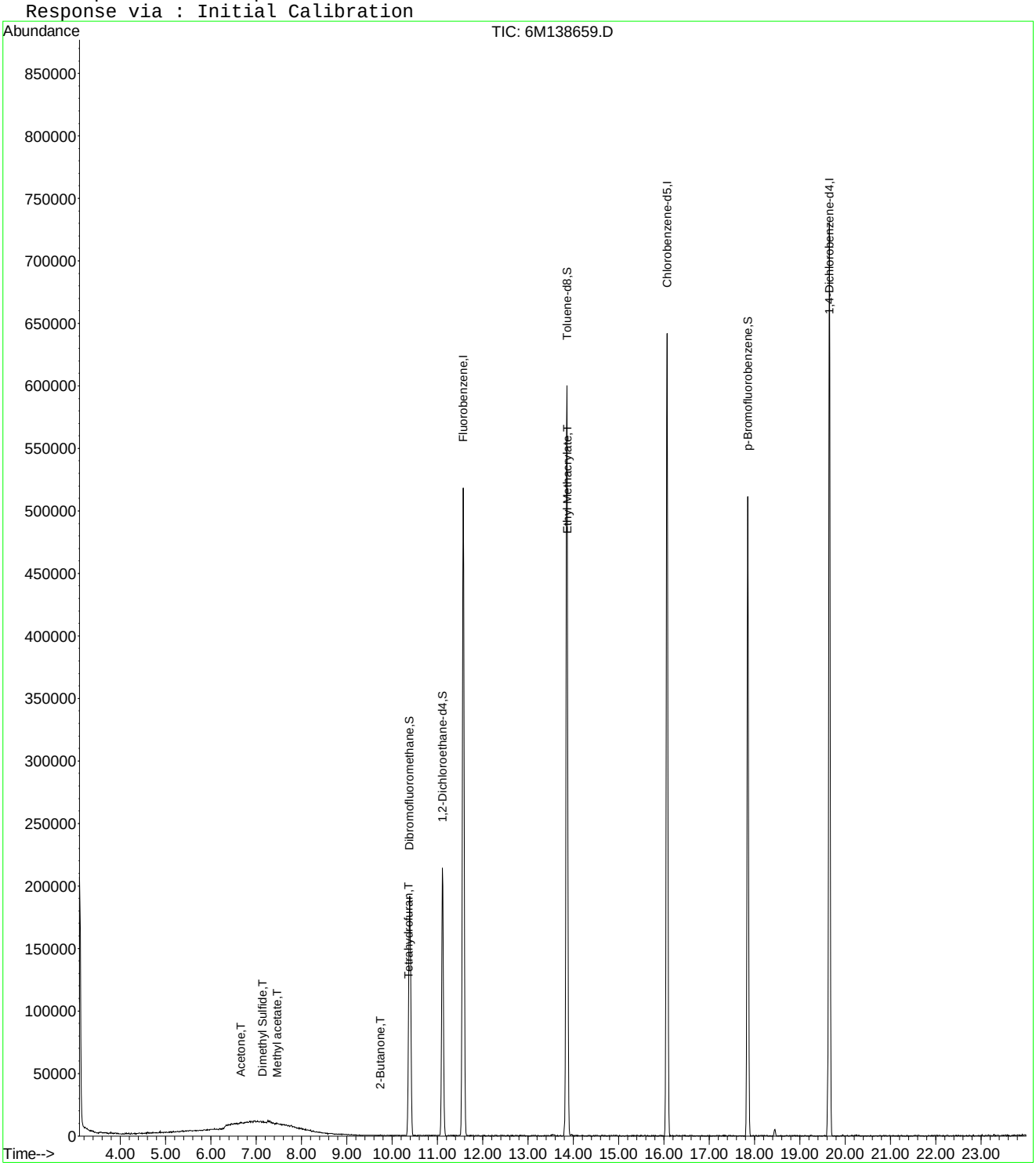
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	628545	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	472009	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	253482	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	173819	27.0025	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.00%			
43) 1,2-Dichloroethane-d4	11.11	65	213052	27.2706	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 109.08%			
58) Toluene-d8	13.86	98	556034	26.1665	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.68%			
80) p-Bromofluorobenzene	17.85	95	229436	27.1114	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 108.44%			
Target Compounds						Qvalue
13) Acetone	6.66	43	2808	1.4407	ug/L #	46
16) Dimethyl Sulfide	7.14	62	695	0.1311	ug/L #	1
18) Methyl acetate	7.47	43	953	0.1761	ug/L #	60
29) 2-Butanone	9.74	43	392	0.1363	ug/L #	52
36) Tetrahydrofuran	10.37	42	2682	1.4310	ug/L #	54
60) Ethyl Methacrylate	13.87	69	1492	0.2113	ug/L	82

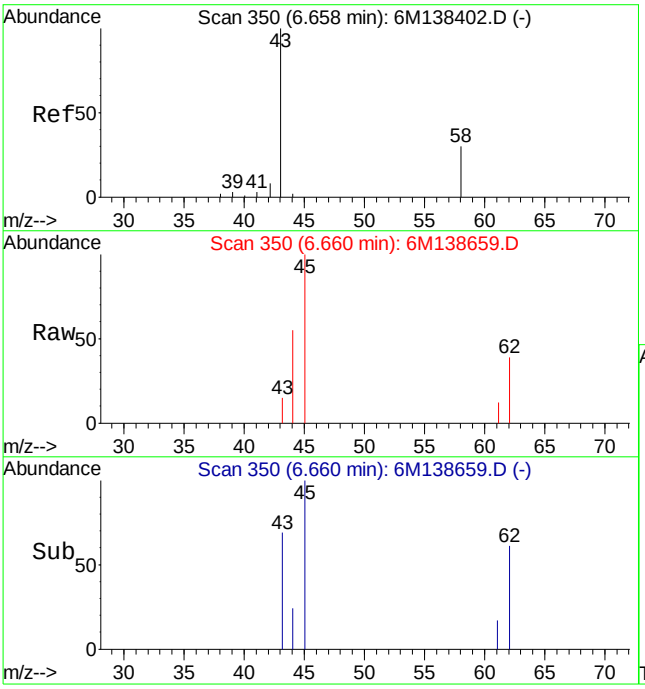
(#) = qualifier out of range (m) = manual integration
6M138659.D 8260WTR.M Thu Apr 21 09:21:50 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042016\6M138659.D Vial: 5
Acq On : 20 Apr 2016 13:27 Operator: TMB
Sample : WG565673-01 VBLK0420 BLANK STD 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 9:21 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

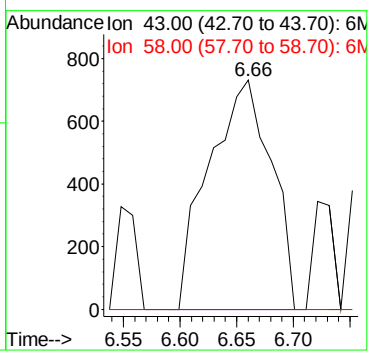


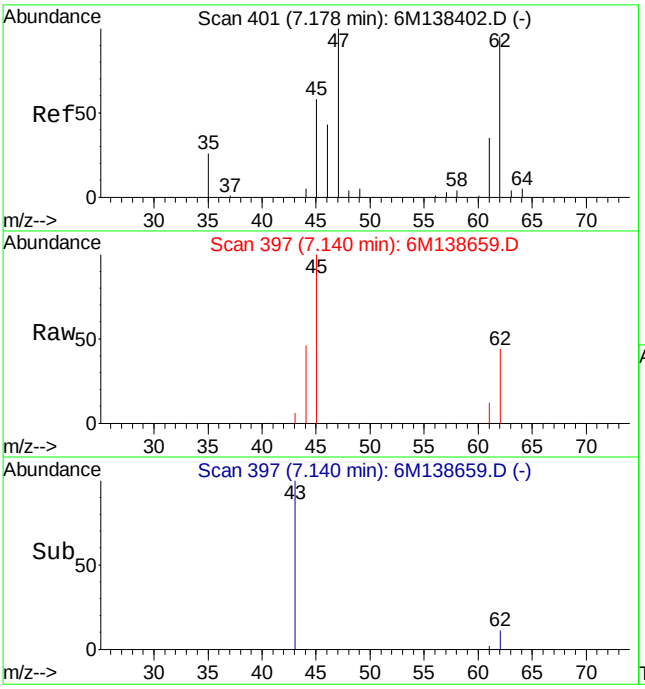


#13
Acetone
Concen: 1.44 ug/L
RT: 6.66 min Scan# 350
Delta R.T. -0.01 min
Lab File: 6M138659.D
Acq: 20 Apr 2016 13:27

Tgt Ion: 43 Resp: 2808

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

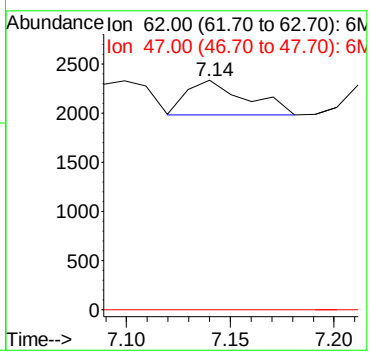


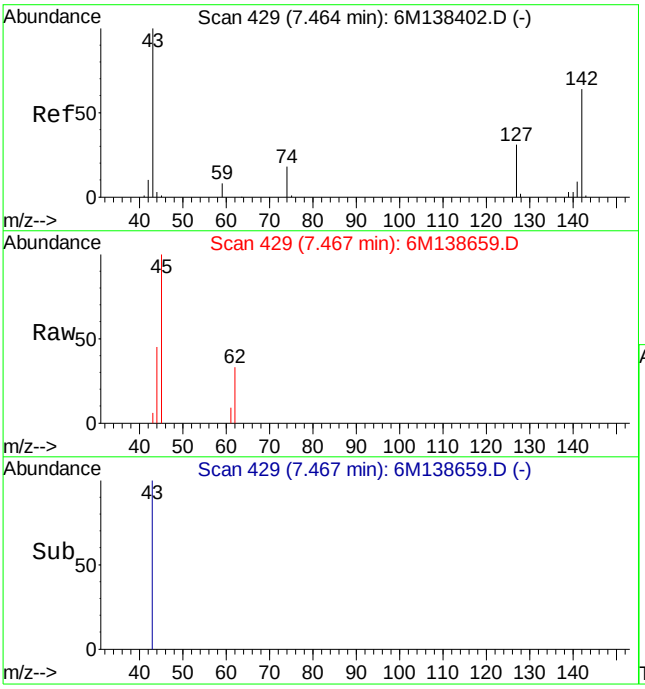


#16
Dimethyl Sulfide
Concen: 0.13 ug/L
RT: 7.14 min Scan# 397
Delta R.T. -0.03 min
Lab File: 6M138659.D
Acq: 20 Apr 2016 13:27

Tgt Ion: 62 Resp: 695

Ion	Ratio	Lower	Upper
62	100		
47	0.0	58.0	135.2#

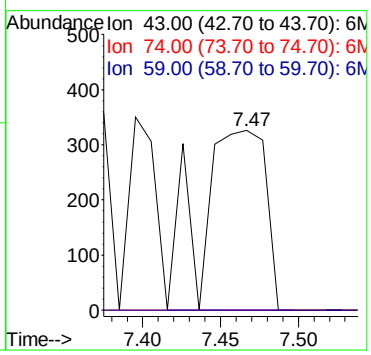


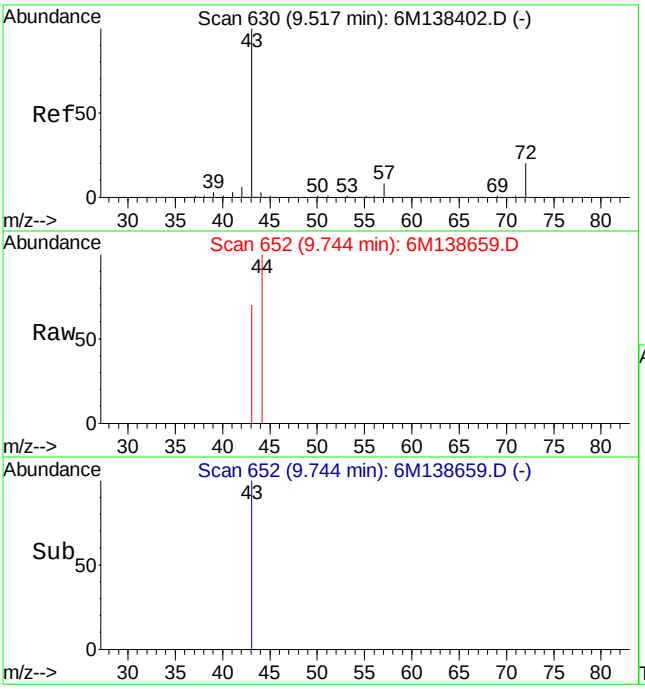


#18
Methyl acetate
Concen: 0.18 ug/L
RT: 7.47 min Scan# 429
Delta R.T. 0.00 min
Lab File: 6M138659.D
Acq: 20 Apr 2016 13:27

Tgt Ion: 43 Resp: 953

Ion	Ratio	Lower	Upper
43	100		
74	0.0	13.1	30.7#
59	0.0	5.0	11.6#

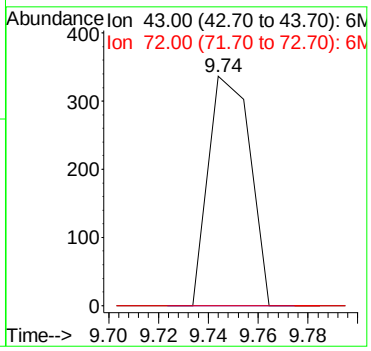


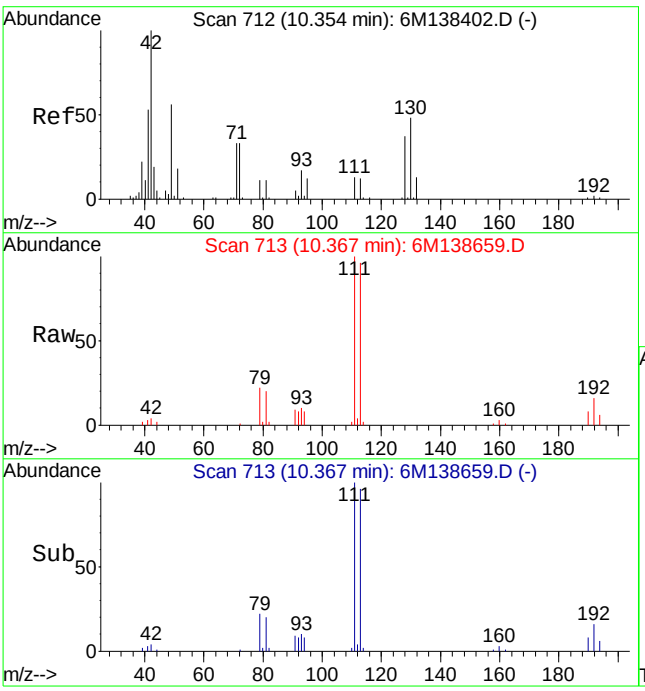


#29
2-Butanone
Concen: 0.14 ug/L
RT: 9.74 min Scan# 652
Delta R.T. 0.22 min
Lab File: 6M138659.D
Acq: 20 Apr 2016 13:27

Tgt Ion: 43 Resp: 392

Ion	Ratio	Lower	Upper
43	100		
72	0.0	14.1	32.9#

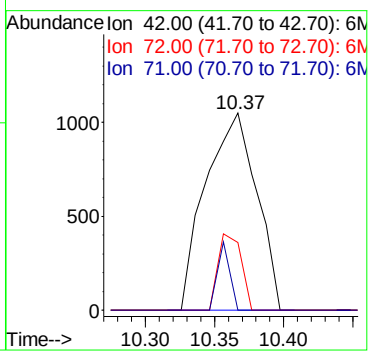


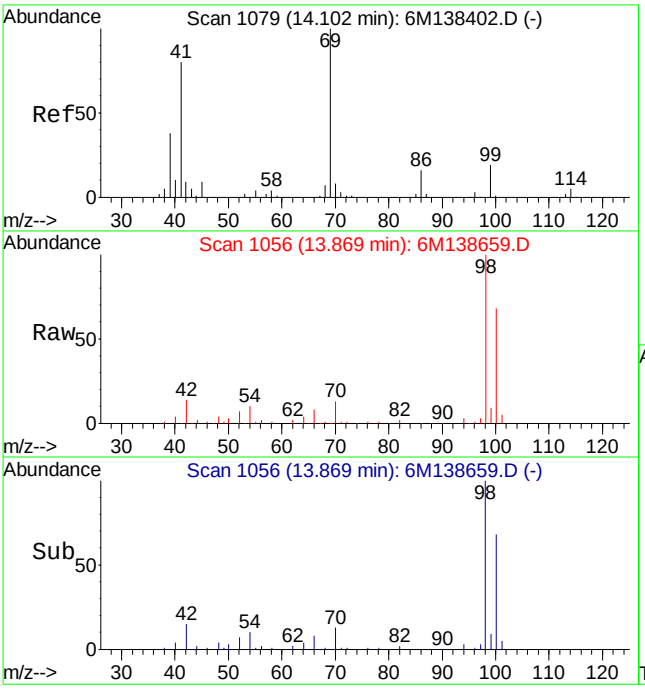


#36
Tetrahydrofuran
Concen: 1.43 ug/L
RT: 10.37 min Scan# 713
Delta R.T. 0.00 min
Lab File: 6M138659.D
Acq: 20 Apr 2016 13:27

Tgt Ion: 42 Resp: 2682

Ion	Ratio	Lower	Upper
42	100		
72	17.6	26.2	61.2#
71	8.3	24.2	56.6#

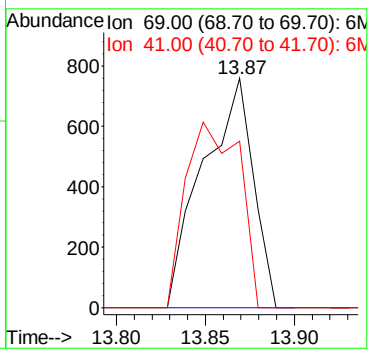




#60
Ethyl Methacrylate
Concen: 0.21 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138659.D
Acq: 20 Apr 2016 13:27

Tgt Ion: 69 Resp: 1492

Ion	Ratio	Lower	Upper
69	100		
41	86.4	42.9	100.1



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411514.D Vial: 5
Acq On : 18 Apr 2016 17:31 Operator: TMB
Sample : WG565386-01 VBLK0418 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:01 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

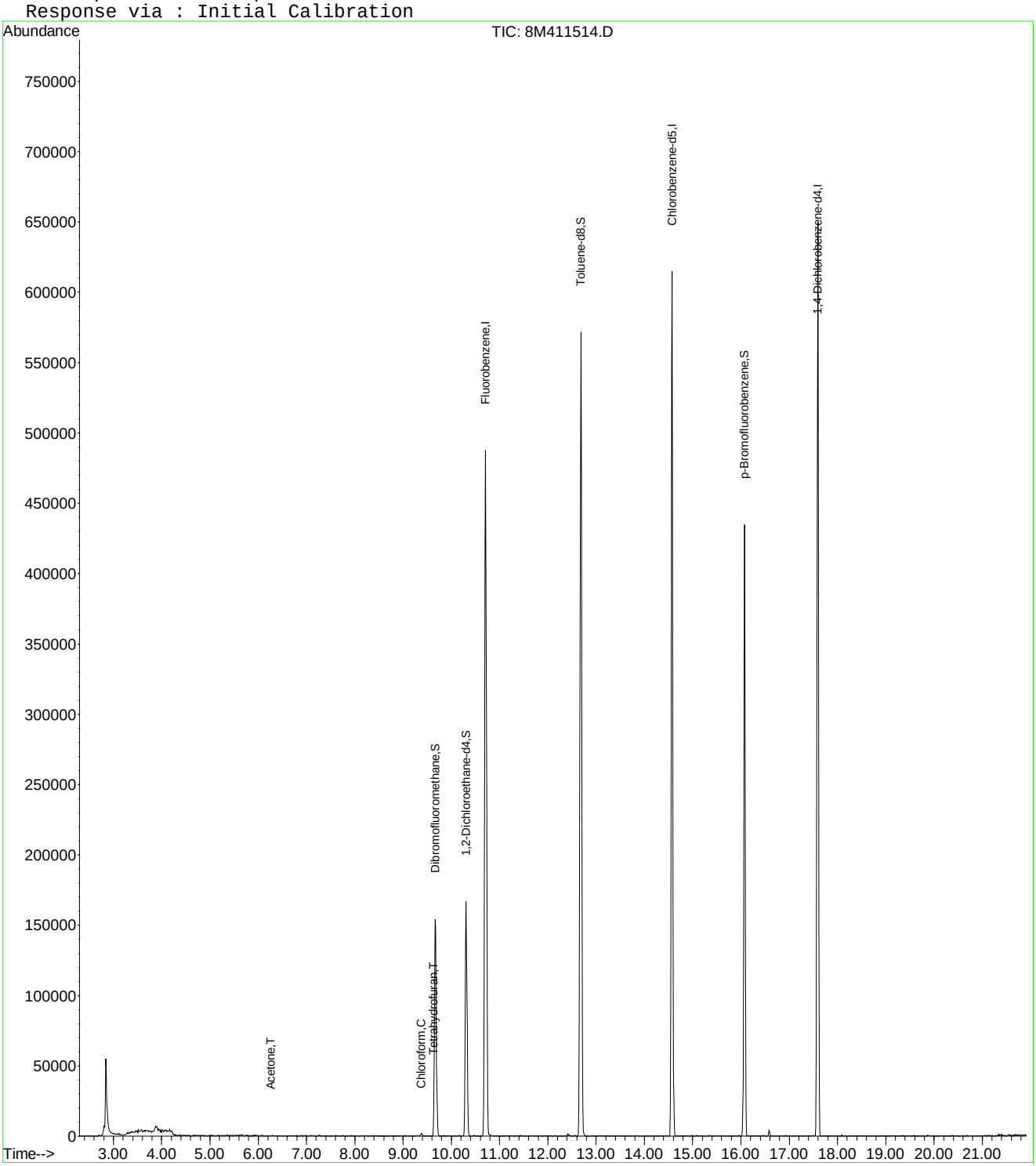
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	546020	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	388562	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	187820	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	133837	23.9730	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.88%			
43) 1,2-Dichloroethane-d4	10.31	65	140469	23.9647	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 95.84%			
58) Toluene-d8	12.68	98	478347	24.6008	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.40%			
80) p-Bromofluorobenzene	16.07	95	176755	24.0872	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.36%			
Target Compounds						Qvalue
13) Acetone	6.27	43	248	0.2389	ug/L #	48
33) Chloroform	9.38	83	1963	0.1886	ug/L	93
36) Tetrahydrofuran	9.64	42	2366	1.8625	ug/L #	50

(#) = qualifier out of range (m) = manual integration
8M411514.D 8260WT.M Tue Apr 19 08:41:02 2016 Page 1

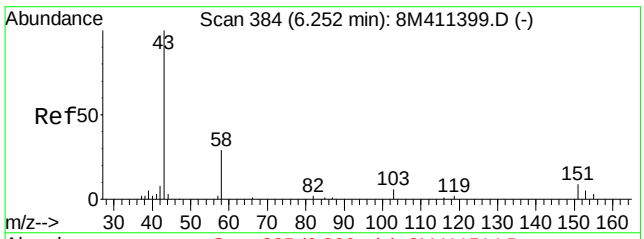
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411514.D Vial: 5
Acq On : 18 Apr 2016 17:31 Operator: TMB
Sample : WG565386-01 VBLK0418 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



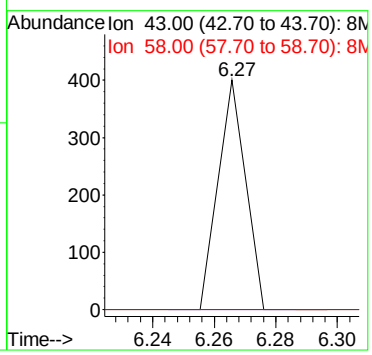
8M411514.D 8260WT.M Tue Apr 19 08:41:02 2016 Page 2

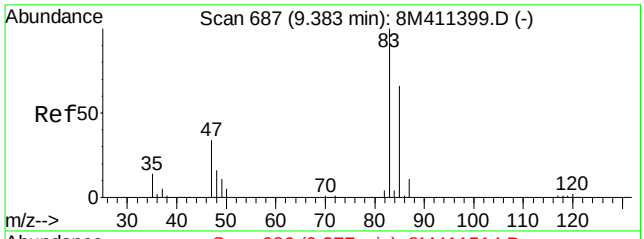


#13
Acetone
Concen: 0.24 ug/L
RT: 6.27 min Scan# 385
Delta R.T. 0.01 min
Lab File: 8M411514.D
Acq: 18 Apr 2016 17:31

Tgt Ion: 43 Resp: 248

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

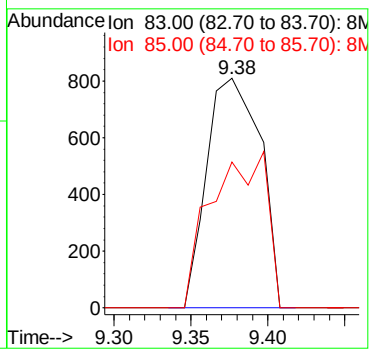


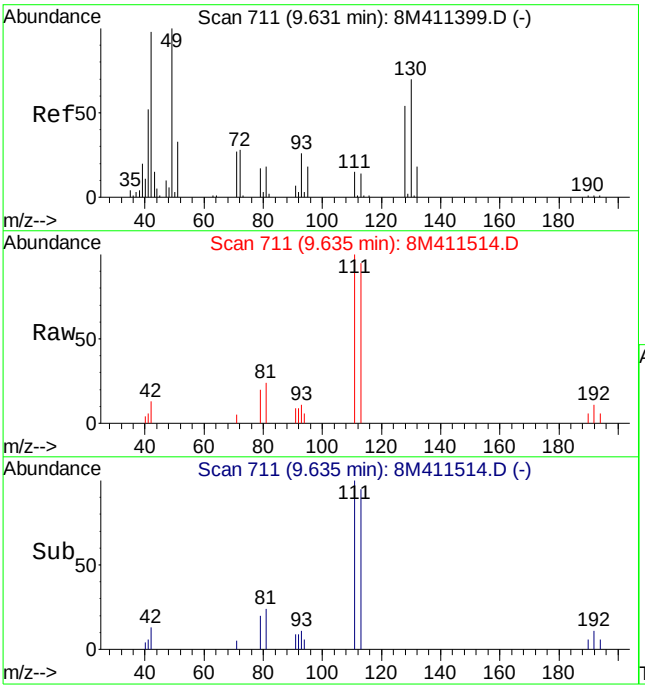


#33
Chloroform
Concen: 0.19 ug/L
RT: 9.38 min Scan# 686
Delta R.T. -0.01 min
Lab File: 8M411514.D
Acq: 18 Apr 2016 17:31

Tgt Ion: 83 Resp: 1963

Ion	Ratio	Lower	Upper
83	100		
85	70.4	38.8	90.6

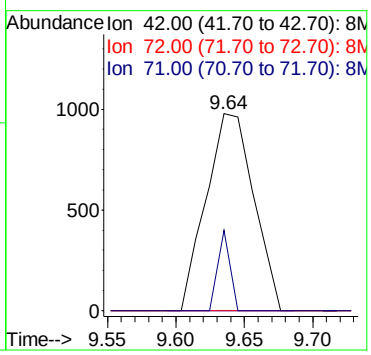




#36
Tetrahydrofuran
Concen: 1.86 ug/L
RT: 9.64 min Scan# 711
Delta R.T. 0.00 min
Lab File: 8M411514.D
Acq: 18 Apr 2016 17:31

Tgt Ion: 42 Resp: 2366

Ion	Ratio	Lower	Upper
42	100		
72	0.0	20.8	48.6#
71	10.4	19.0	44.4#



Data File : C:\MSDCHEM\2\DATA\041916\8M411547.D Vial: 4
Acq On : 19 Apr 2016 15:41 Operator: TMB
Sample : WG565517-01 VBLK0419 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 08:38:22 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

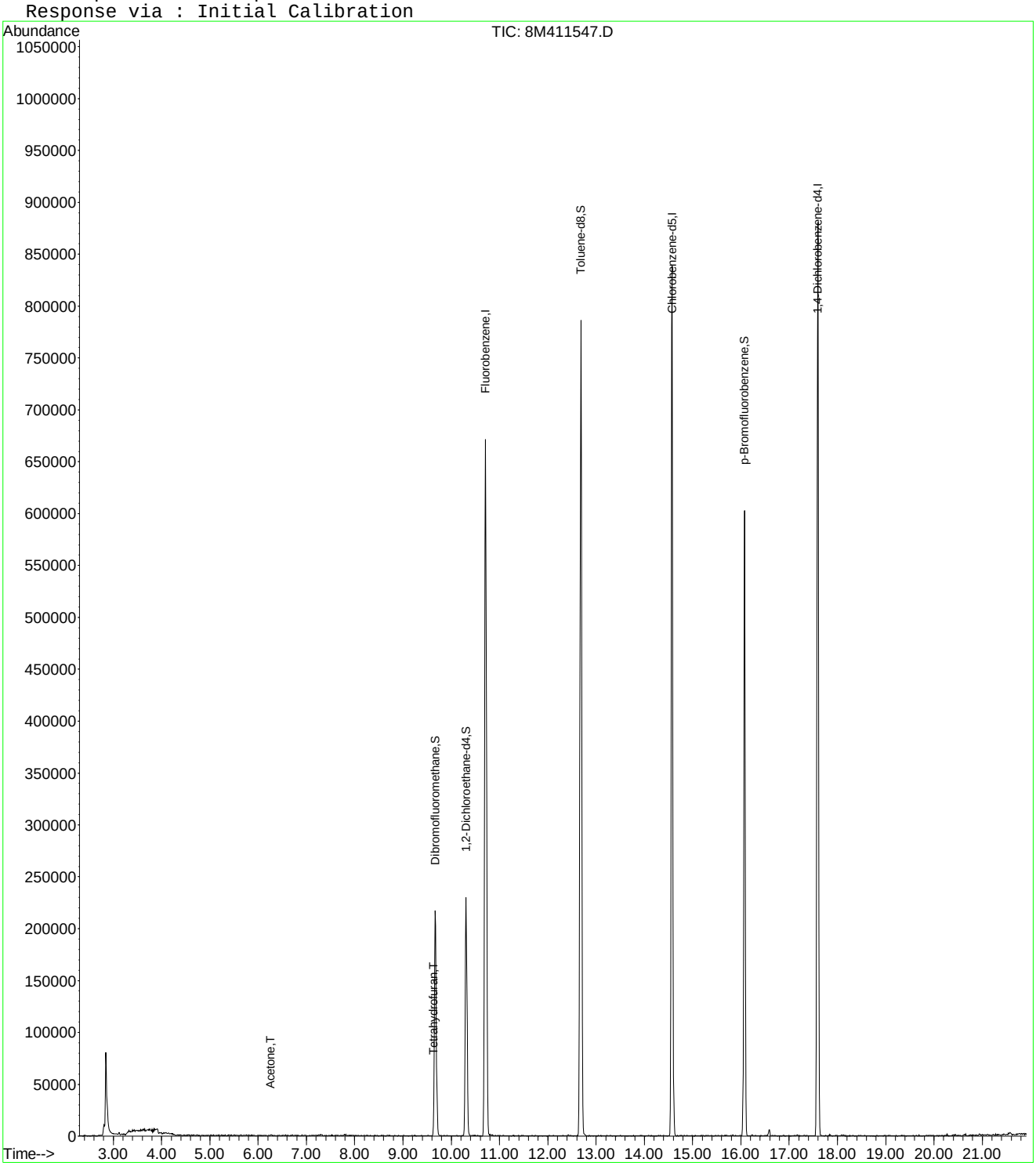
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	758953	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	536901	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	260453	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	184585	23.7868	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 95.16%			
43) 1,2-Dichloroethane-d4	10.31	65	197672	24.2622	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 97.04%			
58) Toluene-d8	12.68	98	650526	24.2123	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.84%			
80) p-Bromofluorobenzene	16.07	95	250640	24.6308	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.52%			
Target Compounds						Qvalue
13) Acetone	6.26	43	888	0.6155	ug/L #	48
36) Tetrahydrofuran	9.64	42	3345	1.8944	ug/L #	75

(#) = qualifier out of range (m) = manual integration
8M411547.D 8260WT.M Wed Apr 20 08:38:23 2016 Page 1

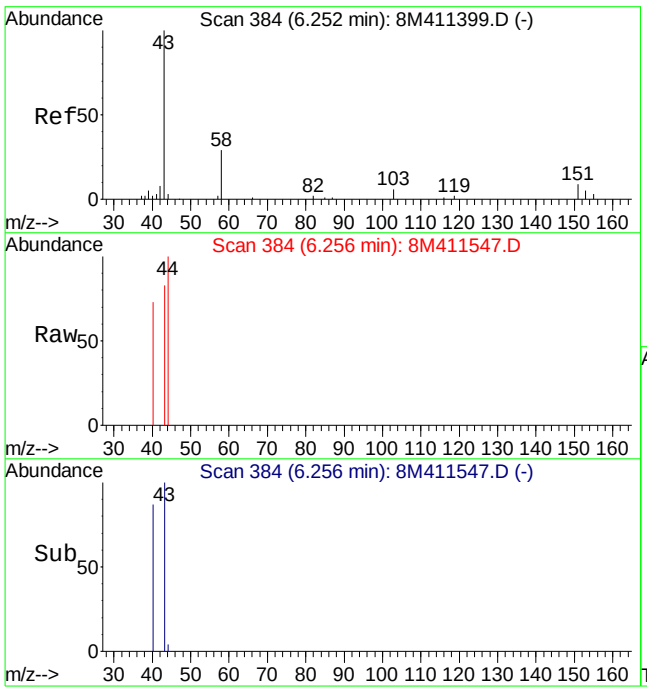
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041916\8M411547.D Vial: 4
Acq On : 19 Apr 2016 15:41 Operator: TMB
Sample : WG565517-01 VBLK0419 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 8:38 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



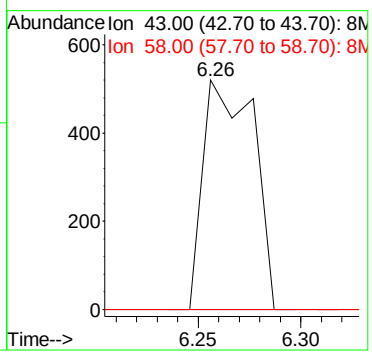
8M411547.D 8260WT.M Wed Apr 20 08:38:23 2016 Page 2

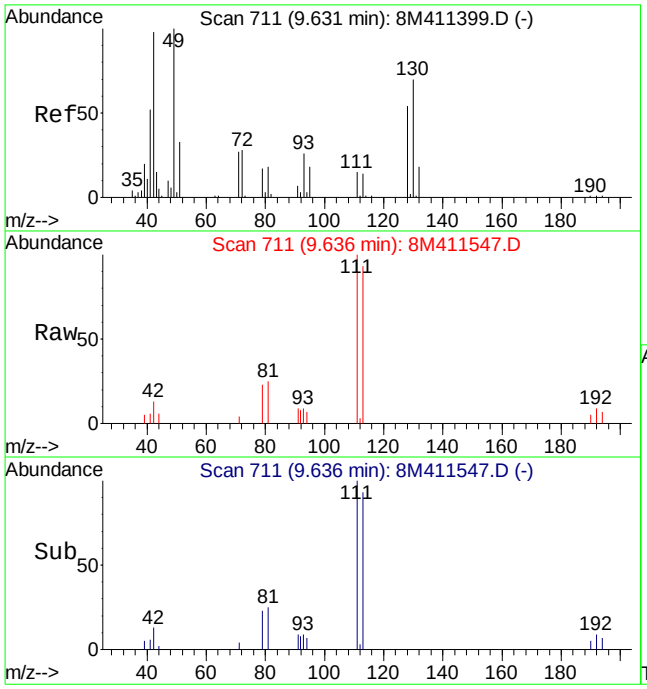


#13
Acetone
Concen: 0.62 ug/L
RT: 6.26 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411547.D
Acq: 19 Apr 2016 15:41

Tgt Ion: 43 Resp: 888

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

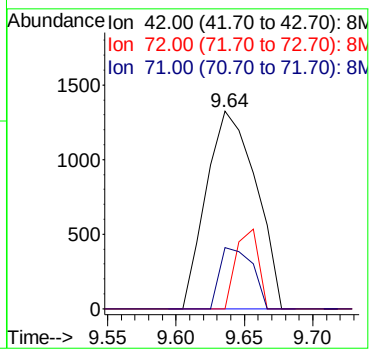




#36
Tetrahydrofuran
Concen: 1.89 ug/L
RT: 9.64 min Scan# 711
Delta R.T. 0.00 min
Lab File: 8M411547.D
Acq: 19 Apr 2016 15:41

Tgt Ion: 42 Resp: 3345

Ion	Ratio	Lower	Upper
42	100		
72	18.2	20.8	48.6#
71	20.2	19.0	44.4



Data File : C:\MSDCHEM\2\DATA\042116\8M411612.D Vial: 5
Acq On : 21 Apr 2016 14:31 Operator: TMB
Sample : WG565880-01 VBLK0421 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 09:35:48 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

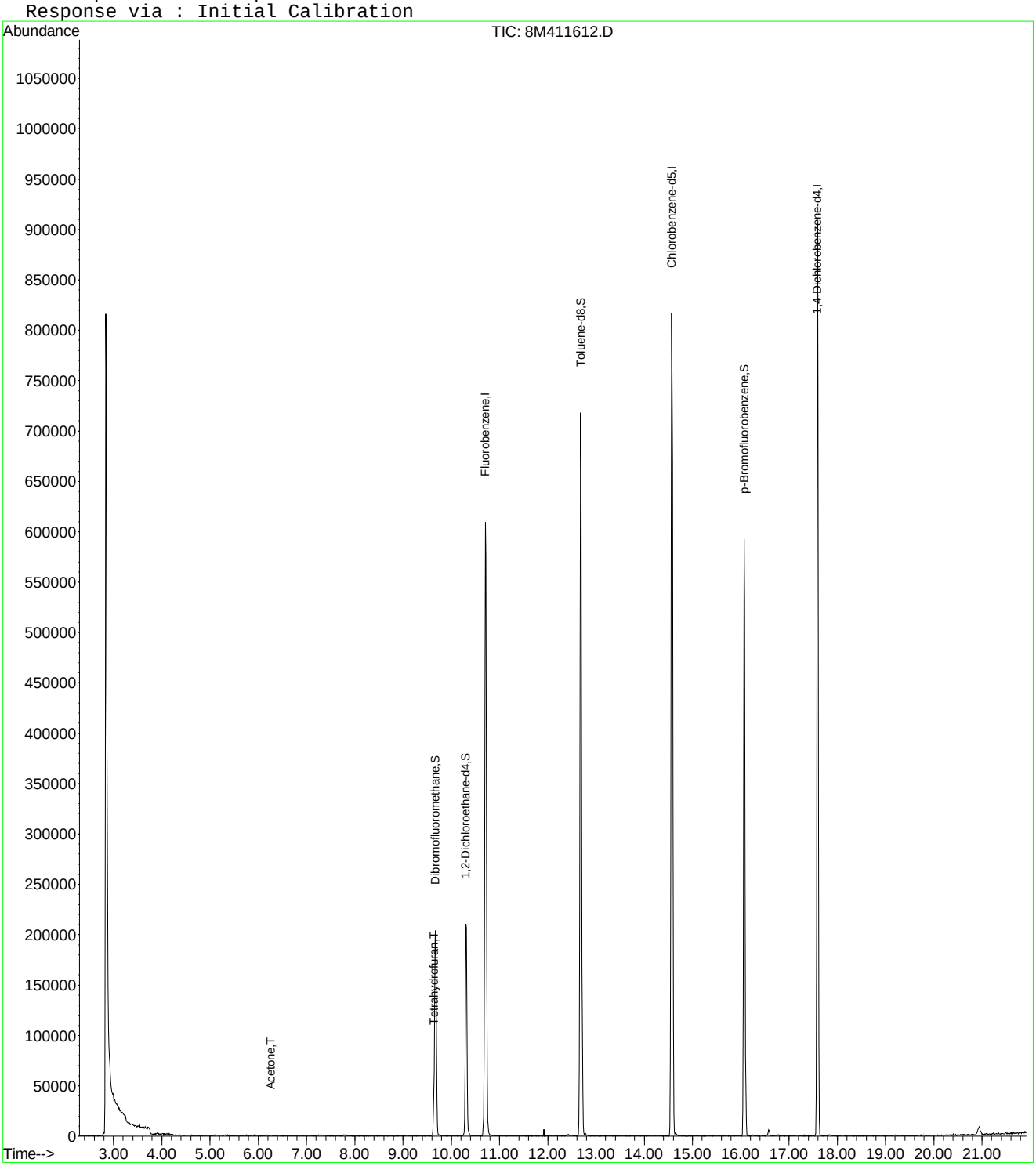
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	683373	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	512792	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	270342	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	180089	25.7741	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 103.08%			
43) 1,2-Dichloroethane-d4	10.30	65	204231	27.8397	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.36%			
58) Toluene-d8	12.68	98	607166	23.6609	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 94.64%			
80) p-Bromofluorobenzene	16.07	95	247164	23.4007	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 93.60%			
Target Compounds						Qvalue
13) Acetone	6.26	43	211	0.1624	ug/L #	48
36) Tetrahydrofuran	9.64	42	3908	2.4581	ug/L #	62

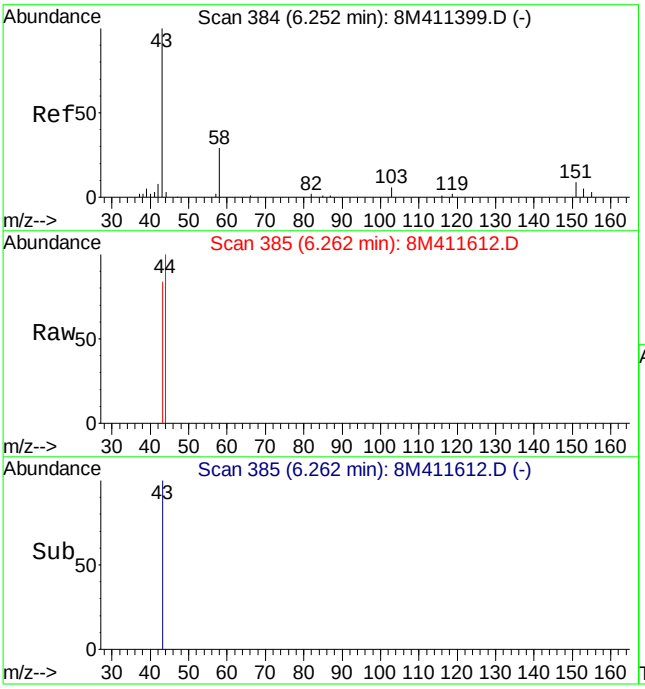
(#) = qualifier out of range (m) = manual integration
8M411612.D 8260WT.M Fri Apr 22 09:35:48 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411612.D Vial: 5
Acq On : 21 Apr 2016 14:31 Operator: TMB
Sample : WG565880-01 VBLK0421 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 9:35 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration

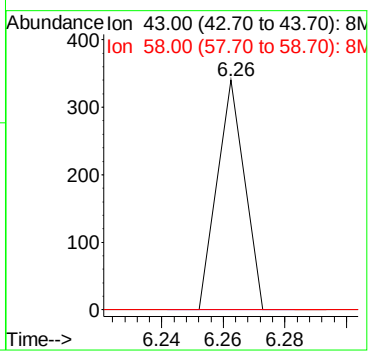


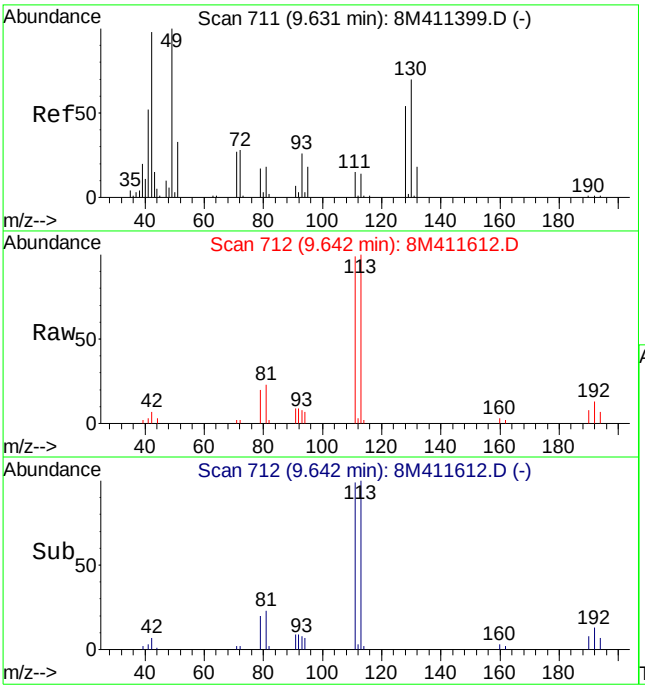


#13
Acetone
Concen: 0.16 ug/L
RT: 6.26 min Scan# 385
Delta R.T. 0.01 min
Lab File: 8M411612.D
Acq: 21 Apr 2016 14:31

Tgt Ion: 43 Resp: 211

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

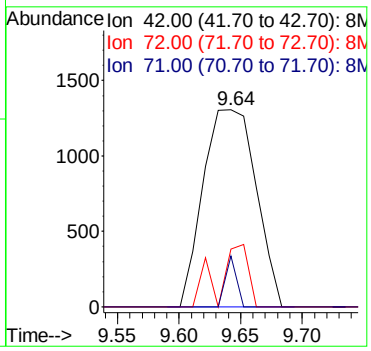




#36
Tetrahydrofuran
Concen: 2.46 ug/L
RT: 9.64 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411612.D
Acq: 21 Apr 2016 14:31

Tgt Ion: 42 Resp: 3908

Ion	Ratio	Lower	Upper
42	100		
72	17.8	20.8	48.6#
71	5.3	19.0	44.4#



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411612.D Vial: 5
Acq On : 21 Apr 2016 14:31 Operator: TMB
Sample : WG565880-01 VBLK0421 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 21 14:54:41 2016 Quant Results File: A9FOOWTR.RES

Quant Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	683373	25.00	ug/L	-0.01
11) Chlorobenzene-d5	14.57	117	512792	25.00	ug/L	-0.01
12) 1,4-Dichlorobenzene-d4	17.59	152	270342	25.00	ug/L	-0.01

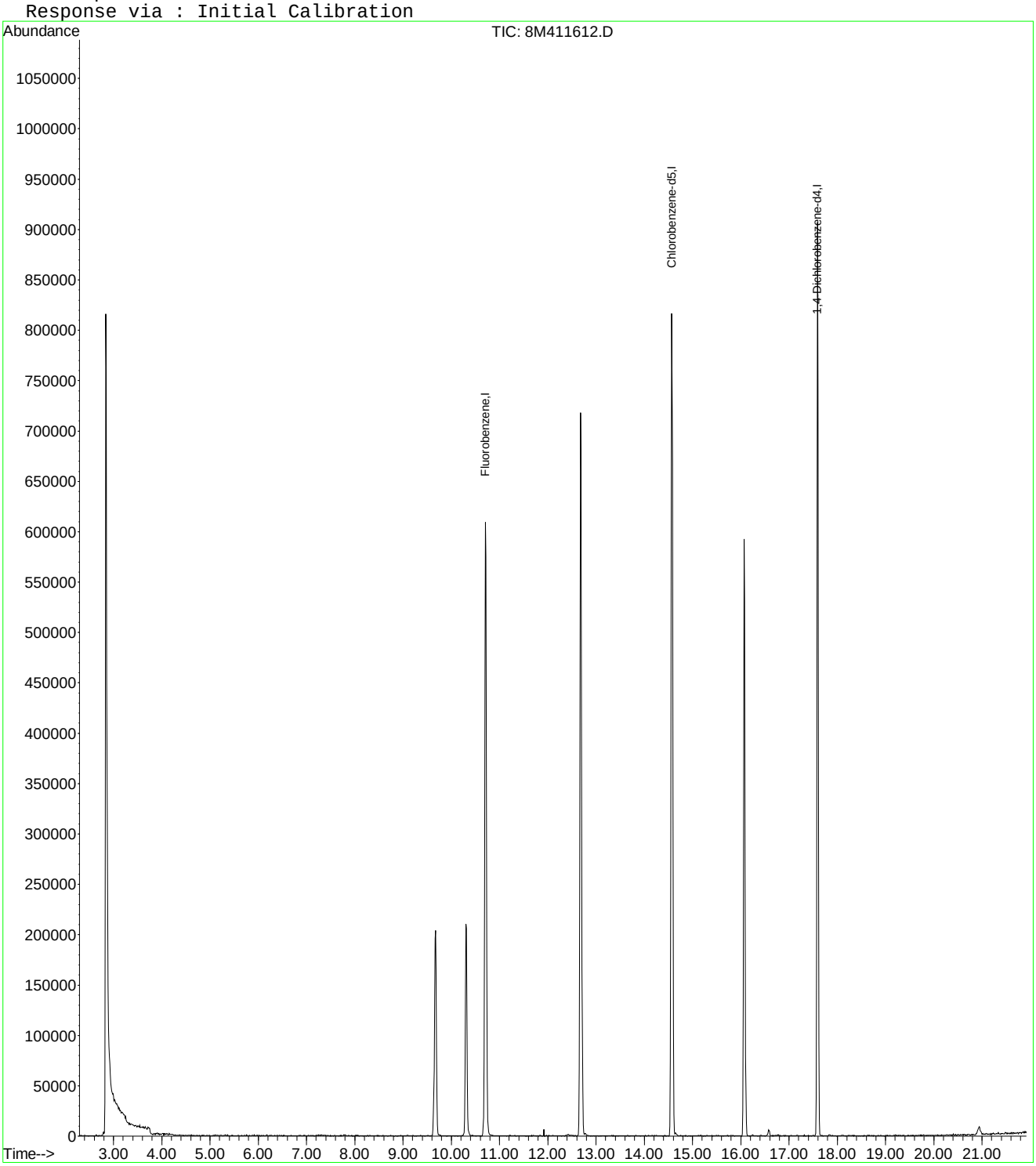
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
8M411612.D A9FOOWTR.M Thu Apr 21 14:54:41 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411612.D Vial: 5
Acq On : 21 Apr 2016 14:31 Operator: TMB
Sample : WG565880-01 VBLK0421 BLANK STD 8260 Inst : HPMS8
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 21 14:54 2016 Quant Results File: A9FOOWTR.RES

Method : C:\MSDCHEM\2\METHODS\A9FOOWTR.M (RTE Integrator)
Title : A9-FOO Water SOP:MSV01 10-05-15 HPMS8
Last Update : Tue Oct 06 11:55:21 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\041816\6M138613.D Vial: 26
Acq On : 19 Apr 2016 2:02 Operator: TMB
Sample : WG565328-04 VBLK0418 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 09:08:04 2016 Quant Results File: 8260WTR.RES

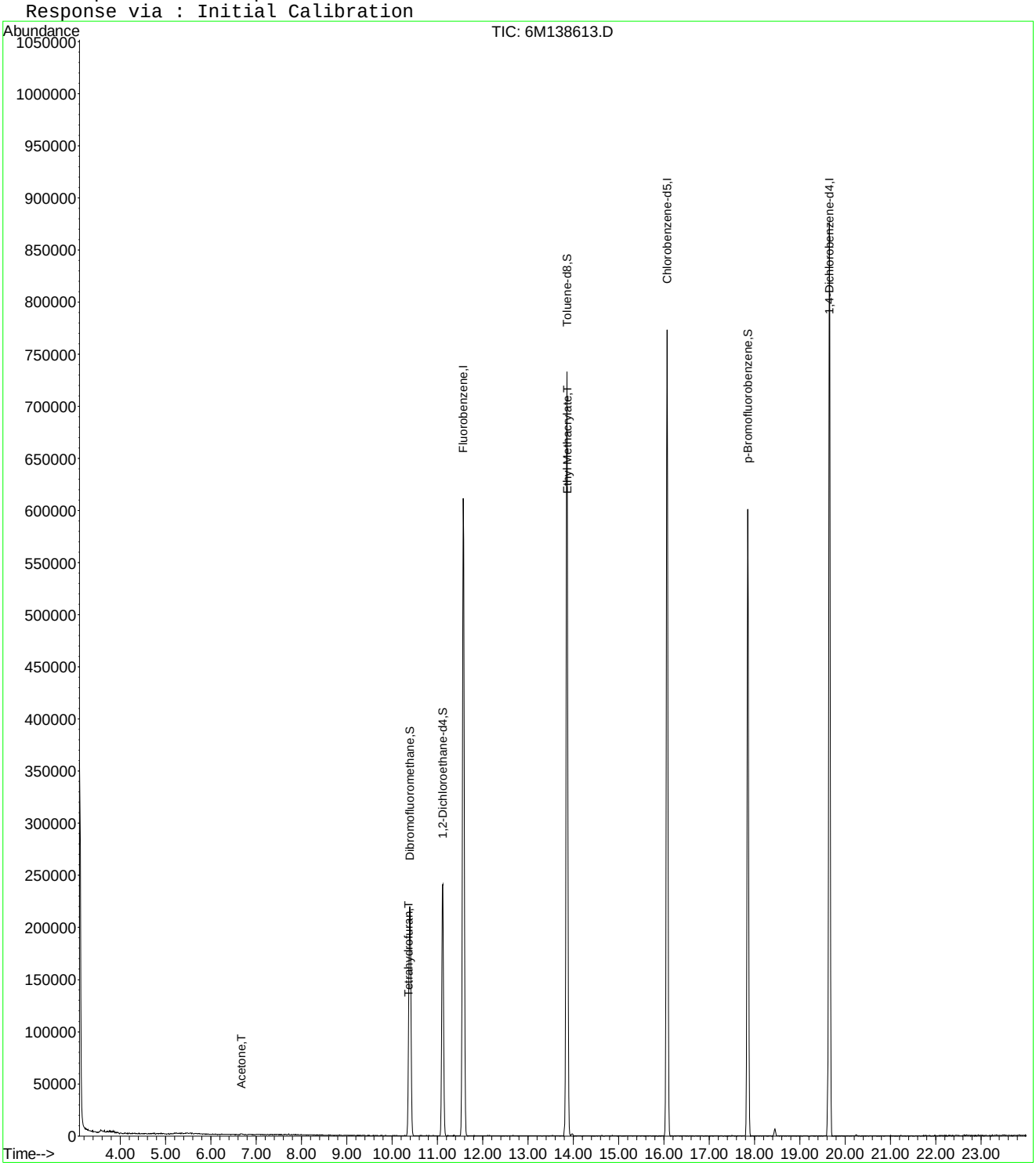
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

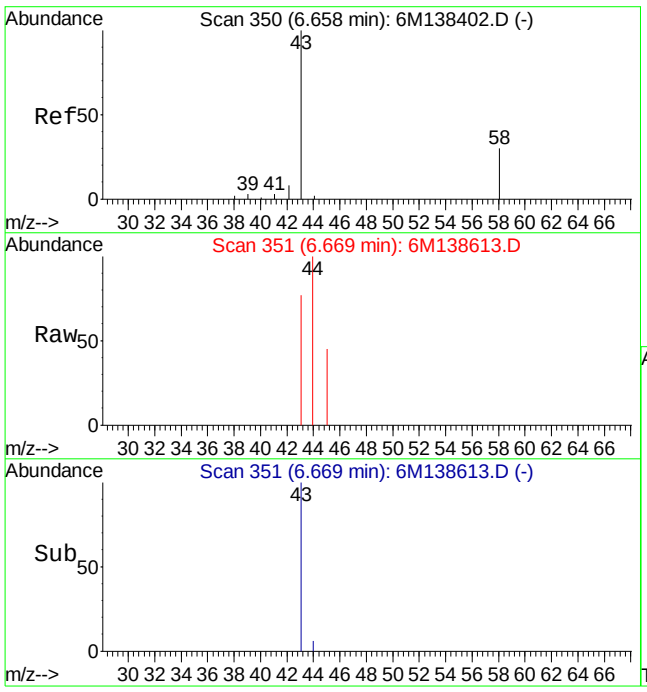
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	767350	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	578675	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	314680	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	201590	25.6518	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.60%			
43) 1,2-Dichloroethane-d4	11.12	65	241523	25.3227	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 101.28%			
58) Toluene-d8	13.86	98	676178	25.9549	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.80%			
80) p-Bromofluorobenzene	17.85	95	283673	27.0014	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 108.00%			
Target Compounds						Qvalue
13) Acetone	6.67	43	1661	0.6980	ug/L	# 46
36) Tetrahydrofuran	10.37	42	3900	1.7045	ug/L	# 68
60) Ethyl Methacrylate	13.87	69	1632	0.1885	ug/L	# 54

(#) = qualifier out of range (m) = manual integration
6M138613.D 8260WTR.M Tue Apr 19 09:08:04 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\041816\6M138613.D Vial: 26
Acq On : 19 Apr 2016 2:02 Operator: TMB
Sample : WG565328-04 VBLK0418 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 9:08 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

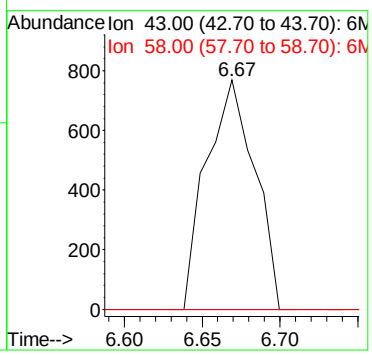


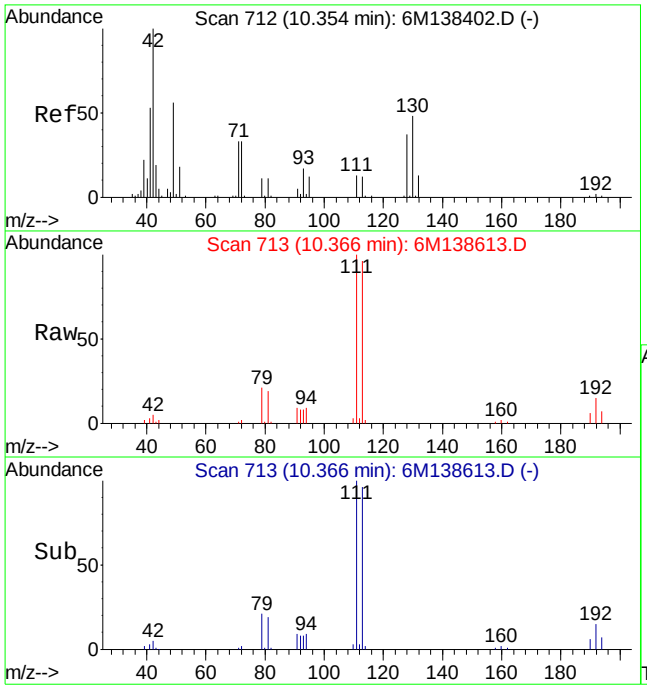


#13
Acetone
Concen: 0.70 ug/L
RT: 6.67 min Scan# 351
Delta R.T. 0.00 min
Lab File: 6M138613.D
Acq: 19 Apr 2016 2:02

Tgt Ion: 43 Resp: 1661

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

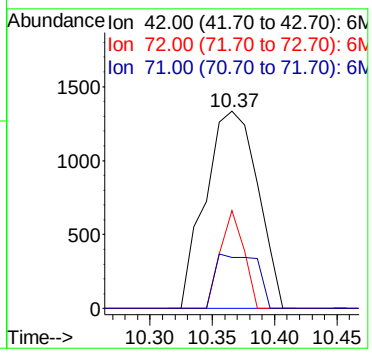


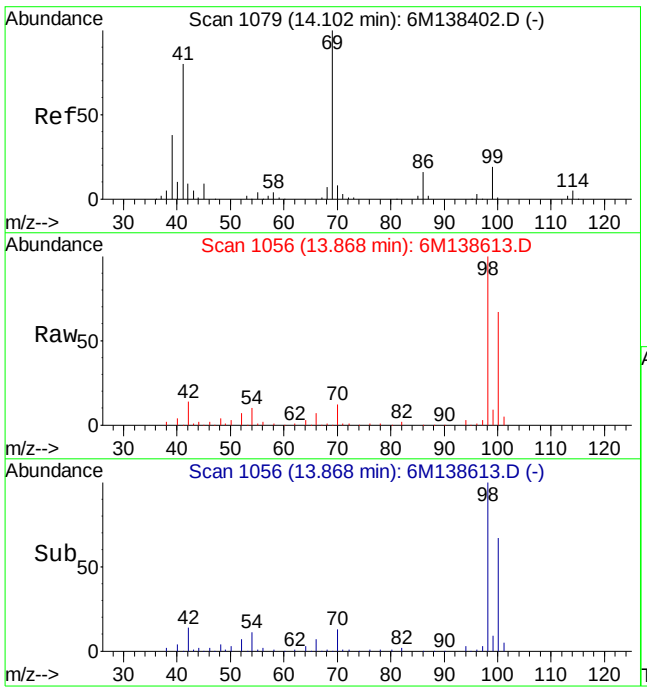


#36
Tetrahydrofuran
Concen: 1.70 ug/L
RT: 10.37 min Scan# 713
Delta R.T. 0.00 min
Lab File: 6M138613.D
Acq: 19 Apr 2016 2:02

Tgt Ion: 42 Resp: 3900

Ion	Ratio	Lower	Upper
42	100		
72	22.3	26.2	61.2#
71	21.9	24.2	56.6#

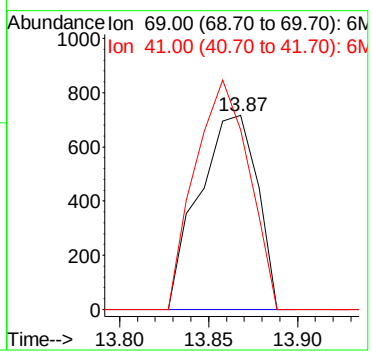




#60
Ethyl Methacrylate
Concen: 0.19 ug/L
RT: 13.87 min Scan# 1056
Delta R.T. -0.23 min
Lab File: 6M138613.D
Acq: 19 Apr 2016 2:02

Tgt Ion: 69 Resp: 1632

Ion	Ratio	Lower	Upper
69	100		
41	109.3	42.9	100.1#



Data File : C:\MSDCHEM\1\DATA\041816\6M138613.D Vial: 26
Acq On : 19 Apr 2016 2:02 Operator: TMB
Sample : WG565328-04 VBLK0418 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

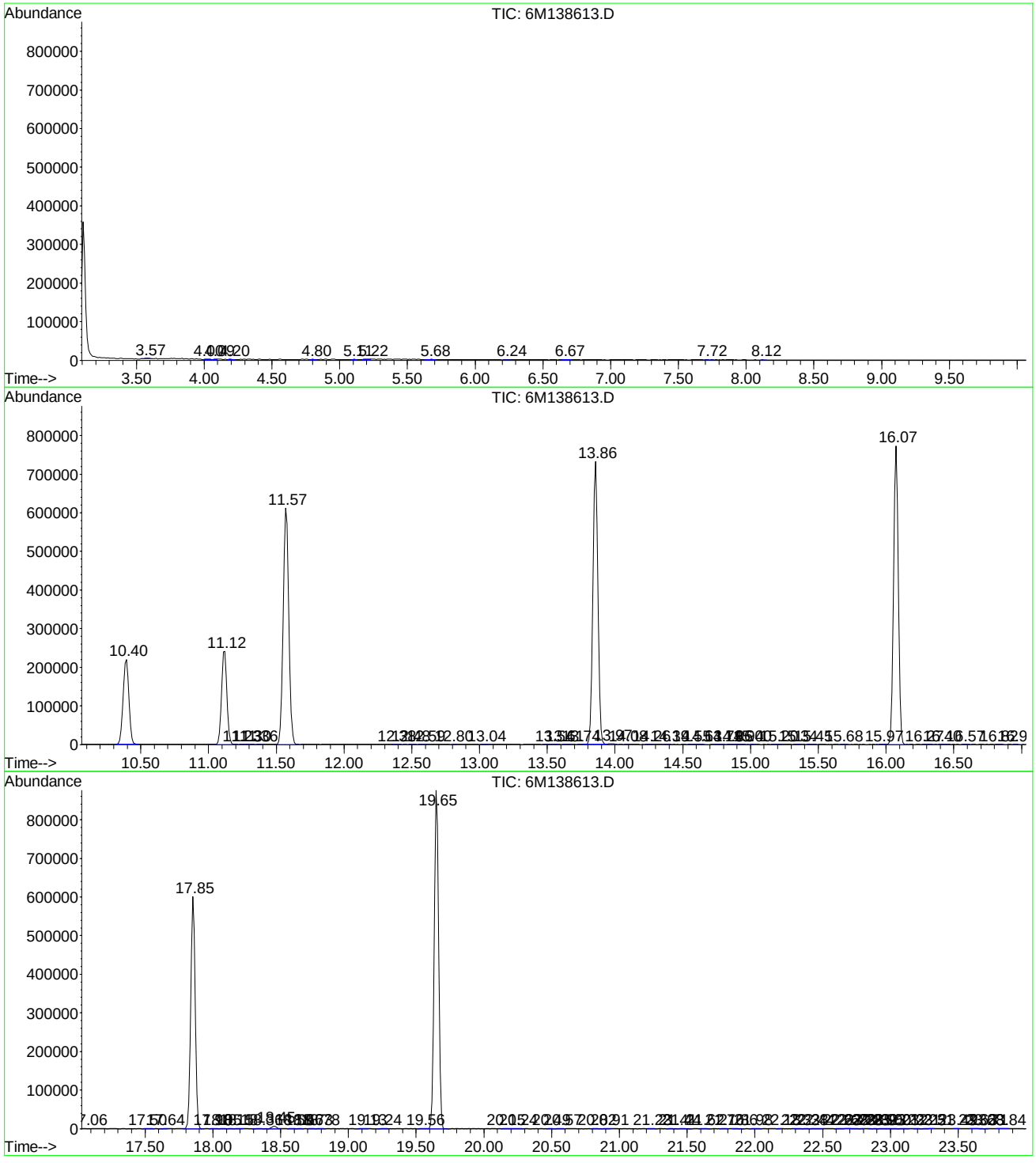
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.575	44	48	52	rBV3	1981	4481	0.22%	0.043%
2	4.004	89	90	96	rVB2	761	1985	0.10%	0.019%
3	4.085	96	98	99	rBV2	639	1005	0.05%	0.010%
4	4.198	107	109	112	rVB2	984	1686	0.08%	0.016%
5	4.800	166	168	171	rBV2	801	1862	0.09%	0.018%
6	5.107	196	198	200	rBV2	840	1239	0.06%	0.012%
7	5.219	204	209	210	rBV2	803	2090	0.10%	0.020%
8	5.678	249	254	257	rBV2	651	2048	0.10%	0.020%
9	6.240	305	309	311	rBV2	750	1774	0.09%	0.017%
10	6.669	348	351	355	rBV2	936	2353	0.12%	0.023%
11	7.721	451	454	458	rVB	642	1090	0.05%	0.010%
12	8.119	492	493	496	rBV	667	1008	0.05%	0.010%
13	10.396	708	716	724	rBV	219964	657297	32.97%	6.319%
14	11.121	776	787	797	rVB	241469	667841	33.50%	6.421%
15	11.233	797	798	801	rBV	514	1021	0.05%	0.010%
16	11.305	802	805	809	rVB	501	1447	0.07%	0.014%
17	11.356	809	810	813	rBV	586	1138	0.06%	0.011%
18	11.570	823	831	841	rVB	611707	1753133	87.93%	16.855%
19	12.377	908	910	915	rVB	457	1513	0.08%	0.015%
20	12.479	919	920	926	rBB	427	1438	0.07%	0.014%
21	12.592	926	931	933	rBV	472	1662	0.08%	0.016%
22	12.796	950	951	954	rBV	493	1025	0.05%	0.010%
23	13.041	971	975	977	rBV	437	1433	0.07%	0.014%
24	13.541	1016	1024	1027	rBV	741	2770	0.14%	0.027%
25	13.613	1030	1031	1036	rBV	424	1410	0.07%	0.014%
26	13.735	1041	1043	1046	rBV	482	1229	0.06%	0.012%
27	13.858	1046	1055	1063	rVV	732586	1902108	95.40%	18.287%
28	13.970	1063	1066	1071	rVB2	1963	5596	0.28%	0.054%
29	14.082	1075	1077	1079	rBV	446	915	0.05%	0.009%
30	14.256	1088	1094	1096	rBV	482	1663	0.08%	0.016%
31	14.389	1105	1107	1110	rVB	447	978	0.05%	0.009%
32	14.552	1121	1123	1126	rBV	462	1103	0.06%	0.011%
33	14.634	1126	1131	1135	rVB	607	1889	0.09%	0.018%
34	14.787	1141	1146	1149	rVB	494	1819	0.09%	0.017%
35	14.859	1149	1153	1157	rBV	515	1904	0.10%	0.018%
36	14.940	1157	1161	1164	rVB	472	1529	0.08%	0.015%
37	15.002	1164	1167	1169	rBV	405	924	0.05%	0.009%
38	15.196	1181	1186	1189	rBV	476	1812	0.09%	0.017%
39	15.338	1197	1200	1202	rBV	448	1139	0.06%	0.011%
40	15.451	1207	1211	1215	rBB	422	1562	0.08%	0.015%
41	15.675	1231	1233	1239	rBB	395	1241	0.06%	0.012%
42	15.972	1257	1262	1264	rBV	441	1382	0.07%	0.013%

43	16.074	1264	1272	1281	rVB	773461	1891548	94.87%	18.186%
44	16.268	1290	1291	1299	rBB	462	1774	0.09%	0.017%
45	16.400	1302	1304	1312	rBB	438	2069	0.10%	0.020%
46	16.574	1319	1321	1326	rBB	391	1264	0.06%	0.012%
47	16.819	1343	1345	1351	rBB	441	1456	0.07%	0.014%
48	16.952	1356	1358	1362	rBB	434	934	0.05%	0.009%
49	17.064	1365	1369	1370	rBB	469	932	0.05%	0.009%
50	17.503	1410	1412	1418	rBB	539	1670	0.08%	0.016%
51	17.636	1422	1425	1428	rBV	369	1052	0.05%	0.010%
52	17.851	1439	1446	1454	rVB	601464	1375499	68.99%	13.224%
53	17.983	1458	1459	1465	rBB	433	1270	0.06%	0.012%
54	18.055	1465	1466	1471	rBB	391	1080	0.05%	0.010%
55	18.147	1471	1475	1476	rBB	421	927	0.05%	0.009%
56	18.177	1476	1478	1482	rBV	360	1235	0.06%	0.012%
57	18.361	1489	1496	1498	rBB	385	1258	0.06%	0.012%
58	18.453	1498	1505	1510	rBV3	6691	16270	0.82%	0.156%
59	18.586	1515	1518	1521	rBB	360	1055	0.05%	0.010%
60	18.657	1521	1525	1526	rBB	428	905	0.05%	0.009%
61	18.729	1529	1532	1535	rBB	374	1101	0.06%	0.011%
62	18.780	1535	1537	1542	rBB	374	1271	0.06%	0.012%
63	19.127	1565	1571	1573	rBV	322	1535	0.08%	0.015%
64	19.239	1580	1582	1588	rBB	416	1310	0.07%	0.013%
65	19.556	1609	1613	1616	rBV	395	1431	0.07%	0.014%
66	19.648	1616	1622	1631	rVB	876500	1993843	100.00%	19.169%
67	20.148	1669	1671	1676	rBV	424	1548	0.08%	0.015%
68	20.240	1676	1680	1685	rVB2	1151	2848	0.14%	0.027%
69	20.485	1702	1704	1707	rBB	404	933	0.05%	0.009%
70	20.567	1708	1712	1715	rBB	417	1280	0.06%	0.012%
71	20.822	1734	1737	1740	rBB	464	1180	0.06%	0.011%
72	20.914	1740	1746	1748	rBV	442	1639	0.08%	0.016%
73	21.230	1774	1777	1781	rBB	681	1513	0.08%	0.015%
74	21.414	1789	1795	1796	rBB	427	1130	0.06%	0.011%
75	21.445	1797	1798	1806	rBB	353	1191	0.06%	0.011%
76	21.619	1812	1815	1820	rBB	386	1252	0.06%	0.012%
77	21.762	1827	1829	1833	rBB	728	1529	0.08%	0.015%
78	21.864	1836	1839	1844	rVB	728	1359	0.07%	0.013%
79	21.976	1849	1850	1857	rBB	751	2005	0.10%	0.019%
80	22.180	1868	1870	1871	rBV	694	942	0.05%	0.009%
81	22.323	1881	1884	1887	rVB	778	1599	0.08%	0.015%
82	22.384	1887	1890	1892	rBB	880	1445	0.07%	0.014%
83	22.435	1892	1895	1902	rBV2	826	3533	0.18%	0.034%
84	22.629	1910	1914	1917	rBV	1022	2950	0.15%	0.028%
85	22.681	1917	1919	1922	rVV	769	1316	0.07%	0.013%
86	22.732	1922	1924	1928	rVB2	842	2241	0.11%	0.022%
87	22.783	1928	1929	1931	rBV2	776	1061	0.05%	0.010%
88	22.854	1934	1936	1937	rVB2	832	902	0.05%	0.009%
89	22.895	1937	1940	1941	rBB2	768	1109	0.06%	0.011%
90	22.946	1941	1945	1947	rBV	1082	2204	0.11%	0.021%
91	22.997	1947	1950	1956	rVB	844	2721	0.14%	0.026%
92	23.120	1956	1962	1964	rBV	772	2613	0.13%	0.025%
93	23.212	1967	1971	1972	rVB	726	1340	0.07%	0.013%
94	23.252	1973	1975	1978	rBV	1019	1688	0.08%	0.016%
95	23.314	1978	1981	1982	rBV	544	1090	0.05%	0.010%
96	23.487	1996	1998	2000	rBV	778	1120	0.06%	0.011%
97	23.630	2008	2012	2014	rVB	440	953	0.05%	0.009%
98	23.681	2014	2017	2018	rVB	720	1064	0.05%	0.010%
99	23.712	2018	2020	2021	rBV	794	1010	0.05%	0.010%
100	23.845	2027	2033	2036	rVB	716	1859	0.09%	0.018%

Sum of corrected areas: 10401398

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\041816\6M138613.D
Operator : TMB
Acquired : 19 Apr 2016 2:02 using AcqMethod 8260WTR
Instrument : HPMS6
Sample Name: WG565328-04 VBLK0418 BLANK STD 624
Misc Info : 2,1
Vial Number: 26
Quant File :8260WTR.RES (RTE Integrator)



Tentatively Identified Compound (LSC) summary

Operator ID: TMB Date Acquired: 19 Apr 2016 2:02
Data File: C:\MSDCHEM\1\DATA\041816\6M138613.D
Name: WG565328-04 VBLK0418 BLANK STD 624
Misc: 2,1
Method: C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title: 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Library Searched: C:\DATABASE\NIST02.L

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

Data File : C:\MSDCHEM\1\DATA\042016\6M138679.D Vial: 25
Acq On : 21 Apr 2016 00:12 Operator: TMB
Sample : WG565673-04 VBLK0420 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 09:22:12 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

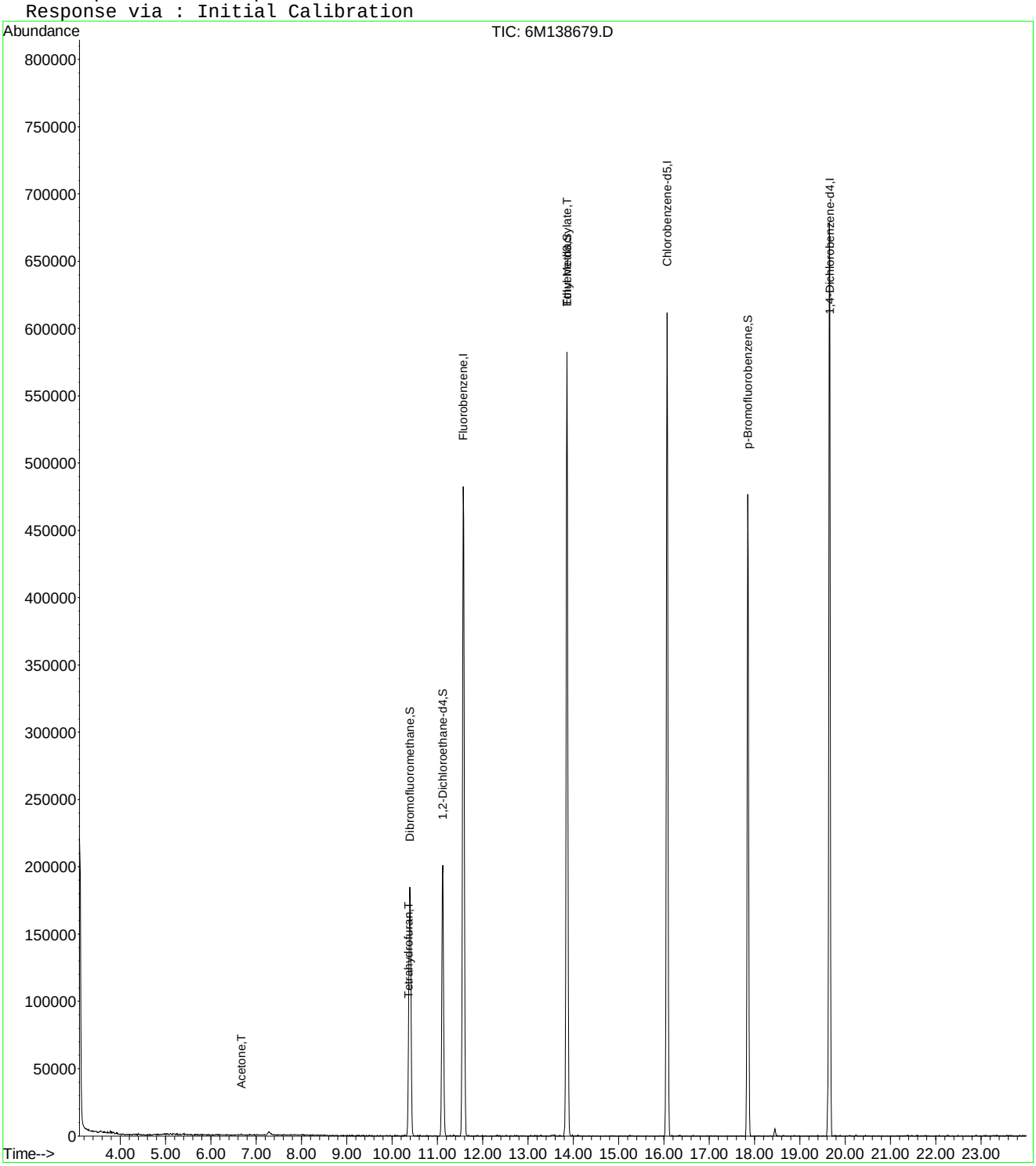
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	592262	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	449823	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	244426	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	166758	27.4926	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 109.96%			
43) 1,2-Dichloroethane-d4	11.12	65	205142	27.8668	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.48%			
58) Toluene-d8	13.86	98	526644	26.0057	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.04%			
80) p-Bromofluorobenzene	17.85	95	216393	26.5175	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 106.08%			
Target Compounds						Qvalue
13) Acetone	6.67	43	507	0.2761	ug/L #	46
36) Tetrahydrofuran	10.36	42	2512	1.4224	ug/L #	66
60) Ethyl Methacrylate	13.86	69	1528	0.2271	ug/L	76

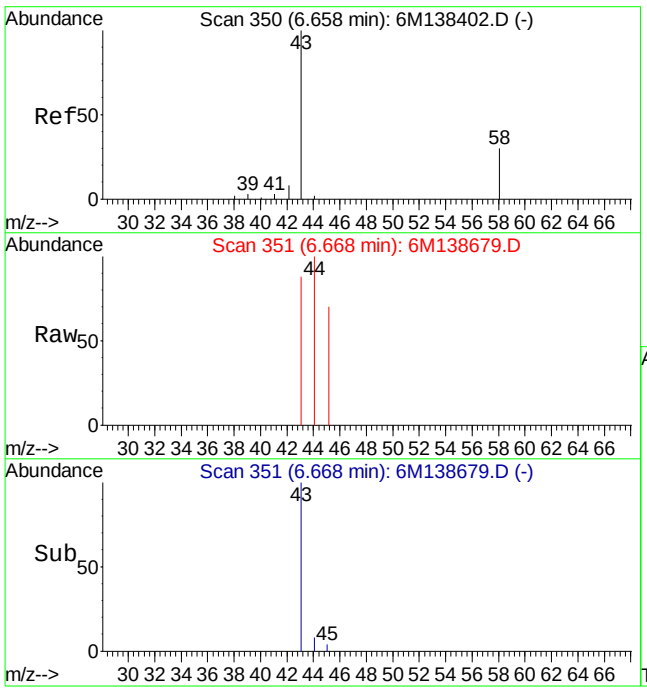
(#) = qualifier out of range (m) = manual integration
6M138679.D 8260WTR.M Thu Apr 21 09:22:12 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042016\6M138679.D Vial: 25
Acq On : 21 Apr 2016 00:12 Operator: TMB
Sample : WG565673-04 VBLK0420 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration

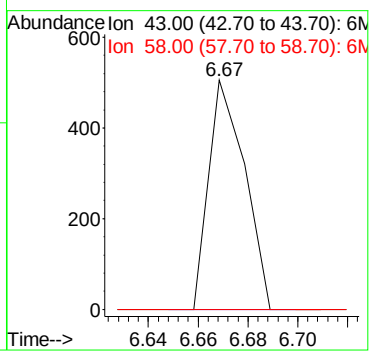


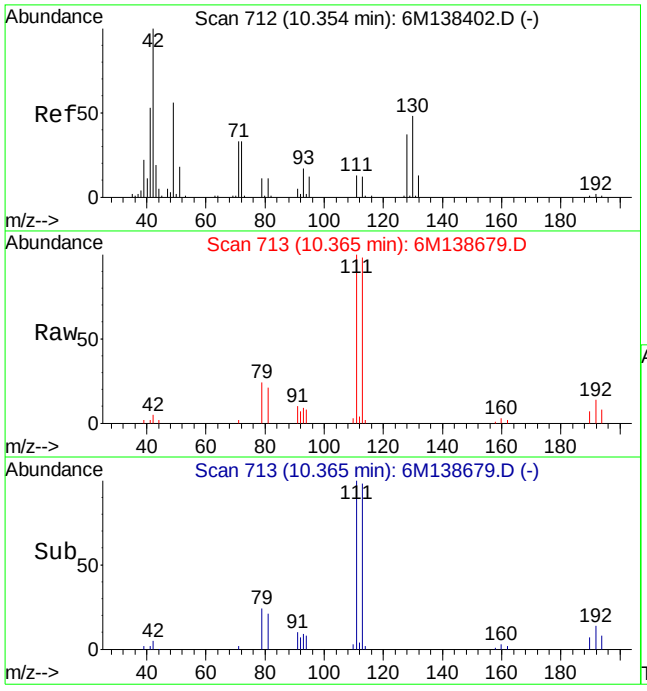


#13
Acetone
Concen: 0.28 ug/L
RT: 6.67 min Scan# 351
Delta R.T. 0.00 min
Lab File: 6M138679.D
Acq: 21 Apr 2016 00:12

Tgt Ion: 43 Resp: 507

Ion	Ratio	Lower	Upper
43	100		
58	0.0	17.3	40.3#

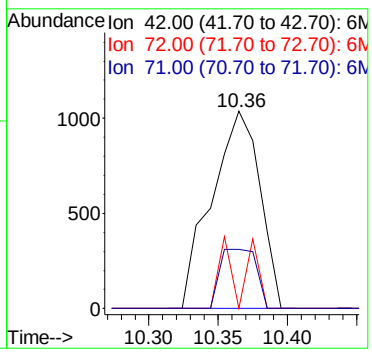


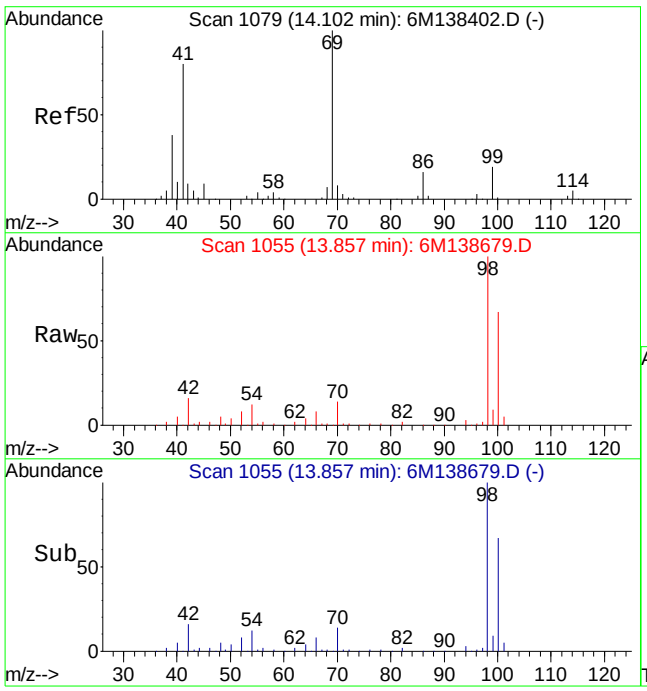


#36
Tetrahydrofuran
Concen: 1.42 ug/L
RT: 10.36 min Scan# 713
Delta R.T. 0.00 min
Lab File: 6M138679.D
Acq: 21 Apr 2016 00:12

Tgt Ion: 42 Resp: 2512

Ion	Ratio	Lower	Upper
42	100		
72	18.2	26.2	61.2#
71	22.5	24.2	56.6#

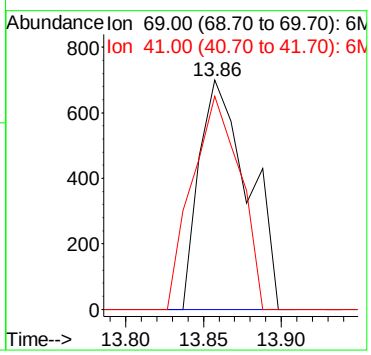




#60
Ethyl Methacrylate
Concen: 0.23 ug/L
RT: 13.86 min Scan# 1055
Delta R.T. -0.24 min
Lab File: 6M138679.D
Acq: 21 Apr 2016 00:12

Tgt Ion: 69 Resp: 1528

Ion	Ratio	Lower	Upper
69	100		
41	91.2	42.9	100.1



Data File : C:\MSDCHEM\2\DATA\041816\8M411536.D Vial: 27
Acq On : 19 Apr 2016 4:12 Operator: TMB
Sample : WG565386-06 VBLK0418 BLANK STD 624 Inst : HPMS8
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 08:41:28 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

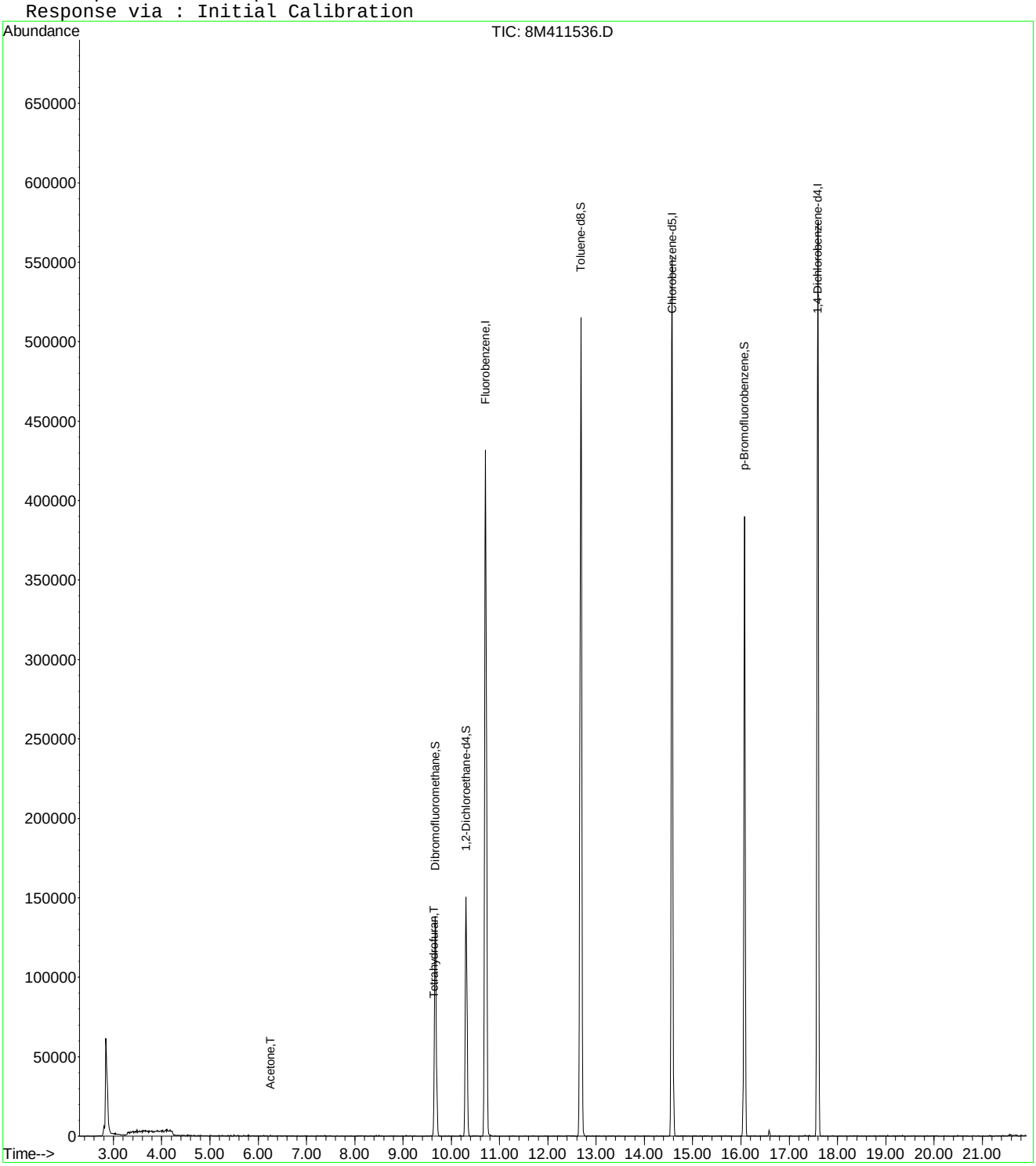
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.71	96	479902	25.00 ug/L	0.00
57) Chlorobenzene-d5	14.58	117	346343	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	167072	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.67	111	119502	24.3543 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 97.40%		
43) 1,2-Dichloroethane-d4	10.31	65	128636	24.9695 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.88%		
58) Toluene-d8	12.68	98	424333	24.4831 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 97.92%		
80) p-Bromofluorobenzene	16.07	95	156942	24.0432 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.16%		
Target Compounds					Qvalue
13) Acetone	6.26	43	419	0.4593 ug/L #	48
36) Tetrahydrofuran	9.65	42	2249	2.0143 ug/L #	50

(#) = qualifier out of range (m) = manual integration
8M411536.D 8260WT.M Tue Apr 19 08:41:29 2016 Page 1

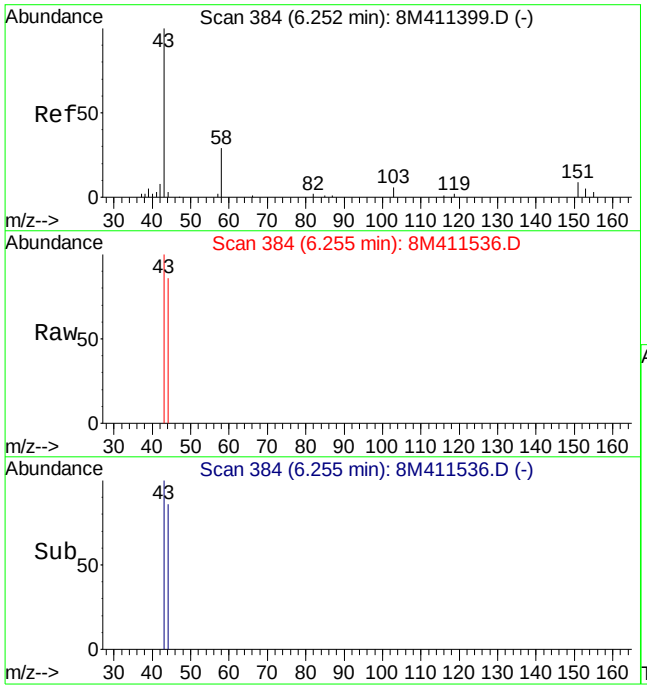
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\041816\8M411536.D Vial: 27
Acq On : 19 Apr 2016 4:12 Operator: TMB
Sample : WG565386-06 VBLK0418 BLANK STD 624 Inst : HPMS8
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 8:41 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



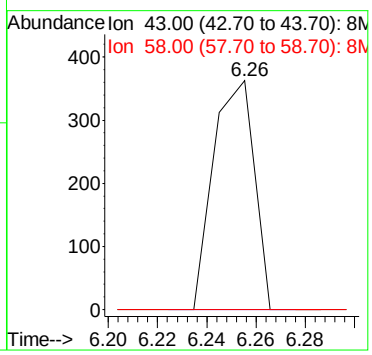
8M411536.D 8260WT.M Tue Apr 19 08:41:29 2016 Page 2

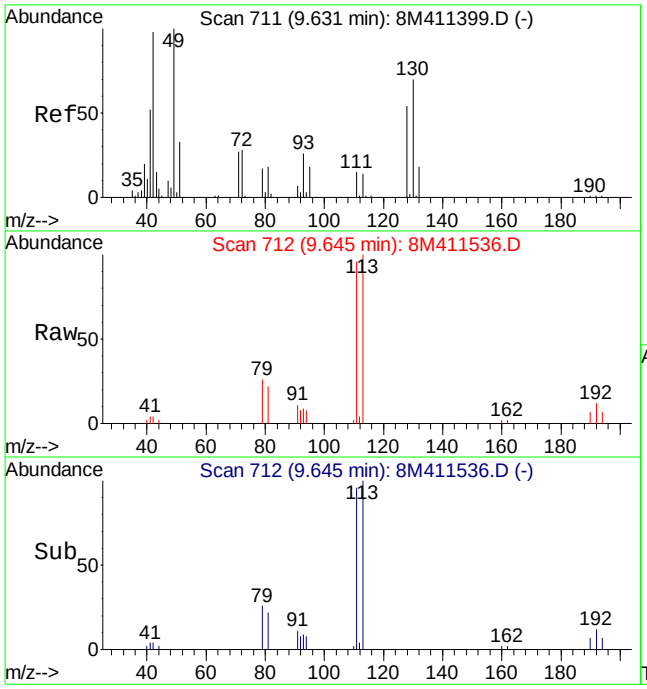


#13
Acetone
Concen: 0.46 ug/L
RT: 6.26 min Scan# 384
Delta R.T. 0.00 min
Lab File: 8M411536.D
Acq: 19 Apr 2016 4:12

Tgt Ion: 43 Resp: 419

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

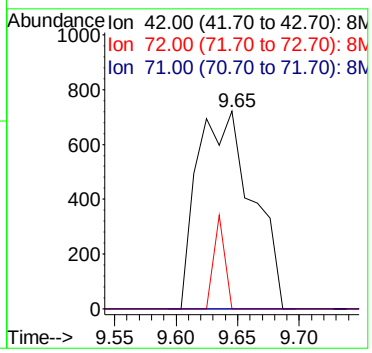




#36
Tetrahydrofuran
Concen: 2.01 ug/L
RT: 9.65 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411536.D
Acq: 19 Apr 2016 4:12

Tgt Ion: 42 Resp: 2249

Ion	Ratio	Lower	Upper
42	100		
72	9.4	20.8	48.6#
71	0.0	19.0	44.4#



Data File : C:\MSDCHEM\2\DATA\042116\8M411628.D Vial: 21
Acq On : 21 Apr 2016 22:18 Operator: TMB
Sample : WG565880-04 VBLK0421 BLANK STD 624 Inst : HPMS8
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 09:36:08 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

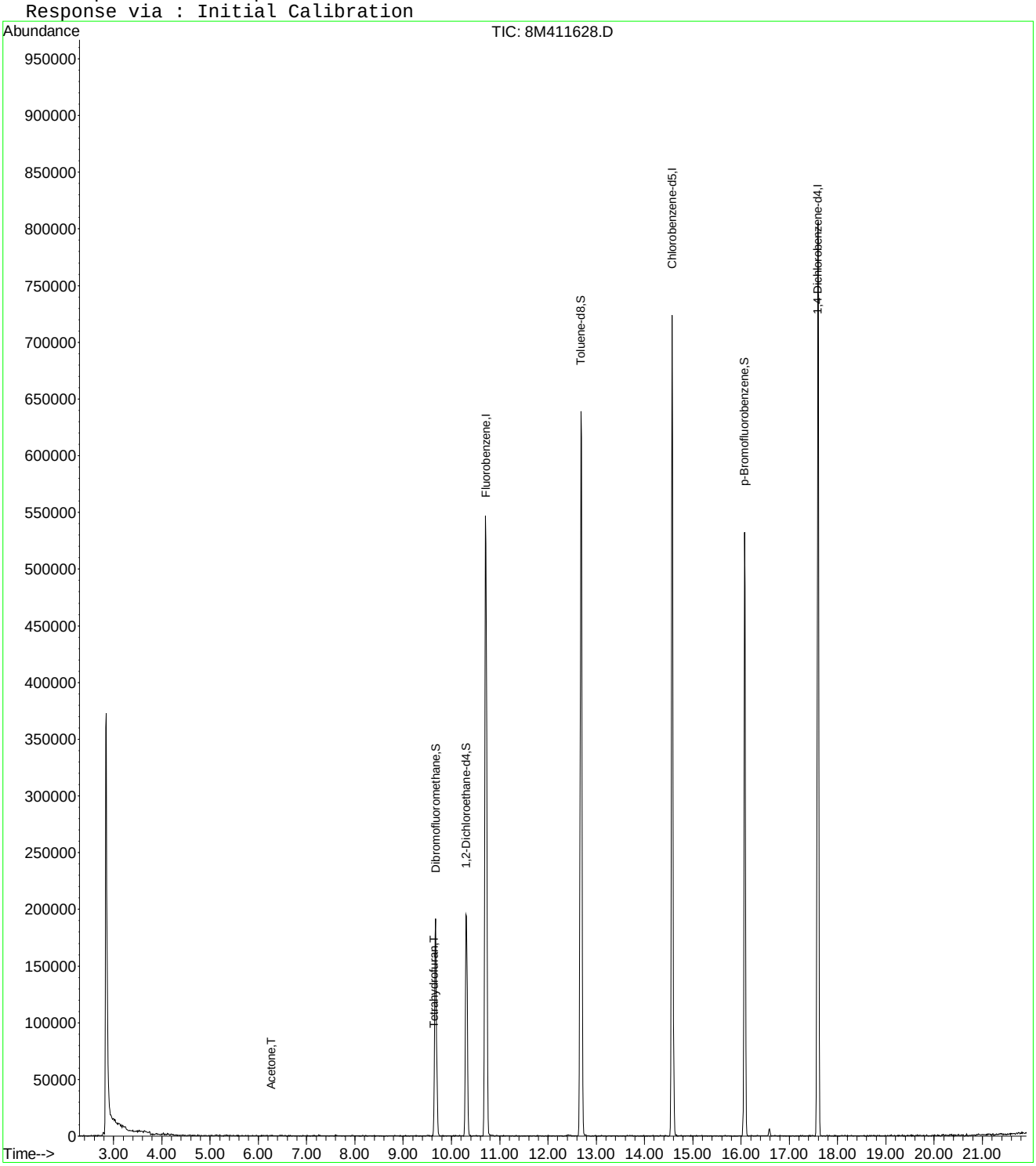
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.72	96	612293	25.00	ug/L	0.01
57) Chlorobenzene-d5	14.57	117	463105	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	249173	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	159832	25.5304	ug/L	0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 102.12%			
43) 1,2-Dichloroethane-d4	10.30	65	187749	28.5640	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 114.24%			
58) Toluene-d8	12.68	98	542193	23.3959	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 93.60%			
80) p-Bromofluorobenzene	16.07	95	221538	22.7564	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.04%			
Target Compounds						Qvalue
13) Acetone	6.27	43	212	0.1821	ug/L #	48
36) Tetrahydrofuran	9.64	42	3269	2.2948	ug/L #	53

(#) = qualifier out of range (m) = manual integration
8M411628.D 8260WT.M Fri Apr 22 09:36:09 2016 Page 1

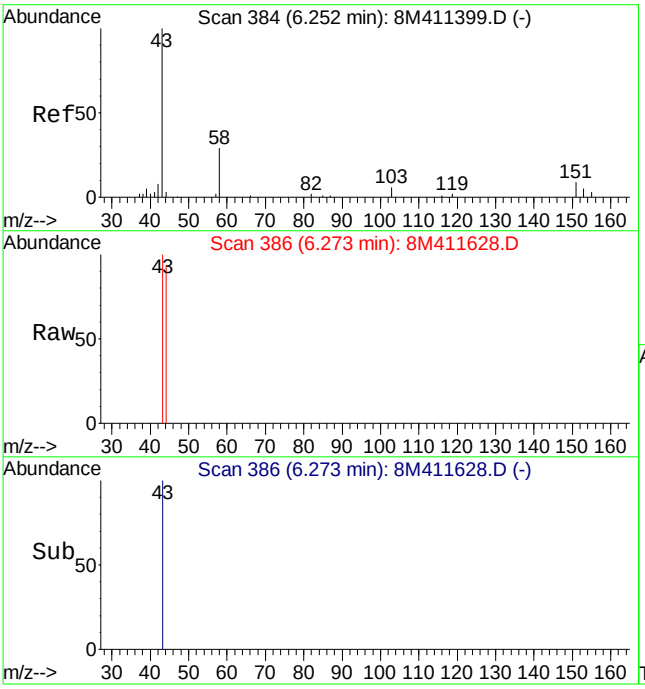
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\2\DATA\042116\8M411628.D Vial: 21
Acq On : 21 Apr 2016 22:18 Operator: TMB
Sample : WG565880-04 VBLK0421 BLANK STD 624 Inst : HPMS8
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 9:36 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



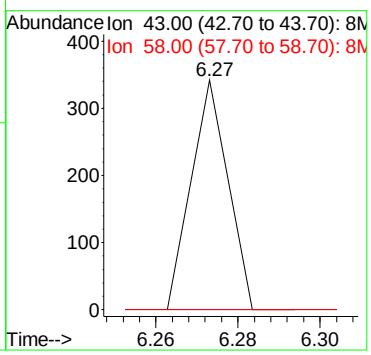
8M411628.D 8260WT.M Fri Apr 22 09:36:09 2016 Page 2

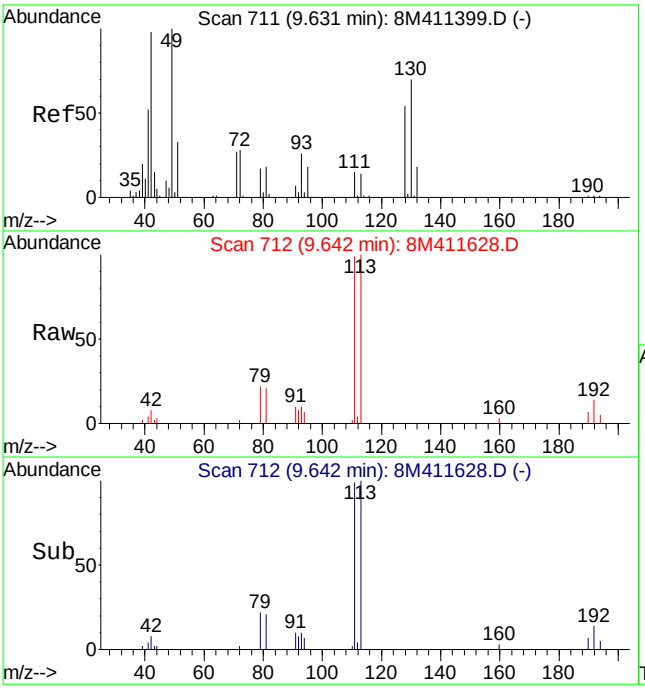


#13
Acetone
Concen: 0.18 ug/L
RT: 6.27 min Scan# 386
Delta R.T. 0.02 min
Lab File: 8M411628.D
Acq: 21 Apr 2016 22:18

Tgt Ion: 43 Resp: 212

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.2	37.8#

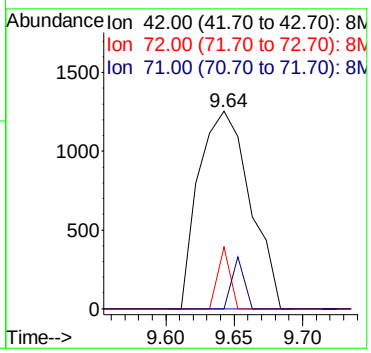




#36
Tetrahydrofuran
Concen: 2.29 ug/L
RT: 9.64 min Scan# 712
Delta R.T. 0.01 min
Lab File: 8M411628.D
Acq: 21 Apr 2016 22:18

Tgt Ion: 42 Resp: 3269

Ion	Ratio	Lower	Upper
42	100		
72	7.5	20.8	48.6#
71	6.2	19.0	44.4#



Data File : C:\MSDchem\1\data\041816\6M138593.D Vial: 6
Acq On : 18 Apr 2016 15:19 Operator: TMB
Sample : WG565328-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 15:43:59 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	689288	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	526147	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	306702	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	182694	25.8801	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 103.52%			
43) 1,2-Dichloroethane-d4	11.11	65	219239	25.5896	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 102.36%			
58) Toluene-d8	13.86	98	623344	26.3157	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 105.28%			
80) p-Bromofluorobenzene	17.85	95	267977	26.1709	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 104.68%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.44	85	267981	22.6249	ug/L	98
3) Chloromethane	3.94	50	205813	24.8349	ug/L	99
4) Vinyl Chloride	4.17	62	156808	23.3886	ug/L	98
5) 1,3-Butadiene	4.21	54	92327	20.2527	ug/L	92
6) Bromomethane	5.08	94	71153	21.6841	ug/L	99
7) Chloroethane	5.24	64	88432	22.7559	ug/L	94
8) Trichlorofluoromethane	5.74	101	233975	17.0705	ug/L	99
9) Diethyl ether	6.30	59	644284	106.4960	ug/L	93
10) Isoprene	6.33	67	116820	13.4777	ug/L	93
11) Acrolein	6.55	56	69164	64.6726	ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	6.55	101	156223	21.2319	ug/L	95
13) Acetone	6.67	43	43325	20.2697	ug/L	97
14) 1,1-Dichloroethene	6.88	61	251683	20.2542	ug/L	95
15) Tert-Butyl Alcohol	7.03	59	140080	228.1314	ug/L	92
16) Dimethyl Sulfide	7.17	62	109743	18.8755	ug/L	86
17) Iodomethane	7.45	142	55780	13.2825	ug/L	92
18) Methyl acetate	7.47	43	107564	18.1214	ug/L	97
19) Methylene Chloride	7.73	84	158694	20.9913	ug/L	73
20) Carbon Disulfide	7.77	76	195817	8.9103	ug/L	99
21) Acrylonitrile	7.94	53	53689	21.3872	ug/L	99
22) Methyl Tert Butyl Ether	7.97	73	390151	20.9002	ug/L	97
23) trans-1,2-Dichloroethene	8.22	96	148650	21.4907	ug/L	81
24) n-Hexane	8.29	57	132090	13.3582	ug/L	89
25) Diisopropyl ether	8.68	45	3020212	106.4974	ug/L	96
26) Vinyl Acetate	8.87	43	275208	24.9196	ug/L	95
27) 1,1-Dichloroethane	8.90	63	296982	20.3374	ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	2389671	100.8392	ug/L	95
29) 2-Butanone	9.52	43	67444	21.3778	ug/L	92
30) Propionitrile	9.64	54	93166	102.7939	ug/L	98
31) 2,2-Dichloropropane	9.75	77	241638	21.1933	ug/L	91
32) cis-1,2-Dichloroethene	9.84	96	164703	21.7760	ug/L	98
33) Chloroform	10.07	83	283790	20.9040	ug/L	98
34) 1-Bromopropane	10.21	122	30500	25.7454	ug/L	96
35) Bromochloromethane	10.33	130	94306	20.7945	ug/L	99
36) Tetrahydrofuran	10.36	42	202389	98.4702	ug/L	85
38) 1,1,1-Trichloroethane	10.66	97	256471	20.5149	ug/L	95
39) Cyclohexane	10.69	56	208177	16.3096	ug/L	88
40) 1,1-Dichloropropene	10.89	75	201648	20.4450	ug/L	91
41) Tert-Amyl-Methyl ether	11.01	73	1894989	103.7308	ug/L	92
42) Carbon Tetrachloride	11.04	117	239017	20.3552	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138593.D 8260WTR.M Mon Apr 18 15:43:59 2016 Page 1

Data File : C:\MSDchem\1\data\041816\6M138593.D Vial: 6
Acq On : 18 Apr 2016 15:19 Operator: TMB
Sample : WG565328-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 15:43:59 2016 Quant Results File: 8260WTR.RES

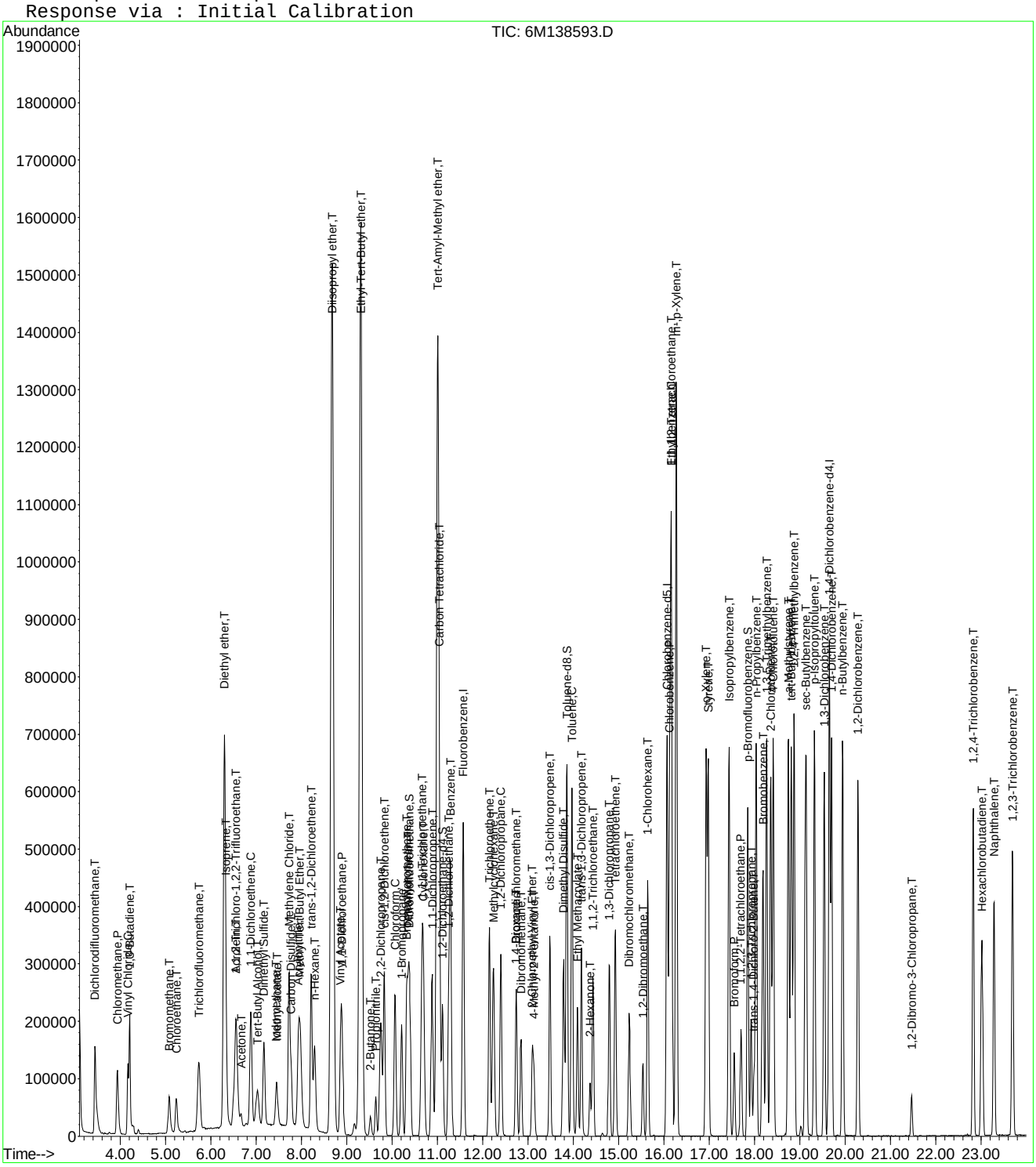
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.26	62	230393	21.2622	ug/L	96
46)	Benzene	11.30	78	602052	21.0259	ug/L	92
47)	Trichloroethene	12.15	130	162084	21.6395	ug/L	93
48)	Methylcyclohexane	12.25	83	185356	18.5332	ug/L	86
49)	1,2-Dichloropropane	12.40	63	172861	22.0771	ug/L	100
50)	1,4-Dioxane	12.74	88	11511	193.1523	ug/L	82
51)	Bromodichloromethane	12.75	83	217887	20.7370	ug/L	98
52)	Dibromomethane	12.85	93	85555	20.4824	ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.09	63	74200	20.4175	ug/L	100
54)	4-Methyl-2-Pentanone	13.13	58	49007	20.2478	ug/L	93
55)	cis-1,3-Dichloropropene	13.48	75	259434	23.3927	ug/L	96
56)	Dimethyl Disulfide	13.79	79	117609	20.2212	ug/L	91
59)	Toluene	13.97	91	614807	20.9952	ug/L	99
60)	Ethyl Methacrylate	14.09	69	168046	21.3485	ug/L	89
62)	trans-1,3-Dichloropropene	14.19	75	227297	20.5458	ug/L	98
63)	1,1,2-Trichloroethane	14.43	97	121010	20.7316	ug/L	100
64)	2-Hexanone	14.37	43	93954	19.8019	ug/L	93
65)	1,3-Dichloropropane	14.80	76	228266	22.0041	ug/L	81
66)	Tetrachloroethene	14.93	166	154910	19.3352	ug/L	98
67)	Dibromochloromethane	15.24	129	158690	20.1437	ug/L	99
68)	1,2-Dibromoethane	15.54	107	119738	20.9150	ug/L	98
69)	1-Chlorohexane	15.65	91	184151	19.9532	ug/L	79
70)	Chlorobenzene	16.13	112	407778	20.3068	ug/L	96
71)	1,1,1,2-Tetrachloroethane	16.17	131	161174	20.2452	ug/L	98
72)	Ethylbenzene	16.17	106	216915	20.6178	ug/L	93
73)	m-,p-Xylene	16.27	106	533515	42.7420	ug/L	91
74)	o-Xylene	16.93	106	266356	22.0761	ug/L	94
75)	Styrene	16.98	104	448943	22.1743	ug/L	94
76)	Bromoform	17.56	173	97319	18.4490	ug/L	99
77)	Isopropylbenzene	17.44	105	682659	22.4762	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.70	83	132226	17.7054	ug/L	97
81)	1,2,3-Trichloropropane	17.93	110	48403	20.7214	ug/L	94
82)	trans-1,4-Dichloro-2-Buten	17.98	53	39441	15.1155	ug/L	82
83)	n-Propylbenzene	18.05	91	834353	22.6395	ug/L	99
84)	Bromobenzene	18.19	156	181107	19.6150	ug/L	96
85)	1,3,5-Trimethylbenzene	18.27	105	598358	21.3966	ug/L	98
86)	2-Chlorotoluene	18.36	91	522064	19.7945	ug/L	96
87)	4-Chlorotoluene	18.41	91	564318	22.2608	ug/L	93
88)	a-Methylstyrene	18.75	118	315366	22.2765	ug/L	100
89)	tert-Butylbenzene	18.81	134	126130	21.5100	ug/L	98
90)	1,2,4-Trimethylbenzene	18.87	105	618545	20.7514	ug/L	99
91)	sec-Butylbenzene	19.14	105	730456	21.7869	ug/L	99
92)	p-Isopropyltoluene	19.32	119	608824	21.3875	ug/L	97
93)	1,3-Dichlorobenzene	19.55	146	365717	20.2776	ug/L	99
94)	1,4-Dichlorobenzene	19.70	146	373438	19.8208	ug/L	99
95)	n-Butylbenzene	19.94	91	577834	21.6852	ug/L	97
96)	1,2-Dichlorobenzene	20.28	146	357213	20.8690	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	21.48	75	27285	18.0178	ug/L	91
98)	1,2,4-Trichlorobenzene	22.83	180	256074	21.1770	ug/L	99
99)	Hexachlorobutadiene	23.03	225	109844	22.3405	ug/L	98
100)	Naphthalene	23.29	128	486698	20.3791	ug/L	99
101)	1,2,3-Trichlorobenzene	23.70	180	238273	21.0504	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138593.D 8260WTR.M Mon Apr 18 15:43:59 2016 Page 2

Data File : C:\MSDchem\1\data\041816\6M138593.D Vial: 6
Acq On : 18 Apr 2016 15:19 Operator: TMB
Sample : WG565328-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 15:43 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Data File : C:\MSDchem\1\data\042016\6M138660.D Vial: 6
Acq On : 20 Apr 2016 14:00 Operator: TMB
Sample : WG565673-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 14:24:10 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	646359	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	491497	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	287445	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.39	111	178719	26.9985 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.00%		
43) 1,2-Dichloroethane-d4	11.11	65	213006	26.5133 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 106.04%		
58) Toluene-d8	13.86	98	587040	26.5302 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 106.12%		
80) p-Bromofluorobenzene	17.85	95	253923	26.4597 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 105.84%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.45	85	235311	21.1862 ug/L	98
3) Chloromethane	3.94	50	163496	21.0390 ug/L	98
4) Vinyl Chloride	4.17	62	140308	22.3175 ug/L	97
5) 1,3-Butadiene	4.21	54	84741	19.8233 ug/L	93
6) Bromomethane	5.08	94	65615	21.3245 ug/L	99
7) Chloroethane	5.24	64	75619	20.7512 ug/L	96
8) Trichlorofluoromethane	5.74	101	218986	17.0381 ug/L	99
9) Diethyl ether	6.29	59	413472	72.8835 ug/L	95
10) Isoprene	6.33	67	153828	18.9260 ug/L	88
11) Acrolein	6.54	56	107657	107.3518 ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.55	101	140879	20.4182 ug/L	96
13) Acetone	6.66	43	46217	23.0588 ug/L	94
14) 1,1-Dichloroethene	6.88	61	238688	20.4841 ug/L	93
15) Tert-Butyl Alcohol	7.01	59	122742	213.1715 ug/L	92
16) Dimethyl Sulfide	7.17	62	161424	29.6085 ug/L	86
17) Iodomethane	7.44	142	81296	19.6241 ug/L	91
18) Methyl acetate	7.45	43	116535	20.9367 ug/L	93
19) Methylene Chloride	7.73	84	148762	20.9845 ug/L	73
20) Carbon Disulfide	7.77	76	418235	20.2949 ug/L	100
21) Acrylonitrile	7.92	53	55382	23.5269 ug/L	99
22) Methyl Tert Butyl Ether	7.96	73	380571	21.7411 ug/L	95
23) trans-1,2-Dichloroethene	8.22	96	138402	21.3381 ug/L	79
24) n-Hexane	8.29	57	193451	20.8630 ug/L	90
25) Diisopropyl ether	8.68	45	3043255	114.4371 ug/L	96
26) Vinyl Acetate	8.86	43	268836	25.9594 ug/L	95
27) 1,1-Dichloroethane	8.89	63	280580	20.4903 ug/L	100
28) Ethyl-Tert-Butyl ether	9.31	59	2837822	127.7036 ug/L	87
29) 2-Butanone	9.52	43	68890	23.2864 ug/L	95
30) Propionitrile	9.64	54	91539	107.7068 ug/L	99
31) 2,2-Dichloropropane	9.76	77	234718	21.9537 ug/L	93
32) cis-1,2-Dichloroethene	9.83	96	155550	21.9318 ug/L	97
33) Chloroform	10.07	83	270820	21.2735 ug/L	96
34) 1-Bromopropane	10.21	122	33854	30.4745 ug/L	99
35) Bromochloromethane	10.32	130	88382	20.7826 ug/L	100
36) Tetrahydrofuran	10.35	42	199292	103.4033 ug/L	85
38) 1,1,1-Trichloroethane	10.66	97	253038	21.5845 ug/L	97
39) Cyclohexane	10.69	56	262720	21.9499 ug/L	88
40) 1,1-Dichloropropene	10.88	75	191771	20.7350 ug/L	90
41) Tert-Amyl-Methyl ether	11.01	73	1913455	111.6982 ug/L	92
42) Carbon Tetrachloride	11.05	117	233952	21.2471 ug/L	97

(#) = qualifier out of range (m) = manual integration
6M138660.D 8260WTR.M Wed Apr 20 14:24:10 2016 Page 1

Data File : C:\MSDchem\1\data\042016\6M138660.D Vial: 6
Acq On : 20 Apr 2016 14:00 Operator: TMB
Sample : WG565673-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 14:24:10 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

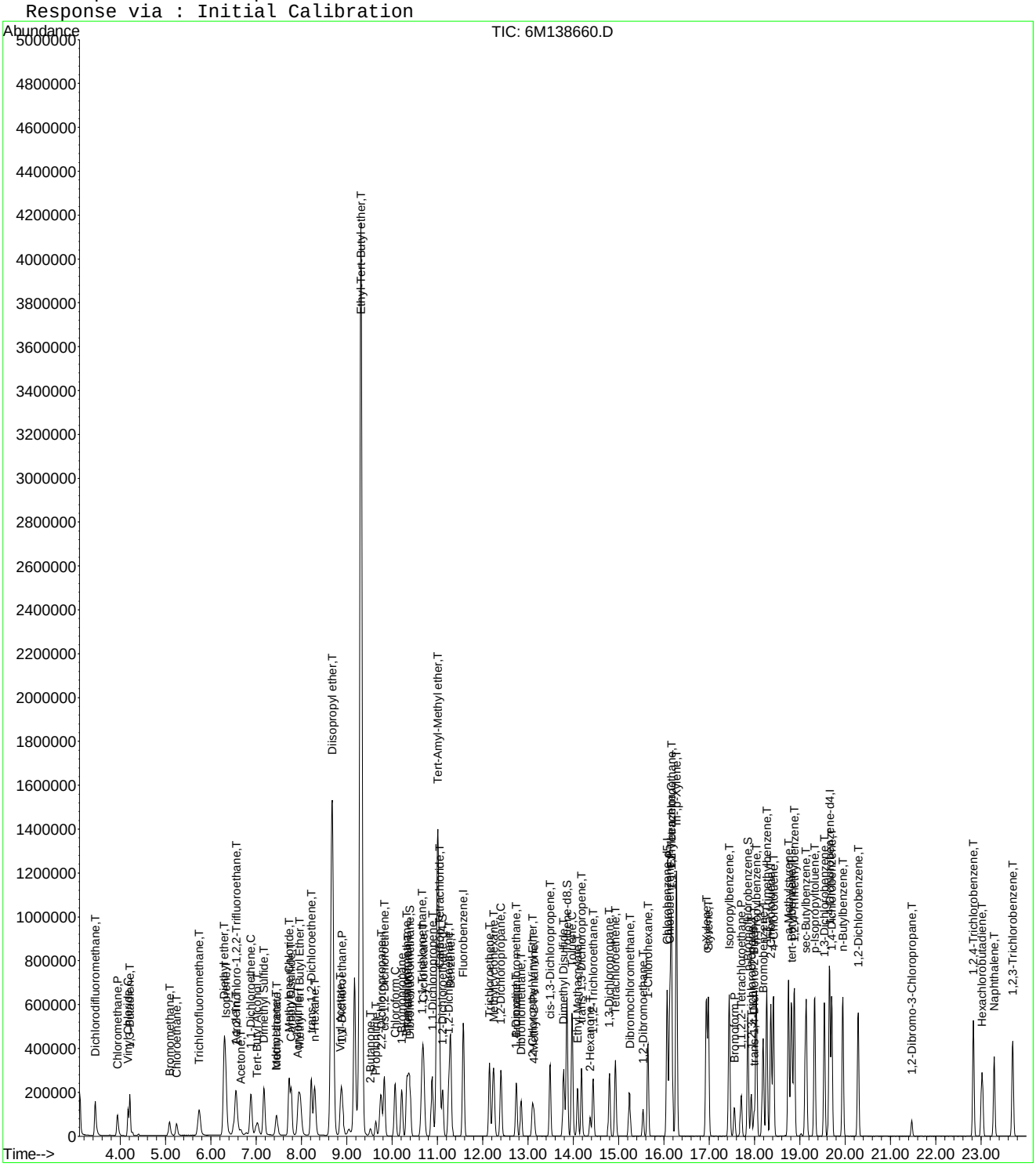
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	222753	21.9225	ug/L	98
46)	Benzene	11.29	78	566146	21.0851	ug/L	91
47)	Trichloroethene	12.15	130	146606	20.8731	ug/L	92
48)	Methylcyclohexane	12.24	83	196425	20.9443	ug/L	86
49)	1,2-Dichloropropane	12.40	63	162197	22.0910	ug/L	99
50)	1,4-Dioxane	12.73	88	9334	167.0250	ug/L	78
51)	Bromodichloromethane	12.74	83	210594	21.3741	ug/L	99
52)	Dibromomethane	12.85	93	81294	20.7549	ug/L	99
53)	2-Chloroethyl Vinyl Ether	13.10	63	70120	20.5763	ug/L	100
54)	4-Methyl-2-Pentanone	13.13	58	46550	20.5100	ug/L	96
55)	cis-1,3-Dichloropropene	13.49	75	246051	23.6595	ug/L	97
56)	Dimethyl Disulfide	13.78	79	119112	21.8398	ug/L	91
59)	Toluene	13.97	91	573082	20.9500	ug/L	100
60)	Ethyl Methacrylate	14.09	69	162583	22.1106	ug/L	86
62)	trans-1,3-Dichloropropene	14.18	75	215771	20.8790	ug/L	98
63)	1,1,2-Trichloroethane	14.44	97	112885	20.7030	ug/L	99
64)	2-Hexanone	14.37	43	87791	19.8074	ug/L	93
65)	1,3-Dichloropropane	14.80	76	210883	21.7616	ug/L	79
66)	Tetrachloroethene	14.93	166	144007	19.2415	ug/L	96
67)	Dibromochloromethane	15.24	129	150613	20.4662	ug/L	99
68)	1,2-Dibromoethane	15.54	107	109321	20.4416	ug/L	99
69)	1-Chlorohexane	15.65	91	177495	20.5801	ug/L	78
70)	Chlorobenzene	16.13	112	383059	20.4207	ug/L	95
71)	1,1,1,2-Tetrachloroethane	16.17	131	152643	20.5253	ug/L	97
72)	Ethylbenzene	16.16	106	201086	20.4608	ug/L	94
73)	m-,p-Xylene	16.28	106	499462	42.8349	ug/L	90
74)	o-Xylene	16.94	106	244873	21.7264	ug/L	90
75)	Styrene	16.98	104	420652	22.2417	ug/L	95
76)	Bromoform	17.56	173	91779	18.6253	ug/L	99
77)	Isopropylbenzene	17.44	105	635484	22.3980	ug/L	99
79)	1,1,2,2-Tetrachloroethane	17.71	83	133692	19.1010	ug/L	98
81)	1,2,3-Trichloropropane	17.93	110	45933	20.9814	ug/L	98
82)	trans-1,4-Dichloro-2-Buten	17.99	53	38026	15.5344	ug/L	71
83)	n-Propylbenzene	18.04	91	778508	22.5394	ug/L	100
84)	Bromobenzene	18.19	156	170284	19.6783	ug/L	96
85)	1,3,5-Trimethylbenzene	18.27	105	557026	21.2530	ug/L	98
86)	2-Chlorotoluene	18.36	91	526264	21.2906	ug/L	97
87)	4-Chlorotoluene	18.42	91	492186	20.7161	ug/L	98
88)	a-Methylstyrene	18.75	118	308943	23.2848	ug/L	100
89)	tert-Butylbenzene	18.82	134	113432	20.6405	ug/L	94
90)	1,2,4-Trimethylbenzene	18.88	105	577289	20.6648	ug/L	97
91)	sec-Butylbenzene	19.14	105	658476	20.9557	ug/L	99
92)	p-Isopropyltoluene	19.33	119	558435	20.9316	ug/L	97
93)	1,3-Dichlorobenzene	19.54	146	339346	20.0760	ug/L	97
94)	1,4-Dichlorobenzene	19.70	146	349550	19.7959	ug/L	98
95)	n-Butylbenzene	19.95	91	518025	20.7431	ug/L	97
96)	1,2-Dichlorobenzene	20.29	146	328677	20.4882	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	21.47	75	28085	19.7886	ug/L	85
98)	1,2,4-Trichlorobenzene	22.83	180	227201	20.0480	ug/L	99
99)	Hexachlorobutadiene	23.03	225	95211	20.6617	ug/L	99
100)	Naphthalene	23.29	128	404951	18.0922	ug/L	99
101)	1,2,3-Trichlorobenzene	23.70	180	206131	19.4308	ug/L	100

(#) = qualifier out of range (m) = manual integration
6M138660.D 8260WTR.M Wed Apr 20 14:24:10 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\042016\6M138660.D Vial: 6
Acq On : 20 Apr 2016 14:00 Operator: TMB
Sample : WG565673-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 14:24 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411515.D Vial: 6
Acq On : 18 Apr 2016 18:00 Operator: TMB
Sample : WG565386-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 18:22:36 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	575198	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	408953	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	220060	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	138256	23.5083	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 94.04%			
43) 1,2-Dichloroethane-d4	10.30	65	146489	23.7240	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 94.88%			
58) Toluene-d8	12.68	98	493311	24.1053	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 96.44%			
80) p-Bromofluorobenzene	16.07	95	197119	22.9268	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	187722	20.2912	ug/L	99
3) Chloromethane	3.63	50	319967	22.3854	ug/L	97
4) Vinyl Chloride	3.84	62	156819	18.4192	ug/L	98
5) 1,3-Butadiene	3.90	54	117863	13.3955	ug/L	97
6) Bromomethane	4.74	94	72131	20.9050	ug/L	99
7) Chloroethane	4.90	64	99488	21.2301	ug/L	96
8) Trichlorofluoromethane	5.38	101	199553	18.9527	ug/L	99
9) Diethyl ether	5.91	59	406847	95.8397	ug/L	92
10) Isoprene	5.95	67	179754	22.4035	ug/L	90
11) Acrolein	6.15	56	35561	68.4691	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	115802	20.2434	ug/L	91
13) Acetone	6.25	43	25264	23.1040	ug/L	95
14) 1,1-Dichloroethene	6.48	61	206571	18.9779	ug/L	92
15) Tert-Butyl Alcohol	6.59	59	52166	204.2476	ug/L	98
16) Dimethyl Sulfide	6.74	62	136829	27.6194	ug/L	88
17) Iodomethane	7.00	142	49338	21.2333	ug/L	99
18) Methyl acetate	7.01	43	66477	17.2557	ug/L	95
19) Methylene Chloride	7.26	84	116505	19.4311	ug/L	76
20) Carbon Disulfide	7.30	76	359267	17.9992	ug/L	98
21) Acrylonitrile	7.44	53	33845	20.5150	ug/L	98
22) Methyl Tert Butyl Ether	7.47	73	246280	20.3205	ug/L	94
23) trans-1,2-Dichloroethene	7.71	61	209640	20.1966	ug/L	90
24) n-Hexane	7.79	57	186234	18.4206	ug/L	96
25) Diisopropyl ether	8.13	45	2585236	99.3192	ug/L	97
26) Vinyl Acetate	8.30	43	237103	24.7360	ug/L	97
27) 1,1-Dichloroethane	8.33	63	253384	19.4414	ug/L	97
28) Ethyl-Tert-Butyl ether	8.70	59	1761764	92.5114	ug/L	96
29) 2-Butanone	8.89	43	39744	21.9168	ug/L	91
30) Propionitrile	8.99	54	49829	94.5683	ug/L	98
31) 2,2-Dichloropropane	9.11	77	197951	20.4049	ug/L	100
32) cis-1,2-Dichloroethene	9.18	96	132113	20.3830	ug/L	84
33) Chloroform	9.38	83	225688	20.5880	ug/L	100
34) 1-Bromopropane	9.52	122	26628	27.7398	ug/L	97
35) Bromochloromethane	9.61	130	63945	19.4541	ug/L	79
36) Tetrahydrofuran	9.63	42	117081	87.4914	ug/L	90
38) 1,1,1-Trichloroethane	9.91	97	193779	19.9647	ug/L	99
39) Cyclohexane	9.94	56	256409	19.1484	ug/L	92
40) 1,1-Dichloropropene	10.11	75	169582	19.8088	ug/L	95
41) Tert-Amyl-Methyl ether	10.21	73	1252653	97.4940	ug/L	94
42) Carbon Tetrachloride	10.25	117	174177	20.2209	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411515.D 8260WT.M Mon Apr 18 18:22:37 2016 Page 1

Data File : C:\MSDchem\2\data\041816\8M411515.D Vial: 6
Acq On : 18 Apr 2016 18:00 Operator: TMB
Sample : WG565386-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 18:22:36 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

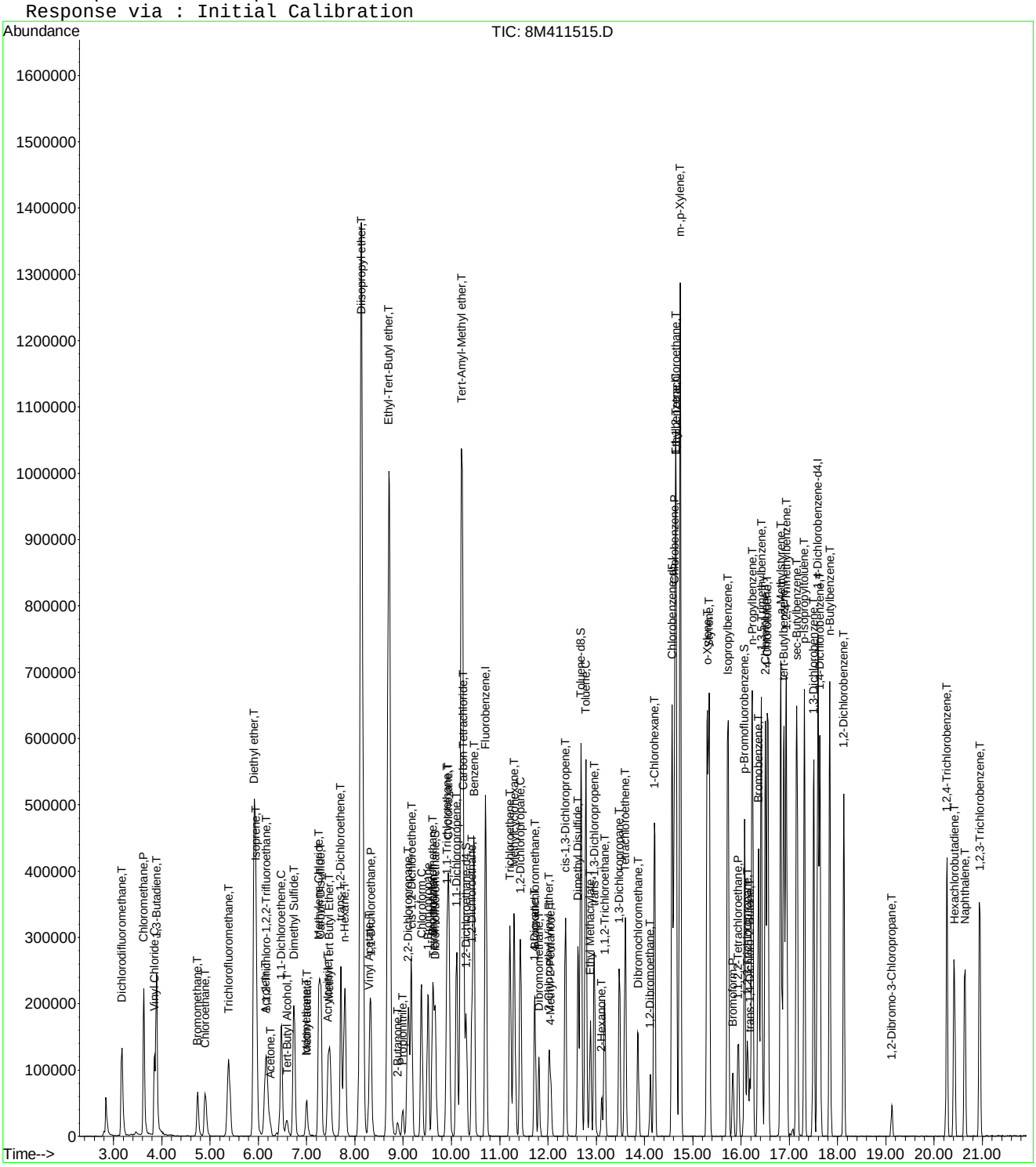
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	173919	20.9122	ug/L		97
46)	Benzene	10.47	78	487810	20.9507	ug/L		93
47)	Trichloroethene	11.21	130	124547	21.2454	ug/L		97
48)	Methylcyclohexane	11.30	83	183713	19.7191	ug/L		89
49)	1,2-Dichloropropane	11.43	63	145018	20.8139	ug/L		94
50)	Bromodichloromethane	11.73	83	165461	20.0462	ug/L		100
51)	1,4-Dioxane	11.72	88	5138	212.1134	ug/L		96
52)	Dibromomethane	11.81	93	58265	20.0116	ug/L		93
53)	2-Chloroethyl Vinyl Ether	12.02	63	58731	20.6634	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	29509	19.2039	ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	203927	22.3791	ug/L		99
56)	Dimethyl Disulfide	12.62	79	98628	20.4135	ug/L		94
59)	Toluene	12.78	91	509450	21.1799	ug/L		99
60)	Ethyl Methacrylate	12.88	69	109226	21.5437	ug/L		90
62)	trans-1,3-Dichloropropene	12.96	75	162435	20.1251	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	78991	20.5329	ug/L		98
64)	2-Hexanone	13.12	58	27206	19.0661	ug/L	#	96
65)	1,3-Dichloropropane	13.48	76	154667	21.4858	ug/L		87
66)	Tetrachloroethene	13.60	164	90224	19.5827	ug/L		93
67)	Dibromochloromethane	13.87	129	105222	20.7536	ug/L		99
68)	1,2-Dibromoethane	14.12	107	78127	19.9675	ug/L		100
69)	1-Chlorohexane	14.21	91	173408	21.2824	ug/L		84
70)	Chlorobenzene	14.62	112	332285	20.4740	ug/L		95
71)	1,1,1,2-Tetrachloroethane	14.66	131	118092	20.8686	ug/L		97
72)	Ethylbenzene	14.66	106	180381	20.0649	ug/L		92
73)	m-,p-Xylene	14.74	106	443286	42.2093	ug/L		94
74)	o-Xylene	15.31	106	218560	20.4888	ug/L		95
75)	Styrene	15.34	104	365713	21.6036	ug/L		99
76)	Bromoform	15.83	173	56644	18.4481	ug/L		98
77)	Isopropylbenzene	15.73	105	573991	22.3601	ug/L		99
79)	1,1,2,2-Tetrachloroethane	15.94	83	94456	19.5318	ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	25830	19.6409	ug/L		96
82)	trans-1,4-Dichloro-2-Buten	16.18	53	31958	16.5012	ug/L		88
83)	n-Propylbenzene	16.24	91	727651	22.0656	ug/L		98
84)	Bromobenzene	16.36	156	128707	19.6276	ug/L		89
85)	1,3,5-Trimethylbenzene	16.42	105	482701	20.8566	ug/L		100
86)	2-Chlorotoluene	16.51	91	458816	21.3855	ug/L		97
87)	4-Chlorotoluene	16.55	91	454645	20.3460	ug/L		97
88)	a-Methylstyrene	16.83	118	276403	21.9302	ug/L		99
89)	tert-Butylbenzene	16.89	134	97488	20.6804	ug/L		89
90)	1,2,4-Trimethylbenzene	16.94	105	505616	20.8098	ug/L		99
91)	sec-Butylbenzene	17.16	105	622171	21.6543	ug/L		96
92)	p-Isopropyltoluene	17.31	119	492495	21.0278	ug/L		97
93)	1,3-Dichlorobenzene	17.51	146	273595	20.5069	ug/L		96
94)	1,4-Dichlorobenzene	17.63	146	275961	20.6628	ug/L		94
95)	n-Butylbenzene	17.84	91	498431	20.9098	ug/L		97
96)	1,2-Dichlorobenzene	18.13	146	239521	20.2876	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	16307	18.6689	ug/L		81
98)	1,2,4-Trichlorobenzene	20.27	180	157772	18.9907	ug/L		99
99)	Hexachlorobutadiene	20.42	225	68584	20.9742	ug/L		99
100)	Naphthalene	20.64	128	243585	17.5063	ug/L		100
101)	1,2,3-Trichlorobenzene	20.95	180	131225	18.9273	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411515.D 8260WT.M Mon Apr 18 18:22:37 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041816\8M411515.D Vial: 6
Acq On : 18 Apr 2016 18:00 Operator: TMB
Sample : WG565386-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 18:22 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411515.D 8260WT.M Mon Apr 18 18:22:37 2016 Page 3

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\041916\8M411548.D Vial: 5
Acq On : 19 Apr 2016 16:10 Operator: TMB
Sample : WG565517-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 16:32:16 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	756245	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.58	117	541336	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	282307	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	180207	23.3057	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 93.24%			
43) 1,2-Dichloroethane-d4	10.31	65	193299	23.8104	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 95.24%			
58) Toluene-d8	12.68	98	649396	23.9722	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 95.88%			
80) p-Bromofluorobenzene	16.07	95	262178	23.7701	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	241061	19.8187	ug/L	99
3) Chloromethane	3.63	50	420731	22.3882	ug/L	96
4) Vinyl Chloride	3.85	62	248756	22.2229	ug/L	96
5) 1,3-Butadiene	3.89	54	162054	14.0457	ug/L	94
6) Bromomethane	4.75	94	100957	22.1707	ug/L	100
7) Chloroethane	4.90	64	131454	21.3358	ug/L	97
8) Trichlorofluoromethane	5.39	101	261783	18.9108	ug/L	99
9) Diethyl ether	5.91	59	601637	107.7963	ug/L	93
10) Isoprene	5.95	67	238040	22.5654	ug/L	92
11) Acrolein	6.15	56	95583	121.5738	ug/L	97
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	152011	20.2114	ug/L	89
13) Acetone	6.26	43	33543	23.3315	ug/L	100
14) 1,1-Dichloroethene	6.47	61	272961	19.0737	ug/L	94
15) Tert-Butyl Alcohol	6.60	59	64360	191.6639	ug/L	97
16) Dimethyl Sulfide	6.74	62	184832	28.3771	ug/L	88
17) Iodomethane	6.99	142	57064	19.1731	ug/L	97
18) Methyl acetate	7.01	43	91857	18.1354	ug/L	95
19) Methylene Chloride	7.26	84	157261	19.9494	ug/L	78
20) Carbon Disulfide	7.30	76	477159	18.1825	ug/L	99
21) Acrylonitrile	7.44	53	44547	20.5377	ug/L	98
22) Methyl Tert Butyl Ether	7.48	73	331612	20.8108	ug/L	93
23) trans-1,2-Dichloroethene	7.71	61	270769	19.8407	ug/L	89
24) n-Hexane	7.80	57	251780	18.9418	ug/L	97
25) Diisopropyl ether	8.14	45	3743575	109.3892	ug/L	97
26) Vinyl Acetate	8.30	43	315763	25.0559	ug/L	98
27) 1,1-Dichloroethane	8.33	63	328258	19.1566	ug/L	98
28) Ethyl-Tert-Butyl ether	8.71	59	2513313	100.3804	ug/L	96
29) 2-Butanone	8.89	43	52189	21.8896	ug/L	93
30) Propionitrile	8.99	54	71535	103.2611	ug/L	99
31) 2,2-Dichloropropane	9.11	77	265626	20.8259	ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	175143	20.5528	ug/L	82
33) Chloroform	9.38	83	297382	20.6336	ug/L	99
34) 1-Bromopropane	9.52	122	36965	29.2894	ug/L	93
35) Bromochloromethane	9.61	130	86096	19.9224	ug/L	77
36) Tetrahydrofuran	9.64	42	170572	96.9486	ug/L	90
38) 1,1,1-Trichloroethane	9.91	97	258292	20.2406	ug/L	100
39) Cyclohexane	9.95	56	345665	19.6341	ug/L	90
40) 1,1-Dichloropropene	10.11	75	218000	19.3682	ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	1811547	107.2387	ug/L	93
42) Carbon Tetrachloride	10.26	117	229252	20.2432	ug/L	98

(#) = qualifier out of range (m) = manual integration
8M411548.D 8260WT.M Tue Apr 19 16:32:16 2016 Page 1

Data File : C:\MSDchem\2\data\041916\8M411548.D Vial: 5
Acq On : 19 Apr 2016 16:10 Operator: TMB
Sample : WG565517-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 16:32:16 2016 Quant Results File: 8260WT.RES

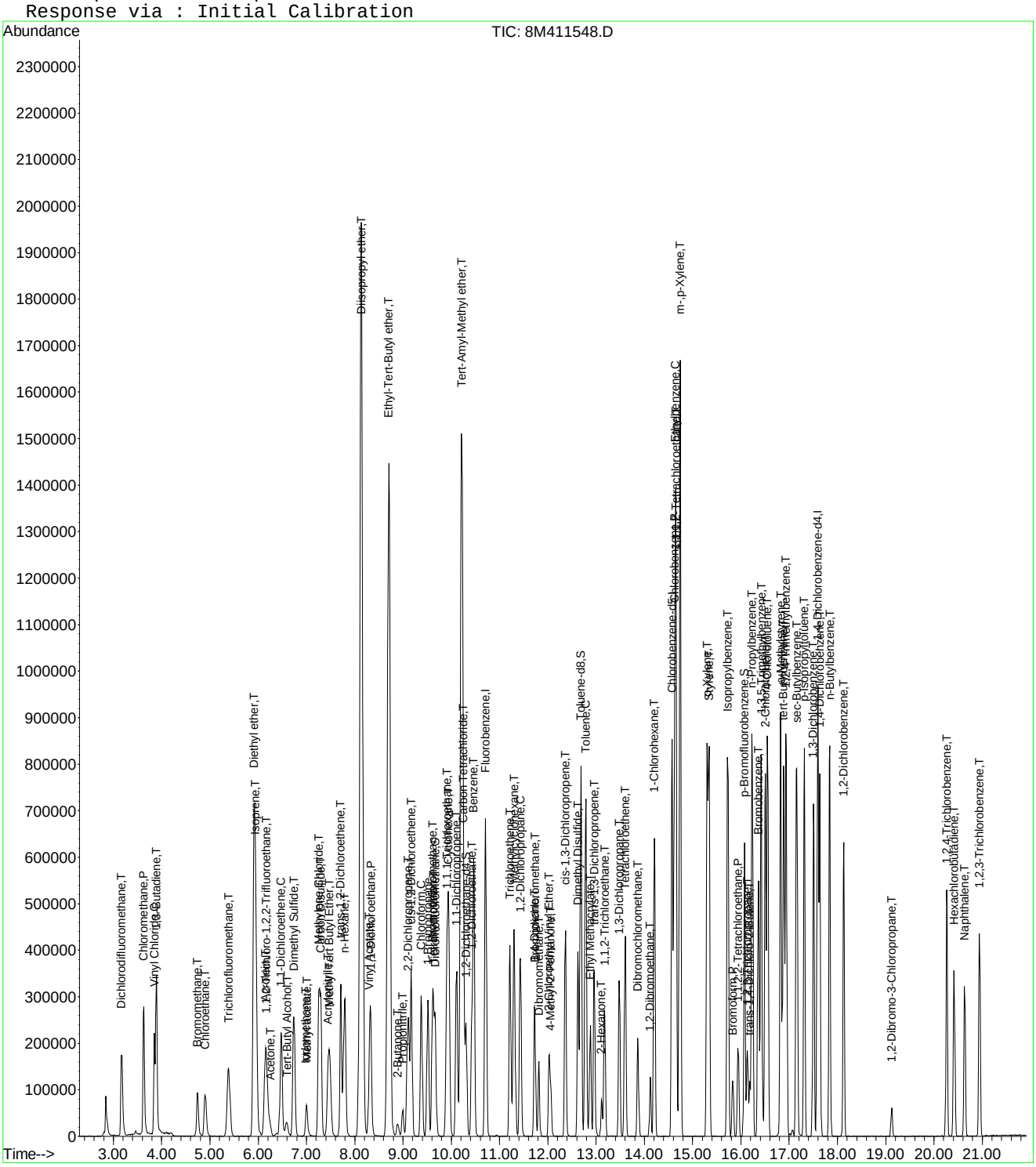
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	227108	20.7702	ug/L		98
46)	Benzene	10.46	78	642731	20.9958	ug/L		93
47)	Trichloroethene	11.22	130	161417	20.9429	ug/L		97
48)	Methylcyclohexane	11.30	83	245473	20.0404	ug/L		90
49)	1,2-Dichloropropane	11.43	63	191525	20.9080	ug/L		94
50)	Bromodichloromethane	11.73	83	223047	20.5535	ug/L		100
51)	1,4-Dioxane	11.72	88	5223	164.0019	ug/L		89
52)	Dibromomethane	11.82	93	77693	20.2960	ug/L		94
53)	2-Chloroethyl Vinyl Ether	12.02	63	84106	22.5069	ug/L		94
54)	4-Methyl-2-Pentanone	12.05	58	39624	19.6132	ug/L		92
55)	cis-1,3-Dichloropropene	12.36	75	275065	22.9592	ug/L		98
56)	Dimethyl Disulfide	12.62	79	134199	21.1262	ug/L		97
59)	Toluene	12.79	91	664185	20.8602	ug/L		98
60)	Ethyl Methacrylate	12.88	69	148874	22.1830	ug/L		88
62)	trans-1,3-Dichloropropene	12.96	75	218870	20.4857	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	106448	20.9034	ug/L		99
64)	2-Hexanone	13.11	58	36394	19.2679	ug/L	#	99
65)	1,3-Dichloropropane	13.48	76	204219	21.4317	ug/L		86
66)	Tetrachloroethene	13.60	164	116320	19.0727	ug/L		90
67)	Dibromochloromethane	13.86	129	137750	20.5251	ug/L		100
68)	1,2-Dibromoethane	14.12	107	104731	20.2197	ug/L		99
69)	1-Chlorohexane	14.20	91	230489	21.3702	ug/L		85
70)	Chlorobenzene	14.63	112	443632	20.6501	ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.66	131	150636	20.1098	ug/L		100
72)	Ethylbenzene	14.65	106	233969	19.6613	ug/L		95
73)	m-,p-Xylene	14.74	106	574177	41.3025	ug/L		94
74)	o-Xylene	15.30	106	290072	20.5428	ug/L		99
75)	Styrene	15.34	104	470558	20.9994	ug/L		97
76)	Bromoform	15.84	173	73202	18.0177	ug/L		99
77)	Isopropylbenzene	15.72	105	734369	21.6117	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.94	83	124906	20.1334	ug/L		97
81)	1,2,3-Trichloropropane	16.14	110	34217	20.2815	ug/L		98
82)	trans-1,4-Dichloro-2-Buten	16.18	53	43831	17.6415	ug/L		89
83)	n-Propylbenzene	16.23	91	929654	21.9752	ug/L		98
84)	Bromobenzene	16.36	156	167008	19.8528	ug/L		89
85)	1,3,5-Trimethylbenzene	16.43	105	624479	21.0331	ug/L		99
86)	2-Chlorotoluene	16.51	91	606826	22.0478	ug/L		98
87)	4-Chlorotoluene	16.55	91	563680	19.6634	ug/L		97
88)	a-Methylstyrene	16.83	118	357361	22.1017	ug/L		100
89)	tert-Butylbenzene	16.88	134	123957	20.4974	ug/L		87
90)	1,2,4-Trimethylbenzene	16.93	105	638160	20.4737	ug/L		100
91)	sec-Butylbenzene	17.16	105	795296	21.5765	ug/L		95
92)	p-Isopropyltoluene	17.31	119	623397	20.7480	ug/L		96
93)	1,3-Dichlorobenzene	17.50	146	342036	19.9841	ug/L		93
94)	1,4-Dichlorobenzene	17.63	146	351566	20.5195	ug/L		93
95)	n-Butylbenzene	17.84	91	642190	21.0004	ug/L		96
96)	1,2-Dichlorobenzene	18.13	146	301317	19.8943	ug/L		92
97)	1,2-Dibromo-3-Chloropropan	19.12	75	21062	18.7959	ug/L		82
98)	1,2,4-Trichlorobenzene	20.27	180	195965	18.3869	ug/L		100
99)	Hexachlorobutadiene	20.42	225	86129	20.5320	ug/L		99
100)	Naphthalene	20.63	128	292547	16.3892	ug/L		99
101)	1,2,3-Trichlorobenzene	20.94	180	154285	17.3466	ug/L		99

(#) = qualifier out of range (m) = manual integration
8M411548.D 8260WT.M Tue Apr 19 16:32:16 2016 Page 2

Data File : C:\MSDchem\2\data\041916\8M411548.D Vial: 5
Acq On : 19 Apr 2016 16:10 Operator: TMB
Sample : WG565517-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 19 16:32 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Data File : C:\MSDchem\2\data\042116\8M411613.D Vial: 6
Acq On : 21 Apr 2016 15:00 Operator: TMB
Sample : WG565880-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 15:22:12 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	691169	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	512606	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	278030	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.67	111	178072	25.1980	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 100.80%			
43) 1,2-Dichloroethane-d4	10.30	65	209688	28.2611	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 113.04%			
58) Toluene-d8	12.68	98	601429	23.4459	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 93.80%			
80) p-Bromofluorobenzene	16.07	95	249049	22.9271	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.17	85	283840	25.5329	ug/L	99
3) Chloromethane	3.63	50	246231	14.3362	ug/L	98
4) Vinyl Chloride	3.84	62	165509	16.1781	ug/L	98
5) 1,3-Butadiene	3.89	54	125683	11.8015	ug/L	97
6) Bromomethane	4.74	94	102995	24.5837	ug/L	99
7) Chloroethane	4.90	64	125077	22.2122	ug/L	93
8) Trichlorofluoromethane	5.38	101	303104	23.9573	ug/L	99
9) Diethyl ether	5.91	59	569031	111.5536	ug/L	84
10) Isoprene	5.95	67	206511	21.4197	ug/L	74
11) Acrolein	6.15	56	77932	111.2706	ug/L	91
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	155031	22.5538	ug/L	98
13) Acetone	6.25	43	31391	23.8904	ug/L	99
14) 1,1-Dichloroethene	6.47	61	278486	21.2920	ug/L	90
15) Tert-Butyl Alcohol	6.59	59	69069	225.0535	ug/L	98
16) Dimethyl Sulfide	6.74	62	166813	28.0220	ug/L	77
17) Iodomethane	7.00	142	95433	31.6756	ug/L	89
18) Methyl acetate	7.01	43	100456	21.7005	ug/L	90
19) Methylene Chloride	7.25	84	142407	19.7659	ug/L	54
20) Carbon Disulfide	7.30	76	406466	16.9470	ug/L	100
21) Acrylonitrile	7.44	53	45274	22.8381	ug/L	96
22) Methyl Tert Butyl Ether	7.47	73	330353	22.6838	ug/L	94
23) trans-1,2-Dichloroethene	7.71	61	270654	21.6996	ug/L	89
24) n-Hexane	7.79	57	252424	20.7783	ug/L	89
25) Diisopropyl ether	8.13	45	3783294	120.9584	ug/L	94
26) Vinyl Acetate	8.30	43	323137	28.0552	ug/L	95
27) 1,1-Dichloroethane	8.33	63	313974	20.0481	ug/L	97
28) Ethyl-Tert-Butyl ether	8.70	59	2412521	105.4270	ug/L	97
29) 2-Butanone	8.89	43	55177	25.3219	ug/L	85
30) Propionitrile	8.99	54	71507	112.9393	ug/L	99
31) 2,2-Dichloropropane	9.10	77	282618	24.2443	ug/L	100
32) cis-1,2-Dichloroethene	9.18	96	162211	20.8275	ug/L	77
33) Chloroform	9.38	83	290183	22.0298	ug/L	100
34) 1-Bromopropane	9.52	122	34199	29.6491	ug/L	99
35) Bromochloromethane	9.61	130	88503	22.4076	ug/L	77
36) Tetrahydrofuran	9.63	42	175315	109.0262	ug/L	83
38) 1,1,1-Trichloroethane	9.91	97	286658	24.5784	ug/L	98
39) Cyclohexane	9.94	56	335769	20.8676	ug/L	87
40) 1,1-Dichloropropene	10.11	75	217886	21.1807	ug/L	98
41) Tert-Amyl-Methyl ether	10.21	73	1654571	107.1681	ug/L	88
42) Carbon Tetrachloride	10.25	117	262347	25.3466	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411613.D 8260WT.M Thu Apr 21 15:22:13 2016 Page 1

Data File : C:\MSDchem\2\data\042116\8M411613.D Vial: 6
Acq On : 21 Apr 2016 15:00 Operator: TMB
Sample : WG565880-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 15:22:12 2016 Quant Results File: 8260WT.RES

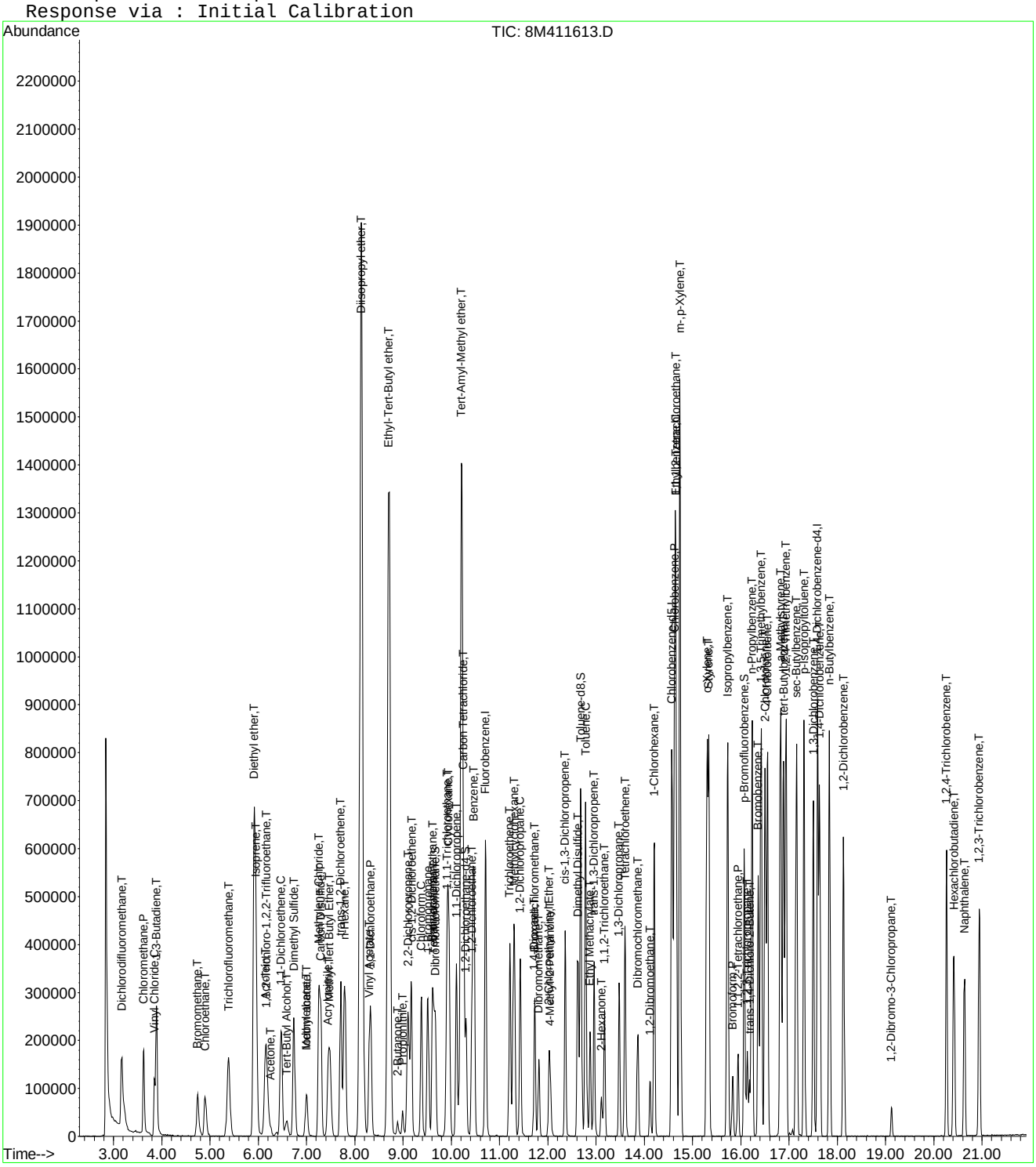
Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	248277	24.8441	ug/L		98
46)	Benzene	10.47	78	579561	20.7147	ug/L		85
47)	Trichloroethene	11.21	130	162352	23.0475	ug/L		97
48)	Methylcyclohexane	11.31	83	237159	21.1846	ug/L		81
49)	1,2-Dichloropropane	11.43	63	172486	20.6025	ug/L		95
50)	Bromodichloromethane	11.73	83	226252	22.8119	ug/L		99
51)	1,4-Dioxane	11.72	88	6244	214.5211	ug/L		89
52)	Dibromomethane	11.81	93	73932	21.1320	ug/L		97
53)	2-Chloroethyl Vinyl Ether	12.03	63	74102	21.6969	ug/L		95
54)	4-Methyl-2-Pentanone	12.05	58	40125	21.7312	ug/L		91
55)	cis-1,3-Dichloropropene	12.36	75	259431	23.6931	ug/L		98
56)	Dimethyl Disulfide	12.63	79	125847	21.6767	ug/L		93
59)	Toluene	12.78	91	610936	20.2632	ug/L		99
60)	Ethyl Methacrylate	12.88	69	125075	19.6814	ug/L		65
62)	trans-1,3-Dichloropropene	12.96	75	211588	20.9141	ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	98464	20.4193	ug/L		99
64)	2-Hexanone	13.11	58	35321	19.7479	ug/L	#	82
65)	1,3-Dichloropropane	13.48	76	186233	20.6395	ug/L		69
66)	Tetrachloroethene	13.60	164	125866	21.7946	ug/L		93
67)	Dibromochloromethane	13.87	129	146359	23.0301	ug/L		96
68)	1,2-Dibromoethane	14.12	107	100440	20.4766	ug/L		97
69)	1-Chlorohexane	14.21	91	213874	20.9411	ug/L		72
70)	Chlorobenzene	14.62	112	425367	20.9096	ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.65	131	159542	22.4925	ug/L		96
72)	Ethylbenzene	14.65	106	227557	20.1942	ug/L		99
73)	m-,p-Xylene	14.74	106	563483	42.8050	ug/L		98
74)	o-Xylene	15.31	106	283258	21.1845	ug/L		99
75)	Styrene	15.34	104	447669	21.0976	ug/L		93
76)	Bromoform	15.83	173	77886	20.2077	ug/L		99
77)	Isopropylbenzene	15.73	105	732112	22.7529	ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	105522	17.2705	ug/L		97
81)	1,2,3-Trichloropropane	16.13	110	34229	20.6007	ug/L	#	4
82)	trans-1,4-Dichloro-2-Buten	16.18	53	42998	17.5725	ug/L	#	2
83)	n-Propylbenzene	16.24	91	881855	21.1660	ug/L		98
84)	Bromobenzene	16.36	156	167884	20.2640	ug/L		98
85)	1,3,5-Trimethylbenzene	16.42	105	629784	21.5380	ug/L		100
86)	2-Chlorotoluene	16.50	91	533123	19.6679	ug/L		99
87)	4-Chlorotoluene	16.56	91	567795	20.1117	ug/L		98
88)	a-Methylstyrene	16.83	118	346149	21.7376	ug/L		97
89)	tert-Butylbenzene	16.89	134	121224	20.3538	ug/L		81
90)	1,2,4-Trimethylbenzene	16.94	105	629421	20.5040	ug/L		99
91)	sec-Butylbenzene	17.16	105	764581	21.0623	ug/L		97
92)	p-Isopropyltoluene	17.31	119	648519	21.9161	ug/L		94
93)	1,3-Dichlorobenzene	17.51	146	341675	20.2701	ug/L		95
94)	1,4-Dichlorobenzene	17.63	146	347687	20.6053	ug/L		95
95)	n-Butylbenzene	17.84	91	609166	20.2269	ug/L		99
96)	1,2-Dichlorobenzene	18.13	146	306149	20.5243	ug/L		96
97)	1,2-Dibromo-3-Chloropropan	19.12	75	22833	20.6898	ug/L		82
98)	1,2,4-Trichlorobenzene	20.27	180	221654	21.1172	ug/L		99
99)	Hexachlorobutadiene	20.42	225	104813	25.3704	ug/L		98
100)	Naphthalene	20.64	128	317229	18.0453	ug/L		100
101)	1,2,3-Trichlorobenzene	20.94	180	182058	20.7841	ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411613.D 8260WT.M Thu Apr 21 15:22:13 2016 Page 2

Data File : C:\MSDchem\2\data\042116\8M411613.D Vial: 6
Acq On : 21 Apr 2016 15:00 Operator: TMB
Sample : WG565880-02 20ug/L LCS STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 15:22 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\041816\6M138594.D Vial: 7
Acq On : 18 Apr 2016 15:52 Operator: TMB
Sample : WG565328-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 16:16:19 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	697190	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	532673	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	306531	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.39	111	186992	26.1887 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 104.76%		
43) 1,2-Dichloroethane-d4	11.11	65	220535	25.4491 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 101.80%		
58) Toluene-d8	13.86	98	631408	26.3295 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 105.32%		
80) p-Bromofluorobenzene	17.85	95	268318	26.2188 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 104.88%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.44	85	270521	22.5805 ug/L	98
3) Chloromethane	3.93	50	212401	25.3394 ug/L	100
4) Vinyl Chloride	4.17	62	161672	23.8407 ug/L	99
5) 1,3-Butadiene	4.21	54	90910	19.7159 ug/L	91
6) Bromomethane	5.08	94	68239	20.5604 ug/L	99
7) Chloroethane	5.24	64	82472	20.9817 ug/L	95
8) Trichlorofluoromethane	5.73	101	235191	16.9648 ug/L	100
9) Diethyl ether	6.30	59	653111	106.7315 ug/L	92
10) Isoprene	6.32	67	115584	13.1839 ug/L	92
11) Acrolein	6.56	56	71407	66.0132 ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	6.55	101	161140	21.6520 ug/L	98
13) Acetone	6.67	43	44247	20.4664 ug/L	95
14) 1,1-Dichloroethene	6.88	61	258832	20.5934 ug/L	92
15) Tert-Butyl Alcohol	7.03	59	141609	228.0076 ug/L	93
16) Dimethyl Sulfide	7.17	62	112131	19.0676 ug/L	89
17) Iodomethane	7.44	142	59053	13.8166 ug/L	91
18) Methyl acetate	7.46	43	112514	18.7405 ug/L #	89
19) Methylene Chloride	7.73	84	158965	20.7888 ug/L	72
20) Carbon Disulfide	7.77	76	192024	8.6386 ug/L	99
21) Acrylonitrile	7.93	53	56174	22.1235 ug/L	99
22) Methyl Tert Butyl Ether	7.96	73	373939	19.8047 ug/L	92
23) trans-1,2-Dichloroethene	8.22	96	149529	21.3728 ug/L	81
24) n-Hexane	8.29	57	131894	13.1872 ug/L	92
25) Diisopropyl ether	8.68	45	3057832	106.6019 ug/L	96
26) Vinyl Acetate	8.86	43	303239	27.1466 ug/L	95
27) 1,1-Dichloroethane	8.89	63	300123	20.3195 ug/L	99
28) Ethyl-Tert-Butyl ether	9.31	59	2403403	100.2692 ug/L	95
29) 2-Butanone	9.52	43	68398	21.4345 ug/L	93
30) Propionitrile	9.64	54	96323	105.0726 ug/L	99
31) 2,2-Dichloropropane	9.75	77	254574	22.0748 ug/L	93
32) cis-1,2-Dichloroethene	9.83	96	165439	21.6254 ug/L	99
33) Chloroform	10.07	83	284845	20.7439 ug/L	97
34) 1-Bromopropane	10.21	122	31765	26.5093 ug/L	96
35) Bromochloromethane	10.32	130	94770	20.6600 ug/L	99
36) Tetrahydrofuran	10.36	42	204479	98.3594 ug/L	85
38) 1,1,1-Trichloroethane	10.66	97	257394	20.3553 ug/L	98
39) Cyclohexane	10.69	56	211029	16.3457 ug/L	89
40) 1,1-Dichloropropene	10.89	75	204811	20.5303 ug/L	92
41) Tert-Amyl-Methyl ether	11.01	73	1921939	104.0136 ug/L	92
42) Carbon Tetrachloride	11.05	117	241692	20.3497 ug/L	97

(#) = qualifier out of range (m) = manual integration
6M138594.D 8260WTR.M Mon Apr 18 16:16:19 2016 Page 1

Data File : C:\MSDchem\1\data\041816\6M138594.D Vial: 7
Acq On : 18 Apr 2016 15:52 Operator: TMB
Sample : WG565328-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 16:16:19 2016 Quant Results File: 8260WTR.RES

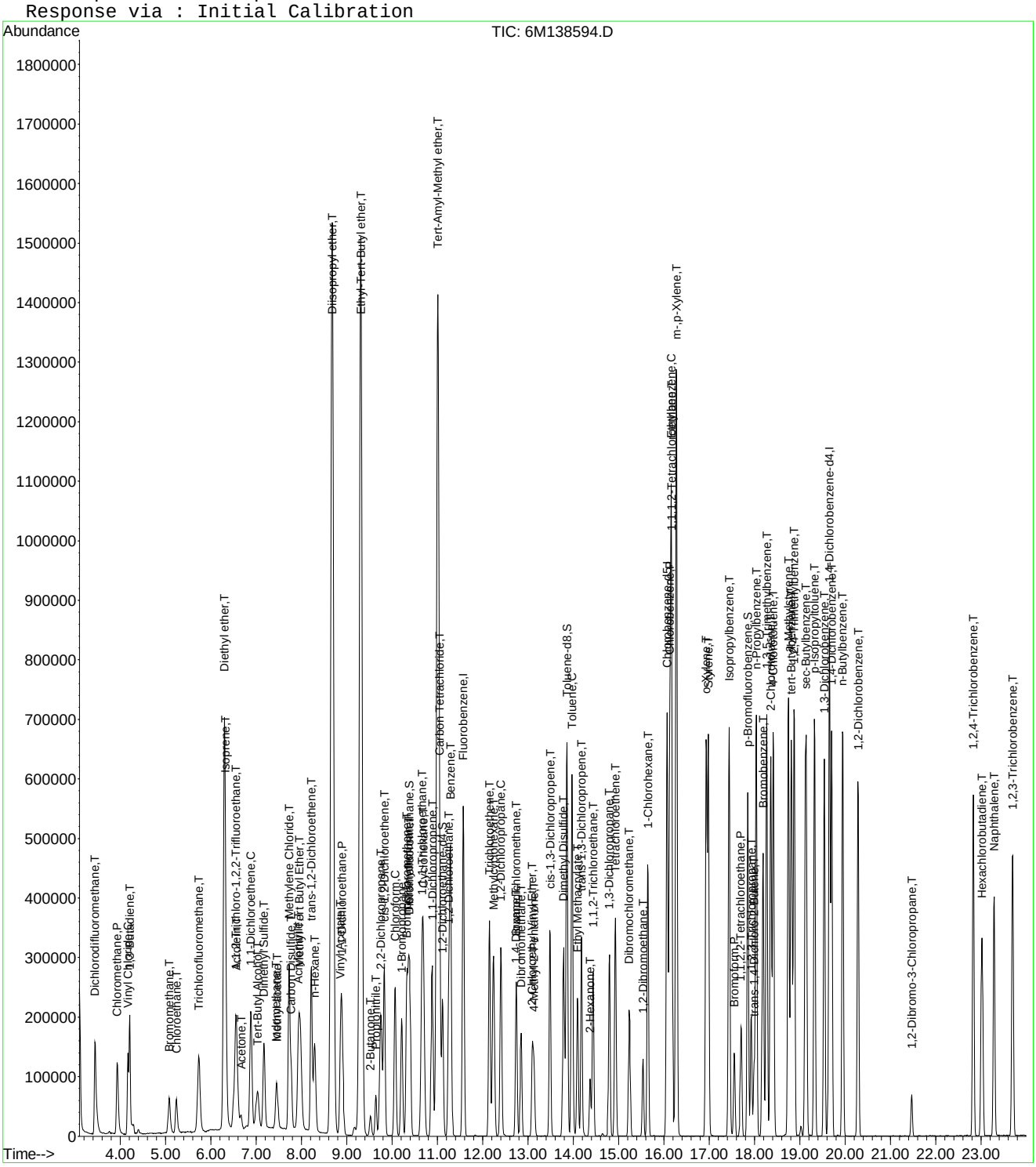
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	233597	21.3136	ug/L	97
46)	Benzene	11.29	78	605857	20.9189	ug/L	91
47)	Trichloroethene	12.15	130	160411	21.1734	ug/L	92
48)	Methylcyclohexane	12.24	83	189398	18.7227	ug/L	85
49)	1,2-Dichloropropane	12.40	63	173428	21.8985	ug/L	100
50)	1,4-Dioxane	12.73	88	11902	197.4497	ug/L	75
51)	Bromodichloromethane	12.74	83	219308	20.6357	ug/L	97
52)	Dibromomethane	12.85	93	87266	20.6553	ug/L	100
53)	2-Chloroethyl Vinyl Ether	13.09	63	76271	20.7495	ug/L	98
54)	4-Methyl-2-Pentanone	13.13	58	50896	20.7899	ug/L	95
55)	cis-1,3-Dichloropropene	13.49	75	263393	23.4805	ug/L	97
56)	Dimethyl Disulfide	13.79	79	123013	20.9106	ug/L	90
59)	Toluene	13.97	91	619953	20.9115	ug/L	99
60)	Ethyl Methacrylate	14.09	69	173893	21.8207	ug/L	86
62)	trans-1,3-Dichloropropene	14.18	75	228238	20.3781	ug/L	99
63)	1,1,2-Trichloroethane	14.44	97	120567	20.4026	ug/L	99
64)	2-Hexanone	14.37	43	98105	20.4235	ug/L	93
65)	1,3-Dichloropropane	14.80	76	227197	21.6327	ug/L	81
66)	Tetrachloroethene	14.93	166	157364	19.4008	ug/L	98
67)	Dibromochloromethane	15.24	129	157632	19.7642	ug/L	98
68)	1,2-Dibromoethane	15.54	107	118743	20.4871	ug/L	100
69)	1-Chlorohexane	15.65	91	193435	20.6932	ug/L	81
70)	Chlorobenzene	16.13	112	411303	20.2314	ug/L	96
71)	1,1,1,2-Tetrachloroethane	16.18	131	161880	20.0847	ug/L	97
72)	Ethylbenzene	16.17	106	218015	20.4685	ug/L	94
73)	m-,p-Xylene	16.28	106	537902	42.5655	ug/L	91
74)	o-Xylene	16.93	106	267167	21.8721	ug/L	94
75)	Styrene	16.98	104	449489	21.9292	ug/L	95
76)	Bromoform	17.55	173	95532	17.8883	ug/L	99
77)	Isopropylbenzene	17.44	105	684149	22.2493	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.70	83	133566	17.8948	ug/L	96
81)	1,2,3-Trichloropropane	17.93	110	47300	20.2605	ug/L	96
82)	trans-1,4-Dichloro-2-Buten	17.99	53	41640	15.9375	ug/L	80
83)	n-Propylbenzene	18.04	91	841819	22.8549	ug/L	99
84)	Bromobenzene	18.19	156	182774	19.8066	ug/L	97
85)	1,3,5-Trimethylbenzene	18.27	105	594916	21.2854	ug/L	99
86)	2-Chlorotoluene	18.36	91	573488	21.7565	ug/L	98
87)	4-Chlorotoluene	18.41	91	514355	20.3012	ug/L	97
88)	a-Methylstyrene	18.75	118	328252	23.1997	ug/L	99
89)	tert-Butylbenzene	18.81	134	125526	21.4190	ug/L	97
90)	1,2,4-Trimethylbenzene	18.87	105	619956	20.8103	ug/L	99
91)	sec-Butylbenzene	19.14	105	725677	21.6564	ug/L	99
92)	p-Isopropyltoluene	19.32	119	605483	21.2820	ug/L	98
93)	1,3-Dichlorobenzene	19.55	146	363935	20.1901	ug/L	99
94)	1,4-Dichlorobenzene	19.70	146	375931	19.9643	ug/L	99
95)	n-Butylbenzene	19.94	91	575077	21.5938	ug/L	97
96)	1,2-Dichlorobenzene	20.29	146	353272	20.6502	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	21.48	75	26957	17.8112	ug/L	89
98)	1,2,4-Trichlorobenzene	22.83	180	251993	20.8512	ug/L	99
99)	Hexachlorobutadiene	23.03	225	108995	22.1802	ug/L	99
100)	Naphthalene	23.29	128	470699	19.7202	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	232780	20.5766	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M138594.D 8260WTR.M Mon Apr 18 16:16:20 2016 Page 2

Data File : C:\MSDchem\1\data\041816\6M138594.D Vial: 7
Acq On : 18 Apr 2016 15:52 Operator: TMB
Sample : WG565328-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD75664 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 18 16:16 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Data File : C:\MSDchem\1\data\042016\6M138661.D Vial: 7
Acq On : 20 Apr 2016 14:32 Operator: TMB
Sample : WG565673-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 14:56:23 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	649226	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	494945	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	291494	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	177772	26.7368	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 106.96%			
43) 1,2-Dichloroethane-d4	11.11	65	216759	26.8613	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 107.44%			
58) Toluene-d8	13.86	98	595720	26.7349	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 106.92%			
80) p-Bromofluorobenzene	17.85	95	255559	26.2602	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 105.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.45	85	227809	20.4202	ug/L	99
3) Chloromethane	3.94	50	169597	21.7277	ug/L	98
4) Vinyl Chloride	4.17	62	136852	21.6716	ug/L	99
5) 1,3-Butadiene	4.21	54	84485	19.6761	ug/L	92
6) Bromomethane	5.08	94	64783	20.9611	ug/L	98
7) Chloroethane	5.24	64	76463	20.8901	ug/L	95
8) Trichlorofluoromethane	5.74	101	213792	16.5605	ug/L	99
9) Diethyl ether	6.30	59	655505	115.0368	ug/L	91
10) Isoprene	6.33	67	213017	26.0925	ug/L	89
11) Acrolein	6.56	56	118075	117.2204	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	6.56	101	142540	20.5677	ug/L	97
13) Acetone	6.66	43	43496	21.6054	ug/L	90
14) 1,1-Dichloroethene	6.88	61	234926	20.0723	ug/L	91
15) Tert-Butyl Alcohol	7.01	59	124420	215.1315	ug/L	93
16) Dimethyl Sulfide	7.17	62	163059	29.7763	ug/L	88
17) Iodomethane	7.44	142	91242	21.7117	ug/L	90
18) Methyl acetate	7.46	43	114143	20.4164	ug/L	93
19) Methylene Chloride	7.73	84	143662	20.1756	ug/L	70
20) Carbon Disulfide	7.77	76	416850	20.1384	ug/L	99
21) Acrylonitrile	7.93	53	55161	23.3296	ug/L	99
22) Methyl Tert Butyl Ether	7.96	73	398098	22.6419	ug/L	93
23) trans-1,2-Dichloroethene	8.22	96	135256	20.7610	ug/L	77
24) n-Hexane	8.29	57	201027	21.5843	ug/L	89
25) Diisopropyl ether	8.68	45	3105612	116.2663	ug/L	96
26) Vinyl Acetate	8.86	43	285965	27.4915	ug/L	95
27) 1,1-Dichloroethane	8.89	63	276213	20.0823	ug/L	99
28) Ethyl-Tert-Butyl ether	9.31	59	2469467	110.6367	ug/L	95
29) 2-Butanone	9.52	43	65437	22.0215	ug/L	92
30) Propionitrile	9.64	54	92887	108.8102	ug/L	98
31) 2,2-Dichloropropane	9.76	77	234767	21.8613	ug/L	92
32) cis-1,2-Dichloroethene	9.83	96	152799	21.4488	ug/L	96
33) Chloroform	10.07	83	265926	20.7968	ug/L	97
34) 1-Bromopropane	10.21	122	32580	29.1982	ug/L	99
35) Bromochloromethane	10.32	130	86416	20.2306	ug/L	100
36) Tetrahydrofuran	10.35	42	202409	104.5568	ug/L	84
38) 1,1,1-Trichloroethane	10.66	97	243893	20.7126	ug/L	98
39) Cyclohexane	10.69	56	260905	21.7020	ug/L	87
40) 1,1-Dichloropropene	10.88	75	188318	20.2717	ug/L	89
41) Tert-Amyl-Methyl ether	11.01	73	1927661	112.0306	ug/L	92
42) Carbon Tetrachloride	11.05	117	226661	20.4941	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M138661.D 8260WTR.M Wed Apr 20 14:56:25 2016 Page 1

Data File : C:\MSDchem\1\data\042016\6M138661.D Vial: 7
Acq On : 20 Apr 2016 14:32 Operator: TMB
Sample : WG565673-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 14:56:23 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

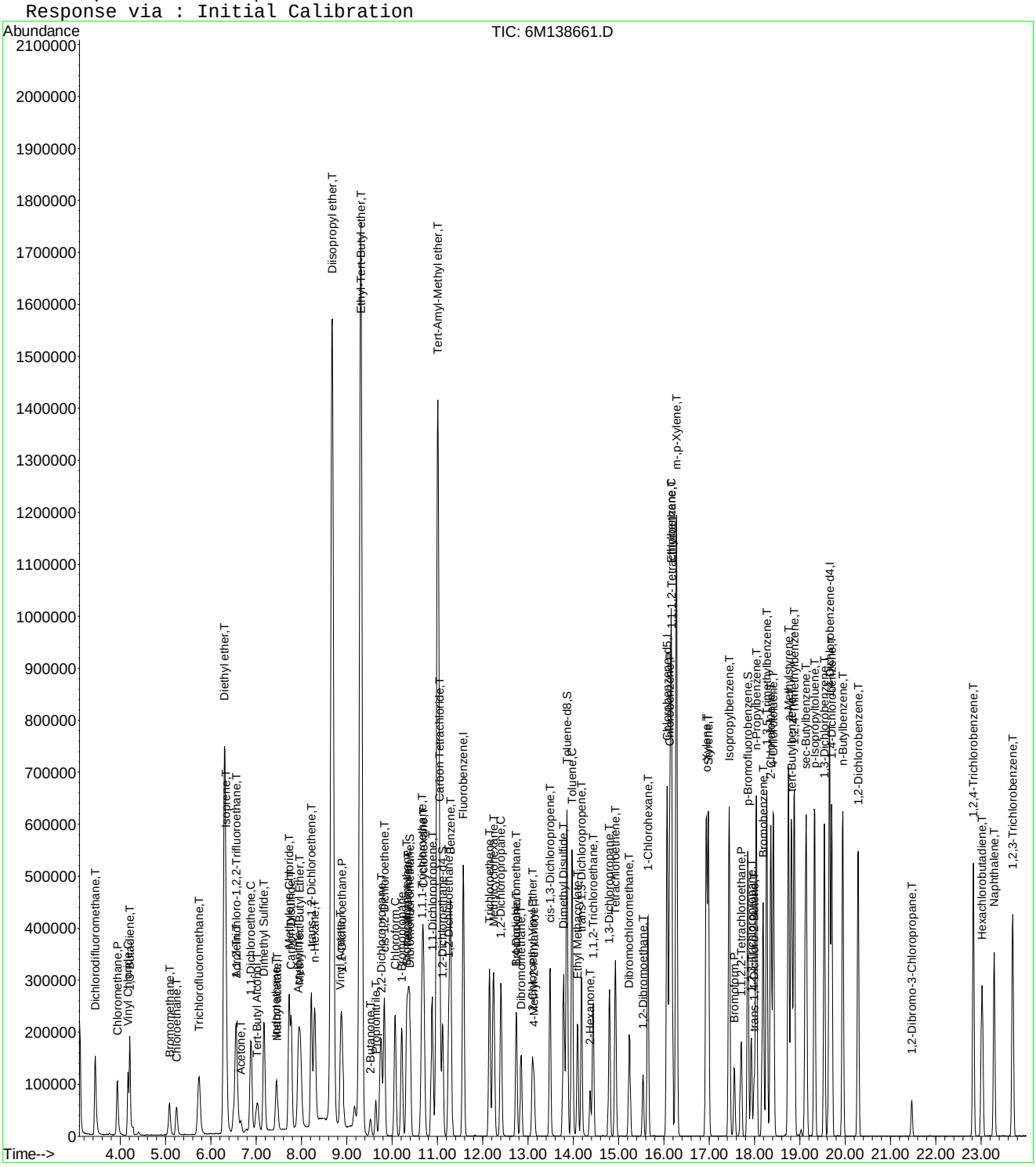
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	11.25	62	219468	21.5038	ug/L	98
46)	Benzene	11.29	78	557891	20.6859	ug/L	91
47)	Trichloroethene	12.15	130	140926	19.9758	ug/L	90
48)	Methylcyclohexane	12.24	83	197878	21.0061	ug/L	86
49)	1,2-Dichloropropane	12.40	63	159934	21.6866	ug/L	99
50)	1,4-Dioxane	12.74	88	10176	181.2879	ug/L	78
51)	Bromodichloromethane	12.74	83	207165	20.9332	ug/L	98
52)	Dibromomethane	12.85	93	79668	20.2500	ug/L	100
53)	2-Chloroethyl Vinyl Ether	13.10	63	70983	20.7375	ug/L	100
54)	4-Methyl-2-Pentanone	13.13	58	46286	20.3037	ug/L	95
55)	cis-1,3-Dichloropropene	13.49	75	243280	23.2898	ug/L	97
56)	Dimethyl Disulfide	13.78	79	119061	21.7341	ug/L	90
59)	Toluene	13.97	91	567361	20.5963	ug/L	99
60)	Ethyl Methacrylate	14.09	69	162114	21.8932	ug/L	86
62)	trans-1,3-Dichloropropene	14.18	75	214491	20.6106	ug/L	97
63)	1,1,2-Trichloroethane	14.44	97	111586	20.3222	ug/L	99
64)	2-Hexanone	14.37	43	89353	20.0194	ug/L	93
65)	1,3-Dichloropropane	14.80	76	207184	21.2309	ug/L	79
66)	Tetrachloroethene	14.93	166	139803	18.5496	ug/L	94
67)	Dibromochloromethane	15.23	129	147777	19.9410	ug/L	99
68)	1,2-Dibromoethane	15.54	107	108618	20.1687	ug/L	99
69)	1-Chlorohexane	15.65	91	179982	20.7214	ug/L	80
70)	Chlorobenzene	16.13	112	377544	19.9865	ug/L	95
71)	1,1,1,2-Tetrachloroethane	16.17	131	151299	20.2028	ug/L	97
72)	Ethylbenzene	16.16	106	199799	20.1882	ug/L	94
73)	m-,p-Xylene	16.28	106	494189	42.0874	ug/L	90
74)	o-Xylene	16.94	106	241725	21.2977	ug/L	90
75)	Styrene	16.98	104	419552	22.0290	ug/L	95
76)	Bromoform	17.55	173	90762	18.2906	ug/L	99
77)	Isopropylbenzene	17.44	105	626278	21.9198	ug/L	100
79)	1,1,2,2-Tetrachloroethane	17.71	83	133588	18.8211	ug/L	99
81)	1,2,3-Trichloropropane	17.93	110	45049	20.2917	ug/L	94
82)	trans-1,4-Dichloro-2-Buten	17.99	53	38493	15.5077	ug/L	70
83)	n-Propylbenzene	18.04	91	769867	21.9796	ug/L	99
84)	Bromobenzene	18.19	156	168709	19.2255	ug/L	96
85)	1,3,5-Trimethylbenzene	18.27	105	550964	20.7297	ug/L	98
86)	2-Chlorotoluene	18.36	91	526869	21.0190	ug/L	96
87)	4-Chlorotoluene	18.41	91	489679	20.3242	ug/L	97
88)	a-Methylstyrene	18.75	118	308713	22.9443	ug/L	100
89)	tert-Butylbenzene	18.82	134	115140	20.6603	ug/L	98
90)	1,2,4-Trimethylbenzene	18.88	105	575344	20.3091	ug/L	96
91)	sec-Butylbenzene	19.14	105	651370	20.4416	ug/L	99
92)	p-Isopropyltoluene	19.33	119	553468	20.4573	ug/L	97
93)	1,3-Dichlorobenzene	19.54	146	339118	19.7838	ug/L	98
94)	1,4-Dichlorobenzene	19.70	146	348165	19.4435	ug/L	98
95)	n-Butylbenzene	19.95	91	511725	20.2062	ug/L	98
96)	1,2-Dichlorobenzene	20.29	146	328249	20.1773	ug/L	98
97)	1,2-Dibromo-3-Chloropropan	21.47	75	26995	18.7564	ug/L	90
98)	1,2,4-Trichlorobenzene	22.83	180	221845	19.3035	ug/L	99
99)	Hexachlorobutadiene	23.03	225	94936	20.3158	ug/L	99
100)	Naphthalene	23.29	128	402073	17.7141	ug/L	100
101)	1,2,3-Trichlorobenzene	23.70	180	203528	18.9189	ug/L	100

(#) = qualifier out of range (m) = manual integration
6M138661.D 8260WTR.M Wed Apr 20 14:56:25 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\1\data\042016\6M138661.D Vial: 7
Acq On : 20 Apr 2016 14:32 Operator: TMB
Sample : WG565673-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 20 14:56 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Data File : C:\MSDchem\2\data\042116\8M411614.D Vial: 7
Acq On : 21 Apr 2016 15:29 Operator: TMB
Sample : WG565880-03 20ug/L LCS2 STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 15:51:15 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.71	96	689483	25.00	ug/L	0.00
57) Chlorobenzene-d5	14.57	117	518564	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	17.59	152	273061	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.66	111	179023	25.3945	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 101.56%			
43) 1,2-Dichloroethane-d4	10.30	65	207984	28.1000	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 112.40%			
58) Toluene-d8	12.68	98	594754	22.9193	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 91.68%			
80) p-Bromofluorobenzene	16.07	95	245902	23.0494	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 92.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.16	85	261242	23.5575	ug/L	99
3) Chloromethane	3.63	50	248274	14.4905	ug/L	95
4) Vinyl Chloride	3.85	62	163172	15.9886	ug/L	96
5) 1,3-Butadiene	3.89	54	121451	11.4092	ug/L	95
6) Bromomethane	4.73	94	111854	26.6248	ug/L	99
7) Chloroethane	4.90	64	123496	21.9850	ug/L	93
8) Trichlorofluoromethane	5.38	101	291588	23.1035	ug/L	99
9) Diethyl ether	5.91	59	581217	114.2212	ug/L	85
10) Isoprene	5.94	67	193495	20.1188	ug/L	76
11) Acrolein	6.15	56	81305	115.2226	ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	6.17	101	148376	21.6384	ug/L	98
13) Acetone	6.25	43	34068	25.9912	ug/L	91
14) 1,1-Dichloroethene	6.47	61	274196	21.0153	ug/L	89
15) Tert-Butyl Alcohol	6.59	59	74376	242.9384	ug/L	99
16) Dimethyl Sulfide	6.74	62	164007	27.6180	ug/L	76
17) Iodomethane	6.99	142	97269	32.2747	ug/L	92
18) Methyl acetate	7.01	43	95936	20.7748	ug/L	91
19) Methylene Chloride	7.26	84	142478	19.8242	ug/L	53
20) Carbon Disulfide	7.30	76	392458	16.4030	ug/L	100
21) Acrylonitrile	7.44	53	44361	22.4323	ug/L	99
22) Methyl Tert Butyl Ether	7.47	73	323174	22.2451	ug/L	92
23) trans-1,2-Dichloroethene	7.71	61	270734	21.7591	ug/L	88
24) n-Hexane	7.79	57	228089	18.8210	ug/L	90
25) Diisopropyl ether	8.13	45	3840684	123.0936	ug/L	94
26) Vinyl Acetate	8.30	43	325804	28.3559	ug/L	94
27) 1,1-Dichloroethane	8.33	63	313890	20.0918	ug/L	98
28) Ethyl-Tert-Butyl ether	8.71	59	2448266	107.2507	ug/L	97
29) 2-Butanone	8.89	43	52023	23.9328	ug/L	87
30) Propionitrile	8.99	54	69556	110.1265	ug/L	96
31) 2,2-Dichloropropane	9.11	77	276181	23.7501	ug/L	100
32) cis-1,2-Dichloroethene	9.17	96	167232	21.5247	ug/L	81
33) Chloroform	9.37	83	296711	22.5804	ug/L	99
34) 1-Bromopropane	9.52	122	34259	29.7738	ug/L	98
35) Bromochloromethane	9.61	130	85319	21.6543	ug/L	72
36) Tetrahydrofuran	9.63	42	175517	109.4188	ug/L	82
38) 1,1,1-Trichloroethane	9.91	97	282386	24.2714	ug/L	99
39) Cyclohexane	9.94	56	318153	19.8212	ug/L	85
40) 1,1-Dichloropropene	10.11	75	210305	20.4938	ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	1686493	109.5028	ug/L	88
42) Carbon Tetrachloride	10.25	117	256307	24.8236	ug/L	99

(#) = qualifier out of range (m) = manual integration
8M411614.D 8260WT.M Thu Apr 21 15:51:16 2016 Page 1

Data File : C:\MSDchem\2\data\042116\8M411614.D Vial: 7
Acq On : 21 Apr 2016 15:29 Operator: TMB
Sample : WG565880-03 20ug/L LCS2 STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 15:51:15 2016 Quant Results File: 8260WT.RES

Quant Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration
DataAcq Meth : 8260WT

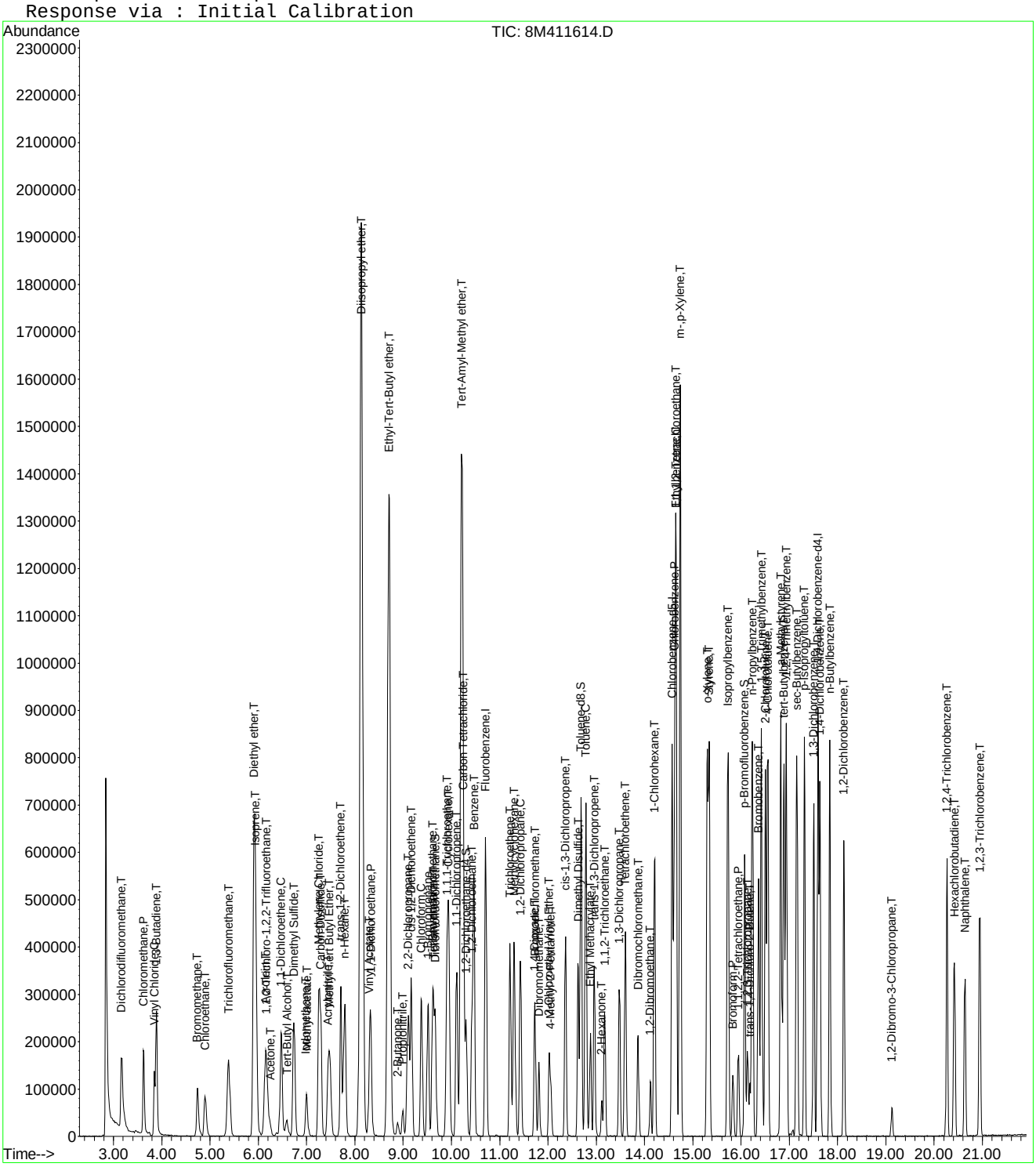
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.43	62	249875	25.0651 ug/L		98
46)	Benzene	10.47	78	571232	20.4670 ug/L		84
47)	Trichloroethene	11.21	130	161898	23.0392 ug/L		99
48)	Methylcyclohexane	11.30	83	219004	19.6107 ug/L		81
49)	1,2-Dichloropropane	11.43	63	173652	20.7925 ug/L		97
50)	Bromodichloromethane	11.73	83	222391	22.4774 ug/L		100
51)	1,4-Dioxane	11.72	88	7087	244.0789 ug/L		75
52)	Dibromomethane	11.81	93	75286	21.5716 ug/L		97
53)	2-Chloroethyl Vinyl Ether	12.02	63	73651	21.6175 ug/L		97
54)	4-Methyl-2-Pentanone	12.05	58	37388	20.2984 ug/L		93
55)	cis-1,3-Dichloropropene	12.36	75	258197	23.6381 ug/L		98
56)	Dimethyl Disulfide	12.63	79	124076	21.4239 ug/L		89
59)	Toluene	12.79	91	611620	20.0528 ug/L		99
60)	Ethyl Methacrylate	12.88	69	124781	19.4095 ug/L		69
62)	trans-1,3-Dichloropropene	12.96	75	212575	20.7702 ug/L		99
63)	1,1,2-Trichloroethane	13.18	97	98029	20.0955 ug/L		98
64)	2-Hexanone	13.12	58	31668	17.5021 ug/L	#	78
65)	1,3-Dichloropropane	13.48	76	183430	20.0953 ug/L		68
66)	Tetrachloroethene	13.60	164	124097	21.2414 ug/L		94
67)	Dibromochloromethane	13.87	129	143135	22.2640 ug/L		99
68)	1,2-Dibromoethane	14.12	107	103592	20.8744 ug/L		98
69)	1-Chlorohexane	14.21	91	206299	19.9673 ug/L		72
70)	Chlorobenzene	14.62	112	424538	20.6291 ug/L		98
71)	1,1,1,2-Tetrachloroethane	14.66	131	160280	22.3370 ug/L		98
72)	Ethylbenzene	14.66	106	231817	20.3359 ug/L		98
73)	m-,p-Xylene	14.74	106	577522	43.3674 ug/L		100
74)	o-Xylene	15.31	106	283993	20.9955 ug/L		97
75)	Styrene	15.34	104	453100	21.1082 ug/L		95
76)	Bromoform	15.83	173	81433	20.8751 ug/L		97
77)	Isopropylbenzene	15.73	105	720785	22.1435 ug/L		100
79)	1,1,2,2-Tetrachloroethane	15.95	83	108277	18.0439 ug/L		99
81)	1,2,3-Trichloropropane	16.13	110	34751	21.2954 ug/L	#	10
82)	trans-1,4-Dichloro-2-Buten	16.19	53	44622	18.5680 ug/L	#	10
83)	n-Propylbenzene	16.24	91	884339	21.6119 ug/L		99
84)	Bromobenzene	16.36	156	169409	20.8201 ug/L		98
85)	1,3,5-Trimethylbenzene	16.42	105	635206	22.1188 ug/L		99
86)	2-Chlorotoluene	16.51	91	550608	20.6826 ug/L		99
87)	4-Chlorotoluene	16.56	91	568950	20.5193 ug/L		98
88)	a-Methylstyrene	16.83	118	341574	21.8407 ug/L		98
89)	tert-Butylbenzene	16.89	134	122239	20.8978 ug/L		85
90)	1,2,4-Trimethylbenzene	16.94	105	637683	21.1511 ug/L		100
91)	sec-Butylbenzene	17.16	105	750297	21.0450 ug/L		98
92)	p-Isopropyltoluene	17.31	119	634667	21.8383 ug/L		96
93)	1,3-Dichlorobenzene	17.51	146	344837	20.8299 ug/L		95
94)	1,4-Dichlorobenzene	17.63	146	341942	20.6336 ug/L		92
95)	n-Butylbenzene	17.84	91	597370	20.1962 ug/L		99
96)	1,2-Dichlorobenzene	18.13	146	306954	20.9527 ug/L		95
97)	1,2-Dibromo-3-Chloropropan	19.12	75	22631	20.8799 ug/L		81
98)	1,2,4-Trichlorobenzene	20.27	180	223752	21.7050 ug/L		98
99)	Hexachlorobutadiene	20.42	225	100906	24.8691 ug/L		98
100)	Naphthalene	20.64	128	319069	18.4803 ug/L		99
101)	1,2,3-Trichlorobenzene	20.95	180	180034	20.9270 ug/L		98

(#) = qualifier out of range (m) = manual integration
8M411614.D 8260WT.M Thu Apr 21 15:51:16 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDchem\2\data\042116\8M411614.D Vial: 7
Acq On : 21 Apr 2016 15:29 Operator: TMB
Sample : WG565880-03 20ug/L LCS2 STD 8260 Inst : HPMS8
Misc : 1,1 STD75744 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 21 15:51 2016 Quant Results File: 8260WT.RES

Method : C:\MSDCHEM\2\METHODS\8260WT.M (RTE Integrator)
Title : Method 8260B/624 WTR-SOP:OVLMSV01 04-13-16 HPMS 8
Last Update : Thu Apr 14 09:40:40 2016
Response via : Initial Calibration



8M411614.D 8260WT.M Thu Apr 21 15:51:16 2016 Page 3

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 26, 2016

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001 – BIO-CHEM TESTING WVDEP 220	002 – REIC Consultants, Inc. WVDEP 060
003 – Sturm Environmental	004 – MICROBAC PITTSBURGH
005 – ES LABORATORIES	006 – ALCOSAN LABORATORIES
007 – ALS LABORATORIES	008 – BENCHMARK LABORATORIES
010 – MICROBAC CHICAGOLAND	AC – AMBER R. CARMICHAEL
ADC – ANTHONY D. CANTER	ADG – APRIL D. GREENE
AED – ALLEN E. DAVIS	ALS – ADRIANE L. STEED
AWE – ANDREW W. ESSIG	AZH – AFTER HOURS
BJO – BRIAN J. OGDEN	BKT – BRENDAN TORRENCE
BLG – BRENDA L. GREENWALT	BRG – BRENDA R. GREGORY
CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS
CEB – CHAD E. BARNES	CJR – COURTNEY J. REXROAD
CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER
CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS
CSH – CHRIS S. HILL	DAK – DEAN A. KETELSEN
DCM – DAVID C. MERCKLE	DEV – DAVID E. VANDENBERG
DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER
DLP – DOROTHY L. PAYNE	DLW – DIANA L. WRIGHT
DSM – DAVID S. MOSSOR	ECL – ERIC C. LAWSON
ENY – EMILY N. YOAK	ERP – ERIN R. PORTER
FJB – FRANCES J. BOLDEN	JBK – JEREMY B. KINNEY
JDH – JUSTIN D. HESSON	JDS – JARED D. SMITH
JJS – JOHN J. STE MARIE	JKP – JACQUELINE K. PARSONS
JLD – JESSICA L. DELONG	JLL – JOHN L. LENT
JMW – JEANA M. WHITE	JTP – JOSHUA T. PEMBERTON
JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES
JYH – JI Y. HU	KAJ – KELLIE A. JOHNSON
KAT – KATHY A. TUCKER	KDW – KATHRYN D. WELCH
KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KKB – KERRI K. BUCK	KRA – KATHY R. ALBERTSON
KRB – KAELY R. BECKER	KRP – KATHY R. PARSONS
LEC – LAURA E. CARPENTER	LKN – LINDA K. NEDEFF
LLS – LARRY L. STEPHENS	LSB – LESLIE S. BUCINA
MAP – MARLA A. PORTER	MBK – MORGAN B. KNOWLTON
MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN
MES – MARY E. SCHILLING	MLB – MEGAN L. BACHE
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR
MSW – MATT S. WILSON	PDM – PIERCE D. MORRIS
PIT – MICROBAC WARRENDALE	PRL – PAIGE R. LAMB
PSW – PEGGY S. WEBB	QX – QIN XU
RAH – ROY A. HALSTEAD	REK – BOB E. KYER
RLB – BOB BUCHANAN	RM – RAYMOND MALEKE
RNP – RICK N. PETTY	RST – ROBIN S. TURNER
SAV – SARAH A. VANDENBERG	SCB – SARAH C. BOGOLIN
SDC – SHALYN D. CONLEY	SLM – STEPHANIE L. MOSSBURG
SLP – SHERI L. PFALZGRAF	TB – TODD BOYLE
TGF – TIM G. FELTON	TMB – TIFFANY M. BAILEY
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER
WJB – WILL J. BEASLEY	WRR – WESLEY R. RICHARDS
WTD – WADE T. DELONG	XXX – UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
April 26, 2016

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.
B,H1	Analyte present in method blank. Sample analysis performed past holding time.
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
CT1	Cooler temperature at sample reciept exceeded regulatory limit.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
E,CT1	Estimated results. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
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)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
FP1	Did not ignite.
H1	Sample analysis performed past holding time.
H1,CT1	Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guidelines for reque
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,CT1	Estimated value ; the analyte concentration was less than the LOQ. Cooler temperature at sample reciept exceeded regu
J,H1	Estimated value ; the analyte concentration was less than the LOQ. Sample analysis performed past holding time.
J,H1	The reported result is an estimated value. Sample was analyzed past holding time.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
JB	The reported result is an estimated value. The reported result is also associated with a contaminated method blank.
JQ	The reported result is an estimated value and one or more quality control criteria failed. See narrative.
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, B	Not detected at or above the reporting limit (RL). Analyte present in method blank.
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
ND,H1	Not detected; Sample analysis performed past holding time.
ND,H1,CT1	Not detected; Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guide
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.
Q,H1	One or more quality control criteria failed. Sample analyzed past holding time. 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
T5	Laboratory not licensed for this parameter
TIC	Library Search Compound
TNTC	Too numerous to count

Microbac Laboratories Inc.
List of Valid Qualifiers
April 26, 2016

Qualkey: DOD

TNTC, B	Too numerous to count. Analyte present in method blank.
TNTC,CT1	Too numerous to count. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
TNTC,H1	Too numerous to count. Sample analysis performed past holding time.
U	Analyte was not detected. The concentration is below the reported LOD.
U,CT1	Analyte was not detected. The concentration is below the reported LOD. Cooler temperature at sample reciept exceeded
U,H1	Not detected; Sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
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

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AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071	Signature:	Scott Beesinger
Client:	AECOM		
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	Standard		
Project Name/Location:	Longhorn		
Project Number:	60256135.0002HA		

Mail to: Linda Raabe, 112 East Pecan STE. 400, San Antonio, TX 78205, 210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp*	Grab	Matrix	Number of Containers	VOC	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
SITE 58	35AWW17-041116			4/11/16	0835		✓	W	3	✓					
	35AWW18-041116			4/11/16	0930		✓	W	3	✓					
	35AWW18FD-041116			4/11/16	0930		✓	W	3	✓					
	35AWW06-041116			4/11/16	1025		✓	W	3	✓					
	35AWW12-041216			4/12/16	0815		✓	W	3	✓					
	35AWW09-041216			4/12/16	0915		✓	W	3	✓					
	35AWW01-041216			4/12/16	1020		✓	W	3	✓					
	35AWW01FD-041216			4/12/16	1020		✓	W	3	✓					
	35AWW11-041216			4/12/16	1125		✓	W	3	✓					
	35AWW16-041216			4/12/16	1515		✓	W	3	✓					
	35AWW16MS-041216			4/12/16	1515		✓	W	3	✓					
	35AWW16MSD-041216			4/12/16	1515		✓	W	3	✓					
	35AWW19-041216			4/12/16	0735		✓	W	3	✓					
	LHSMW06-041316			4/13/16	0755		✓	W	3	✓					

Comments: STANDARD TAT

Microbac OVD
Received: 04/15/2016 09:49
By: BRENDA GREENWALT 221000084657
Brenda Greenwalt

Relinquished by: (Signature)	Date	Time
Scott Beesinger	4/14/16	1400
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

00866048

L16040858 / Revision: 0 / 821 total pages

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Generated: 04/26/2016 08:09

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	Scott Beesinger
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	Standard	pH:	
Project Name/Location:	Longhorn		
Project Number:	60256135.0002HA		

Mail to: Linda Raabe, 112 East Pecan STE. 400, San Antonio, TX 78205, 210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp	Grab	Matrix	Number of Containers	VOC	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
SITE 58	35AWW14-041316			4/13/16	0805		✓	W	3	✓					
	35AWW08-041316			4/13/16	0820		✓	W	3	✓					
	03WW01-041316			4/13/16	0835		✓	W	3	✓					
	LHSMW04-041316			4/13/16	0850		✓	W	3	✓					
	35AWW22-041316			4/13/16	0905		✓	W	3	✓					
	35AWW21-041316			4/13/16	1015		✓	W	3	✓					
	35AWW21FD-041316			4/13/16	1015		✓	W	3	✓					
	35AWW13-041316			4/13/16	1115		✓	W	3	✓					
	35ASW03-041316			4/13/16	1210		✓	W	3	✓					
	35AWW10-041316			4/13/16	1345		✓	W	3	✓					
	35AWW10MS-041316			4/13/16	1345		✓	W	3	✓					
	35AWW10MSD-041316			4/13/16	1345		✓	W	3	✓					
	35AWW20-041316			4/13/16	1455		✓	W	3	✓					
	35AWW15-041416			4/14/16	0830		✓	W	3	✓					

Comments: **STANDARD TAT**

Relinquished by: (Signature)	Scott Beesinger	Date 4/14/16	Time 1400	Re	Date	Time	Relinquished by: (Signature)
Relinquished by: (Signature)		Date	Time	Re (Si		Time	Remarks:

Microbac OVD
Received: 04/15/2016 09:49
By: BRENDA GREENWALT 221000084657

Brenda Greenwalt

•Homogenize all composite samples prior to analysis

Distribution: White to Laboratory, Canary to Project Manager, Pink QA/QC Manager

00866049

L16040858 / Revision: 0 / 821 total pages

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AECOM Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	Scott Beesinger
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	Standard		
Project Name/Location:	Longhorn		
Project Number:	60256135.0002HA		

Mail to: Linda Raabe, 112 East Pecan STE. 400, San Antonio, TX 78205, 210-296-2000

Fed Ex Airbill No:

Program:

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp*	Grab	Matrix	Number of Containers	VOC	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
SITE 58	35AWW05-041416			4/14/16	0935		✓	W	3	✓					
	LHSMW07-041416			4/14/16	1030		✓	W	3	✓					
	TRIP BLANK			4/14/16			✓	W	2	✓					

ERPIMS REQUIRED FIELDS

Comments: STANDARD TAT

Relinquished by: (Signature)	Scott Beesinger	Date	4/14/16	Time	1400
Relinquished by: (Signature)		Date		Time	

Microbac OVD
Received: 04/15/2016 09:49
By: BRENDA GREENWALT 221000084657
Brenda Greenwalt

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

Generated: 04/26/2016 08:09

00866050

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-01	730133	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Samplenum	Container ID	Products
L16040858-02	730134	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-03	730135	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Samplenum	Container ID	Products
L16040858-04	730136	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-05	730137	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		15-APR-2016 16:09	CLS		

Samplenum	Container ID	Products
L16040858-06	730138	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:08	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-07	730139	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-08	730140	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-09	730141	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-10	730142	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-11	730143	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-12	730144	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-13	730145	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-14	730146	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-15	730147	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-16	730148	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-17	730149	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-18	730150	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-19	730151	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-20	730152	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-21	730153	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-22	730154	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-23	730155	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-24	730156	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-25	730157	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Samplenum	Container ID	Products
L16040858-26	730158	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:07	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-27	730159	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Samplenum	Container ID	Products
L16040858-28	730160	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	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: L16040858
Account: 2551
Project: 2551.096
Samples: 31
Due Date: 26-APR-2016

Samplenum	Container ID	Products
L16040858-29	730161	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Samplenum	Container ID	Products
L16040858-30	730162	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Samplenum	Container ID	Products
L16040858-31	730163	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	CLS	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	15-APR-2016 16:09	CLS		
2	ANALYZ	V1	ORG4	18-APR-2016 08:06	AWE	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 - January 4, 2016

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVD NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
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)
Propionaldehyde (HPLC-UV)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1
ASTM D3987-06

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVD HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVD 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

OVD MSV01/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)

OVD HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

OVD HPLC12/HPLC/UV

Acetate
Formate

OVD RSK01/GC-FID

Acetylene
Propane

OVD K9305/ISE

Fluoroborate

SOLID AND HAZARDOUS CHEMICALS

OVD MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVD MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac



Laboratory Report Number: L16100123

Kayla Teague
AECOM Technical Services, Inc.
1950 N Stemmons FWY
Dallas, TX 75207

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:
Adriane Steed – Client Services Specialist
(740) 373-4071
Adriane.Steed@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 October 20 2016

Leslie Bucina – Managing Director

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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
Sample ID per COC: 35AWW09-100316 (10/3 @ 09:40). Labels read: 35AWW10-100316. BRG Sample ID per COC: 35AWW09F-100316 (10/3 @ 09:40). Labels read: 35AWW10F-100316. BRG Sample ID per COC: 35AWW11F-100316 (10/3 @ 10:50). Label reads: 35AWW11-100316 (Total Metals). BRG	The ones collected at 9:40 are from 35AWW10 and the one from 35AWW11 should have the F on the label ALS

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0013287	I	4.0		J4616883264	X

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?	No
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	All samples were checked for pH and met the standard. Exceptions are noted above under discrepancy. (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35AWW09-100316	L16100123-01	10/03/2016 08:25	10/04/2016 10:17
35AWW09F-100316	L16100123-02	10/03/2016 08:25	10/04/2016 10:17
35AWW10-100316	L16100123-03	10/03/2016 09:40	10/04/2016 10:17
35AWW10F-100316	L16100123-04	10/03/2016 09:40	10/04/2016 10:17
35AWW11-100316	L16100123-05	10/03/2016 10:50	10/04/2016 10:17
35AWW11F-100316	L16100123-06	10/03/2016 10:50	10/04/2016 10:17
35AWW06-100316	L16100123-07	10/03/2016 13:30	10/04/2016 10:17
35AWW17-100316	L16100123-08	10/03/2016 14:35	10/04/2016 10:17
TRIP BLANK	L16100123-09	10/03/2016 00:01	10/04/2016 10:17
35AWW09FF-100316	L16100123-10	10/03/2016 08:25	10/04/2016 10:17
35AWW09-100316	L16100123-11	10/03/2016 08:25	10/04/2016 10:17
35AWW10-100316	L16100123-12	10/03/2016 09:40	10/04/2016 10:17
35AWW10FF-100316	L16100123-13	10/03/2016 09:40	10/04/2016 10:17
35AWW11FF-100316	L16100123-14	10/03/2016 10:50	10/04/2016 10:17
35AWW06FF-100316	L16100123-15	10/03/2016 13:30	10/04/2016 10:17

Microbac REPORT L16100123
PREPARED FOR AECOM Technical Services, Inc.
WORK ID:

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2.4.4.3 Raw Data 1256

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1.0 Summary Data

1.1 Narratives

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	8260
Prep Batch Number(s):	587315	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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
Franci Bolden		Analyst I	2016-10-19 20:22:25

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	8260
Prep Batch Number(s):	587315	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	8260
Prep Batch Number(s):	587315	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	8260
Prep Batch Number(s):	587315	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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				
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					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	8260
Prep Batch Number(s):	587315	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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 the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	8260
Prep Batch Number(s):	587315	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 00:00:00		

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) Bromomethane was below the LCL and Trichlorofluoromethane exceeded the UCL in the CCV.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	RSK175
Prep Batch Number(s):	586463, 586612	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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
Franci Bolden		Analyst I	2016-10-19 20:25:43

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	RSK175
Prep Batch Number(s):	586463, 586612	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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				

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	RSK175
Prep Batch Number(s):	586463, 586612	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	RSK175
Prep Batch Number(s):	586463, 586612	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	RSK175
Prep Batch Number(s):	586463, 586612	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	RSK175
Prep Batch Number(s):	586463, 586612	**Reviewer Name:**	Franci Bolden
LRC Date:	2016-10-19 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

There were no exceptions.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	830-MBA
Prep Batch Number(s):	WG587720	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-17 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
Eric Lawson		Chemist III	2016-10-17 20:35:10

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	830-MBA
Prep Batch Number(s):	WG587720	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-17 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	830-MBA
Prep Batch Number(s):	WG587720	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-17 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	830-MBA
Prep Batch Number(s):	WG587720	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-17 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					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	830-MBA
Prep Batch Number(s):	WG587720	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-17 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 the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	830-MBA
Prep Batch Number(s):	WG587720	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-17 00:00:00		

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

There are no exceptions.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG586390	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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
Brendan Torrence		Analyst	2016-10-20 16:11:28

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG586390	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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	X				
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					
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):	X				
Were all COCs included in the LCS?	X				

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG586390	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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				

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG586390	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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?					
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					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG586390	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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 the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG586390	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 00:00:00		

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

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG586277	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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
Brendan Torrence		Analyst	2016-10-20 16:08:15

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG586277	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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	X				
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			ER#1
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					
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				

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG586277	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG586277	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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?					
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					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG586277	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 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 the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG586277	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-10-20 00:00:00		

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

ER#1 - Client samples 06, 07, 14, and 15 required dilution analyses in order to obtain results for manganese within the calibration range.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	9056
Prep Batch Number(s):	WG586244	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-07 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
Eric Lawson		Chemist III	2016-10-07 12:19:05

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	9056
Prep Batch Number(s):	WG586244	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-07 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	9056
Prep Batch Number(s):	WG586244	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-07 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	9056
Prep Batch Number(s):	WG586244	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-07 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					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	9056
Prep Batch Number(s):	WG586244	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-07 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 the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	9056
Prep Batch Number(s):	WG586244	**Reviewer Name:**	Eric Lawson
LRC Date:	2016-10-07 00:00:00		

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

There are no exceptions.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	ALK-COLOR
Prep Batch Number(s):	WG586270	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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
Deanna Hesson	Deanna Hesson	Conventional Lab Supervisor	2016-10-13 18:15:27

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	ALK-COLOR
Prep Batch Number(s):	WG586270	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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					
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					
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):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	ALK-COLOR
Prep Batch Number(s):	WG586270	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	ALK-COLOR
Prep Batch Number(s):	WG586270	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)			X		
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)			X		
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			X		
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	ALK-COLOR
Prep Batch Number(s):	WG586270	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)	X				
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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	ALK-COLOR
Prep Batch Number(s):	WG586270	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	FERROUS
Prep Batch Number(s):	WG586481	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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
Deanna Hesson	Deanna Hesson	Conventional Lab Supervisor	2016-10-13 18:14:18

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	FERROUS
Prep Batch Number(s):	WG586481	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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					
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					
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):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	FERROUS
Prep Batch Number(s):	WG586481	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	FERROUS
Prep Batch Number(s):	WG586481	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)			X		
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)			X		
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			X		
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	FERROUS
Prep Batch Number(s):	WG586481	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)	X				
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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	FERROUS
Prep Batch Number(s):	WG586481	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	PHOS
Prep Batch Number(s):	WG586864	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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
Deanna Hesson	Deanna Hesson	Conventional Lab Supervisor	2016-10-13 18:16:07

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	PHOS
Prep Batch Number(s):	WG586864	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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					
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					
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):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	PHOS
Prep Batch Number(s):	WG586864	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	PHOS
Prep Batch Number(s):	WG586864	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)			X		
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)			X		
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			X		
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	PHOS
Prep Batch Number(s):	WG586864	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)	X				
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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	PHOS
Prep Batch Number(s):	WG586864	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	S
Prep Batch Number(s):	WG586639	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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
Deanna Hesson	Deanna Hesson	Conventional Lab Supervisor	2016-10-13 18:14:55

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	S
Prep Batch Number(s):	WG586639	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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					
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					
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):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	S
Prep Batch Number(s):	WG586639	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	S
Prep Batch Number(s):	WG586639	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)			X		
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)			X		
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			X		
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	S
Prep Batch Number(s):	WG586639	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)	X				
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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	S
Prep Batch Number(s):	WG586639	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	TOC
Prep Batch Number(s):	WG586887	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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
Deanna Hesson	Deanna Hesson	Conventional Lab Supervisor	2016-10-13 18:16:37

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	TOC
Prep Batch Number(s):	WG586887	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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					
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					
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):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	TOC
Prep Batch Number(s):	WG586887	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	TOC
Prep Batch Number(s):	WG586887	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)			X		
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)			X		
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			X		
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
Method detection limit (MDL) studies					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	TOC
Prep Batch Number(s):	WG586887	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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)	X				
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

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16100123
Project Name:		**Method:**	TOC
Prep Batch Number(s):	WG586887	**Reviewer Name:**	Deanna Hesson
LRC Date:	2016-10-13 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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW09-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 23:02
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	6M142671
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	3.78	J	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	Q	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	0.506	J	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	0.437	J	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	173		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	48.2		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	Q	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	109	85	115	
1,2-Dichloroethane-d4	103	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	96.0	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW09-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 18:59
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	16G50812
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	7.57		5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW09-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:13
Collect Date:	10/03/2016 08:25	**Dilution:**	10	**File ID:**	16G50832
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	706000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW09-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 03:23
Collect Date:	10/03/2016 08:25	**Dilution:**	10	**File ID:**	I2_100416-45
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Nitrate	14797-55-8	2.00	U	4.00	2.00	1.00
Nitrite	14797-65-0	2.00	U	4.00	2.00	1.00
Sulfate	14808-79-8	951		20.0	10.0	5.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW09-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 03:42
Collect Date:	10/03/2016 08:25	**Dilution:**	100	**File ID:**	I2_100416-46
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Chloride	16887-00-6	1420		40.0	20.0	10.0

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW09-100316	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	10/05/2016 10:09
Workgroup #:	WG586270	**Analyst:**	DCM	**Run Date:**	10/05/2016 10:22
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	SC161005001.029
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Alkalinity, Total (as CaCO3)	11-43-8	241		40.0	20.0	10.0

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	UV-2600
Client ID:	35AWW09-100316	**Prep Method:**	SM3500Fe-B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM3500Fe-B-1997	**Cal Date:**	08/10/2016 11:20
Workgroup #:	WG586481	**Analyst:**	TMM	**Run Date:**	10/06/2016 09:45
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	00.1610060945-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Ferrous - Laboratory		0.0400	U	0.0400	0.0400	0.0200

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW09-100316	**Prep Method:**	365.4	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	365.4	**Cal Date:**	10/10/2016 09:33
Workgroup #:	WG586864	**Analyst:**	DCM	**Run Date:**	10/10/2016 09:43
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	SC161010002.023
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Phosphorus, Total	7723-14-0	0.200	U	0.400	0.200	0.100

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	35AWW09-100316	**Prep Method:**	SM4500-S-(-2)-F-2000	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-S-(-2)-F-2000	**Cal Date:**	
Workgroup #:	WG586639	**Analyst:**	EPT	**Run Date:**	10/06/2016 16:20
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	ET.1610061620-04
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Sulfide	18496-25-8	3.68		2.00	1.00	0.500

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	35AWW09-100316	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	10/30/2015 17:00
Workgroup #:	WG586887	**Analyst:**	DCM	**Run Date:**	10/11/2016 11:49
Collect Date:	10/03/2016 08:25	**Dilution:**	3	**File ID:**	TC10102016.101
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Total Organic Carbon	TOC	15.6		6.00	3.00	1.50

Certificate of Analysis

Sample #:	L16100123-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO4
Client ID:	35AWW09F-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 12:30
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/06/2016 11:45
Workgroup #:	WG586422	**Analyst:**	KKB	**Run Date:**	10/06/2016 13:43
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	T4.100616.134341
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Total	7439-89-6	0.913		0.100	0.100	0.0500

Certificate of Analysis

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Sample #:	L16100123-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW09F-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 15:52
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	NI.101216.155232
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.151		0.00400	0.00200	0.00100

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW10-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 22:30
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	6M142670
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
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
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
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	109	85	115	
1,2-Dichloroethane-d4	102	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	96.0	75	120	

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW10-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 19:10
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	16G50813
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	2.00	U	5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW10-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:35
Collect Date:	10/03/2016 09:40	**Dilution:**	10	**File ID:**	16G50834
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	525000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW10-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 05:57
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	I2_100416-53
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Chloride	16887-00-6	6.37		0.400	0.200	0.100
Nitrate	14797-55-8	0.200	U	0.400	0.200	0.100
Nitrite	14797-65-0	0.200	U	0.400	0.200	0.100
Sulfate	14808-79-8	47.0		2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW10-100316	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	10/05/2016 10:09
Workgroup #:	WG586270	**Analyst:**	DCM	**Run Date:**	10/05/2016 10:23
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	SC161005001.030
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Alkalinity, Total (as CaCO3)	11-43-8	55.4		40.0	20.0	10.0

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	UV-2600
Client ID:	35AWW10-100316	**Prep Method:**	SM3500Fe-B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM3500Fe-B-1997	**Cal Date:**	08/10/2016 11:20
Workgroup #:	WG586481	**Analyst:**	TMM	**Run Date:**	10/06/2016 09:45
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	00.1610060945-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Ferrous - Laboratory		0.0400	U	0.0400	0.0400	0.0200

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW10-100316	**Prep Method:**	365.4	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	365.4	**Cal Date:**	10/10/2016 09:33
Workgroup #:	WG586864	**Analyst:**	DCM	**Run Date:**	10/10/2016 09:44
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	SC161010002.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Phosphorus, Total	7723-14-0	0.200	U	0.400	0.200	0.100

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	35AWW10-100316	**Prep Method:**	SM4500-S-(-2)-F-2000	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-S-(-2)-F-2000	**Cal Date:**	
Workgroup #:	WG586639	**Analyst:**	EPT	**Run Date:**	10/06/2016 16:20
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	ET.1610061620-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Sulfide	18496-25-8	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	35AWW10-100316	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	10/30/2015 17:00
Workgroup #:	WG586887	**Analyst:**	DCM	**Run Date:**	10/10/2016 20:40
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	TC10102016.052
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Total Organic Carbon	TOC	7.43		2.00	1.00	0.500

Certificate of Analysis

Sample #:	L16100123-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO4
Client ID:	35AWW10F-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 12:30
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/06/2016 11:45
Workgroup #:	WG586422	**Analyst:**	KKB	**Run Date:**	10/06/2016 13:47
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	T4.100616.134733
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Total	7439-89-6	0.100	U	0.100	0.100	0.0500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW10F-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 15:55
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	NI.101216.155532
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.0770		0.00400	0.00200	0.00100

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW11-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 21:58
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	6M142669
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
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	0.458	J	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	16.0		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
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	Q	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
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	0.328	J	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	109	85	115	
1,2-Dichloroethane-d4	105	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	95.4	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW11-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 19:21
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	16G50814
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	2.00	U	5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW11-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:47
Collect Date:	10/03/2016 10:50	**Dilution:**	10	**File ID:**	16G50835
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	855000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW11-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 04:01
Collect Date:	10/03/2016 10:50	**Dilution:**	20	**File ID:**	I2_100416-47
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Nitrate	14797-55-8	4.00	U	8.00	4.00	2.00
Nitrite	14797-65-0	4.00	U	8.00	4.00	2.00
Sulfate	14808-79-8	1160		40.0	20.0	10.0

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW11-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 04:21
Collect Date:	10/03/2016 10:50	**Dilution:**	200	**File ID:**	I2_100416-48
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Chloride	16887-00-6	2380		80.0	40.0	20.0

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW11-100316	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	10/05/2016 10:09
Workgroup #:	WG586270	**Analyst:**	DCM	**Run Date:**	10/05/2016 10:23
Collect Date:	10/03/2016 10:50	**Dilution:**	2	**File ID:**	SC161005001.031
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Alkalinity, Total (as CaCO3)	11-43-8	421		80.0	40.0	20.0

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	UV-2600
Client ID:	35AWW11-100316	**Prep Method:**	SM3500Fe-B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM3500Fe-B-1997	**Cal Date:**	08/10/2016 11:20
Workgroup #:	WG586481	**Analyst:**	TMM	**Run Date:**	10/06/2016 09:45
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	00.1610060945-08
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Ferrous - Laboratory		0.0400	U	0.0400	0.0400	0.0200

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW11-100316	**Prep Method:**	365.4	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	365.4	**Cal Date:**	10/10/2016 09:33
Workgroup #:	WG586864	**Analyst:**	DCM	**Run Date:**	10/10/2016 09:44
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	SC161010002.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Phosphorus, Total	7723-14-0	0.303	J	0.400	0.200	0.100

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	35AWW11-100316	**Prep Method:**	SM4500-S-(-2)-F-2000	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-S-(-2)-F-2000	**Cal Date:**	
Workgroup #:	WG586639	**Analyst:**	EPT	**Run Date:**	10/06/2016 16:20
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	ET.1610061620-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Sulfide	18496-25-8	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	35AWW11-100316	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	10/30/2015 17:00
Workgroup #:	WG586887	**Analyst:**	DCM	**Run Date:**	10/11/2016 14:10
Collect Date:	10/03/2016 10:50	**Dilution:**	5	**File ID:**	TC10102016.111
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Total Organic Carbon	TOC	25.6		10.0	5.00	2.50

Certificate of Analysis

Sample #:	L16100123-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO4
Client ID:	35AWW11F-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 12:30
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/06/2016 11:45
Workgroup #:	WG586422	**Analyst:**	KKB	**Run Date:**	10/06/2016 13:51
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	T4.100616.135116
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Total	7439-89-6	0.188		0.100	0.100	0.0500

Certificate of Analysis

Sample #:	L16100123-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW11F-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 18:14
Collect Date:	10/03/2016 10:50	**Dilution:**	10	**File ID:**	NI.101216.181404
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.525		0.0400	0.0200	0.0100

Certificate of Analysis

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW06-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 21:25
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	6M142668
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	3.19	J	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	Q	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	1.77		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	7.48		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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	109	85	115	
1,2-Dichloroethane-d4	105	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	95.8	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW06-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 19:45
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	16G50816
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	2.00	U	5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW06-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:58
Collect Date:	10/03/2016 13:30	**Dilution:**	10	**File ID:**	16G50836
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	997000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO4
Client ID:	35AWW06-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 12:30
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/06/2016 11:45
Workgroup #:	WG586422	**Analyst:**	KKB	**Run Date:**	10/06/2016 13:55
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	T4.100616.135516
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Total	7439-89-6	0.182		0.100	0.100	0.0500

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW06-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 18:17
Collect Date:	10/03/2016 13:30	**Dilution:**	10	**File ID:**	NI.101216.181703
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.346		0.0400	0.0200	0.0100

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW06-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 04:40
Collect Date:	10/03/2016 13:30	**Dilution:**	20	**File ID:**	I2_100416-49
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Nitrate	14797-55-8	4.00	U	8.00	4.00	2.00
Nitrite	14797-65-0	4.00	U	8.00	4.00	2.00
Sulfate	14808-79-8	1450		40.0	20.0	10.0

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	35AWW06-100316	**Prep Method:**	9056	**Prep Date:**	10/04/2016 23:32
Matrix:	Water	**Analytical Method:**	9056	**Cal Date:**	09/08/2016 00:39
Workgroup #:	WG586244	**Analyst:**	CAS	**Run Date:**	10/05/2016 04:59
Collect Date:	10/03/2016 13:30	**Dilution:**	200	**File ID:**	I2_100416-50
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Chloride	16887-00-6	948		80.0	40.0	20.0

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW06-100316	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	10/05/2016 10:09
Workgroup #:	WG586270	**Analyst:**	DCM	**Run Date:**	10/05/2016 10:24
Collect Date:	10/03/2016 13:30	**Dilution:**	4	**File ID:**	SC161005001.032
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Alkalinity, Total (as CaCO3)	11-43-8	621		160	80.0	40.0

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	UV-2600
Client ID:	35AWW06-100316	**Prep Method:**	SM3500Fe-B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM3500Fe-B-1997	**Cal Date:**	08/10/2016 11:20
Workgroup #:	WG586481	**Analyst:**	TMM	**Run Date:**	10/06/2016 09:45
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	00.1610060945-09
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Iron, Ferrous - Laboratory		0.0238	J	0.0400	0.0400	0.0200

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	35AWW06-100316	**Prep Method:**	365.4	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	365.4	**Cal Date:**	10/10/2016 09:33
Workgroup #:	WG586864	**Analyst:**	DCM	**Run Date:**	10/10/2016 09:45
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	SC161010002.026
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Phosphorus, Total	7723-14-0	0.208	J	0.400	0.200	0.100

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	35AWW06-100316	**Prep Method:**	SM4500-S-(-2)-F-2000	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-S-(-2)-F-2000	**Cal Date:**	
Workgroup #:	WG586639	**Analyst:**	EPT	**Run Date:**	10/06/2016 16:20
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	ET.1610061620-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Sulfide	18496-25-8	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	35AWW06-100316	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	10/30/2015 17:00
Workgroup #:	WG586887	**Analyst:**	DCM	**Run Date:**	10/11/2016 12:17
Collect Date:	10/03/2016 13:30	**Dilution:**	5	**File ID:**	TC10102016.103
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Total Organic Carbon	TOC	28.8		10.0	5.00	2.50

Certificate of Analysis

Sample #:	L16100123-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW17-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 20:53
Collect Date:	10/03/2016 14:35	**Dilution:**	1	**File ID:**	6M142667
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
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
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	Q	1.00	0.500	0.250
1,2,3-Trichloropropane	96-18-4	1.00	U	2.00	1.00	0.500

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
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	111	85	115	
1,2-Dichloroethane-d4	106	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	97.1	75	120	

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	TRIP BLANK	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 17:41
Collect Date:	10/03/2016 00:01	**Dilution:**	1	**File ID:**	6M142661
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	109	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	103	85	120	
4-Bromofluorobenzene	97.4	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW09FF-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 16:04
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	NI.101216.160430
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Dissolved	7439-96-5	0.150		0.00400	0.00200	0.00100

Certificate of Analysis

Sample #:	L16100123-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC4
Client ID:	35AWW09-100316	**Prep Method:**	830-MBA	**Prep Date:**	10/14/2016 15:00
Matrix:	Water	**Analytical Method:**	830-MBA	**Cal Date:**	06/22/2016 20:08
Workgroup #:	WG587720	**Analyst:**	JWR	**Run Date:**	10/15/2016 00:47
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	4L028480.F
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Pyruvic Acid	127-17-3	0.100	U	0.200	0.100	0.0500
Lactic Acid	50-21-5	1.00	U	2.00	1.00	0.500
Acetic Acid	64-19-7	1.00	U	2.00	1.00	0.500
Propionic Acid	79-09-4	10.0	U	20.0	10.0	5.00
Butyric Acid	107-92-6	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW10-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 16:07
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	NI.101216.160729
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Dissolved	7439-96-5	0.0748		0.00400	0.00200	0.00100

Certificate of Analysis

Sample #:	L16100123-13	**PrePrep Method:**	N/A	**Instrument:**	HPLC4
Client ID:	35AWW10FF-100316	**Prep Method:**	830-MBA	**Prep Date:**	10/14/2016 15:00
Matrix:	Water	**Analytical Method:**	830-MBA	**Cal Date:**	06/22/2016 20:08
Workgroup #:	WG587720	**Analyst:**	JWR	**Run Date:**	10/15/2016 02:09
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	4L028481.F
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Pyruvic Acid	127-17-3	0.100	U	0.200	0.100	0.0500
Lactic Acid	50-21-5	1.00	U	2.00	1.00	0.500
Acetic Acid	64-19-7	1.00	U	2.00	1.00	0.500
Propionic Acid	79-09-4	10.0	U	20.0	10.0	5.00
Butyric Acid	107-92-6	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW11FF-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 18:20
Collect Date:	10/03/2016 10:50	**Dilution:**	10	**File ID:**	NI.101216.182002
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Dissolved	7439-96-5	0.487		0.0400	0.0200	0.0100

Certificate of Analysis

Sample #:	L16100123-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW06FF-100316	**Prep Method:**	3015	**Prep Date:**	10/05/2016 09:02
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/12/2016 14:22
Workgroup #:	WG586830	**Analyst:**	BKT	**Run Date:**	10/12/2016 18:23
Collect Date:	10/03/2016 13:30	**Dilution:**	10	**File ID:**	NI.101216.182302
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Dissolved	7439-96-5	0.341		0.0400	0.0200	0.0100

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW09-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 23:02
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	6M142671
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	3.78	J	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	Q	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	0.506	J	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	0.437	J	1.00	0.500	0.250
trans-1,2-Dichloroethene	156-60-5	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	173		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	48.2		1.00	0.500	0.250
Trichlorofluoromethane	75-69-4	0.500	Q	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	109	85	115	
1,2-Dichloroethane-d4	103	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	96.0	75	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW10-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 22:30
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	6M142670
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	109	85	115	
1,2-Dichloroethane-d4	102	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	96.0	75	120	

Q	One or more quality control criteria failed. See narrative.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW11-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 21:58
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	6M142669
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	Q	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	0.458	J	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	16.0		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	0.328	J	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	109	85	115	
1,2-Dichloroethane-d4	105	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	95.4	75	120	

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW06-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 21:25
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	6M142668
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Acetone	67-64-1	3.19	J	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	Q	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	1.77		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	7.48		2.00	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.500	U	1.00	0.500	0.250

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	109	85	115	
1,2-Dichloroethane-d4	105	70	120	
Toluene-d8	102	85	120	
4-Bromofluorobenzene	95.8	75	120	

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

Q	One or more quality control criteria failed. See narrative.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35AWW17-100316	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 20:53
Collect Date:	10/03/2016 14:35	**Dilution:**	1	**File ID:**	6M142667
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	111	85	115	
1,2-Dichloroethane-d4	106	70	120	
Toluene-d8	101	85	120	
4-Bromofluorobenzene	97.1	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	TRIP BLANK	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/26/2016 18:51
Workgroup #:	WG587315	**Analyst:**	TMB	**Run Date:**	10/12/2016 17:41
Collect Date:	10/03/2016 00:01	**Dilution:**	1	**File ID:**	6M142661
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	Q	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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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	Q	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	109	85	115	
1,2-Dichloroethane-d4	101	70	120	
Toluene-d8	103	85	120	
4-Bromofluorobenzene	97.4	75	120	

Q	One or more quality control criteria failed. See narrative.

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

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: HPMS6 Dataset: 042416
Analyst1: JDS Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 23
Method: 624 SOP: MSV10 Rev: 14
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID:

Internal Standard: STD75498 Surrogate Standard: STD75498
CCV: STD75791 LCS: STD75801 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG566155

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M138749	RINSE	NA	1	1		04/24/16 16:05
6M138750	WG566155-01 50ng BFB 826-A9	NA	1	1	STD75485	04/24/16 16:33
6M138751	WG566155-02 5ug/L STD 826-A9	NA	1	1	STD75791	04/24/16 16:59
6M138752	WG566155-03 20ug/L STD 826-A	NA	1	1	STD75791	04/24/16 17:31
6M138753	WG566155-04 50ug/L STD 826-A9	NA	1	1	STD75791	04/24/16 18:03
6M138754	WG566155-05 100ug/L STD 826-A	NA	1	1	STD75791	04/24/16 18:36
6M138755	WG566155-06 200ug/L STD 826-A9	NA	1	1	STD75791	04/24/16 19:08
6M138756	WG566155-07 300ug/L STD 826-A9	NA	1	1	STD75791	04/24/16 19:40
6M138757	WG566155-08 400ug/L STD 826-A9	NA	1	1	STD75791	04/24/16 20:12
6M138758	WG566155-09 500ug/L STD 826-A9	NA	1	1	STD75791	04/24/16 20:44
6M138759	RINSE	NA	1	1		04/24/16 21:16
6M138760	RINSE	NA	1	1		04/24/16 21:49
6M138761	WG566155-10 100ug/L ALT SRC	NA	1	1	STD75801	04/24/16 22:21
6M138762	RINSE	NA	1	1		04/24/16 22:53
6M138763	RINSE	NA	1	1		04/24/16 23:25

Approved: April 29, 2016

Page: 1

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 092616
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 24
Method: 624 SOP: MSV10 Rev: 15
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53908

Internal Standard: STD77923 Surrogate Standard: STD77923
CCV: STD78143 LCS: STD78193 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG584797

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M142171	BFB CHECK	NA	1	1	STD77992	09/26/16 08:57
6M142172	BFB CHECK	NA	1	1	STD77992	09/26/16 09:11
6M142173	BFB CHECK	NA	1	1	STD77992	09/26/16 09:26
6M142174	RINSE	NA	1	1		09/26/16 09:51
6M142175	RINSE	NA	1	1		09/26/16 10:33
6M142176	RINSE	NA	1	1		09/26/16 11:14
6M142177	WG584797-01 50ng BFB STD 8260	NA	1	1	STD77992	09/26/16 13:29
6M142178	WG584797-02 0.3ug/L STD 8260	NA	1	1	STD78143	09/26/16 13:54
6M142179	WG584797-03 0.4ug/L STD 8260	NA	1	1	STD78143	09/26/16 14:35
6M142180	WG584797-04 1ug/L STD 8260	NA	1	1	STD78143	09/26/16 15:07
6M142181	WG584797-05 2ug/L STD 8260	NA	1	1	STD78143	09/26/16 15:39
6M142182	WG584797-06 5ug/L STD 8260	NA	1	1	STD78143	09/26/16 16:11
6M142183	WG584797-07 20ug/L STD 8260	NA	1	1	STD78143	09/26/16 16:43
6M142184	WG584797-08 50ug/L STD 8260	NA	1	1	STD78143	09/26/16 17:15
6M142185	WG584797-09 100ug/L STD 8260	NA	1	1	STD78143	09/26/16 17:47
6M142186	WG584797-10 200ug/L STD 8260	NA	1	1	STD78143	09/26/16 18:19
6M142187	WG584797-11 300ug/L STD 8260	NA	1	1	STD78143	09/26/16 18:51
6M142188	RINSE	NA	1	1		09/26/16 19:23
6M142189	RINSE	NA	1	1		09/26/16 19:55
6M142190	WG584797-12 50ug/L ALT SRC STD 8260	NA	1	1	STD78183	09/26/16 20:27
6M142191	RINSE	NA	1	1	STD78144	09/26/16 20:59

Approved: September 29, 2016

Page: 1

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 101216
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 24
Method: 624 SOP: MSV10 Rev: 15
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53930

Internal Standard: STD78347 Surrogate Standard: STD78347
CCV: STD78428 LCS: STD78472 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG587315

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M142652	WG587314-01 50ng BFB STD 8260	NA	1	1	STD77992	10/12/16 13:46
6M142653	WG587314-01 50ng BFB STD 8260	NA	1	1	STD77992	10/12/16 14:01
6M142654	WG587314-01 50ng BFB STD 8260	NA	1	1	STD77992	10/12/16 14:16
6M142655	WG587314-01 50ng BFB STD 8260	NA	1	1	STD77992	10/12/16 14:33
6M142656	WG587314-02 50ug/L CCV STD 8260	NA	1	1	STD78428	10/12/16 14:59
6M142657	WG587314-02 50ug/L CCV STD 8260	NA	1	1	STD78469	10/12/16 15:32
6M142658	WG000000-01 100ug/L A9 CCV STD 8260	NA	1	1	STD78417	10/12/16 16:03
6M142659	WG587315-01 VBLK1012 BLANK STD 826	NA	1	1		10/12/16 16:35
6M142660	L16090922-01 B 826-REF-BLK	<2	1	1		10/12/16 17:08
6M142661	L16100123-09 A TB 826-LOW	<2	1	1		10/12/16 17:41
6M142662	L16100194-11 A TB 826-LOW	<2	1	1		10/12/16 18:13
6M142663	L16100194-10 A 826-LOW	<2	1	1		10/12/16 18:45
6M142664	L16100194-09 A 826-LOW	<2	1	1		10/12/16 19:17
6M142665	L16100194-08 A 826-LOW	<2	1	1		10/12/16 19:49
6M142666	L16100194-07 A 826-LOW	<2	1	1		10/12/16 20:21
6M142667	L16100123-08 A 826-LOW	<2	1	1		10/12/16 20:53
6M142668	L16100123-07 A 826-LOW	<2	1	1		10/12/16 21:25
6M142669	L16100123-05 A 826-LOW	<2	1	1		10/12/16 21:58
6M142670	L16100123-03 A 826-LOW	<2	1	1		10/12/16 22:30
6M142671	L16100123-01 A 826-LOW	<2	1	1		10/12/16 23:02
6M142672	L16100194-01 A 25X 826-LOW	7	1	25		10/12/16 23:34
6M142673	L16100194-03 A 25X 826-LOW	6	1	25		10/13/16 00:06
6M142674	L16100194-05 A 20X 826-LOW	2.5	1	20		10/13/16 00:38
6M142675	L16100194-06 A 50X 826-LOW	<2	1	50		10/13/16 01:10
6M142676	WG587315-02 20ug/L LCS STD 8260	NA	1	1	STD78472	10/13/16 01:42
6M142677	WG587315-03 20ug/L LCS2 STD 8260	NA	1	1	STD78472	10/13/16 02:14
6M142678	RINSE	NA	1	1		10/13/16 02:46
6M142679	WG587315-04 VBLK1012 BLANK STD 624	NA	2	1		10/13/16 03:18
6M142680	L16100466-09 B 624	<2	2	1		10/13/16 03:50
6M142681	L16100466-08 B 624	5	2	1		10/13/16 04:22
6M142682	L16100466-07 B 50X 624 D1	<2	2	50		10/13/16 04:54
6M142683	L16100566-01 A 624-SPE	6	2	1		10/13/16 05:26
6M142684	L16100565-01 A 624-SPE1	<2	2	1		10/13/16 05:58
6M142685	LCS	NA	1	1		10/13/16 06:30

Approved: October 14, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 101216
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 24
Method: 624 SOP: MSV10 Rev: 15
Method: 5030B/5030C/5035A SOP: PAT01 Rev: 18
Maintenance Log ID: 53930

Internal Standard: STD78347 Surrogate Standard: STD78347
CCV: STD78428 LCS: STD78472 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG587315

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
6M142686	RINSE	NA	1	1		10/13/16 07:02
6M142687	RINSE	NA	1	1		10/13/16 07:34

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1	X			
File ID: 6M142652				
	Tune failed, DNR.			
2	X			
File ID: 6M142653				
	Tune failed, DNR. Changed the septa.			
3	X			
File ID: 6M142654				
	Tune failed, DNR.			
5	X			
File ID: 6M142656				
	DNR.			
7				
File ID: 6M142658				
	Not needed. DNR.			
21	X	10	Analyzed too dilute	
File ID: 6M142672				
	Dark brown sample.			
22	X	10	Analyzed too dilute	
File ID: 6M142673				
	Brown foamy sample.			
24	X	5	Analyzed too dilute	
File ID: 6M142675				
33	X	10	Internal standard and surrogate standard failure	
File ID: 6M142684				
	Sample foamed.			

Approved: October 14, 2016

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Microbac Laboratories Inc.

Data Checklist

Date: 24-APR-2016
Analyst: JDS
Analyst: NA
Method: 8260B/624
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 74754
Analytical Workgroups: WG566155

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
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	TMB
Secondary Reviewer	FJB
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:
27-APR-2016
Tiffany Bailey

Secondary Reviewer:
29-APR-2016

CHECKLIST1 - Modified 03/05/2008
Generated: APR-29-2016 12:29:57

Microbac Laboratories Inc.

Data Checklist

Date: 26-SEP-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624/OVAP
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 77708
Analytical Workgroups: WG584797

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	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
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	TMB
Secondary Reviewer	FJB
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:
27-SEP-2016
Tiffany Bailey

Secondary Reviewer:
29-SEP-2016

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-29-2016 12:40:36

Microbac Laboratories Inc.

Data Checklist

Date: 12-OCT-2016
Analyst: TMB
Analyst: NA
Method: 8260B/624
Instrument: HPMS6
Curve Workgroup: NA
Runlog ID: 78063
Analytical Workgroups: WG587315

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	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	TMB
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	WTD
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:
13-OCT-2016
Tiffany Bailey

Secondary Reviewer:
14-OCT-2016
Wade Dodge

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-14-2016 11:50:34

Microbac

Analytical Method:8260B AAB#:WG587315
Login Number:L16100123

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
35AWW09-100316	01	10/03/16					10/12/2016	9.6	14		10/12/16	9.6	14	
35AWW10-100316	03	10/03/16					10/12/2016	9.5	14		10/12/16	9.5	14	
35AWW11-100316	05	10/03/16					10/12/2016	9.5	14		10/12/16	9.5	14	
35AWW06-100316	07	10/03/16					10/12/2016	9.3	14		10/12/16	9.3	14	
35AWW17-100316	08	10/03/16					10/12/2016	9.3	14		10/12/16	9.3	14	
TRIP BLANK	09	10/03/16					10/12/2016	9.7	14		10/12/16	9.7	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4974594
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L16100123
Instrument Id: HPMS6
Workgroup (AAB#): WG587315

Method: 8260
CAL ID: HPMS6-26-SEP-16
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L16100123-01	1.00	01	103	109	96.0	101
L16100123-03	1.00	01	102	109	96.0	101
L16100123-05	1.00	01	105	109	95.4	101
L16100123-07	1.00	01	105	109	95.8	102
L16100123-08	1.00	01	106	111	97.1	101
L16100123-09	1.00	01	101	109	97.4	103
WG587315-01	1.00	01	102	108	98.7	102
WG587315-02	1.00	01	101	109	90.0	103
WG587315-03	1.00	01	99.2	109	91.3	101
WG587315-04	1.00	01	103	109	97.0	102

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: 4974600
Report generated: 10/18/2016 14:38

METHOD BLANK SUMMARY

Login Number: L16100123
Work Group: WG587315
Blank File ID: 6M142659
Blank Sample ID: WG587315-01
Prep Date: 10/12/16 16:35
Instrument ID: HPMS6
Analyzed Date: 10/12/16 16:35
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
TRIP BLANK	L16100123-09	6M142661	10/12/16 17:41	01
35AWW17-100316	L16100123-08	6M142667	10/12/16 20:53	01
35AWW06-100316	L16100123-07	6M142668	10/12/16 21:25	01
35AWW11-100316	L16100123-05	6M142669	10/12/16 21:58	01
35AWW10-100316	L16100123-03	6M142670	10/12/16 22:30	01
35AWW09-100316	L16100123-01	6M142671	10/12/16 23:02	01
LCS	WG587315-02	6M142676	10/13/16 01:42	01
LCS2	WG587315-03	6M142677	10/13/16 02:14	01

Report Name: BLANK_SUMMARY
PDF File ID: 4977760
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16100123 Prep Date: 10/12/16 16:35 Sample ID: WG587315-01
Instrument ID: HPMS6 Run Date: 10/12/16 16:35 Prep Method: 5030B/5030C/503
File ID: 6M142659 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG587315 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-26-SEP-16

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: 4974595
18-OCT-2016 14:38

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16100123 Prep Date: 10/12/16 16:35 Sample ID: WG587315-01
Instrument ID: HPMS6 Run Date: 10/12/16 16:35 Prep Method: 5030B/5030C/503
File ID: 6M142659 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG587315 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-26-SEP-16

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	108	85 - 115	PASS
1,2-Dichloroethane-d4	102	70 - 120	PASS
Toluene-d8	102	85 - 120	PASS
4-Bromofluorobenzene	98.7	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: 4974595
18-OCT-2016 14:38

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16100123 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG587315 Units: ug/L
QC Key: DOD4 Lot #: STD78362

Sample ID: WG587315-02 LCS File ID: 6M142676 Run Date: 10/13/2016 01:42
Sample ID: WG587315-03 LCS2 File ID: 6M142677 Run Date: 10/13/2016 02:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	19.8	98.9	20.0	18.8	93.9	5.16	80 - 130	30	
1,1,1-Trichloroethane	20.0	20.0	99.8	20.0	19.0	95.0	4.96	65 - 130	30	
1,1,2,2-Tetrachloroethane	20.0	17.2	86.1	20.0	16.3	81.4	5.72	65 - 130	30	
1,1,2-Trichloroethane	20.0	19.9	99.7	20.0	18.3	91.6	8.37	75 - 125	30	
1,1-Dichloroethane	20.0	18.2	91.2	20.0	17.7	88.3	3.29	70 - 135	30	
1,1-Dichloroethene	20.0	17.7	88.5	20.0	16.7	83.6	5.62	70 - 130	30	
1,1-Dichloropropene	20.0	18.3	91.4	20.0	17.4	86.9	5.04	75 - 130	30	
1,2,3-Trichlorobenzene	20.0	19.1	95.3	20.0	18.4	91.8	3.66	55 - 140	30	
1,2,3-Trichloropropane	20.0	18.9	94.6	20.0	18.3	91.6	3.22	75 - 125	30	
1,2,4-Trichlorobenzene	20.0	18.2	91.0	20.0	17.8	89.1	2.08	65 - 135	30	
1,2,4-Trimethylbenzene	20.0	18.4	92.2	20.0	18.1	90.5	1.88	75 - 130	30	
1,2-Dibromo-3-chloropropane	20.0	17.7	88.6	20.0	17.9	89.5	0.946	50 - 130	30	
1,2-Dibromoethane	20.0	19.0	95.0	20.0	18.1	90.4	4.99	80 - 120	30	
1,2-Dichlorobenzene	20.0	19.4	96.9	20.0	18.9	94.3	2.72	70 - 120	30	
1,2-Dichloroethane	20.0	18.8	94.1	20.0	18.0	90.0	4.41	70 - 130	30	
1,2-Dichloropropane	20.0	18.5	92.3	20.0	17.9	89.6	3.05	75 - 125	30	
1,3,5-Trimethylbenzene	20.0	18.0	90.2	20.0	17.5	87.7	2.73	75 - 130	30	
1,3-Dichlorobenzene	20.0	19.0	94.9	20.0	18.6	92.8	2.24	75 - 125	30	
1,3-Dichloropropane	20.0	19.4	97.0	20.0	18.6	93.1	4.04	75 - 125	30	
1,4-Dichlorobenzene	20.0	19.6	98.0	20.0	19.1	95.6	2.47	75 - 125	30	
2,2-Dichloropropane	20.0	15.5	77.5	20.0	14.8	74.2	4.36	70 - 135	30	
2-Butanone	20.0	21.4	107	20.0	20.4	102	4.84	30 - 150	30	
2-Chlorotoluene	20.0	18.3	91.7	20.0	16.4	82.2	10.9	75 - 125	30	
2-Hexanone	20.0	18.8	93.8	20.0	18.3	91.3	2.63	55 - 130	30	
4-Chlorotoluene	20.0	16.9	84.6	20.0	17.8	89.2	5.37	75 - 130	30	
4-Methyl-2-pentanone	20.0	19.6	97.8	20.0	18.3	91.7	6.41	60 - 135	30	
Acetone	20.0	24.1	121	20.0	23.7	118	1.97	40 - 140	30	
Benzene	20.0	18.9	94.4	20.0	17.9	89.7	5.13	80 - 120	30	
Bromobenzene	20.0	19.1	95.3	20.0	18.4	92.2	3.22	75 - 125	30	
Bromochloromethane	20.0	20.6	103	20.0	19.8	99.0	4.11	65 - 130	30	
Bromodichloromethane	20.0	18.7	93.6	20.0	18.2	91.0	2.86	75 - 120	30	
Bromoform	20.0	18.0	89.8	20.0	16.7	83.6	7.21	70 - 130	30	
Bromomethane	20.0	13.5	67.3	20.0	14.3	71.4	5.91	30 - 145	30	
Carbon disulfide	20.0	18.4	91.9	20.0	17.5	87.3	5.06	35 - 160	30	
Carbon tetrachloride	20.0	21.5	107	20.0	19.8	98.8	8.34	65 - 140	30	
Chlorobenzene	20.0	19.2	96.0	20.0	18.2	90.9	5.46	80 - 120	30	
Chloroethane	20.0	22.1	110	20.0	21.0	105	4.85	60 - 135	30	
Chloroform	20.0	19.2	95.9	20.0	18.4	92.2	3.93	65 - 135	30	
Chloromethane	20.0	17.0	84.9	20.0	17.0	85.1	0.235	40 - 125	30	
cis-1,2-Dichloroethene	20.0	18.9	94.7	20.0	18.1	90.5	4.54	70 - 125	30	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4974596
Report generated: 10/18/2016 14:38

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16100123 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG587315 Units: ug/L
QC Key: DOD4 Lot #: STD78362

Sample ID: WG587315-02 LCS File ID: 6M142676 Run Date: 10/13/2016 01:42
Sample ID: WG587315-03 LCS2 File ID: 6M142677 Run Date: 10/13/2016 02:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,3-Dichloropropene	20.0	18.8	93.8	20.0	18.0	89.8	4.28	70 - 130	30	
Chlorodibromomethane	20.0	19.7	98.7	20.0	18.6	93.2	5.66	60 - 135	30	
Dibromomethane	20.0	20.2	101	20.0	19.4	96.8	4.36	75 - 125	30	
Dichlorodifluoromethane	20.0	24.0	120	20.0	24.2	121	0.635	30 - 155	30	
Ethylbenzene	20.0	18.7	93.7	20.0	17.6	87.8	6.50	75 - 125	30	
Hexachlorobutadiene	20.0	18.3	91.6	20.0	17.9	89.6	2.21	50 - 140	30	
Isopropylbenzene	20.0	19.2	95.9	20.0	18.0	90.0	6.37	75 - 125	30	
m-,p-Xylene	40.0	38.7	96.8	40.0	36.6	91.5	5.71	75 - 130	30	
Methylene chloride	20.0	18.7	93.7	20.0	18.2	90.9	3.05	55 - 140	30	
n-Butylbenzene	20.0	17.8	88.8	20.0	17.2	85.8	3.37	70 - 135	30	
n-Propylbenzene	20.0	18.1	90.6	20.0	17.3	86.5	4.64	70 - 130	30	
Naphthalene	20.0	18.2	91.2	20.0	18.0	90.1	1.22	55 - 140	30	
o-Xylene	20.0	18.7	93.3	20.0	17.7	88.6	5.16	80 - 120	30	
p-Isopropyltoluene	20.0	18.9	94.7	20.0	18.3	91.3	3.62	75 - 130	30	
sec-Butylbenzene	20.0	18.3	91.3	20.0	17.7	88.5	3.11	70 - 125	30	
Styrene	20.0	19.5	97.5	20.0	18.6	92.8	4.89	65 - 135	30	
tert-Butylbenzene	20.0	18.8	93.8	20.0	18.1	90.4	3.63	70 - 130	30	
Tetrachloroethene	20.0	20.8	104	20.0	19.0	95.2	8.84	45 - 150	30	
Toluene	20.0	19.0	94.8	20.0	18.0	89.8	5.41	75 - 120	30	
trans-1,2-Dichloroethene	20.0	18.9	94.6	20.0	17.9	89.5	5.56	60 - 140	30	
trans-1,3-Dichloropropene	20.0	17.6	88.1	20.0	16.7	83.5	5.42	55 - 140	30	
Trichloroethene	20.0	20.5	102	20.0	19.7	98.5	3.87	70 - 125	30	
Trichlorofluoromethane	20.0	27.0	135	20.0	24.7	123	8.95	60 - 145	30	
Vinyl chloride	20.0	24.6	123	20.0	23.3	116	5.57	50 - 145	30	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	101	99.2	70 - 120	PASS
Dibromofluoromethane	109	109	85 - 115	PASS
4-Bromofluorobenzene	90.0	91.3	75 - 120	PASS
Toluene-d8	103	101	85 - 120	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4974596
Report generated: 10/18/2016 14:38

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16100123
Instrument: HPMS6
Analyst: JDS
Workgroup: WG566155

Tune ID: WG566155-01
Run Date: 04/24/2016
Run Time: 16:33
File ID: 6M138750
Cal ID: HPMS6-24-APR-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	22.5	10010	PASS
75.0	95.0	30.0	60.0	52.0	23152	PASS
95.0	95.0	100	100	100	44552	PASS
96.0	95.0	5.00	9.00	6.92	3085	PASS
173	174	0	2.00	0.346	113	PASS
174	95.0	50.0	100	73.2	32632	PASS
175	174	5.00	9.00	7.16	2336	PASS
176	174	95.0	101	99.2	32384	PASS
177	176	5.00	9.00	6.95	2251	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG566155-02	STD	01	04/24/2016 16:59	
WG566155-03	STD	01	04/24/2016 17:31	
WG566155-04	STD	01	04/24/2016 18:03	
WG566155-05	STD-CCV	01	04/24/2016 18:36	
WG566155-06	STD	01	04/24/2016 19:08	
WG566155-07	STD	01	04/24/2016 19:40	
WG566155-08	STD	01	04/24/2016 20:12	
WG566155-09	STD	01	04/24/2016 20:44	
WG566155-10	SSCV	01	04/24/2016 22:21	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4974598
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16100123
Instrument: HPMS6
Analyst: TMB
Workgroup: WG584797

Tune ID: WG584797-01
Run Date: 09/26/2016
Run Time: 13:29
File ID: 6M142177
Cal ID: HPMS6-26-SEP-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	20.0	10661	PASS
75.0	95.0	30.0	60.0	46.1	24528	PASS
95.0	95.0	100	100	100	53242	PASS
96.0	95.0	5.00	9.00	6.79	3617	PASS
173	174	0	2.00	0.445	192	PASS
174	95.0	50.0	100	81.1	43162	PASS
175	174	5.00	9.00	7.62	3287	PASS
176	174	95.0	101	101	43386	PASS
177	176	5.00	9.00	6.85	2974	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG584797-02	STD	01	09/26/2016 13:54	
WG584797-03	STD	01	09/26/2016 14:35	
WG584797-04	STD	01	09/26/2016 15:07	
WG584797-05	STD	01	09/26/2016 15:39	
WG584797-06	STD	01	09/26/2016 16:11	
WG584797-07	STD	01	09/26/2016 16:43	
WG584797-08	STD-CCV	01	09/26/2016 17:15	
WG584797-09	STD	01	09/26/2016 17:47	
WG584797-10	STD	01	09/26/2016 18:19	
WG584797-11	STD	01	09/26/2016 18:51	
WG584797-12	SSCV	01	09/26/2016 20:27	

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4974598
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L16100123
Instrument: HPMS6
Analyst: TMB
Workgroup: WG587314

Tune ID: WG587314-01
Run Date: 10/12/2016
Run Time: 14:33
File ID: 6M142655
Cal ID: HPMS6 - 26-SEP-16

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	20.6	10040	PASS
75.0	95.0	30.0	60.0	47.6	23243	PASS
95.0	95.0	100	100	100	48837	PASS
96.0	95.0	5.00	9.00	7.11	3473	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	93.2	45528	PASS
175	174	5.00	9.00	7.82	3559	PASS
176	174	95.0	101	101	45952	PASS
177	176	5.00	9.00	6.89	3167	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG587314-02	CCV	01	10/12/2016 15:32	
WG587315-01	BLANK	01	10/12/2016 16:35	
L16100123-09	TRIP BLANK	01	10/12/2016 17:41	
L16100123-08	35AWW17-100316	01	10/12/2016 20:53	
L16100123-07	35AWW06-100316	01	10/12/2016 21:25	
L16100123-05	35AWW11-100316	01	10/12/2016 21:58	
L16100123-03	35AWW10-100316	01	10/12/2016 22:30	
L16100123-01	35AWW09-100316	01	10/12/2016 23:02	
WG587315-02	LCS	01	10/13/2016 01:42	
WG587315-03	LCS2	01	10/13/2016 02:14	
WG587315-04	BLANK2	01	10/13/2016 03:18	*

* Sample past 12 hour tune limit

TUNE - Modified 03/06/2008
PDF File ID: 4974598
Report generated 10/18/2016 14:38

Calibration Table Report
Method: A9FOOWT.M
Title: A9-FOO Water - IC: 042416 - HPMS6
Last Calibration: Wed Apr 27 16:03:33 2016
Curve: WG566155
Calibration Files

	Compound	5 6M138751.D	20 6M138752.D	50 6M138753.D	100 6M138754.D	200 6M138755.D	300 6M138756.D	400 6M138757.D	500 6M138758.D	Avg	%RSD
I	Fluorobenzene	ISTD									
T	Acetonitrile	0.036	0.037	0.039	0.038	0.038	0.038	0.038	0.036	0.037	2.606
T	3-Chloro-1-propene	0.567	0.621	0.656	0.672	0.635	0.622	0.617	0.603	0.624	5.157
T	2-Chloro-1,3-butadiene	0.415	0.507	0.558	0.590	0.558	0.553	0.556	0.548	0.535	10.001
T	Ethyl Acetate	0.229	0.259	0.279	0.281	0.277	0.272	0.279	0.268	0.268	6.419
T	Methacrylonitrile	0.071	0.089	0.099	0.099	0.097	0.095	0.096	0.093	0.092	9.852
T	Isobutyl Alcohol		0.008	0.008	0.007	0.007	0.008	0.010	0.010	0.009	13.654
T	1-Butanol									0.000	0.000
T	Methyl methacrylate	0.159	0.200	0.231	0.244	0.244	0.241	0.246	0.236	0.225	13.591
T	2-Nitropropane			0.079	0.082	0.085	0.085	0.088	0.084	0.084	3.643
I	Chlorobenzene-d5	ISTD									
I	1,4-Dichlorobenzene-d4	ISTD									
T	Cyclohexanone			0.026	0.027	0.032	0.034	0.035	0.033	0.031	12.127

Wed Apr 27 16:05:59 2016

Calibration Table Report
Method: 8260WTR.M
Title: 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Calibration: Tue Sep 27 09:13:49 2016
Curve: WG584797
Calibration Files

	Compound	0.3 6M142178.D	0.4 6M142179.D	1 6M142180.D	2 6M142181.D	5 6M142182.D	20 6M142183.D	50 6M142184.D	100 6M142185.D	200 6M142186.D	300 6M142187.D	Avg	%RSD	Linear	Quad
I	Fluorobenzene	ISTD													
T	Dichlorodifluoromethane			0.392	0.333	0.376	0.471	0.449	0.456	0.462	0.428	0.421	11.668		
P	Chloromethane			0.557	0.471	0.485	0.548	0.496	0.443	0.454	0.426	0.485	9.744		
C	Vinyl Chloride		0.314	0.325	0.289	0.297	0.310	0.292	0.293	0.287	0.265	0.297	5.932		
T	1,3-Butadiene					0.244	0.222	0.171	0.157	0.152	0.141	0.181	23.228	0.994	
T	Bromomethane			0.184	0.157	0.160	0.157	0.164	0.176	0.192	0.193	0.173	8.851		
T	Chloroethane			0.195	0.168	0.182	0.203	0.195	0.184	0.187	0.187	0.188	5.565		
T	Trichlorofluoromethane		0.433	0.406	0.371	0.417	0.462	0.441	0.416	0.415	0.416	0.420	5.981		
T	Diethyl ether			0.210	0.200	0.206	0.204	0.207	0.207		0.216	0.207	2.522		
T	Isoprene					0.369	0.373	0.398	0.391	0.395	0.414	0.390	4.357		
T	Acrolein				0.027	0.028	0.026	0.028	0.029		0.034	0.029	10.061		
T	1,1,2-Trichloro-1,2,2-Trifluoroet			0.243	0.215	0.246	0.262	0.256	0.263	0.267	0.266	0.252	6.927		
T	Acetone					0.084	0.060	0.058	0.054	0.056	0.056	0.061	18.334	0.996	
C	1,1-Dichloroethene		0.419	0.420	0.373	0.399	0.438	0.416	0.421	0.430	0.429	0.416	4.725		
T	Tert-Butyl Alcohol			0.013	0.013	0.015	0.015	0.015	0.014		0.014	0.014	5.411		
T	Dimethyl Sulfide					0.263	0.262	0.281	0.272	0.279	0.281	0.273	3.192		
T	Iodomethane			0.063	0.076	0.136	0.269	0.317	0.314	0.312	0.294	0.223	50.049	0.995	
T	Methyl acetate					0.186	0.169	0.178	0.172	0.172	0.176	0.176	3.289		
T	Methylene Chloride			0.275	0.251	0.263	0.281	0.266	0.271	0.279	0.276	0.270	3.665		
T	Carbon Disulfide			0.817	0.697	0.777	0.769	0.822	0.800	0.820	0.800	0.788	5.262		
T	Acrylonitrile			0.072	0.071	0.074	0.077	0.082	0.081		0.091	0.078	8.747		
T	Methyl Tert Butyl Ether			0.601	0.549	0.596	0.636	0.619	0.615	0.620	0.623	0.607	4.408		
T	trans-1,2-Dichloroethene		0.247	0.260	0.239	0.259	0.280	0.266	0.271	0.276	0.276	0.264	5.283		
T	n-Hexane					0.349	0.325	0.355	0.344	0.347	0.353	0.346	3.107		
T	Diisopropyl ether			1.055	0.966	0.980	0.965	0.981	0.976		0.959	0.983	3.335		
T	Vinyl Acetate					0.480	0.468	0.490	0.466	0.474	0.523	0.483	4.372		
P	1,1-Dichloroethane		0.486	0.482	0.450	0.474	0.512	0.488	0.497	0.502	0.501	0.488	3.772		
T	Ethyl-Tert-Butyl ether			0.786	0.742	0.770	0.774	0.788	0.787		0.785	0.776	2.136		
T	2-Butanone					0.103	0.090	0.092	0.088	0.089	0.089	0.092	6.135		
T	Propionitrile			0.023	0.024	0.025	0.025	0.026	0.025		0.025	0.025	4.572		
T	2,2-Dichloropropane		0.339	0.351	0.313	0.350	0.362	0.361	0.371	0.378	0.382	0.356	6.023		
T	cis-1,2-Dichloroethene		0.285	0.280	0.267	0.289	0.309	0.294	0.298	0.303	0.301	0.292	4.478		
C	Chloroform	0.537	0.479	0.469	0.424	0.454	0.483	0.461	0.465	0.468	0.461	0.470	6.057		
T	1-Bromopropane			0.037	0.043	0.048	0.054	0.057	0.056	0.057	0.058	0.051	14.993		
T	Bromochloromethane		0.155	0.171	0.163	0.175	0.192	0.184	0.188	0.190	0.189	0.179	7.393		
T	Tetrahydrofuran			0.082	0.065	0.065	0.063	0.064	0.062		0.065	0.067	10.523		
S	Dibromofluoromethane			0.226	0.238	0.257	0.271	0.267	0.271	0.267	0.269	0.258	6.637		
T	1,1,1-Trichloroethane		0.380	0.408	0.355	0.396	0.425	0.414	0.421	0.434	0.434	0.407	6.475		
T	Cyclohexane			0.455	0.397	0.438	0.422	0.460	0.451	0.467	0.477	0.446	5.814		
T	1,1-Dichloropropene			0.358	0.313	0.338	0.360	0.348	0.351	0.358	0.358	0.348	4.614		
T	Tert-Amyl-Methyl ether			0.586	0.553	0.582	0.592	0.609	0.617		0.635	0.596	4.518		
T	Carbon Tetrachloride		0.334	0.353	0.301	0.358	0.4	0.395	0.41	0.407	0.419	0.3752	10.805		
S	1,2-Dichloroethane-d4				0.261	0.262	0.265	0.259	0.259	0.253	0.255	0.2592	1.5553		
T	Heptane											0	0		
T	1,2-Dichloroethane		0.306	0.343	0.319	0.345	0.365	0.347	0.351	0.354	0.349	0.3421	5.3422		
T	Benzene		1.062	1.037	0.952	0.991	1.06	1.009	1.018	1.005	0.95	1.0093	4.0406		
T	Trichloroethene		0.285	0.294	0.265	0.287	0.317	0.301	0.307	0.31	0.303	0.2967	5.3618		
T	Methylcyclohexane					0.388	0.369	0.399	0.39	0.396	0.397	0.39	2.7886		
C	1,2-Dichloropropane		0.241	0.256	0.247	0.262	0.28	0.268	0.271	0.276	0.274	0.2638	5.1359		
T	1,4-Dioxane					0.001	0.002	0.002	0.002		0.001	0.0016	10.527		
T	Bromodichloromethane		0.323	0.332	0.301	0.339	0.373	0.362	0.363	0.371	0.362	0.3473	7.1746		
T	Dibromomethane		0.127	0.135	0.135	0.145	0.157	0.152	0.153	0.157	0.155	0.1463	7.667		
T	2-Chloroethyl Vinyl Ether				0.1	0.114	0.131	0.134	0.129	0.131	0.12	0.1227	9.9213		
T	4-Methyl-2-Pentanone					0.067	0.07	0.073	0.072	0.075	0.074	0.0721	4.1696		
T	cis-1,3-Dichloropropene		0.332	0.361	0.337	0.384	0.423	0.409	0.414	0.423	0.413	0.3884	9.4205		
T	Dimethyl Disulfide					0.204	0.221	0.246	0.243	0.253	0.255	0.2369	8.5476		
I	Chlorobenzene-d5	ISTD													
S	Toluene-d8			1.177	1.113	1.125	1.148	1.11	1.131	1.088	1.103	1.1245	2.4916		
C	Toluene		1.39	1.451	1.281	1.347	1.437	1.367	1.375	1.319	1.221	1.3541	5.3883		
T	Ethyl Methacrylate			0.274	0.263	0.313	0.33	0.359	0.354	0.354	0.363	0.3261	12.136		
T	Paraldehyde											0	0		
T	trans-1,3-Dichloropropene			0.396	0.382	0.422	0.477	0.463	0.471	0.471	0.472	0.4443	8.6277		
T	1,1,2-Trichloroethane		0.227	0.245	0.231	0.257	0.273	0.261	0.262	0.26	0.259	0.2527	6.0672		
T	2-Hexanone					0.184	0.183	0.185	0.181	0.187	0.191	0.185	1.9334		
T	1,3-Dichloropropane		0.355	0.439	0.4	0.434	0.456	0.435	0.434	0.429	0.425	0.4231	6.9431		
T	Tetrachloroethene		0.379	0.368	0.353	0.376	0.399	0.382	0.389	0.389	0.394	0.3811	3.7409		
T	Dibromochloromethane		0.299	0.312	0.301	0.334	0.374	0.365	0.375	0.374	0.372	0.3451	9.6885		
T	1,2-Dibromoethane		0.227	0.26	0.253	0.262	0.285	0.277	0.277	0.275	0.269	0.265	6.6277		
T	1-Chlorohexane		0.38	0.446	0.373	0.415	0.422	0.459	0.451	0.456	0.453	0.4283	7.7203		
P	Chlorobenzene		0.94	0.99	0.915	0.961	1.025	0.979	0.996	0.982	0.915	0.9671	3.8823		
T	1,1,1,2-Tetrachloroethane		0.294	0.347	0.309	0.34	0.389	0.384	0.395	0.406	0.392	0.3619	11.243		
C	Ethylbenzene		0.487	0.508	0.47	0.496	0.545	0.521	0.545	0.56	0.536	0.5187	5.8544		
T	m-,p-Xylene		0.597	0.623	0.573	0.609	0.652	0.634	0.651	0.634	0.561	0.6149	5.2909		
T	o-Xylene			0.583	0.534	0.589	0.644	0.623	0.637	0.654	0.622	0.6107	6.5158		
T	Styrene		0.951	1	0.936	1.013	1.124	1.093	1.122	1.122	1.024	1.0427	7.175		
P	Bromoform			0.176	0.166	0.197	0.235	0.24	0.248	0.258	0.26	0.2226	16.827		
T	Isopropylbenzene		1.471	1.529	1.376	1.493	1.604	1.544	1.568	1.521	1.332	1.4933	5.9329		
I	1,4-Dichlorobenzene-d4	ISTD													
P	1,1,2,2-Tetrachloroethane		0.489	0.519	0.486	0.547	0.568	0.549	0.536	0.544	0.553	0.5323	5.3529		
S	p-Bromofluorobenzene			0.885	0.81	0.829	0.833	0.808	0.815	0.806	0.817	0.8253	3.1739		

T	1,2,3-Trichloropropane			0.149	0.15	0.162	0.173	0.168	0.165	0.166	0.167	0.1626	5.2951
T	trans-1,4-Dichloro-2-Butene			0.114	0.134	0.154	0.158	0.172	0.173	0.176	0.181	0.1577	14.683
T	n-Propylbenzene		3.193	3.28	2.925	3.093	3.233	3.069	3.062	2.851	2.447	3.0169	8.4322
T	Bromobenzene	0.828	0.733	0.769	0.706	0.766	0.824	0.784	0.791	0.8	0.785	0.7786	4.8409
T	1,3,5-Trimethylbenzene		2.169	2.343	2.071	2.244	2.382	2.285	2.325	2.258	2.036	2.2349	5.3757
T	2-Chlorotoluene		2.052	2.026	1.804	2.048	2.006	2.05	2.013	1.958	1.876	1.9814	4.3965
T	4-Chlorotoluene		1.975	2.195	1.976	1.92	2.148	1.911	1.988	1.957	1.742	1.9792	6.6865
T	a-Methylstyrene					1.272	1.294	1.402	1.396	1.392	1.344	1.35	4.1595
T	tert-Butylbenzene			0.509	0.461	0.501	0.537	0.518	0.534	0.548	0.539	0.5184	5.4103
T	1,2,4-Trimethylbenzene			2.401	2.171	2.34	2.502	2.417	2.454	2.352	2.093	2.3412	6.0037
T	sec-Butylbenzene			2.819	2.475	2.738	2.877	2.738	2.769	2.633	2.329	2.6722	6.9251
T	p-Isopropyltoluene			2.362	2.168	2.398	2.569	2.461	2.505	2.369	2.117	2.3685	6.6239
T	1,3-Dichlorobenzene		1.514	1.484	1.403	1.478	1.576	1.503	1.521	1.492	1.404	1.486	3.6825
T	1,4-Dichlorobenzene		1.493	1.556	1.401	1.515	1.577	1.5	1.521	1.485	1.393	1.4934	4.1721
T	n-Butylbenzene			2.074	1.863	2.055	2.198	2.098	2.147	2.061	1.879	2.0469	5.7845
T	1,2-Dichlorobenzene	1.524	1.363	1.453	1.289	1.375	1.47	1.391	1.41	1.375	1.3	1.3949	5.235
T	1,2-Dibromo-3-Chloropropane				0.065	0.086	0.096	0.098	0.097	0.098	0.097	0.0911	13.48
T	1,2,4-Trichlorobenzene	1.049	0.994	1.01	0.922	0.998	1.08	1.014	1.044	1.048	1.016	1.0173	4.2358
T	Hexachlorobutadiene		0.347	0.395	0.344	0.375	0.398	0.373	0.39	0.393	0.395	0.3789	5.525
T	Naphthalene		1.629	1.69	1.645	1.881	2.093	2.029	2.027	1.928	1.727	1.8499	9.7683
T	1,2,3-Trichlorobenzene	0.932	0.837	0.884	0.826	0.892	0.979	0.93	0.95	0.951	0.919	0.9101	5.4725

Tue Sep 27 10:32:17 2016

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16100123 Run Date: 09/26/2016 Sample ID: WG584797-12
Instrument ID: HPMS6 Run Time: 20:27 Method: 8260B
File ID: 6M142190 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG584797 Cal ID: HPMS6 - 26-SEP-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	50.0	45.9	ug/L	0.431	8.30	20	
1,1-Dichloroethene	CCC	50.0	41.9	ug/L	0.349	16.1	20	
1,2-Dichloropropane	CCC	50.0	49.9	ug/L	0.263	0.200	20	
Ethylbenzene	CCC	50.0	48.0	ug/L	0.498	4.10	20	
Toluene	CCC	50.0	47.7	ug/L	1.29	4.60	20	
Vinyl Chloride	CCC	50.0	52.8	ug/L	0.313	5.60	20	
Bromoform	SPCC	50.0	44.0	ug/L	0.222	12.1	20	
Chlorobenzene	SPCC	50.0	49.3	ug/L	0.954	1.30	20	
Chloromethane	SPCC	50.0	47.4	ug/L	0.460	5.10	20	
1,1-Dichloroethane	SPCC	50.0	44.4	ug/L	0.433	11.3	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	51.3	ug/L	0.546	2.60	20	
Acetone		50.0	56.2	ug/L	0.0644	12.4	20	
Benzene		50.0	46.8	ug/L	0.945	6.30	20	
Bromobenzene		50.0	47.8	ug/L	0.745	4.30	20	
Bromochloromethane		50.0	48.7	ug/L	0.174	2.60	20	
Bromodichloromethane		50.0	49.2	ug/L	0.342	1.70	20	
Bromomethane		50.0	45.3	ug/L	0.157	9.30	20	
2-Butanone		50.0	53.4	ug/L	0.0982	6.80	20	
n-Butylbenzene		50.0	49.5	ug/L	2.03	1.00	20	
sec-Butylbenzene		50.0	50.0	ug/L	2.67	0	20	
tert-Butylbenzene		50.0	49.6	ug/L	0.514	0.800	20	
Carbon Disulfide		50.0	41.2	ug/L	0.649	17.6	20	
Carbon Tetrachloride		50.0	48.4	ug/L	0.363	3.30	20	
Dibromochloromethane		50.0	50.9	ug/L	0.352	1.80	20	
Chloroethane		50.0	55.1	ug/L	0.207	10.2	20	
2-Chlorotoluene		50.0	46.5	ug/L	1.84	7.00	20	
4-Chlorotoluene		50.0	50.8	ug/L	2.01	1.50	20	
1,2-Dibromo-3-Chloropropane		50.0	55.9	ug/L	0.102	11.7	20	
1,2-Dibromoethane		50.0	50.7	ug/L	0.269	1.50	20	
Dibromomethane		50.0	47.5	ug/L	0.139	4.90	20	
1,2-Dichlorobenzene		50.0	51.7	ug/L	1.44	3.30	20	
1,3-Dichlorobenzene		50.0	49.9	ug/L	1.48	0.100	20	
1,4-Dichlorobenzene		50.0	50.9	ug/L	1.52	1.90	20	
Dichlorodifluoromethane		50.0	56.3	ug/L	0.474	12.7	20	
1,2-Dichloroethane		50.0	48.4	ug/L	0.331	3.10	20	
cis-1,2-Dichloroethene		50.0	48.8	ug/L	0.285	2.40	20	
trans-1,2-Dichloroethene		50.0	46.9	ug/L	0.248	6.10	20	
1,3-Dichloropropane		50.0	52.4	ug/L	0.444	4.90	20	
2,2-Dichloropropane		50.0	45.6	ug/L	0.325	8.90	20	
cis-1,3-Dichloropropene		50.0	53.8	ug/L	0.418	7.60	20	
trans-1,3-Dichloropropene		50.0	50.0	ug/L	0.444	0	20	
1,1-Dichloropropene		50.0	45.2	ug/L	0.315	9.60	20	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4974597
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16100123 Run Date: 09/26/2016 Sample ID: WG584797-12
Instrument ID: HPMS6 Run Time: 20:27 Method: 8260B
File ID: 6M142190 Analyst: TMB QC Key: DOD4
ICal Workgroup: WG584797 Cal ID: HPMS6 - 26-SEP-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2-Hexanone		50.0	52.7	ug/L	0.195	5.50	20	
Hexachlorobutadiene		50.0	53.9	ug/L	0.408	7.70	20	
Isopropylbenzene		50.0	49.9	ug/L	1.49	0.200	20	
p-Isopropyltoluene		50.0	50.1	ug/L	2.38	0.300	20	
4-Methyl-2-Pentanone		50.0	53.4	ug/L	0.0769	6.70	20	
Methylene Chloride		50.0	46.0	ug/L	0.249	8.00	20	
Naphthalene		50.0	51.1	ug/L	1.89	2.30	20	
n-Propylbenzene		50.0	49.7	ug/L	3.00	0.600	20	
Styrene		50.0	50.4	ug/L	1.05	0.800	20	
1,1,1,2-Tetrachloroethane		50.0	50.5	ug/L	0.365	0.900	20	
Tetrachloroethene		50.0	47.7	ug/L	0.364	4.60	20	
1,2,3-Trichlorobenzene		50.0	52.1	ug/L	0.948	4.10	20	
1,2,4-Trichlorobenzene		50.0	51.5	ug/L	1.05	3.00	20	
1,1,1-Trichloroethane		50.0	47.3	ug/L	0.386	5.30	20	
1,1,2-Trichloroethane		50.0	50.2	ug/L	0.254	0.400	20	
Trichloroethene		50.0	49.7	ug/L	0.295	0.600	20	
Trichlorofluoromethane		50.0	49.8	ug/L	0.418	0.500	20	
1,2,3-Trichloropropane		50.0	52.1	ug/L	0.170	4.20	20	
1,2,4-Trimethylbenzene		50.0	48.9	ug/L	2.29	2.20	20	
1,3,5-Trimethylbenzene		50.0	49.4	ug/L	2.21	1.20	20	
o-Xylene		50.0	50.2	ug/L	0.613	0.400	20	
m-,p-Xylene		100	99.6	ug/L	0.613	0.400	20	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4974597
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/12/2016 Sample ID: WG587314-02
Instrument ID: HPMS6 Run Time: 15:32 Method: 8260B
File ID: 6M142657 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG587315 Cal ID: HPMS6 - 26-SEP-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	48.6	ug/L	0.457	2.87	20	
1,1-Dichloroethene	CCC	50.0	49.5	ug/L	0.412	0.971	20	
1,2-Dichloropropane	CCC	50.0	48.6	ug/L	0.257	2.77	20	
Ethylbenzene	CCC	50.0	48.9	ug/L	0.507	2.20	20	
Toluene	CCC	50.0	49.0	ug/L	1.33	2.04	20	
Vinyl Chloride	CCC	50.0	50.9	ug/L	0.303	1.87	20	
Bromoform	SPCC	50.0	48.6	ug/L	0.246	2.87	20	
Chlorobenzene	SPCC	50.0	49.9	ug/L	0.965	0.213	20	
Chloromethane	SPCC	50.0	42.3	ug/L	0.411	15.3	20	
1,1-Dichloroethane	SPCC	50.0	48.8	ug/L	0.477	2.30	20	
1,1,2,2-Tetrachloroethane	SPCC	50.0	47.7	ug/L	0.508	4.55	20	
Xylenes		150	149	ug/L	0.608	0.533	20	
Acetone		50.0	53.5	ug/L	0.0614	7.07	20	
Benzene		50.0	48.8	ug/L	0.984	2.50	20	
Bromobenzene		50.0	49.3	ug/L	0.768	1.41	20	
Bromochloromethane		50.0	52.6	ug/L	0.188	5.28	20	
Bromodichloromethane		50.0	50.5	ug/L	0.351	1.07	20	
Bromomethane		50.0	39.3	ug/L	0.136	21.5	20	*
2-Butanone		50.0	50.9	ug/L	0.0936	1.80	20	
n-Butylbenzene		50.0	48.3	ug/L	1.98	3.36	20	
sec-Butylbenzene		50.0	48.4	ug/L	2.59	3.21	20	
tert-Butylbenzene		50.0	48.2	ug/L	0.500	3.59	20	
Carbon Disulfide		50.0	49.2	ug/L	0.774	1.69	20	
Carbon Tetrachloride		50.0	54.7	ug/L	0.411	9.43	20	
Dibromochloromethane		50.0	52.8	ug/L	0.364	5.52	20	
Chloroethane		50.0	47.4	ug/L	0.178	5.26	20	
2-Chlorotoluene		50.0	48.4	ug/L	1.92	3.20	20	
4-Chlorotoluene		50.0	44.4	ug/L	1.76	11.2	20	
1,2-Dibromo-3-Chloropropane		50.0	47.2	ug/L	0.0859	5.65	20	
1,2-Dibromoethane		50.0	50.2	ug/L	0.266	0.424	20	
Dibromomethane		50.0	51.1	ug/L	0.150	2.20	20	
1,2-Dichlorobenzene		50.0	49.1	ug/L	1.37	1.78	20	
1,3-Dichlorobenzene		50.0	50.1	ug/L	1.49	0.107	20	
1,4-Dichlorobenzene		50.0	49.8	ug/L	1.49	0.324	20	
Dichlorodifluoromethane		50.0	55.5	ug/L	0.468	11.1	20	
1,2-Dichloroethane		50.0	48.9	ug/L	0.335	2.17	20	
cis-1,2-Dichloroethene		50.0	49.7	ug/L	0.290	0.501	20	
trans-1,2-Dichloroethene		50.0	50.8	ug/L	0.268	1.50	20	
1,3-Dichloropropane		50.0	48.5	ug/L	0.410	3.03	20	
2,2-Dichloropropane		50.0	52.5	ug/L	0.375	5.06	20	
cis-1,3-Dichloropropene		50.0	50.5	ug/L	0.393	1.08	20	
trans-1,3-Dichloropropene		50.0	49.8	ug/L	0.443	0.334	20	

CCV - Modified 03/05/2008
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/12/2016 Sample ID: WG587314-02
Instrument ID: HPMS6 Run Time: 15:32 Method: 8260B
File ID: 6M142657 Analyst: TMB QC Key: DOD4
Workgroup (AAB#): WG587315 Cal ID: HPMS6 - 26-SEP-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	49.0	ug/L	0.341	1.93	20	
2-Hexanone		50.0	49.1	ug/L	0.182	1.82	20	
Hexachlorobutadiene		50.0	48.4	ug/L	0.367	3.20	20	
Isopropylbenzene		50.0	51.0	ug/L	1.52	1.93	20	
p-Isopropyltoluene		50.0	49.6	ug/L	2.35	0.725	20	
4-Methyl-2-Pentanone		50.0	49.8	ug/L	0.0718	0.415	20	
Methylene Chloride		50.0	48.9	ug/L	0.265	2.14	20	
Naphthalene		50.0	49.1	ug/L	1.82	1.85	20	
n-Propylbenzene		50.0	47.4	ug/L	2.86	5.12	20	
Styrene		50.0	50.5	ug/L	1.05	1.06	20	
1,1,1,2-Tetrachloroethane		50.0	53.3	ug/L	0.386	6.58	20	
Tetrachloroethene		50.0	52.2	ug/L	0.398	4.45	20	
1,2,3-Trichlorobenzene		50.0	49.3	ug/L	0.898	1.37	20	
1,2,4-Trichlorobenzene		50.0	48.4	ug/L	0.985	3.19	20	
1,1,1-Trichloroethane		50.0	51.2	ug/L	0.417	2.32	20	
1,1,2-Trichloroethane		50.0	50.1	ug/L	0.253	0.164	20	
Trichloroethene		50.0	51.5	ug/L	0.305	2.94	20	
Trichlorofluoromethane		50.0	60.4	ug/L	0.507	20.7	20	*
1,2,3-Trichloropropane		50.0	48.0	ug/L	0.156	3.99	20	
1,2,4-Trimethylbenzene		50.0	49.0	ug/L	2.30	1.92	20	
1,3,5-Trimethylbenzene		50.0	48.0	ug/L	2.15	3.99	20	
o-Xylene		50.0	49.3	ug/L	0.602	1.39	20	
m-,p-Xylene		100	99.9	ug/L	0.614	0.106	20	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 4974599
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16100123
Instrument ID: HPMS6
Workgroup (AAB#): WG587315

ICAL CCV Number: WG584797-08
CAL ID: HPMS6-26-SEP-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG584797-08	NA	NA	358963	623465	791212
Upper Limit	NA	NA	717926	1246930	1582424
Lower Limit	NA	NA	179482	311733	395606
L16100123-01	1.00	01	252938	474262	592866
L16100123-03	1.00	01	249848	467746	599716
L16100123-05	1.00	01	254264	472925	600802
L16100123-07	1.00	01	252995	468115	599330
L16100123-08	1.00	01	253997	472551	596066
L16100123-09	1.00	01	266965	493626	635060
WG587315-01	1.00	01	275383	513733	660535
WG587315-02	1.00	01	306991	498165	621588
WG587315-03	1.00	01	310406	516481	642986

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: 4977761
Report generated 10/18/2016 14:38

Microbac Laboratories Inc.

INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L16100123
Instrument ID: HPMS6
Workgroup (AAB#): WG587315

ICAL CCV Number: WG584797-08
CAL ID: HPMS6-26-SEP-16
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG584797-08	NA	NA	18.79	15.22	10.75
Upper Limit	NA	NA	19.29	15.72	11.25
Lower Limit	NA	NA	18.29	14.72	10.25
L16100123-01	1.00	01	18.78	15.22	10.75
L16100123-03	1.00	01	18.78	15.22	10.75
L16100123-05	1.00	01	18.79	15.22	10.75
L16100123-07	1.00	01	18.78	15.22	10.75
L16100123-08	1.00	01	18.78	15.22	10.75
L16100123-09	1.00	01	18.77	15.22	10.75
WG587315-01	1.00	01	18.78	15.22	10.75
WG587315-02	1.00	01	18.79	15.22	10.75
WG587315-03	1.00	01	18.77	15.22	10.75

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: 4977762
Report generated: 10/18/2016 14:38

2.1.1.3 Sample Data

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142671.D Vial: 17
Acq On : 12 Oct 2016 23:02 Operator: TMB
Sample : L16100123-01 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:27:12 2016 Quant Results File: 8260WTR.RES

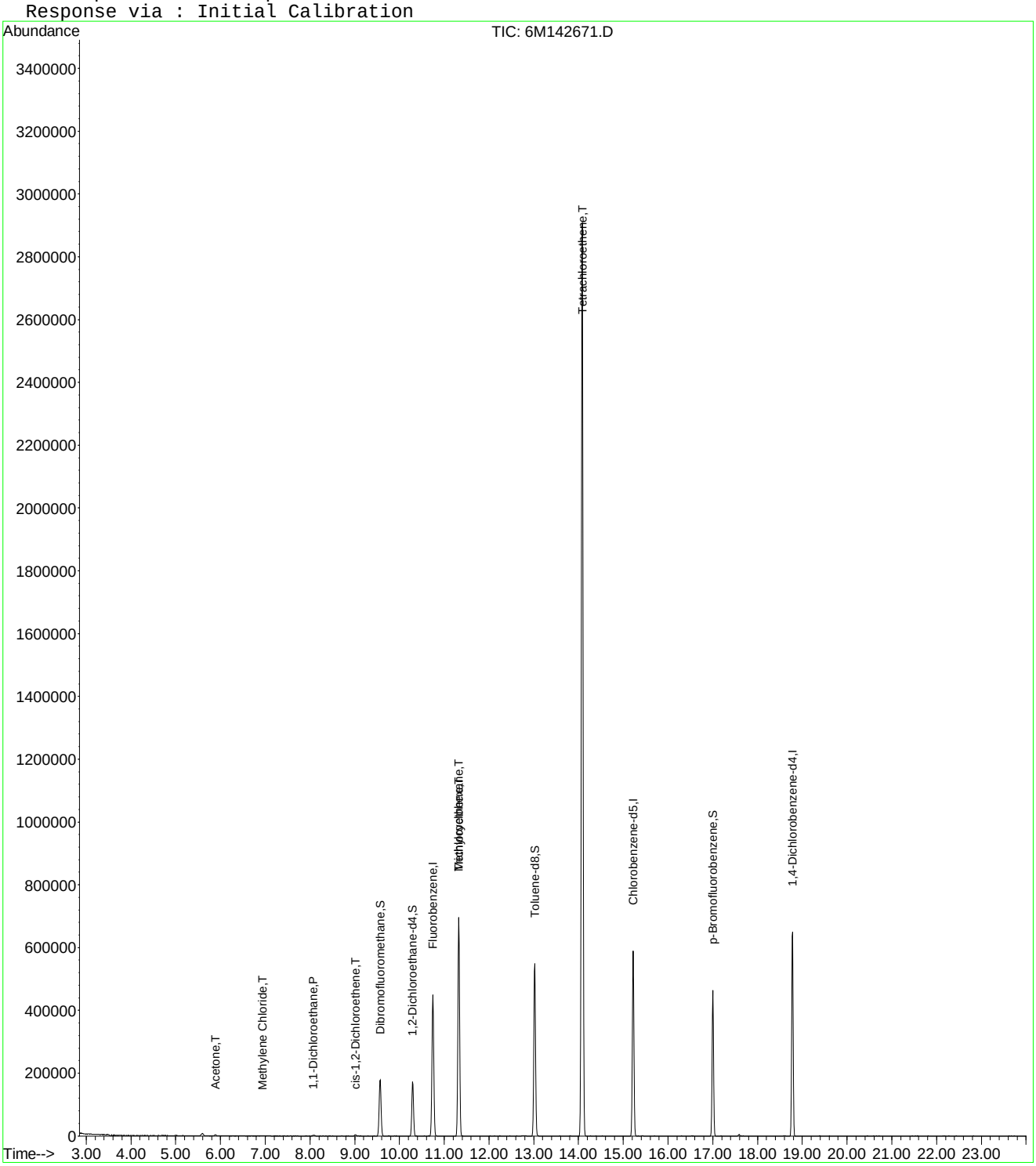
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

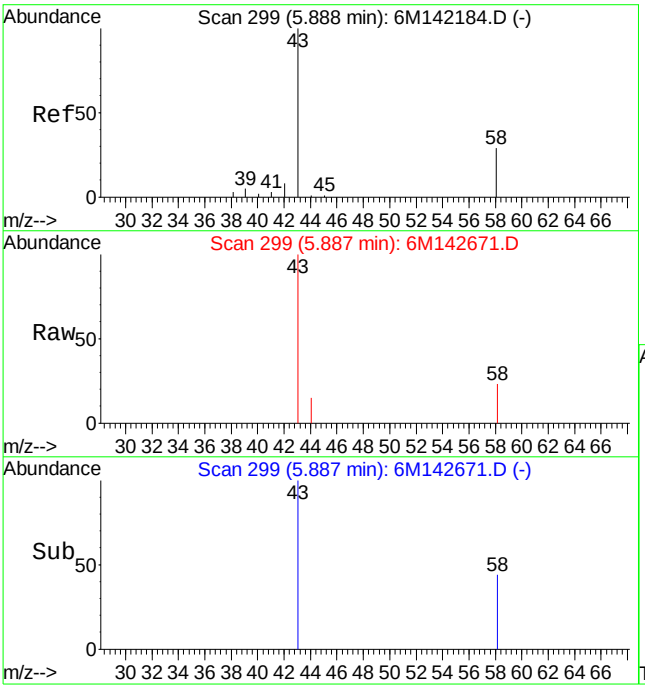
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	592866	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	474262	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	252938	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	167135	27.2756	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 109.12%			
43) 1,2-Dichloroethane-d4	10.29	65	158170	25.7350	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 102.92%			
58) Toluene-d8	13.02	98	536628	25.1568	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 100.64%			
80) p-Bromofluorobenzene	17.00	95	200328	23.9907	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.96%			
Target Compounds						Qvalue
13) Acetone	5.89	43	8017	3.7845	ug/L	84
19) Methylene Chloride	6.94	84	788	0.1229	ug/L	81
27) 1,1-Dichloroethane	8.07	63	5856	0.5060	ug/L	93
32) cis-1,2-Dichloroethene	9.01	96	3023	0.4371	ug/L	88
47) Trichloroethene	11.32	130	338929	48.1748	ug/L	85
48) Methylcyclohexane	11.32	83	3544	0.3832	ug/L #	1
66) Tetrachloroethene	14.09	166	1248317	172.6882	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142671.D 8260WTR.M Thu Oct 13 09:27:15 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142671.D Vial: 17
Acq On : 12 Oct 2016 23:02 Operator: TMB
Sample : L16100123-01 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:27 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

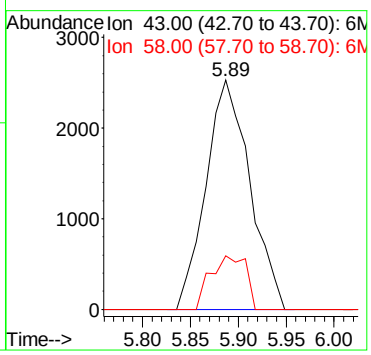


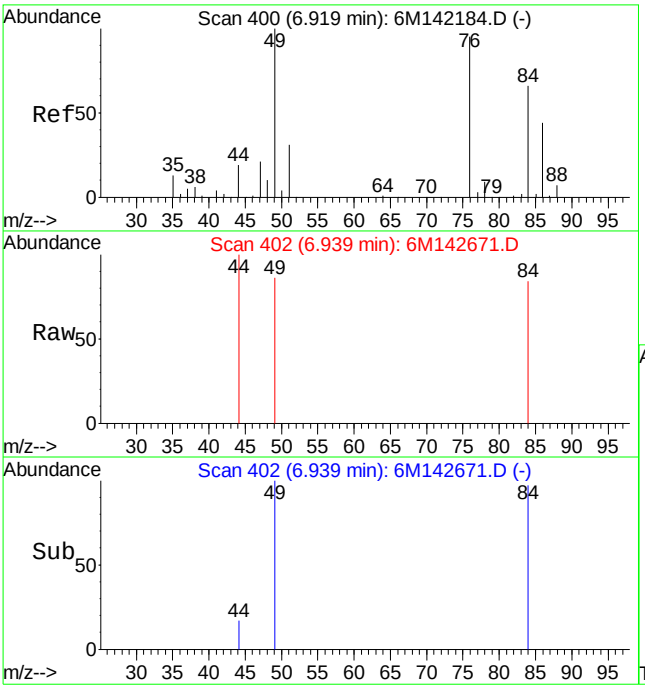


#13
Acetone
Concen: 3.78 ug/L
RT: 5.89 min Scan# 299
Delta R.T. -0.00 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion: 43 Resp: 8017

Ion	Ratio	Lower	Upper
43	100		
58	18.8	16.4	38.2

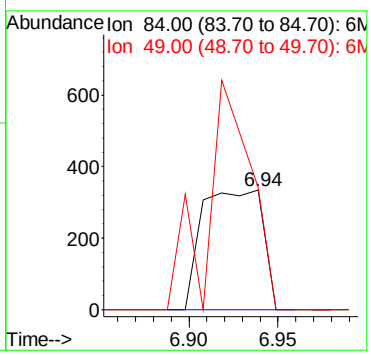


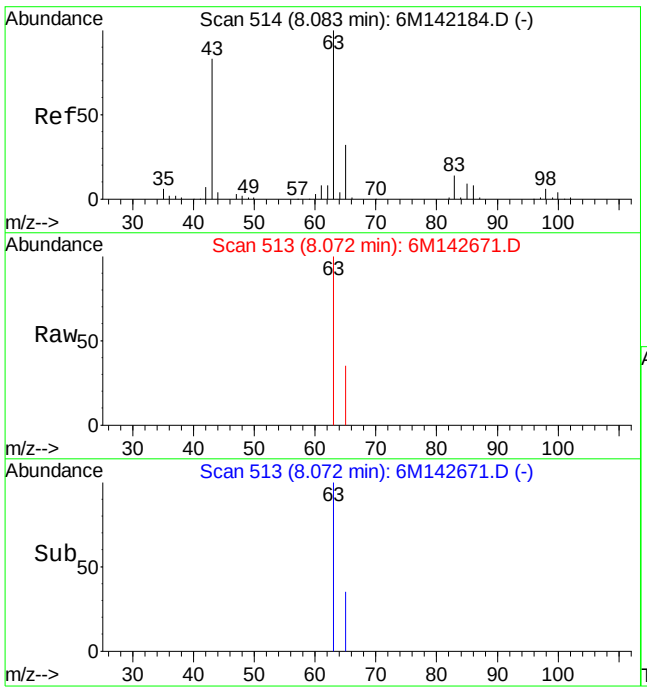


#19
Methylene Chloride
Concen: 0.12 ug/L
RT: 6.94 min Scan# 402
Delta R.T. 0.02 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion: 84 Resp: 788

Ion	Ratio	Lower	Upper
84	100		
49	140.2	99.3	231.7

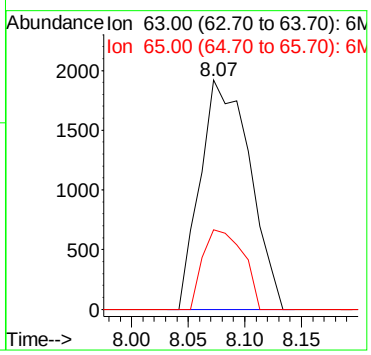


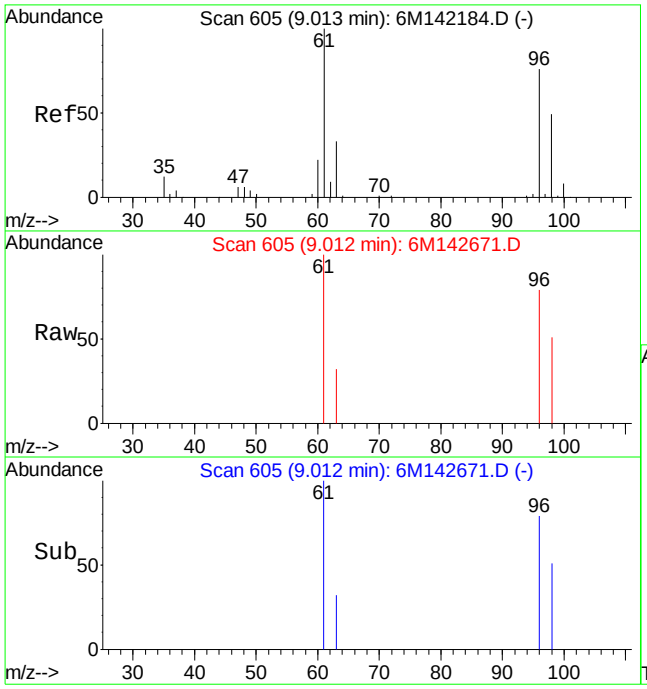


#27
1,1-Dichloroethane
Concen: 0.51 ug/L
RT: 8.07 min Scan# 513
Delta R.T. -0.00 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion: 63 Resp: 5856

Ion	Ratio	Lower	Upper
63	100		
65	28.1	19.3	44.9

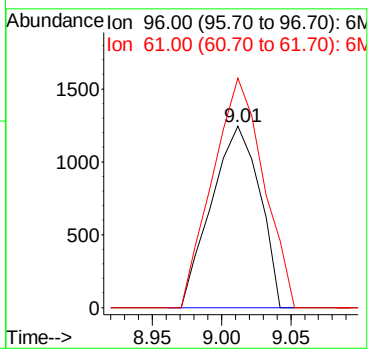


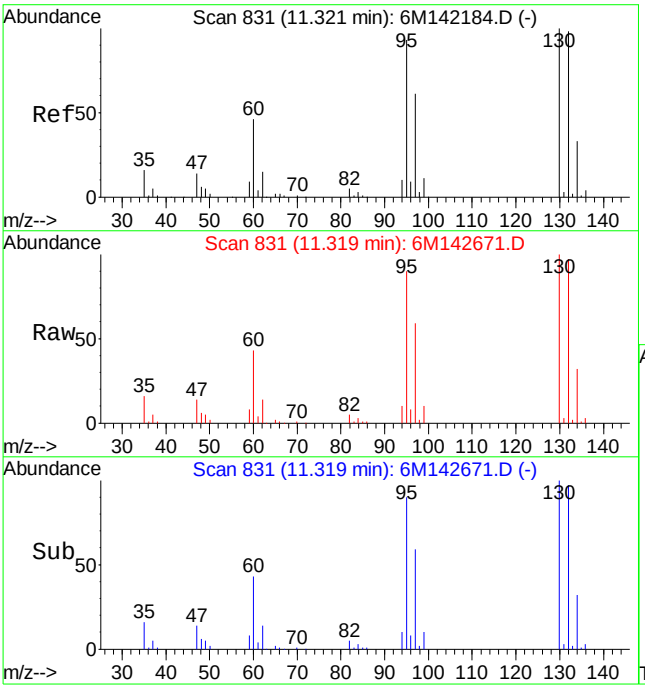


#32
cis-1,2-Dichloroethene
Concen: 0.44 ug/L
RT: 9.01 min Scan# 605
Delta R.T. 0.01 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion: 96 Resp: 3023

Ion	Ratio	Lower	Upper
96	100		
61	133.1	89.2	208.2

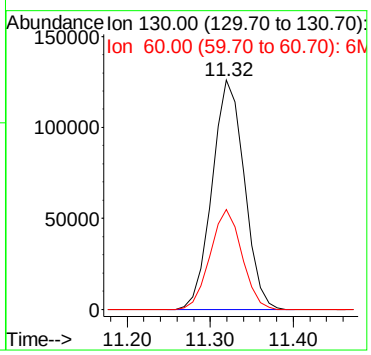


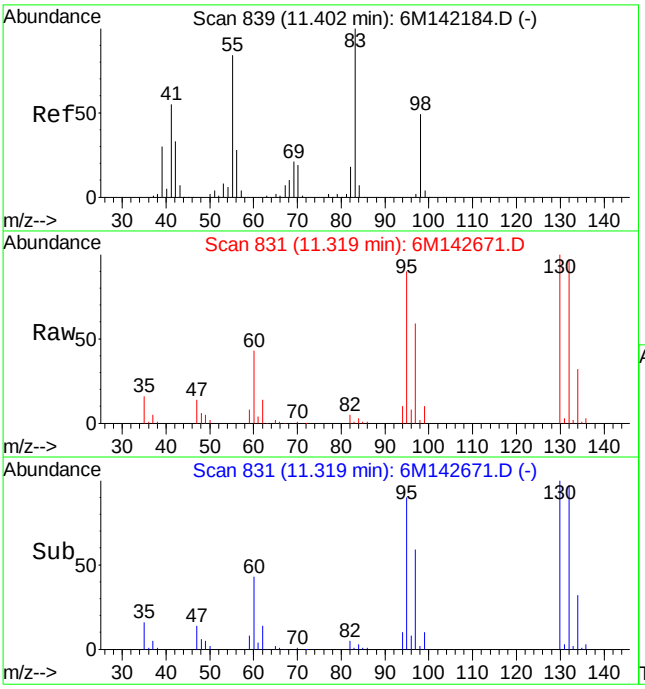


#47
Trichloroethene
Concen: 48.17 ug/L
RT: 11.32 min Scan# 831
Delta R.T. -0.00 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion:130 Resp: 338929

Ion	Ratio	Lower	Upper
130	100		
60	42.8	32.0	74.6

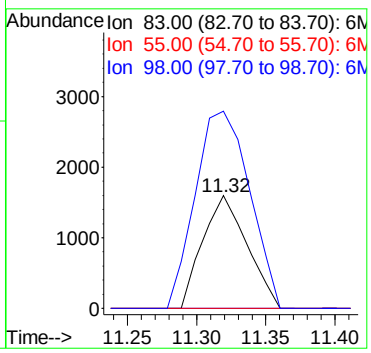


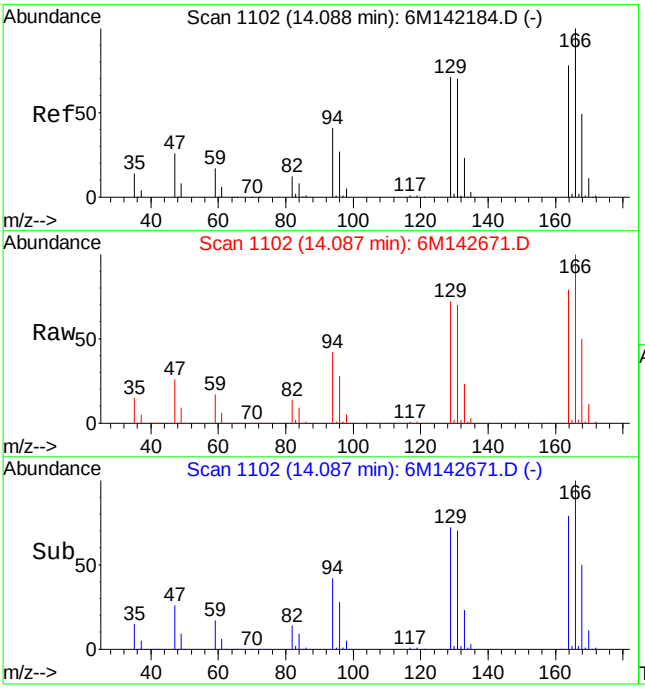


#48
Methylcyclohexane
Concen: 0.38 ug/L
RT: 11.32 min Scan# 831
Delta R.T. -0.09 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion: 83 Resp: 3544

Ion	Ratio	Lower	Upper
83	100		
55	0.0	56.3	131.3#
98	214.8	28.4	66.4#

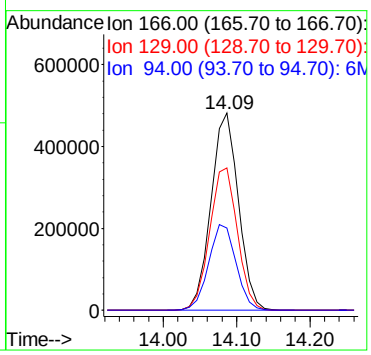




#66
Tetrachloroethene
Concen: 172.69 ug/L
RT: 14.09 min Scan# 1102
Delta R.T. 0.01 min
Lab File: 6M142671.D
Acq: 12 Oct 2016 23:02

Tgt Ion:166 Resp: 1248317

Ion	Ratio	Lower	Upper
166	100		
129	73.0	43.5	101.5
94	43.4	27.8	64.8



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142670.D Vial: 16
Acq On : 12 Oct 2016 22:30 Operator: TMB
Sample : L16100123-03 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:27:06 2016 Quant Results File: 8260WTR.RES

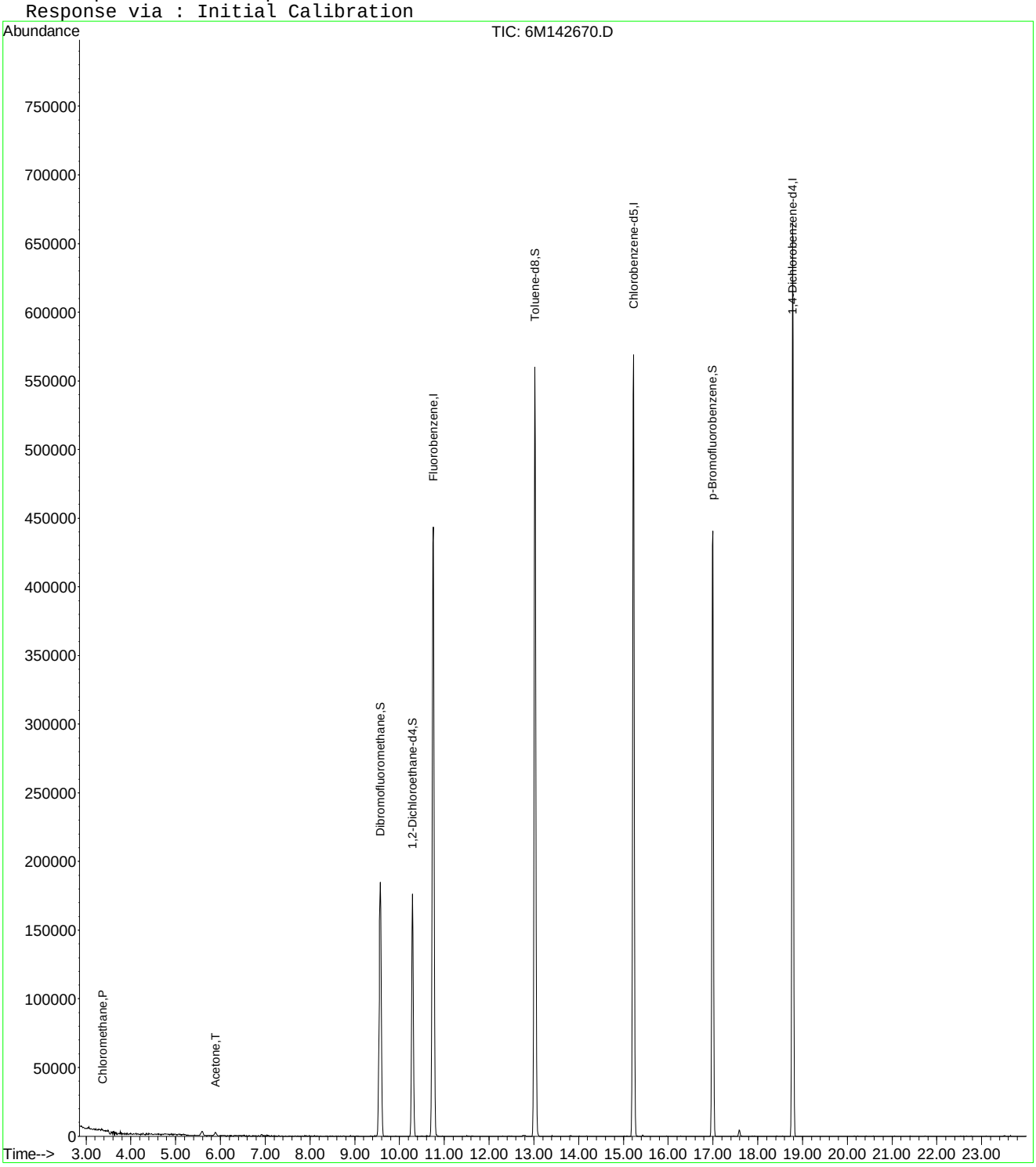
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

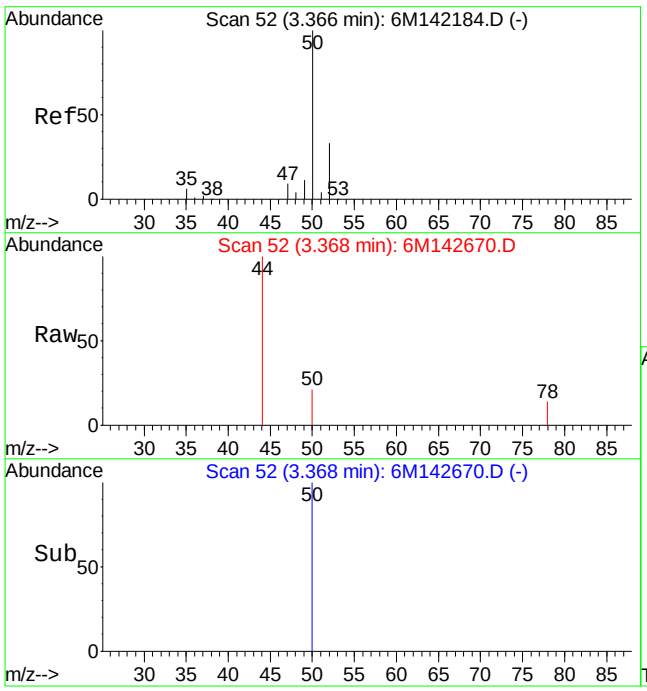
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	599716	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	467746	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	249848	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	168497	27.1838	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.72%			
43) 1,2-Dichloroethane-d4	10.29	65	158308	25.4632	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 101.84%			
58) Toluene-d8	13.02	98	532165	25.2951	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.20%			
80) p-Bromofluorobenzene	16.99	95	198045	24.0106	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 96.04%			
Target Compounds						Qvalue
3) Chloromethane	3.37	50	1534	0.1318	ug/L #	63
13) Acetone	5.89	43	5830	2.0552	ug/L	83

(#) = qualifier out of range (m) = manual integration
6M142670.D 8260WTR.M Thu Oct 13 09:27:09 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142670.D Vial: 16
Acq On : 12 Oct 2016 22:30 Operator: TMB
Sample : L16100123-03 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:27 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

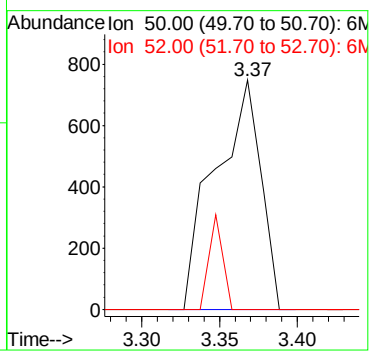


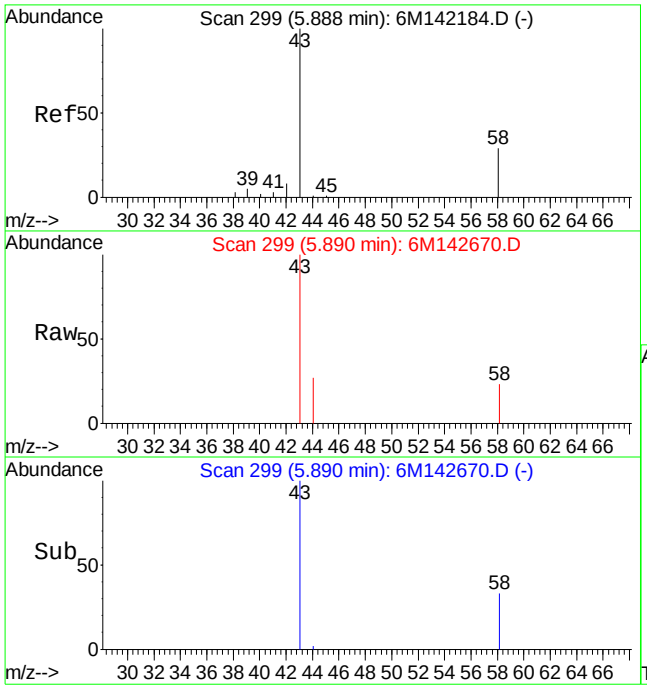


#3
Chloromethane
Concen: 0.13 ug/L
RT: 3.37 min Scan# 52
Delta R.T. 0.01 min
Lab File: 6M142670.D
Acq: 12 Oct 2016 22:30

Tgt Ion: 50 Resp: 1534

Ion	Ratio	Lower	Upper
50	100		
52	12.3	19.8	46.2#

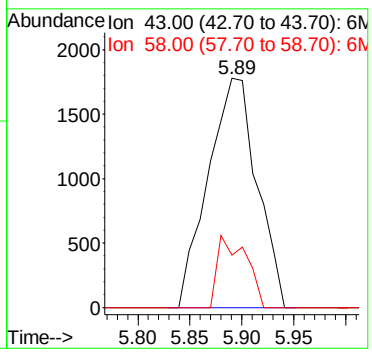




#13
Acetone
Concen: 2.06 ug/L
RT: 5.89 min Scan# 299
Delta R.T. 0.00 min
Lab File: 6M142670.D
Acq: 12 Oct 2016 22:30

Tgt Ion: 43 Resp: 5830

Ion	Ratio	Lower	Upper
43	100		
58	18.3	16.4	38.2



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142669.D Vial: 15
Acq On : 12 Oct 2016 21:58 Operator: TMB
Sample : L16100123-05 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:26:58 2016 Quant Results File: 8260WTR.RES

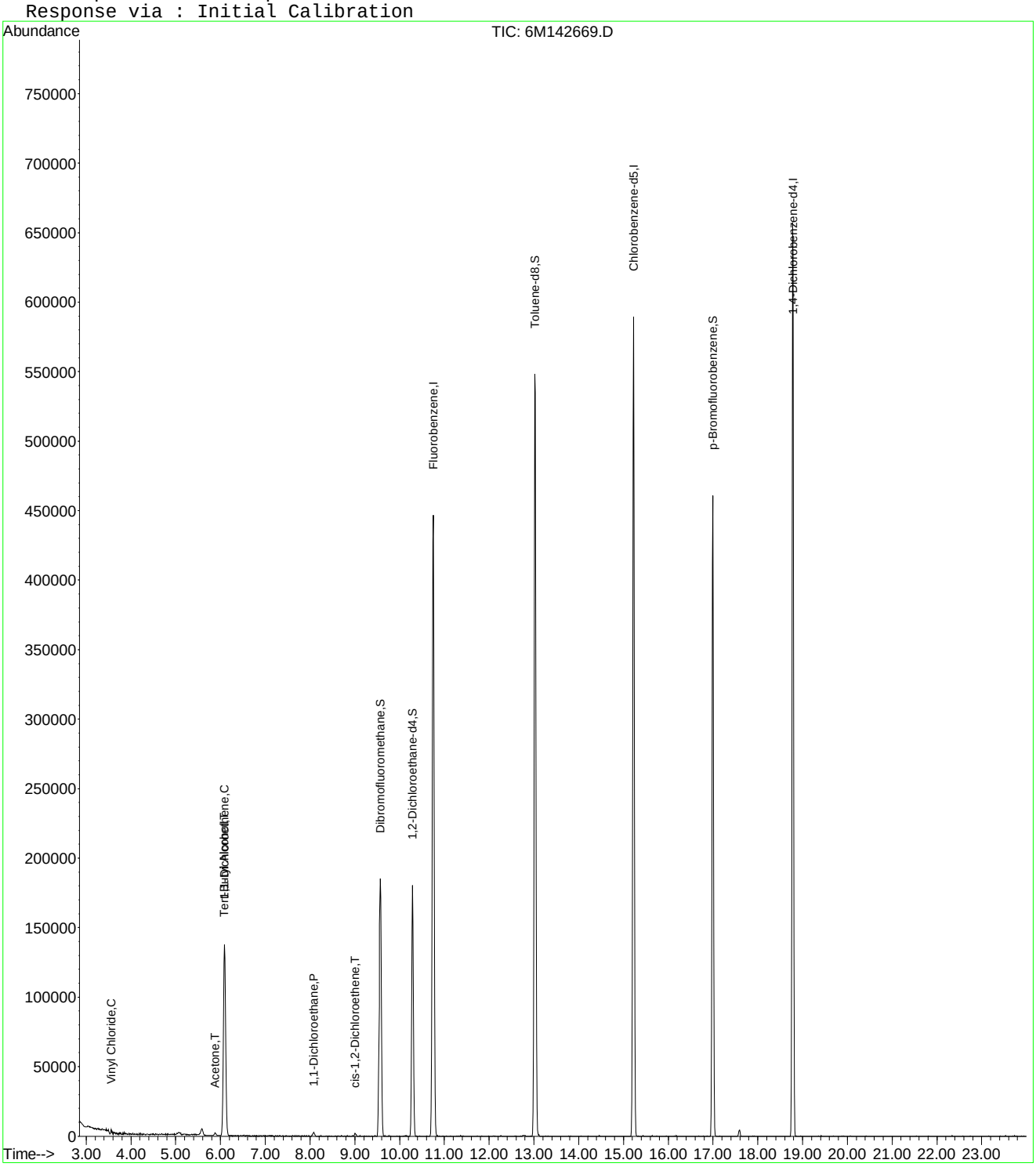
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

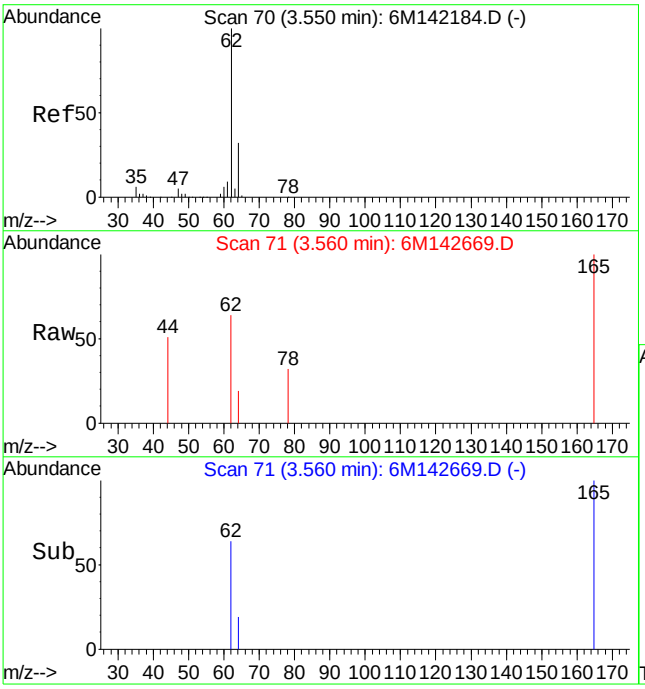
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	600802	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	472925	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.79	152	254264	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.56	111	169595	27.3115	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 109.24%			
43) 1,2-Dichloroethane-d4	10.29	65	163171	26.1980	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 104.80%			
58) Toluene-d8	13.02	98	539735	25.3739	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.48%			
80) p-Bromofluorobenzene	17.00	95	200157	23.8452	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.40%			
Target Compounds						Qvalue
4) Vinyl Chloride	3.56	62	2339	0.3278	ug/L	91
13) Acetone	5.88	43	4298	0.8872	ug/L #	74
14) 1,1-Dichloroethene	6.09	61	160117	16.0085	ug/L	89
15) Tert-Butyl Alcohol	6.08	59	5346	15.8036	ug/L #	57
27) 1,1-Dichloroethane	8.08	63	5371	0.4580	ug/L	90
32) cis-1,2-Dichloroethene	9.00	96	1472	0.2100	ug/L	97

(#) = qualifier out of range (m) = manual integration
6M142669.D 8260WTR.M Thu Oct 13 09:27:01 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142669.D Vial: 15
Acq On : 12 Oct 2016 21:58 Operator: TMB
Sample : L16100123-05 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:26 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

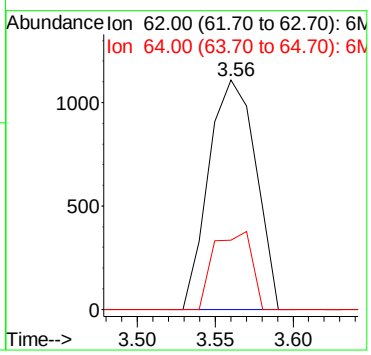


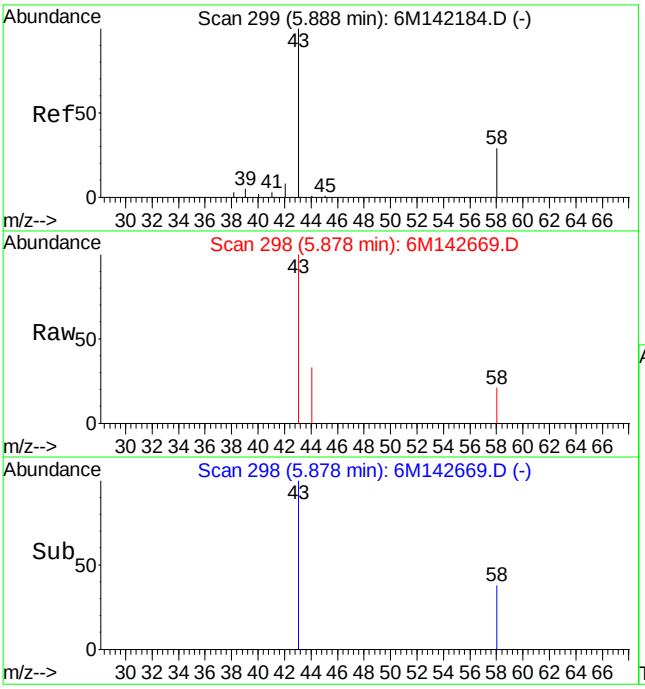


#4
Vinyl Chloride
Concen: 0.33 ug/L
RT: 3.56 min Scan# 71
Delta R.T. 0.02 min
Lab File: 6M142669.D
Acq: 12 Oct 2016 21:58

Tgt Ion: 62 Resp: 2339

Ion	Ratio	Lower	Upper
62	100		
64	27.3	19.3	45.1

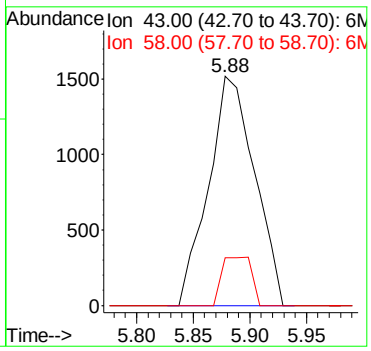


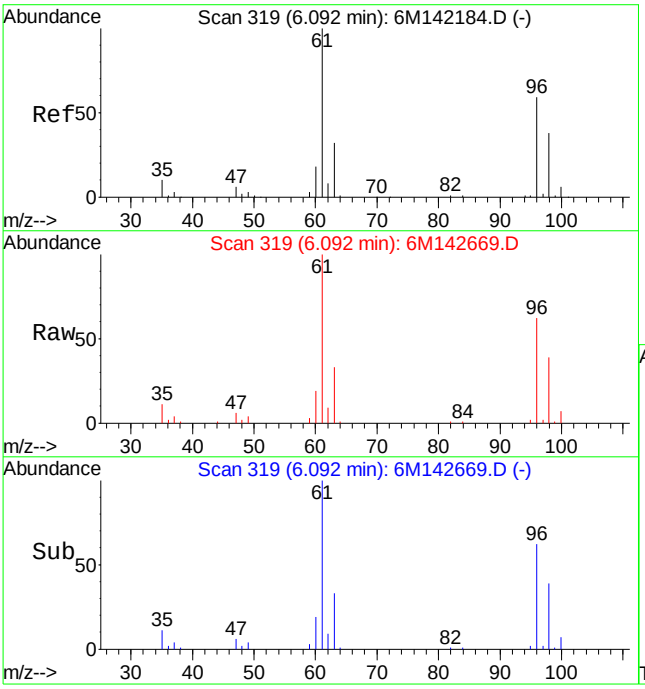


#13
Acetone
Concen: 0.89 ug/L
RT: 5.88 min Scan# 298
Delta R.T. -0.01 min
Lab File: 6M142669.D
Acq: 12 Oct 2016 21:58

Tgt Ion: 43 Resp: 4298

Ion	Ratio	Lower	Upper
43	100		
58	13.6	16.4	38.2#

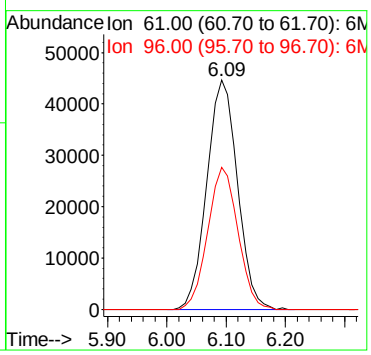


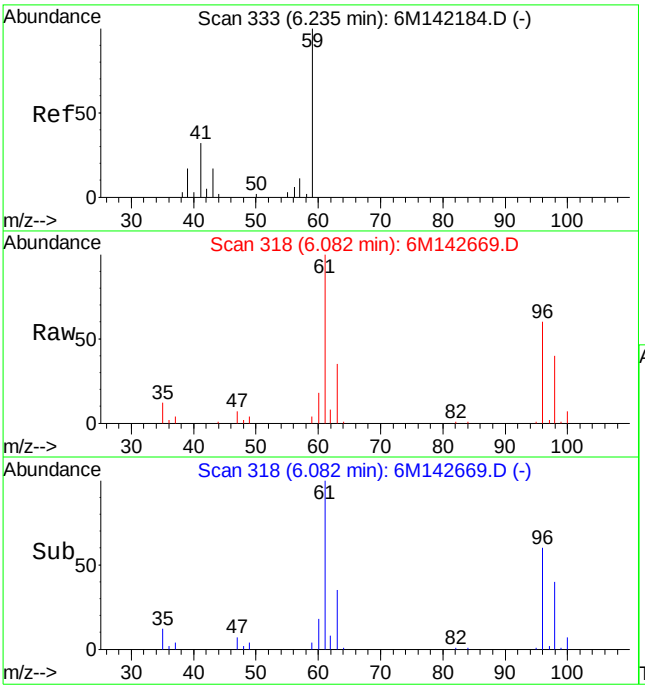


#14
1,1-Dichloroethene
Concen: 16.01 ug/L
RT: 6.09 min Scan# 319
Delta R.T. 0.01 min
Lab File: 6M142669.D
Acq: 12 Oct 2016 21:58

Tgt Ion: 61 Resp: 160117

Ion	Ratio	Lower	Upper
61	100		
96	60.9	32.0	74.6

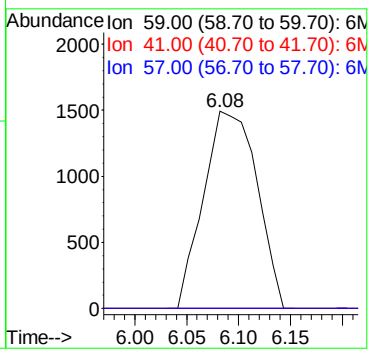


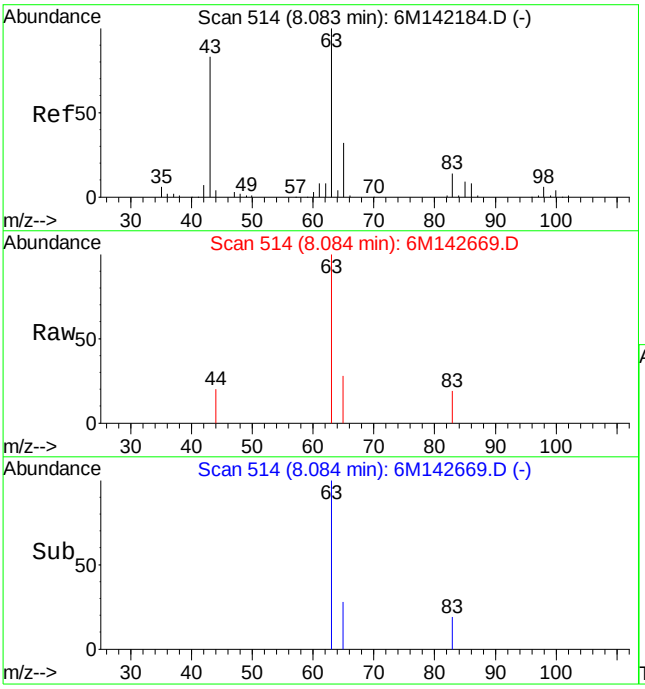


#15
Tert-Butyl Alcohol
Concen: 15.80 ug/L
RT: 6.08 min Scan# 318
Delta R.T. -0.18 min
Lab File: 6M142669.D
Acq: 12 Oct 2016 21:58

Tgt Ion: 59 Resp: 5346

Ion	Ratio	Lower	Upper
59	100		
41	0.0	14.6	34.0#
57	0.0	6.4	14.8#

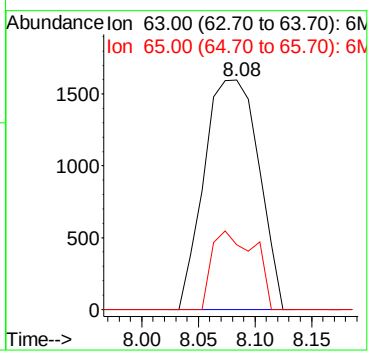


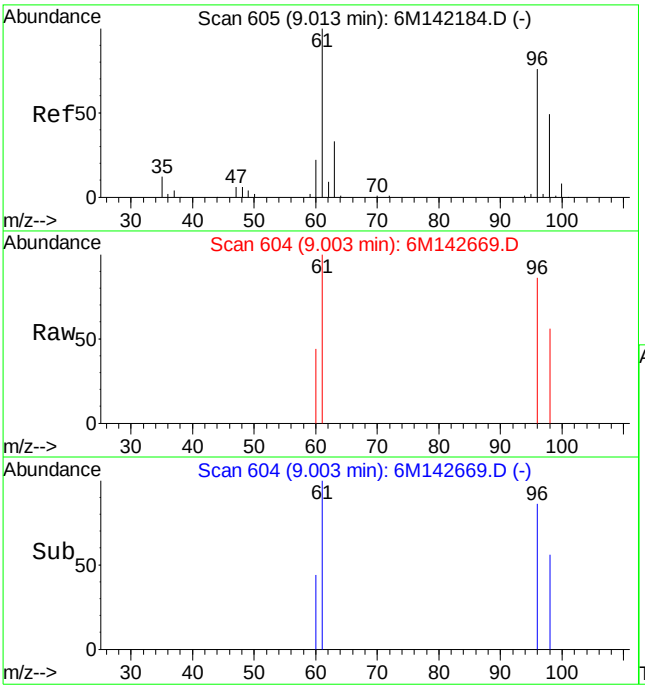


#27
1,1-Dichloroethane
Concen: 0.46 ug/L
RT: 8.08 min Scan# 514
Delta R.T. 0.01 min
Lab File: 6M142669.D
Acq: 12 Oct 2016 21:58

Tgt Ion: 63 Resp: 5371

Ion	Ratio	Lower	Upper
63	100		
65	26.6	19.3	44.9

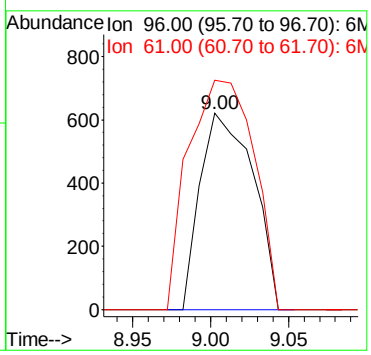




#32
cis-1,2-Dichloroethene
Concen: 0.21 ug/L
RT: 9.00 min Scan# 604
Delta R.T. -0.00 min
Lab File: 6M142669.D
Acq: 12 Oct 2016 21:58

Tgt Ion: 96 Resp: 1472

Ion	Ratio	Lower	Upper
96	100		
61	144.7	89.2	208.2



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142668.D Vial: 14
Acq On : 12 Oct 2016 21:25 Operator: TMB
Sample : L16100123-07 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:26:51 2016 Quant Results File: 8260WTR.RES

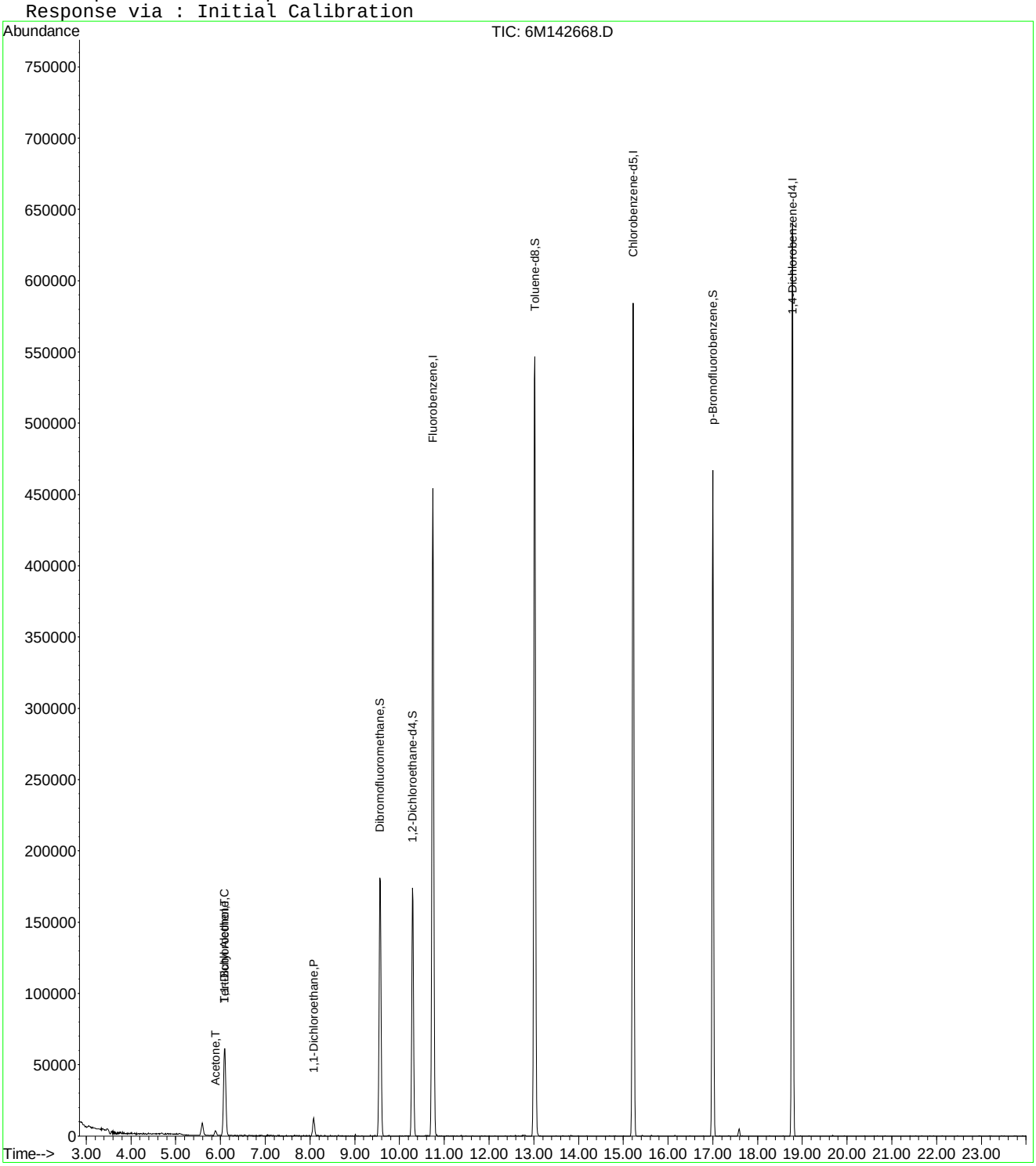
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

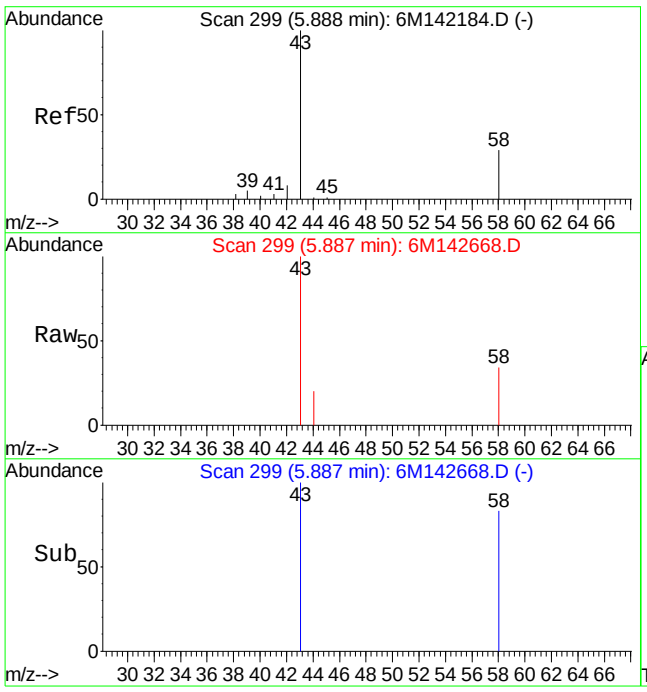
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	599330	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	468115	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	252995	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.56	111	169569	27.3743	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 109.48%			
43) 1,2-Dichloroethane-d4	10.29	65	162729	26.1912	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 104.76%			
58) Toluene-d8	13.02	98	536898	25.4999	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.00%			
80) p-Bromofluorobenzene	17.00	95	200005	23.9466	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 95.80%			
Target Compounds						Qvalue
13) Acetone	5.89	43	7322	3.1906	ug/L	100
14) 1,1-Dichloroethene	6.09	61	74670	7.4839	ug/L	91
15) Tert-Butyl Alcohol	6.09	59	2264	6.7092	ug/L #	57
27) 1,1-Dichloroethane	8.08	63	20752	1.7739	ug/L	97

(#) = qualifier out of range (m) = manual integration
6M142668.D 8260WTR.M Thu Oct 13 09:26:54 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142668.D Vial: 14
Acq On : 12 Oct 2016 21:25 Operator: TMB
Sample : L16100123-07 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:26 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

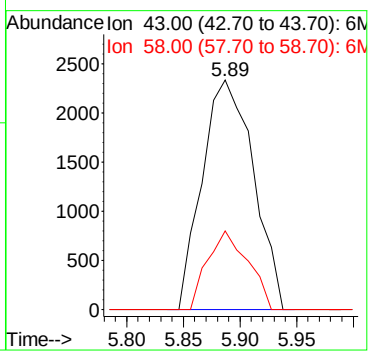


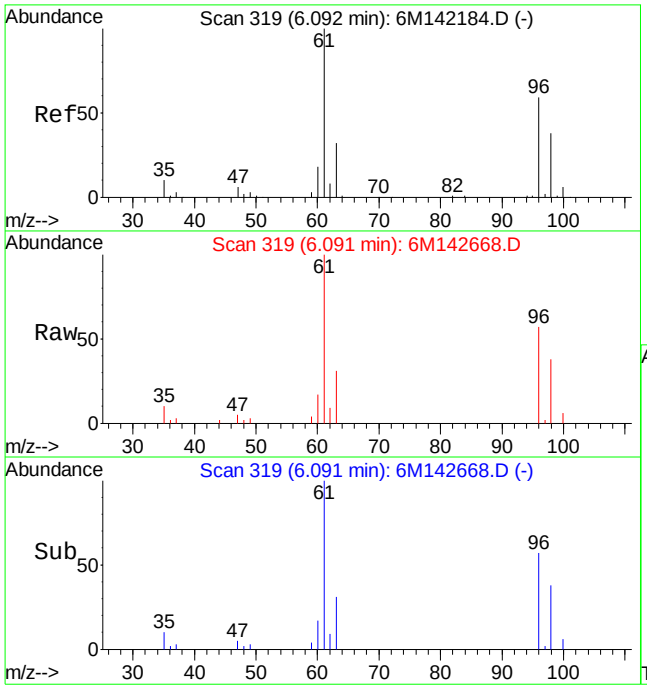


#13
Acetone
Concen: 3.19 ug/L
RT: 5.89 min Scan# 299
Delta R.T. -0.00 min
Lab File: 6M142668.D
Acq: 12 Oct 2016 21:25

Tgt Ion: 43 Resp: 7322

Ion	Ratio	Lower	Upper
43	100		
58	27.1	16.4	38.2

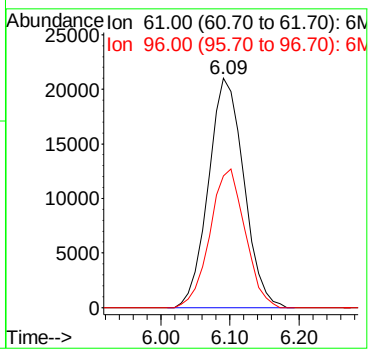


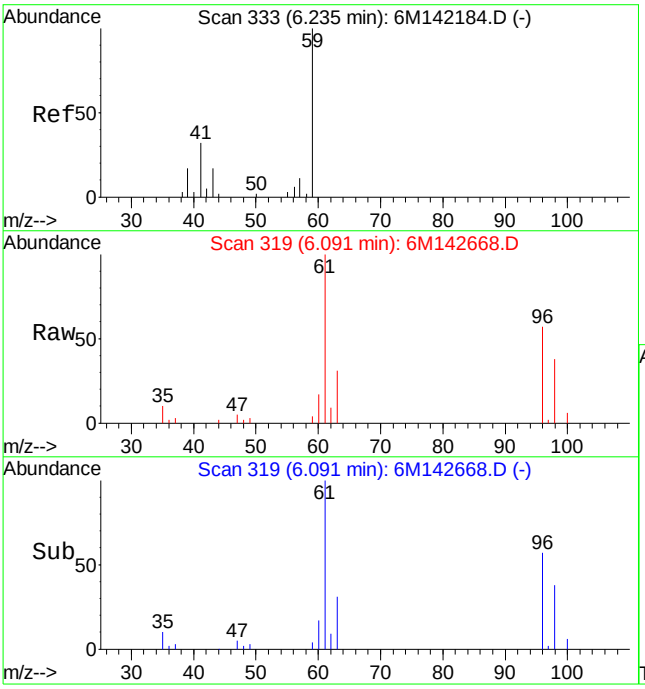


#14
1,1-Dichloroethene
Concen: 7.48 ug/L
RT: 6.09 min Scan# 319
Delta R.T. 0.01 min
Lab File: 6M142668.D
Acq: 12 Oct 2016 21:25

Tgt Ion: 61 Resp: 74670

Ion	Ratio	Lower	Upper
61	100		
96	59.8	32.0	74.6

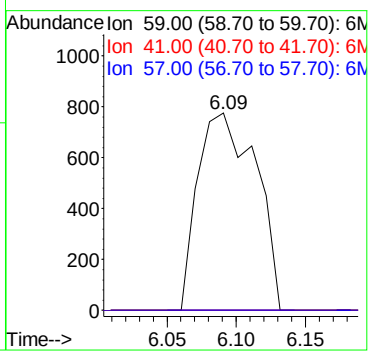


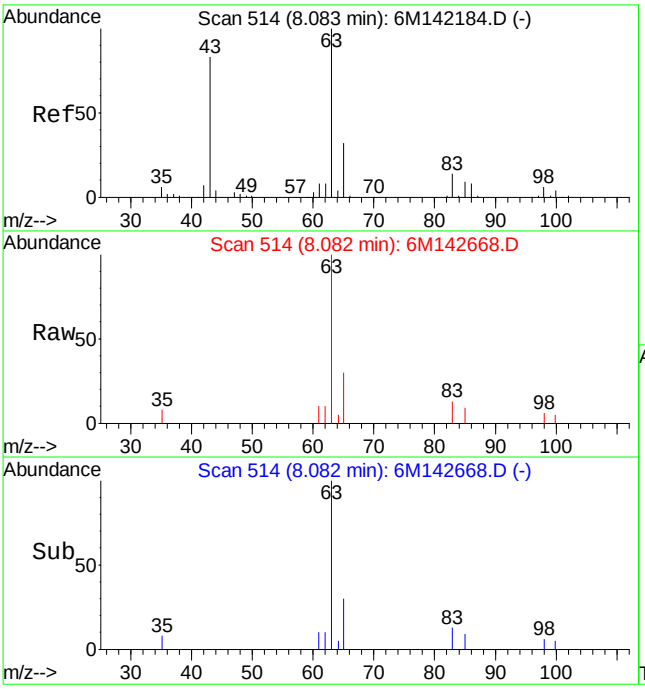


#15
Tert-Butyl Alcohol
Concen: 6.71 ug/L
RT: 6.09 min Scan# 319
Delta R.T. -0.17 min
Lab File: 6M142668.D
Acq: 12 Oct 2016 21:25

Tgt Ion: 59 Resp: 2264

Ion	Ratio	Lower	Upper
59	100		
41	0.0	14.6	34.0#
57	0.0	6.4	14.8#

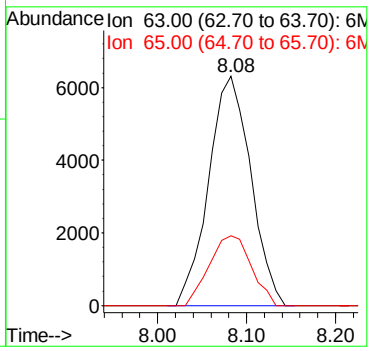




#27
1,1-Dichloroethane
Concen: 1.77 ug/L
RT: 8.08 min Scan# 514
Delta R.T. 0.01 min
Lab File: 6M142668.D
Acq: 12 Oct 2016 21:25

Tgt Ion: 63 Resp: 20752

Ion	Ratio	Lower	Upper
63	100		
65	30.5	19.3	44.9



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142667.D Vial: 13
Acq On : 12 Oct 2016 20:53 Operator: TMB
Sample : L16100123-08 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:26:45 2016 Quant Results File: 8260WTR.RES

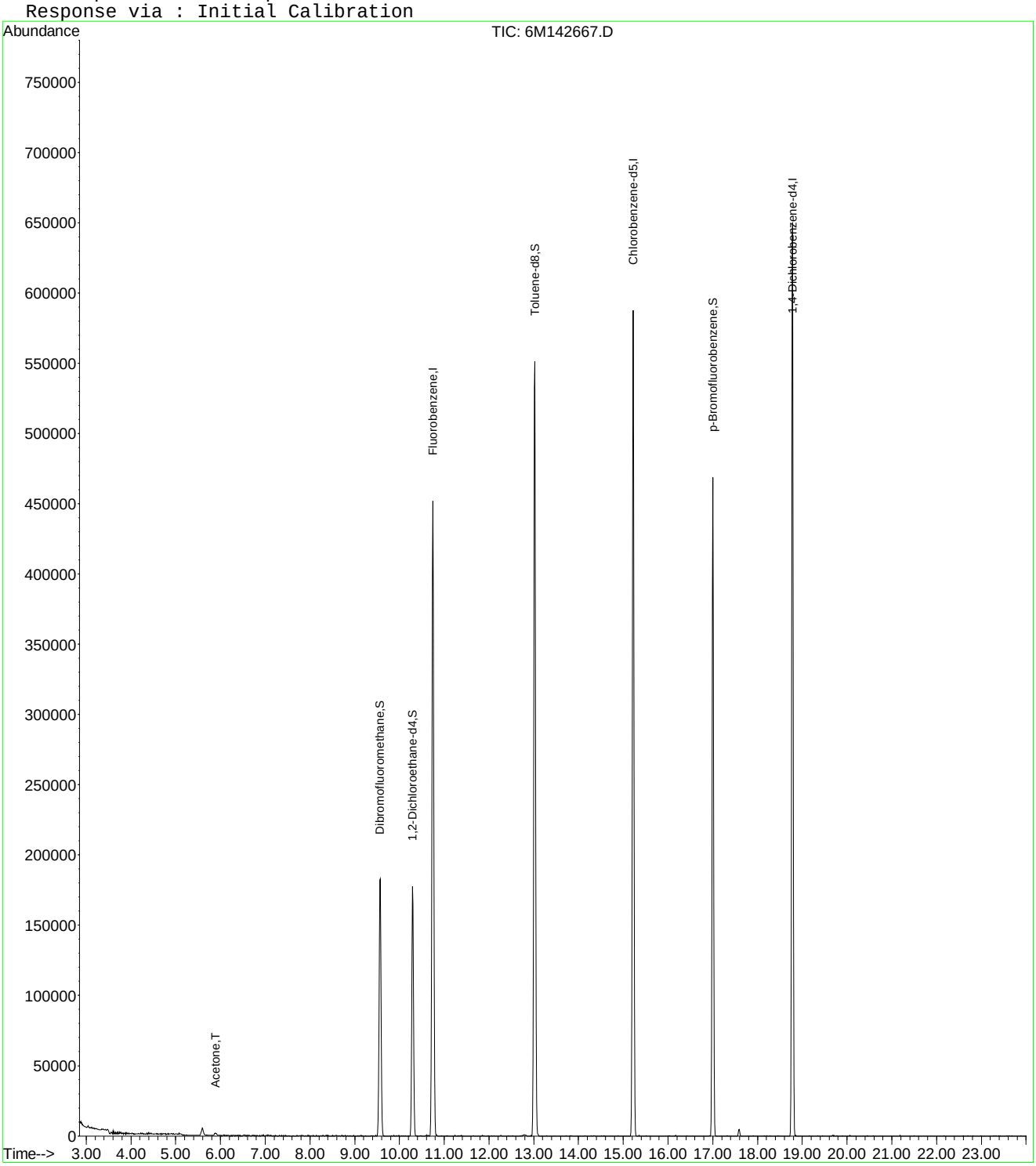
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

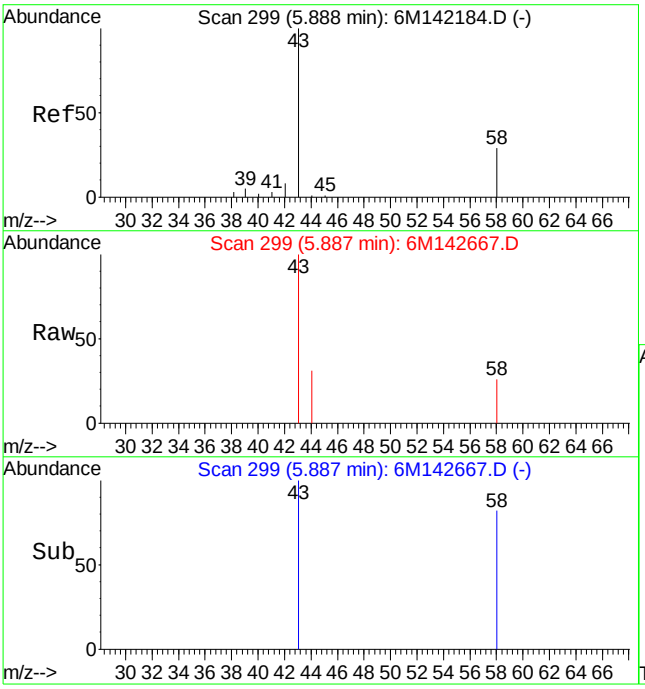
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	596066	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	472551	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	253997	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.56	111	171405	27.8223	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 111.28%			
43) 1,2-Dichloroethane-d4	10.29	65	163197	26.4103	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 105.64%			
58) Toluene-d8	13.02	98	539270	25.3721	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.48%			
80) p-Bromofluorobenzene	17.00	95	203485	24.2672	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.08%			
Target Compounds						Qvalue
13) Acetone	5.89	43	4235	0.8650	ug/L	87

(#) = qualifier out of range (m) = manual integration
6M142667.D 8260WTR.M Thu Oct 13 09:26:48 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142667.D Vial: 13
Acq On : 12 Oct 2016 20:53 Operator: TMB
Sample : L16100123-08 A 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:26 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

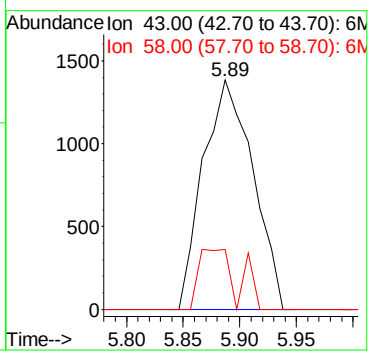




#13
Acetone
Concen: 0.86 ug/L
RT: 5.89 min Scan# 299
Delta R.T. -0.00 min
Lab File: 6M142667.D
Acq: 12 Oct 2016 20:53

Tgt Ion: 43 Resp: 4235

Ion	Ratio	Lower	Upper
43	100		
58	20.5	16.4	38.2



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142661.D Vial: 7
Acq On : 12 Oct 2016 17:41 Operator: TMB
Sample : L16100123-09 A TB 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:26:03 2016 Quant Results File: 8260WTR.RES

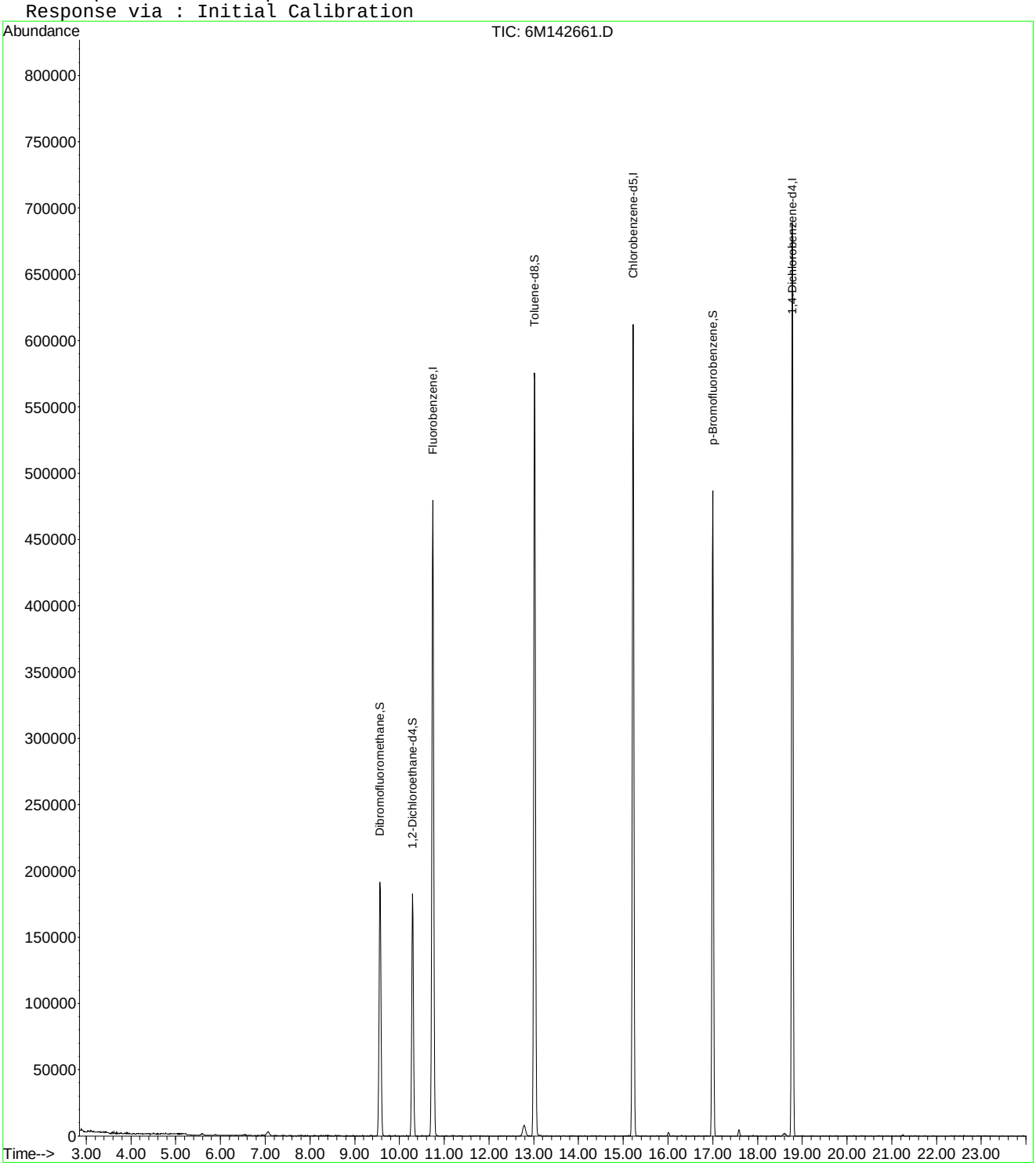
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

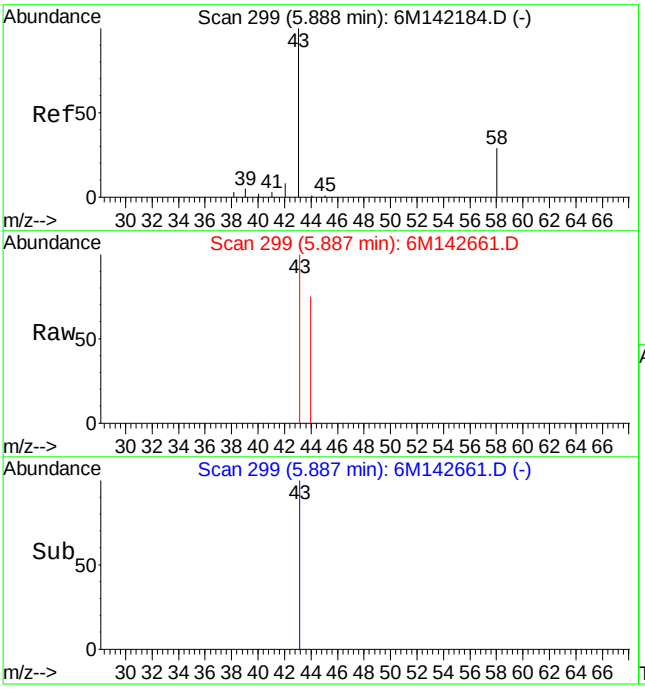
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	635060	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	493626	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.77	152	266965	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.56	111	178617	27.2127	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.84%			
43) 1,2-Dichloroethane-d4	10.29	65	165520	25.1415	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.56%			
58) Toluene-d8	13.01	98	570767	25.7075	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.84%			
80) p-Bromofluorobenzene	17.00	95	214668	24.3573	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.44%			
Target Compounds						Qvalue
13) Acetone	5.89	43	1305	Below Cal	#	48

(#) = qualifier out of range (m) = manual integration
6M142661.D 8260WTR.M Thu Oct 13 09:26:06 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142661.D Vial: 7
Acq On : 12 Oct 2016 17:41 Operator: TMB
Sample : L16100123-09 A TB 826-LOW Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:26 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

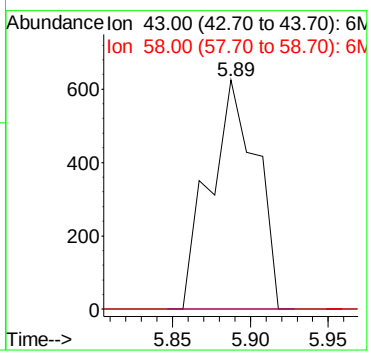




#13
Acetone
Concen: Below Cal
RT: 5.89 min Scan# 299
Delta R.T. -0.00 min
Lab File: 6M142661.D
Acq: 12 Oct 2016 17:41

Tgt Ion: 43 Resp: 1305

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.4	38.2#



2.1.1.4 Standards Data

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:46 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

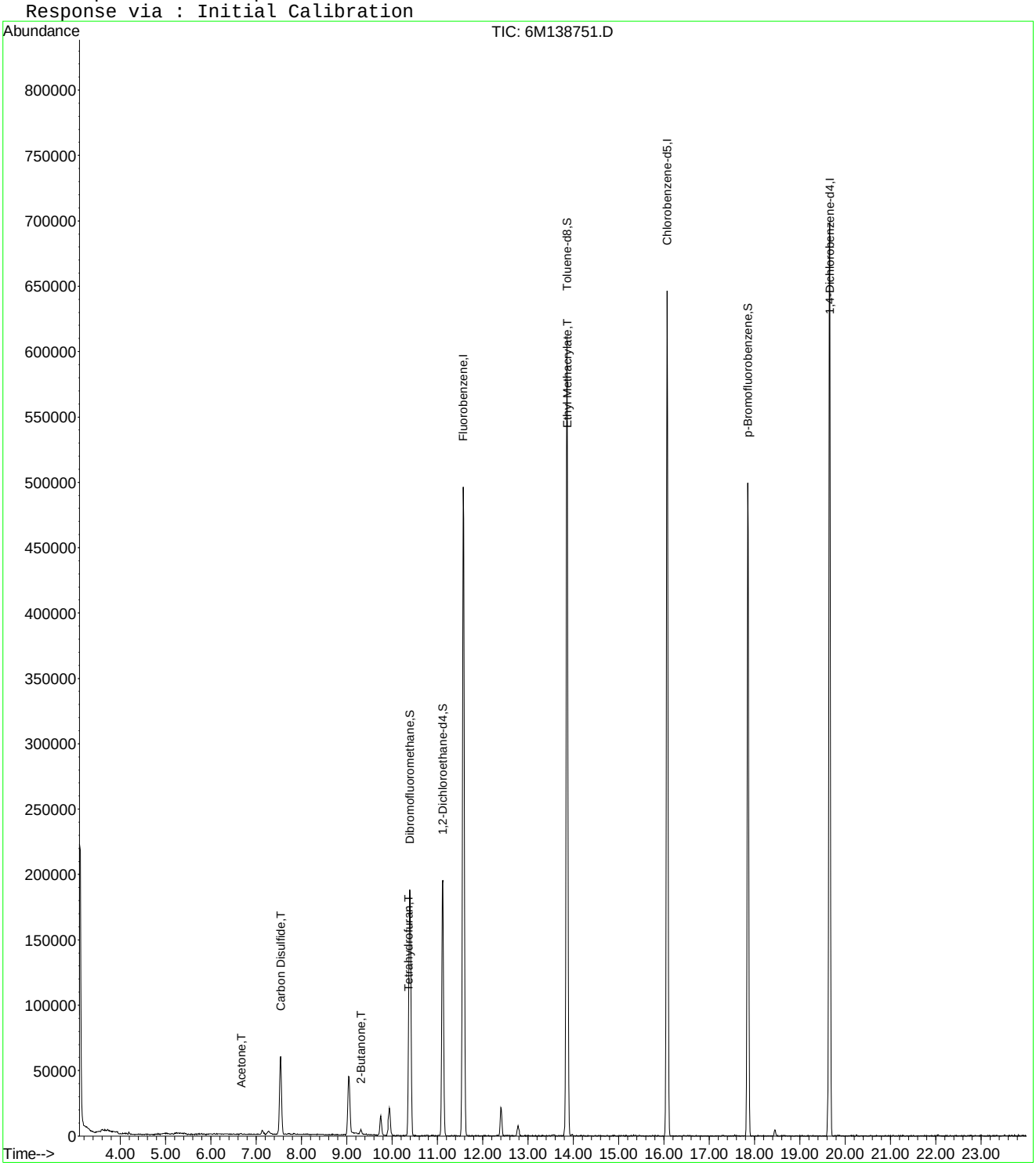
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	611118	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	473080	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	253718	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.40	111	173671	27.7488	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 111.00%			
43) 1,2-Dichloroethane-d4	11.12	65	203570	26.8000	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 107.20%			
58) Toluene-d8	13.86	98	554047	26.0139	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.04%			
80) p-Bromofluorobenzene	17.85	95	229998	27.1525	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 108.60%			
Target Compounds						Qvalue
13) Acetone	6.67	43	1325	0.6992	ug/L #	46
20) Carbon Disulfide	7.54	76	18747	0.9622	ug/L #	39
29) 2-Butanone	9.31	43	1188	0.4247	ug/L #	1
36) Tetrahydrofuran	10.36	42	2769	1.5196	ug/L #	58
60) Ethyl Methacrylate	13.87	69	899	0.1270	ug/L #	1

(#) = qualifier out of range (m) = manual integration
6M138751.D 8260WTR.M Mon Apr 25 09:22:46 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45:52 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

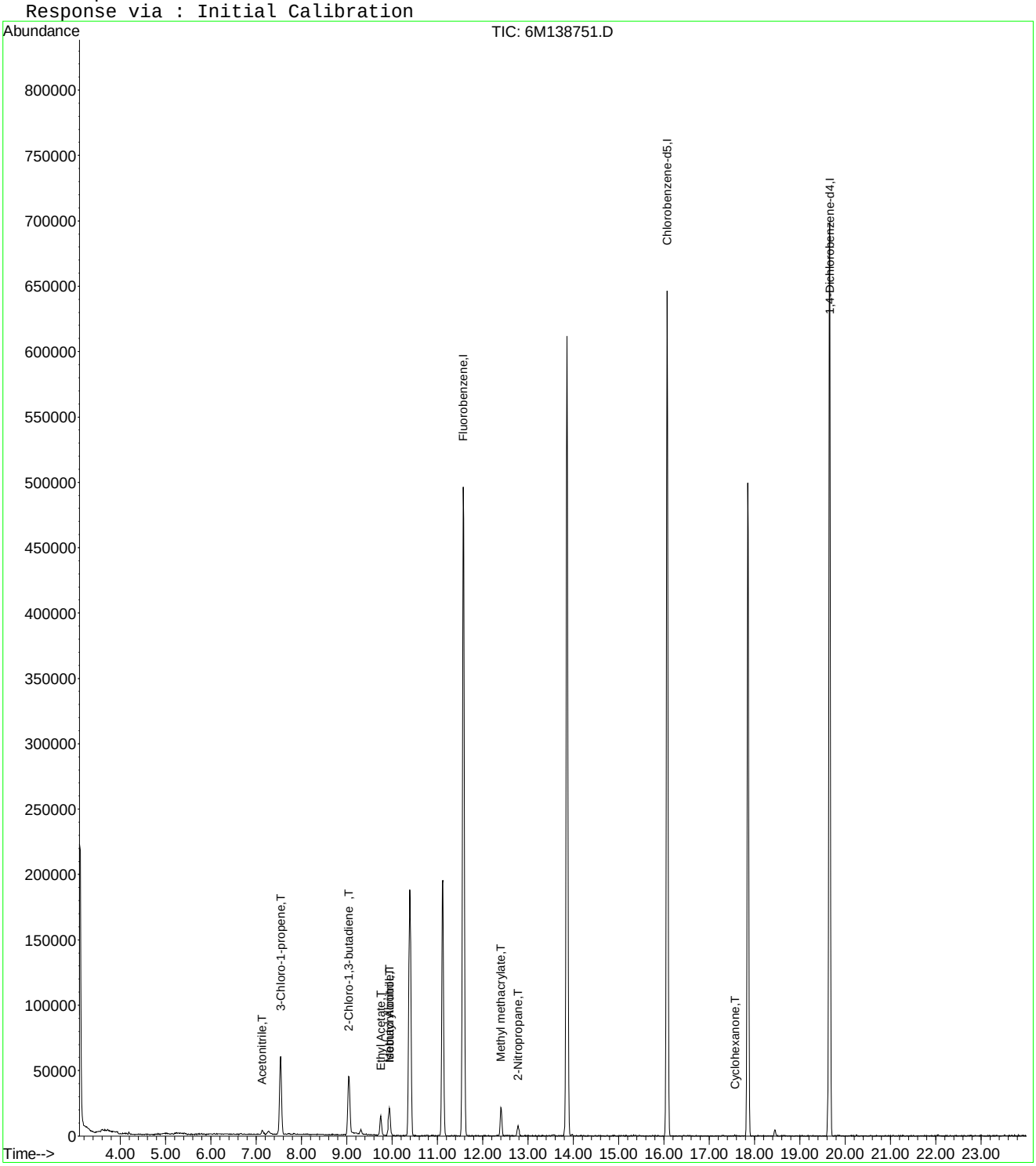
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	611118	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	473080	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	253718	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.13	41	4366	3.7209	ug/L		76
3) 3-Chloro-1-propene	7.54	41	69268	4.2301	ug/L		92
4) 2-Chloro-1,3-butadiene	9.04	53	50753	3.6002	ug/L		85
5) Ethyl Acetate	9.75	43	28042	4.3499	ug/L	#	90
6) Methacrylonitrile	9.94	67	8721	3.5173	ug/L	#	55
7) Isobutyl Alcohol	9.94	43	1233	3.4767	ug/L	#	85
9) Methyl methacrylate	12.40	41	19474	3.0338	ug/L		79
10) 2-Nitropropane	12.78	43	7076	3.7392	ug/L		93
13) Cyclohexanone	17.57	55	447	0.5159	ug/L	#	25

(#) = qualifier out of range (m) = manual integration
6M138751.D A9FOOWT.M Mon Apr 25 15:45:52 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



6M138751.D A9FOOWT.M Mon Apr 25 15:45:53 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04:56 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

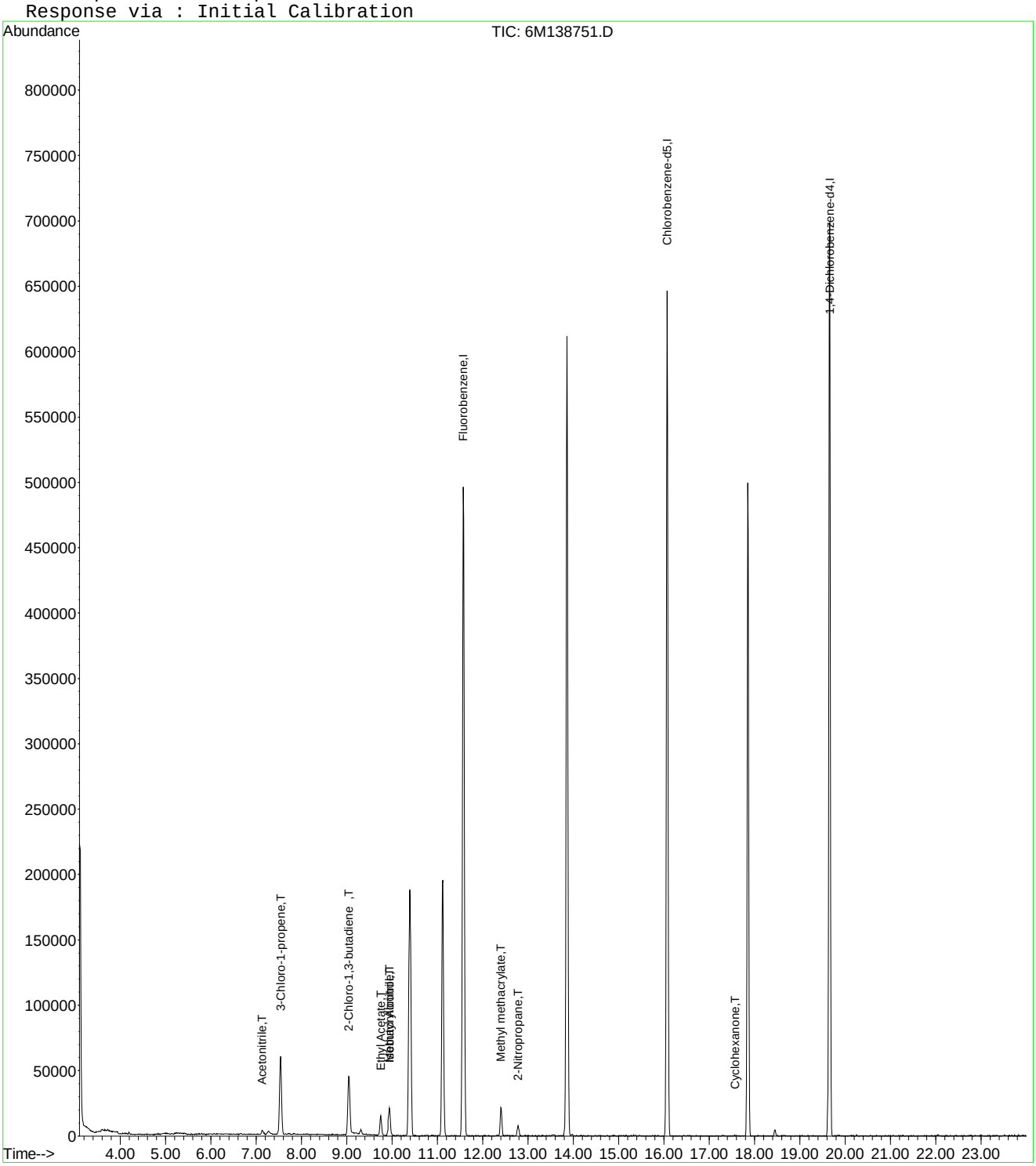
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	611118	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	473080	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.66	152	253718	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.13	41	4366	4.7698	ug/L		76
3) 3-Chloro-1-propene	7.54	41	69268	4.5408	ug/L		92
4) 2-Chloro-1,3-butadiene	9.04	53	50753	3.8775	ug/L		85
5) Ethyl Acetate	9.75	43	28042	4.2792	ug/L	#	90
6) Methacrylonitrile	9.94	67	8721	3.8601	ug/L	#	55
7) Isobutyl Alcohol	9.94	43	1233	5.9076	ug/L	#	85
9) Methyl methacrylate	12.40	41	19474	3.5356	ug/L		79
10) 2-Nitropropane	12.78	43	7076	3.4543	ug/L		93
13) Cyclohexanone	17.57	55	447	1.4133	ug/L	#	25

(#) = qualifier out of range (m) = manual integration
6M138751.D A9FOOWT.M Wed Apr 27 16:04:56 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



6M138751.D A9FOOWT.M Wed Apr 27 16:04:56 2016 Page 2

Data File : C:\MSDCHEM\1\DATA\042416\6M138751.D Vial: 2
Acq On : 24 Apr 2016 16:59 Operator: JDS
Sample : WG566155-02 5ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	5.0000	4.7698	4.6	100	0.00
3	T	3-Chloro-1-propene	5.0000	4.5408	9.2	100	0.00
4	T	2-Chloro-1,3-butadiene	5.0000	3.8775	22.5	100	0.00
5	T	Ethyl Acetate	5.0000	4.2792	14.4	100	0.00
6	T	Methacrylonitrile	5.0000	3.8601	22.8	100	0.00
7	T	Isobutyl Alcohol	-1.0000	5.9076	0.0	100	0.00
8	T	1-Butanol	-1.0000	0.0000	0.0	0	-10.99#
9	T	Methyl methacrylate	5.0000	3.5356	29.3	100	0.00
10	T	2-Nitropropane	-1.0000	3.4543	0.0	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	1.4133	0.0	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138751.D A9FOOWT.M Wed Apr 27 16:04:12 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:48 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

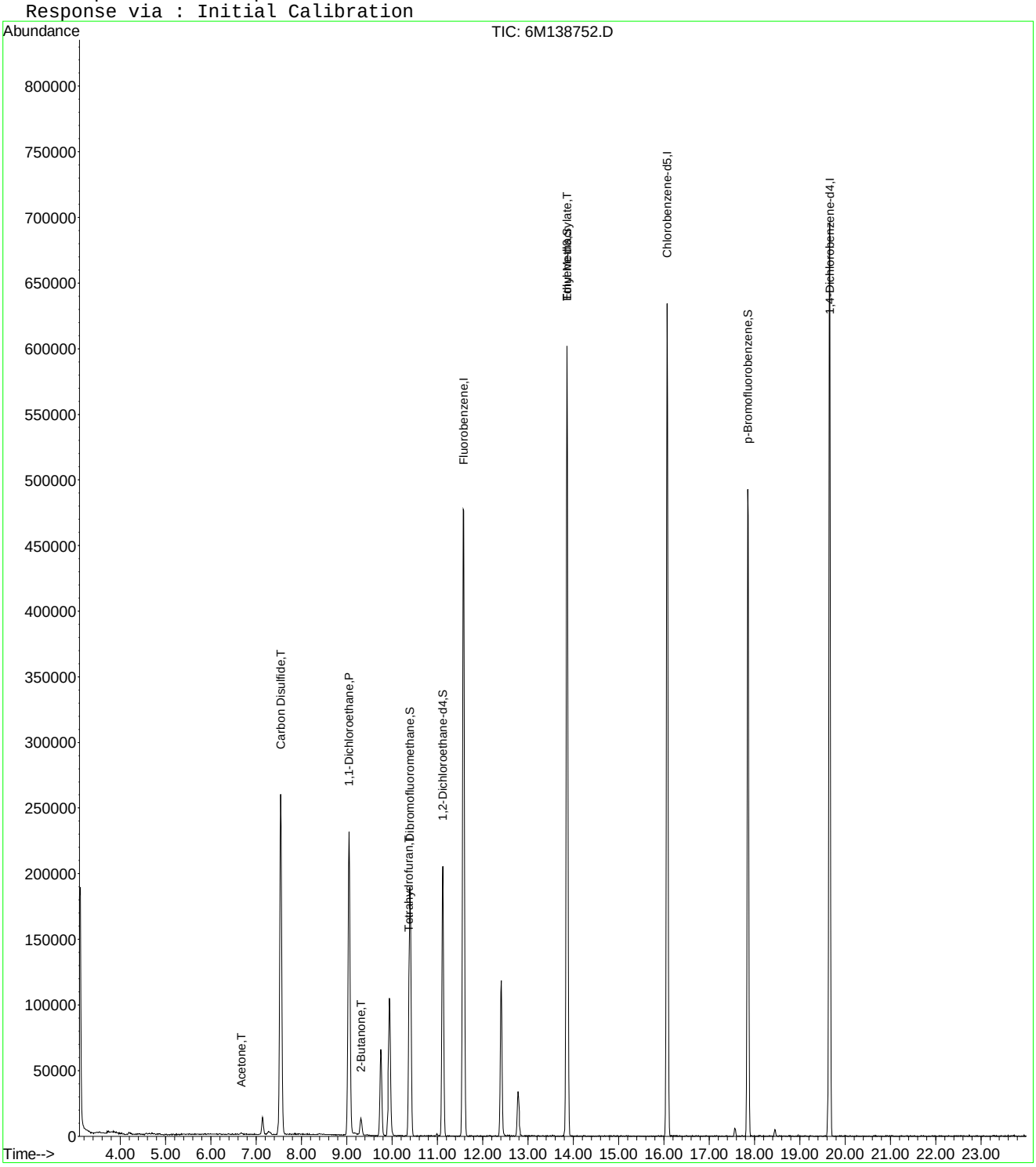
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.58	96	599043	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	463005	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	248475	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	171577	27.9669	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 111.88%			
43) 1,2-Dichloroethane-d4	11.12	65	207390	27.8532	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.40%			
58) Toluene-d8	13.86	98	547786	26.2796	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 105.12%			
80) p-Bromofluorobenzene	17.85	95	228171	27.5052	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 110.04%			
Target Compounds						Qvalue
13) Acetone	6.67	43	2739	1.4745	ug/L #	59
20) Carbon Disulfide	7.54	76	81493	4.2668	ug/L #	36
27) 1,1-Dichloroethane	9.05	63	3411	0.2688	ug/L #	42
29) 2-Butanone	9.31	43	3879	1.4148	ug/L #	1
36) Tetrahydrofuran	10.37	42	3350	1.8754	ug/L #	62
60) Ethyl Methacrylate	13.86	69	1183	0.1708	ug/L #	27

(#) = qualifier out of range (m) = manual integration
6M138752.D 8260WTR.M Mon Apr 25 09:22:48 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45:54 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

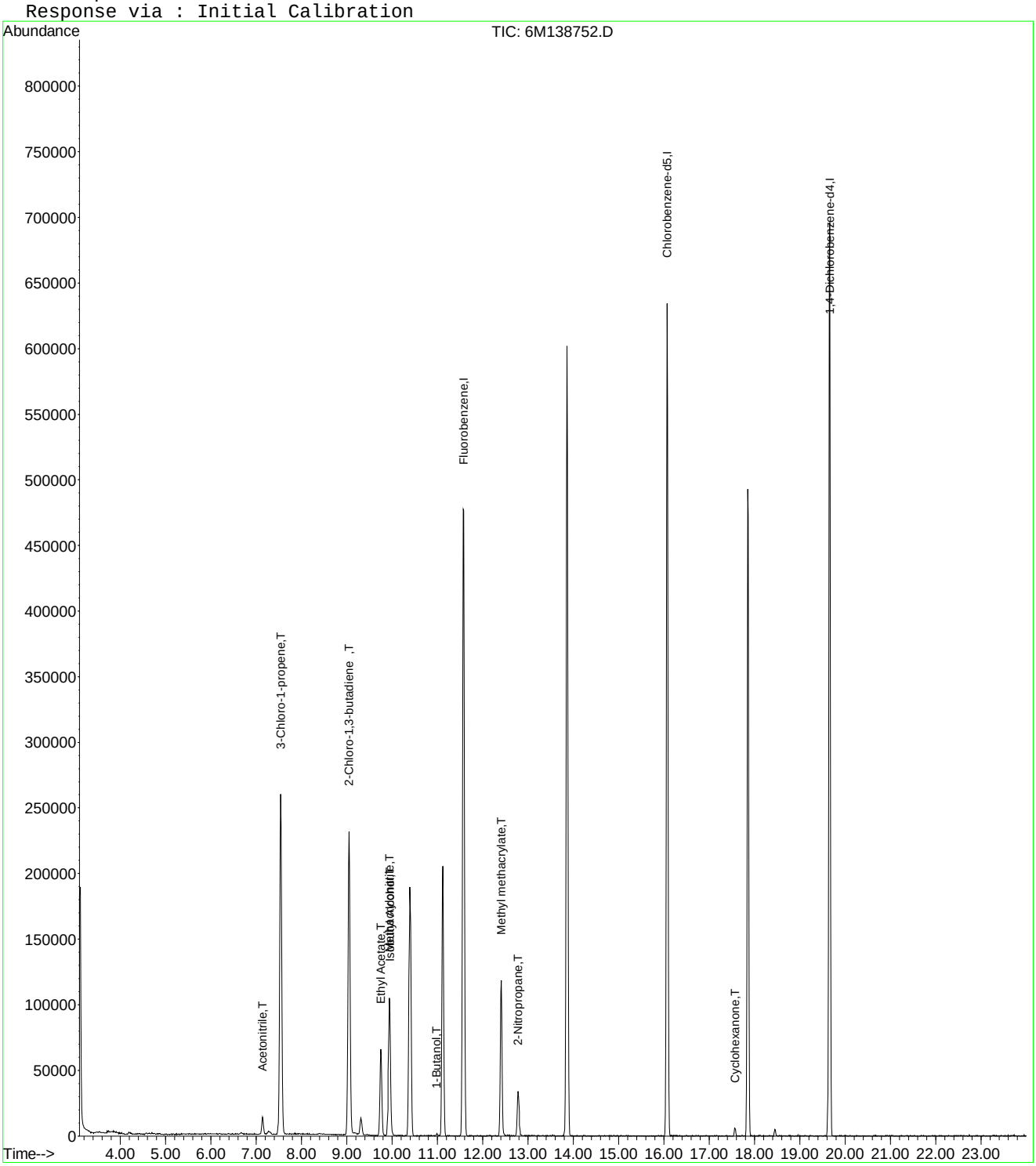
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.58	96	599043	25.00	ug/L		-0.02
11) Chlorobenzene-d5	16.07	117	463005	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	248475	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	17741	15.4242	ug/L		95
3) 3-Chloro-1-propene	7.54	41	297686	18.5457	ug/L		93
4) 2-Chloro-1,3-butadiene	9.05	53	242962	17.5823	ug/L		84
5) Ethyl Acetate	9.75	43	124111	19.6403	ug/L		93
6) Methacrylonitrile	9.93	67	42708	17.5719	ug/L	#	59
7) Isobutyl Alcohol	9.95	43	7968	22.9203	ug/L	#	85
8) 1-Butanol	10.98	41	982	6.5662	ug/L	#	52
9) Methyl methacrylate	12.41	41	95824	15.2291	ug/L		81
10) 2-Nitropropane	12.78	43	34207	18.4403	ug/L		92
13) Cyclohexanone	17.57	55	4053	4.7763	ug/L		81

(#) = qualifier out of range (m) = manual integration
6M138752.D A9FOOWT.M Mon Apr 25 15:45:54 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



6M138752.D A9FOOWT.M Mon Apr 25 15:45:55 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04:58 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

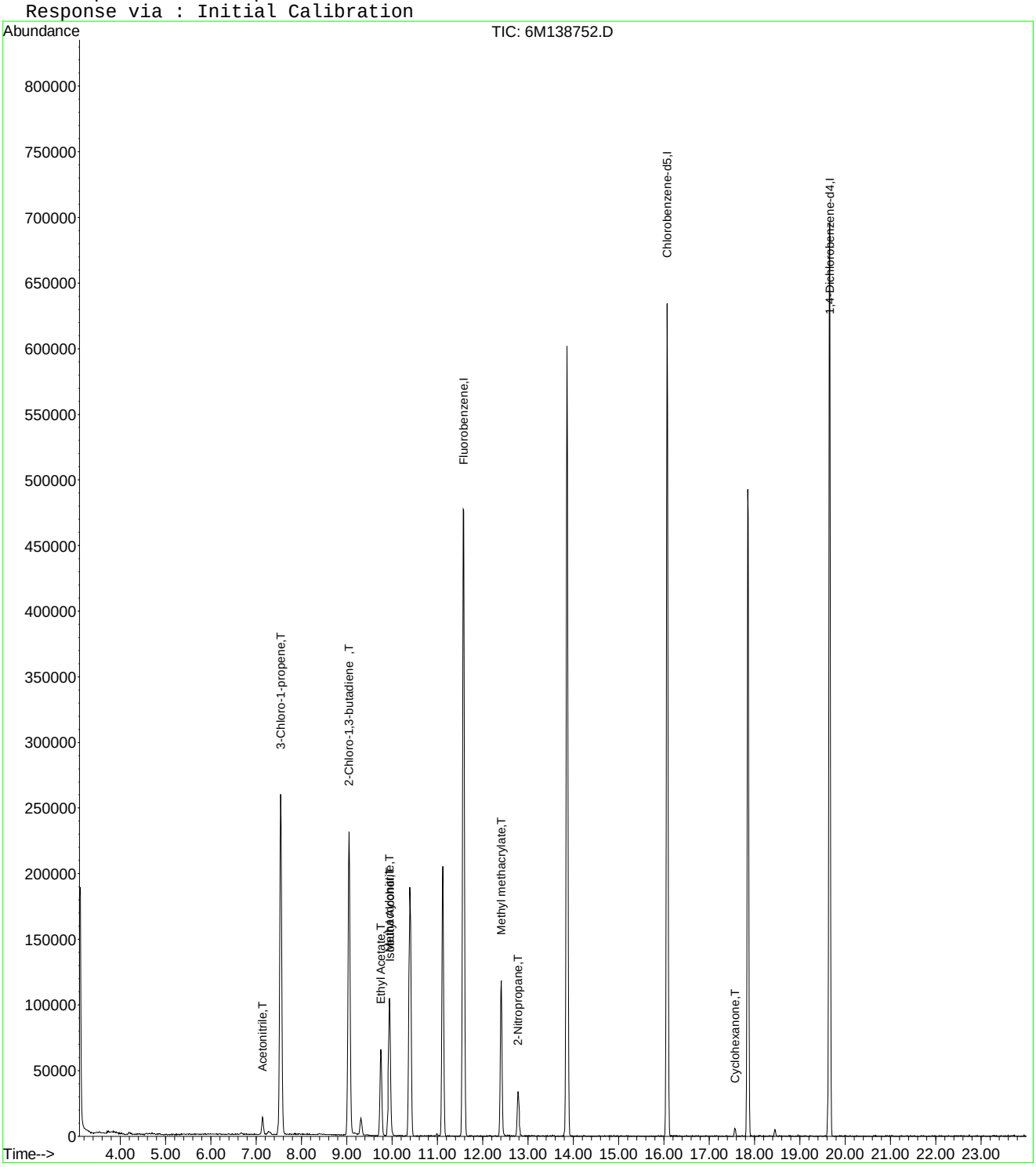
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.58	96	599043	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	463005	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.66	152	248475	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	17741	19.7725	ug/L		95
3) 3-Chloro-1-propene	7.54	41	297686	19.9080	ug/L		93
4) 2-Chloro-1,3-butadiene	9.05	53	242962	18.9362	ug/L		84
5) Ethyl Acetate	9.75	43	124111	19.3209	ug/L		93
6) Methacrylonitrile	9.93	67	42708	19.2846	ug/L	#	59
7) Isobutyl Alcohol	9.95	43	7968	38.9462	ug/L	#	85
9) Methyl methacrylate	12.41	41	95824	17.7480	ug/L		81
10) 2-Nitropropane	12.78	43	34207	17.0355	ug/L		92
13) Cyclohexanone	17.57	55	4053	13.0852	ug/L		81

(#) = qualifier out of range (m) = manual integration
6M138752.D A9FOOWT.M Wed Apr 27 16:04:59 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042416\6M138752.D Vial: 3
Acq On : 24 Apr 2016 17:31 Operator: JDS
Sample : WG566155-03 20ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	20.0000	19.7724	1.1	100	0.00
3	T	3-Chloro-1-propene	20.0000	19.9080	0.5	100	0.00
4	T	2-Chloro-1,3-butadiene	20.0000	18.9362	5.3	100	0.00
5	T	Ethyl Acetate	20.0000	19.3209	3.4	100	0.00
6	T	Methacrylonitrile	20.0000	19.2846	3.6	100	0.00
7	T	Isobutyl Alcohol	40.0000	38.9462	2.6	100	0.00
8	T	1-Butanol	-1.0000	0.0000	0.0	0	0.00
9	T	Methyl methacrylate	20.0000	17.7480	11.3	100	0.00
10	T	2-Nitropropane	-1.0000	17.0355	0.0	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	-1.0000	13.0852	0.0	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138752.D A9FOOWT.M Wed Apr 27 16:04:26 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:48 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

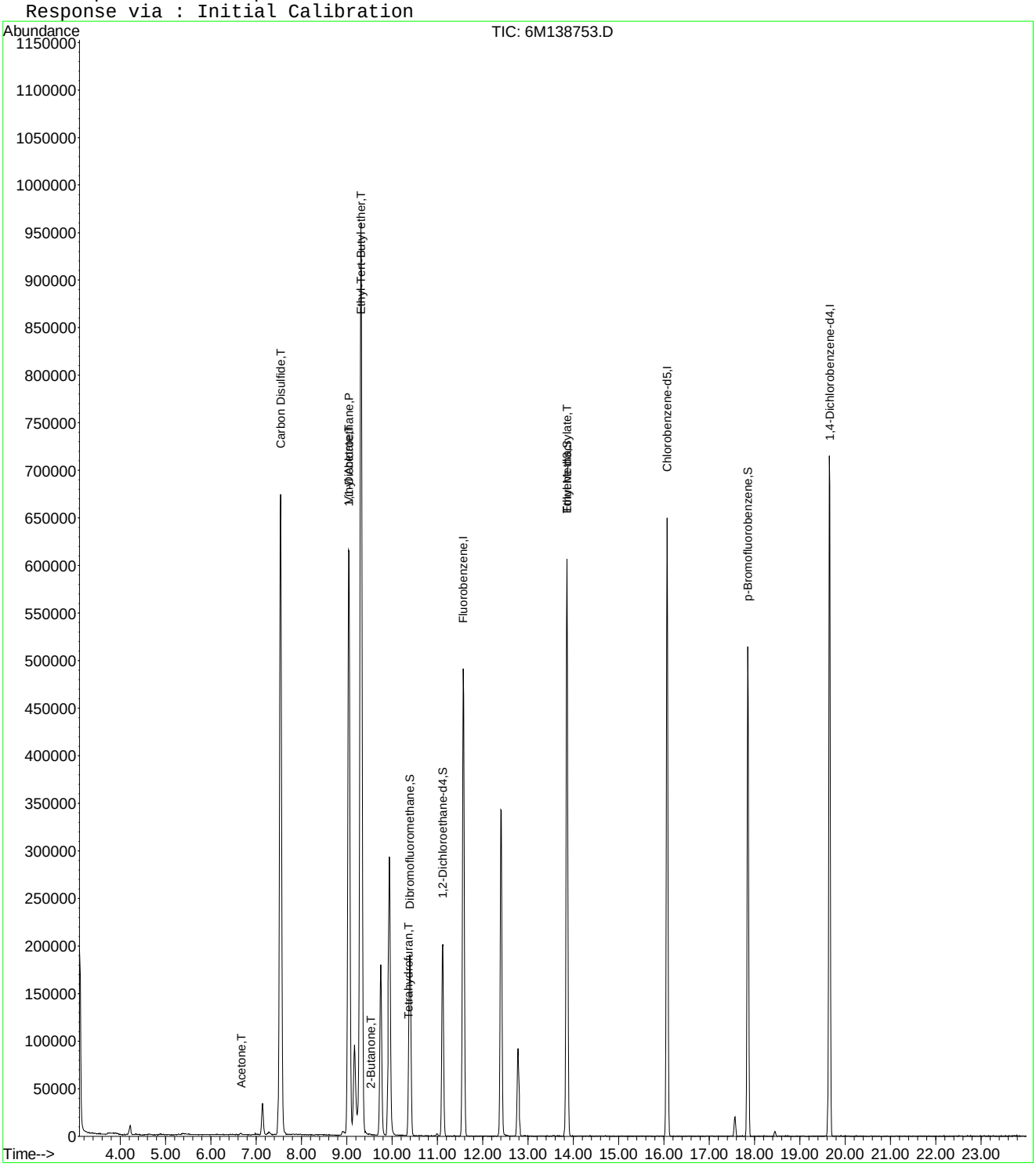
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	604736	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	468574	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	254472	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.40	111	172256	27.8132 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 111.24%		
43) 1,2-Dichloroethane-d4	11.12	65	208744	27.7711 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.08%		
58) Toluene-d8	13.86	98	553191	26.2235 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.88%		
80) p-Bromofluorobenzene	17.85	95	239542	28.1954 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 112.80%		
Target Compounds					Qvalue
13) Acetone	6.67	43	3732	1.9901 ug/L #	57
20) Carbon Disulfide	7.54	76	220780	11.4508 ug/L #	36
26) Vinyl Acetate	9.04	43	2704	0.2791 ug/L #	8
27) 1,1-Dichloroethane	9.05	63	9803	0.7652 ug/L #	42
28) Ethyl-Tert-Butyl ether	9.31	59	152978	7.3579 ug/L #	39
29) 2-Butanone	9.53	43	660	0.2385 ug/L #	52
36) Tetrahydrofuran	10.37	42	3746	2.0774 ug/L #	62
60) Ethyl Methacrylate	13.86	69	1423	0.2030 ug/L #	9

(#) = qualifier out of range (m) = manual integration
6M138753.D 8260WTR.M Mon Apr 25 09:22:49 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45:55 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

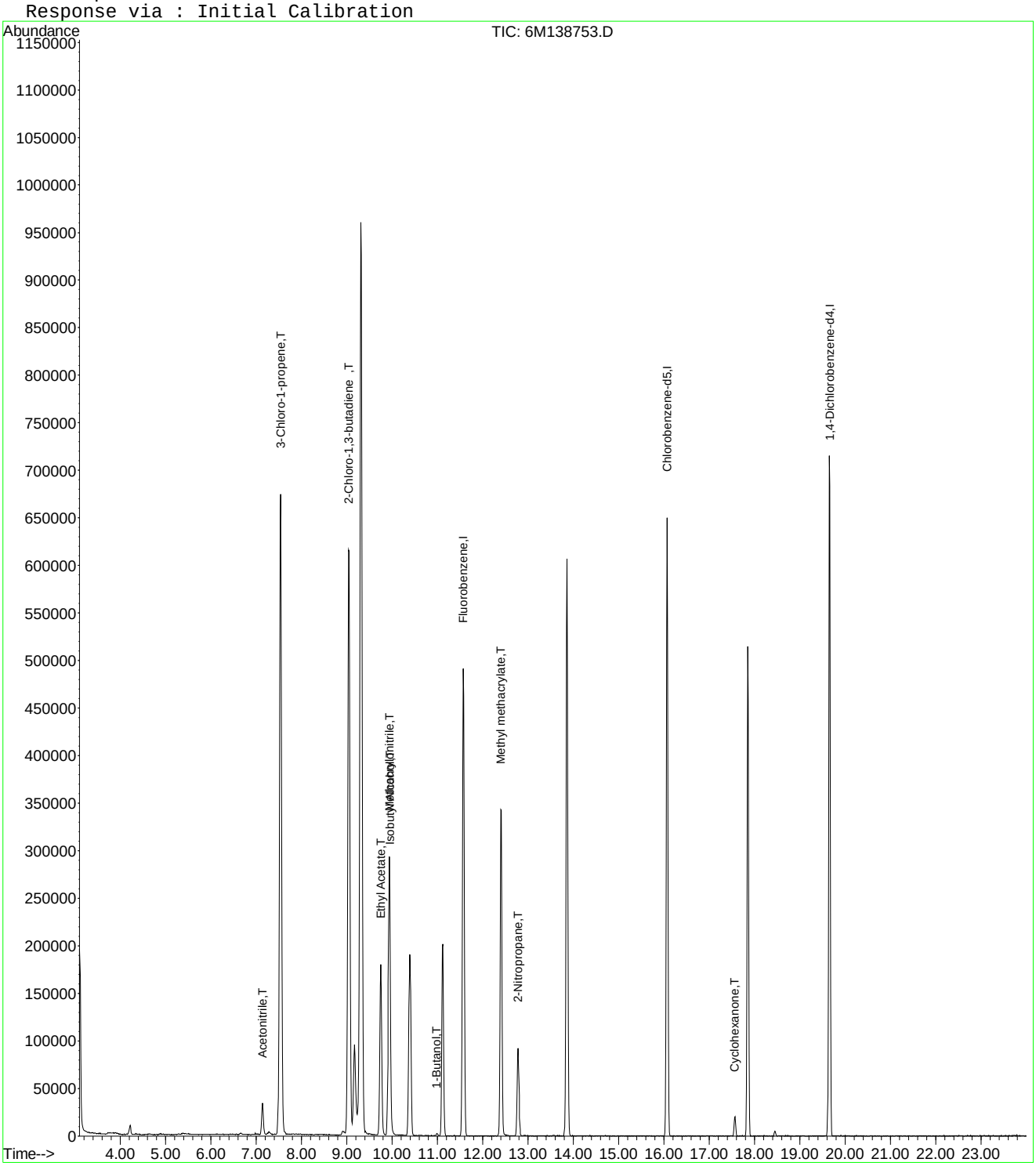
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	604736	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	468574	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	254472	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	46802	40.3072	ug/L		94
3) 3-Chloro-1-propene	7.54	41	793114	48.9454	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	674471	48.3496	ug/L		83
5) Ethyl Acetate	9.75	43	336975	52.8234	ug/L		93
6) Methacrylonitrile	9.94	67	119267	48.6097	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	20135	57.3741	ug/L	#	99
8) 1-Butanol	10.98	41	1474	9.7632	ug/L		77
9) Methyl methacrylate	12.40	41	279157	43.9482	ug/L		81
10) 2-Nitropropane	12.79	43	95327	50.9052	ug/L		94
13) Cyclohexanone	17.56	55	13241	15.2363	ug/L		91

(#) = qualifier out of range (m) = manual integration
6M138753.D A9FOOWT.M Mon Apr 25 15:45:56 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04:59 2016 Quant Results File: A9FOOWT.RES

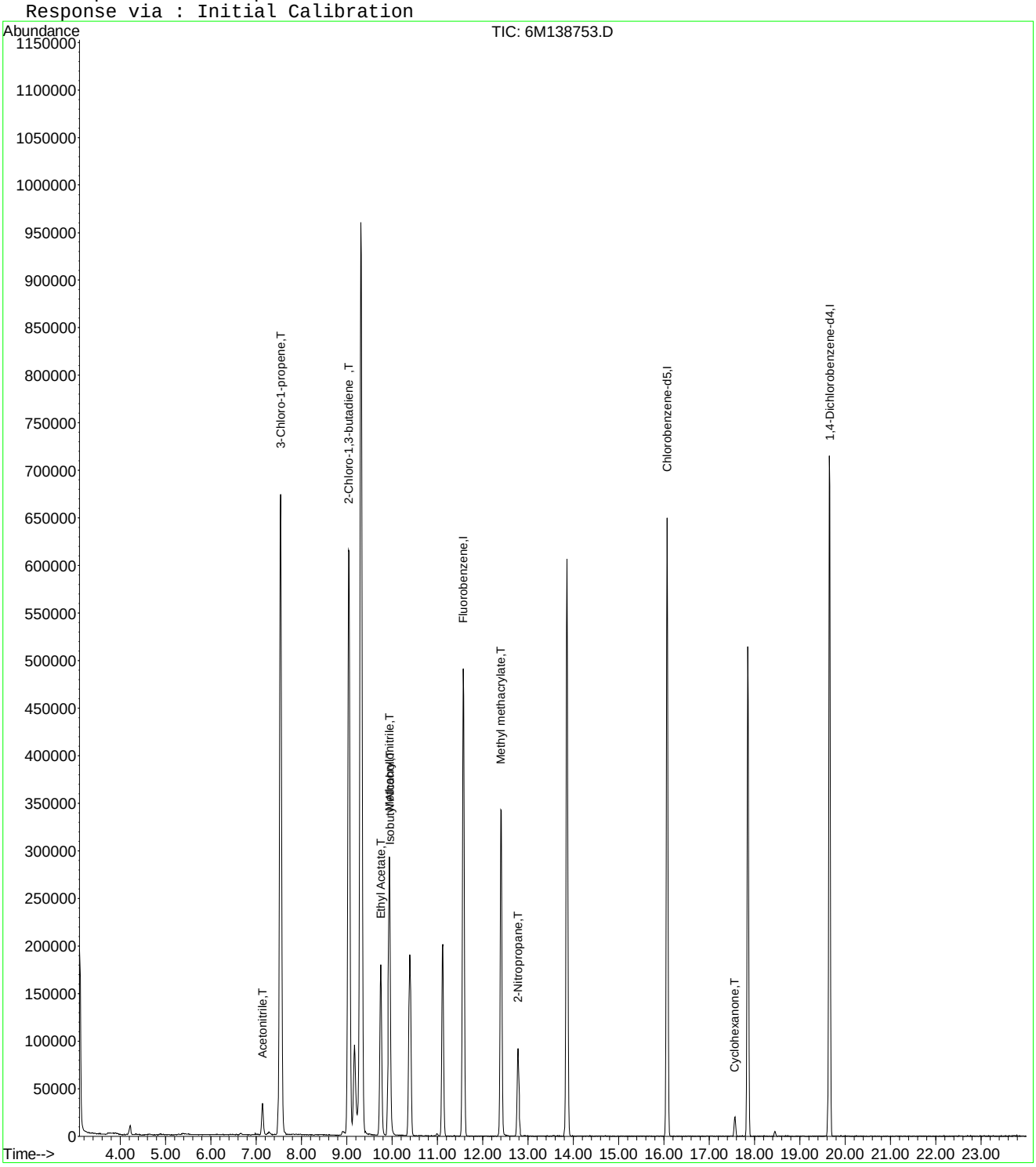
Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	604736	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	468574	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.66	152	254472	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	46802	51.6701	ug/L		94
3) 3-Chloro-1-propene	7.54	41	793114	52.5409	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	674471	52.0726	ug/L		83
5) Ethyl Acetate	9.75	43	336975	51.9646	ug/L		93
6) Methacrylonitrile	9.94	67	119267	53.3476	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	20135	97.4900	ug/L	#	99
9) Methyl methacrylate	12.40	41	279157	51.2171	ug/L		81
10) 2-Nitropropane	12.79	43	95327	47.0270	ug/L		94
13) Cyclohexanone	17.56	55	13241	41.7415	ug/L		91

(#) = qualifier out of range (m) = manual integration
6M138753.D A9FOOWT.M Wed Apr 27 16:04:59 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042416\6M138753.D Vial: 4
Acq On : 24 Apr 2016 18:03 Operator: JDS
Sample : WG566155-04 50ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
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	25.0000	25.0000	0.0	100	0.00
2	T	Acetonitrile	50.0000	51.6701	-3.3	100	0.00
3	T	3-Chloro-1-propene	50.0000	52.5409	-5.1	100	0.00
4	T	2-Chloro-1,3-butadiene	50.0000	52.0726	-4.1	100	0.00
5	T	Ethyl Acetate	50.0000	51.9646	-3.9	100	0.00
6	T	Methacrylonitrile	50.0000	53.3476	-6.7	100	0.00
7	T	Isobutyl Alcohol	100.0000	97.4900	2.5	100	0.00
8	T	1-Butanol	-1.0000	0.0000	0.0	0	0.00
9	T	Methyl methacrylate	50.0000	51.2171	-2.4	100	0.00
10	T	2-Nitropropane	50.0000	47.0270	5.9	100	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	50.0000	41.7415	16.5	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138753.D A9FOOWT.M Wed Apr 27 16:04:38 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138754.D Vial: 5
Acq On : 24 Apr 2016 18:36 Operator: JDS
Sample : WG566155-05 100ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:49 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

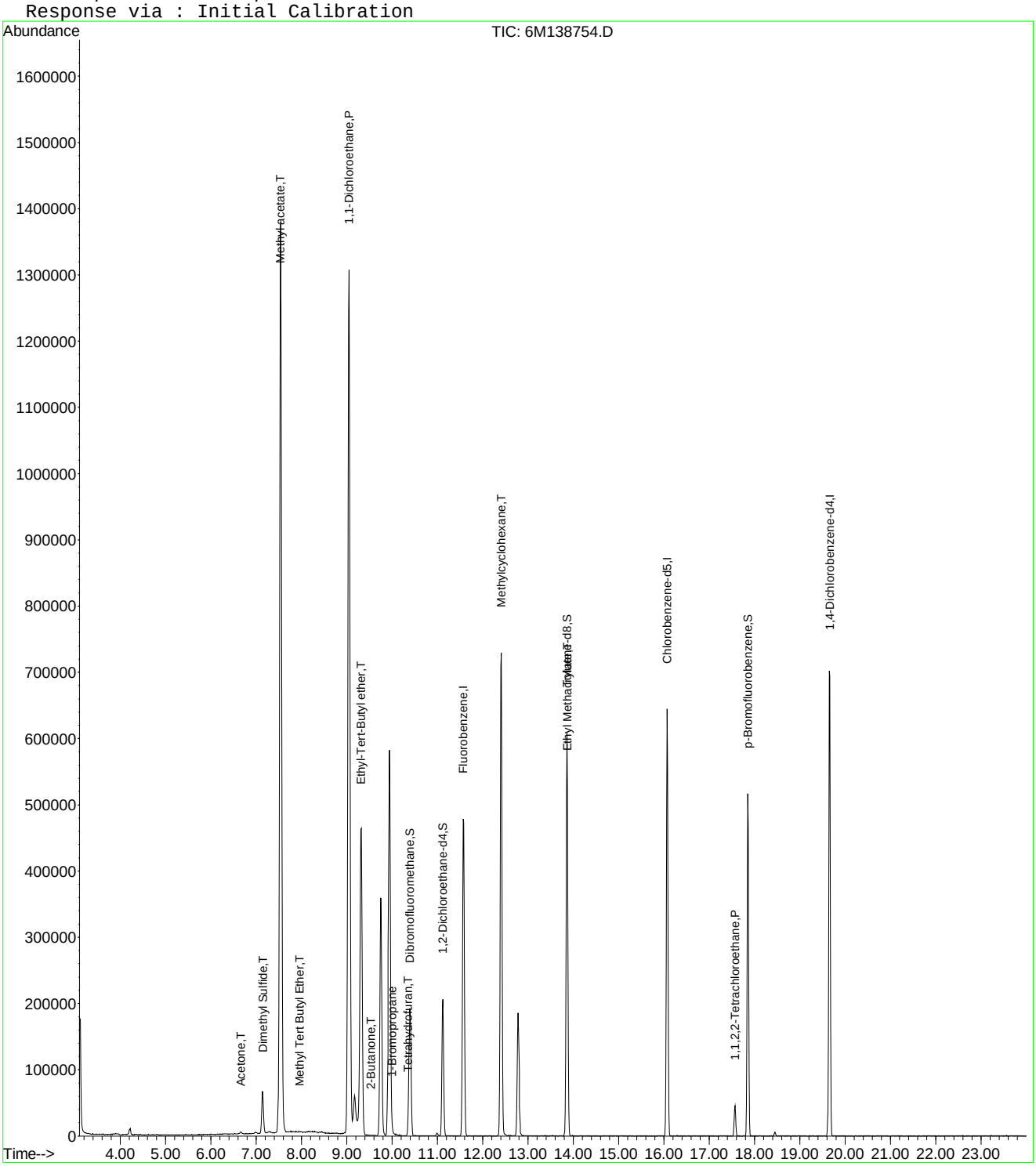
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.57	96	599121	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	467316	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	255798	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	169577	27.6373	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 110.56%			
43) 1,2-Dichloroethane-d4	11.12	65	210119	28.2161	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 112.88%			
58) Toluene-d8	13.86	98	550953	26.1877	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.76%			
80) p-Bromofluorobenzene	17.85	95	239480	28.0420	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 112.16%			
Target Compounds						Qvalue
13) Acetone	6.66	43	6960	3.7463	ug/L	82
16) Dimethyl Sulfide	7.15	62	732	0.1448	ug/L #	1
18) Methyl acetate	7.53	43	1419	0.2750	ug/L #	1
22) Methyl Tert Butyl Ether	7.96	73	2141	0.1320	ug/L #	72
27) 1,1-Dichloroethane	9.05	63	20725	1.6328	ug/L #	42
28) Ethyl-Tert-Butyl ether	9.31	59	76666	3.7220	ug/L #	39
29) 2-Butanone	9.53	43	1176	0.4289	ug/L #	52
34) 1-Bromopropane	10.00	122	702	0.6817	ug/L #	1
36) Tetrahydrofuran	10.35	42	4425	2.4769	ug/L #	60
48) Methylcyclohexane	12.41	83	1461	0.1681	ug/L #	1
60) Ethyl Methacrylate	13.87	69	1083	0.1549	ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.57	83	1910	0.3066	ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M138754.D 8260WTR.M Mon Apr 25 09:22:49 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138754.D Vial: 5
Acq On : 24 Apr 2016 18:36 Operator: JDS
Sample : WG566155-05 100ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042416\6M138754.D Vial: 5
Acq On : 24 Apr 2016 18:36 Operator: JDS
Sample : WG566155-05 100ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45:57 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

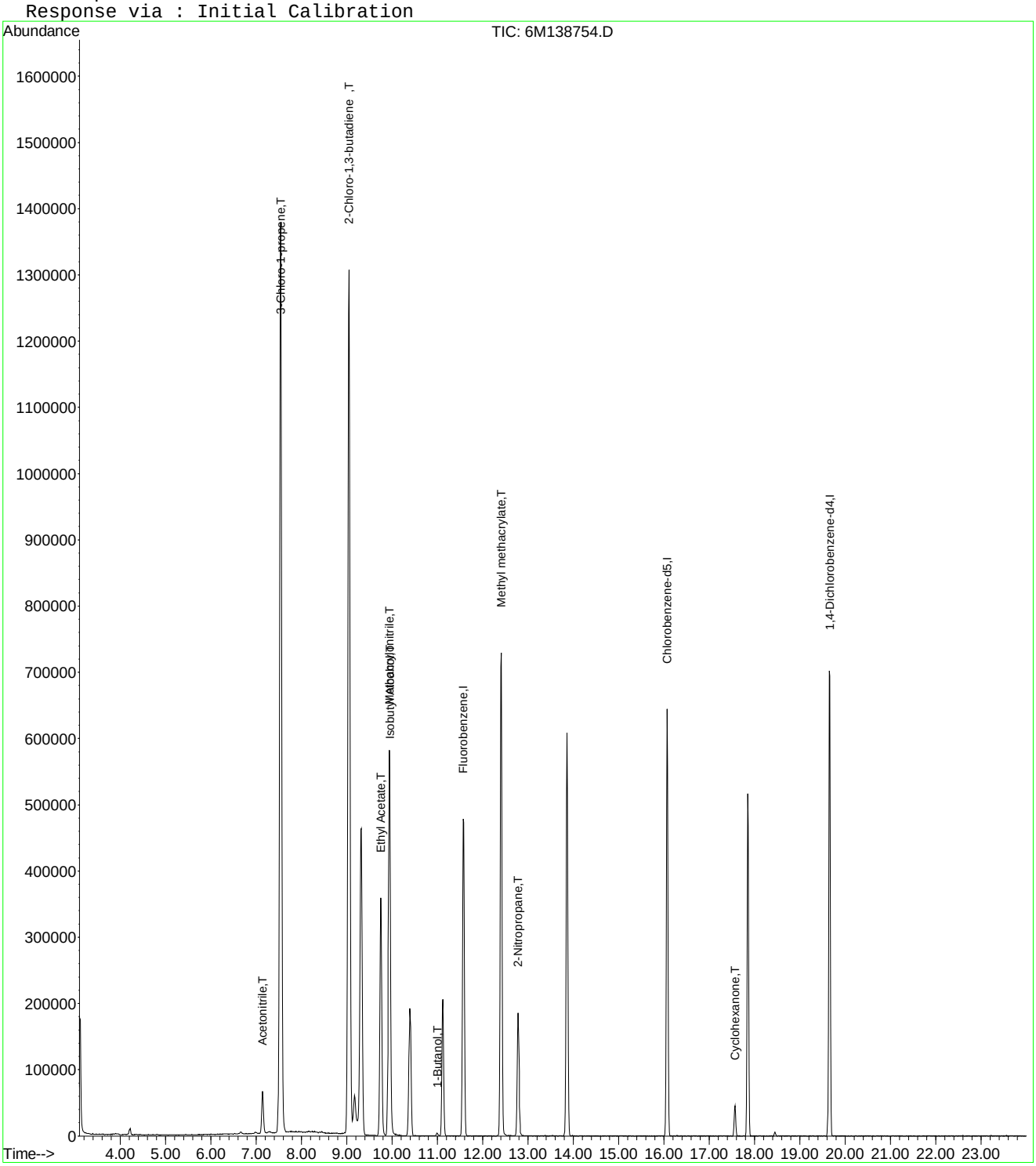
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	599121	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	467316	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	255798	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	90880	79.0019	ug/L		95
3) 3-Chloro-1-propene	7.54	41	1610716	100.3335	ug/L		93
4) 2-Chloro-1,3-butadiene	9.05	53	1413663	102.2884	ug/L		83
5) Ethyl Acetate	9.75	43	673221	106.5217	ug/L		93
6) Methacrylonitrile	9.94	67	237219	97.5895	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	33897	97.4937	ug/L	#	85
8) 1-Butanol	11.00	41	2978	19.9099	ug/L	#	64
9) Methyl methacrylate	12.41	41	585839	93.0942	ug/L		80
10) 2-Nitropropane	12.78	43	197598	106.5074	ug/L		97
13) Cyclohexanone	17.57	55	27547	31.5338	ug/L		88

(#) = qualifier out of range (m) = manual integration
6M138754.D A9FOOWT.M Mon Apr 25 15:45:57 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138754.D Vial: 5
Acq On : 24 Apr 2016 18:36 Operator: JDS
Sample : WG566155-05 100ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138754.D Vial: 5
Acq On : 24 Apr 2016 18:36 Operator: JDS
Sample : WG566155-05 100ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04:59 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

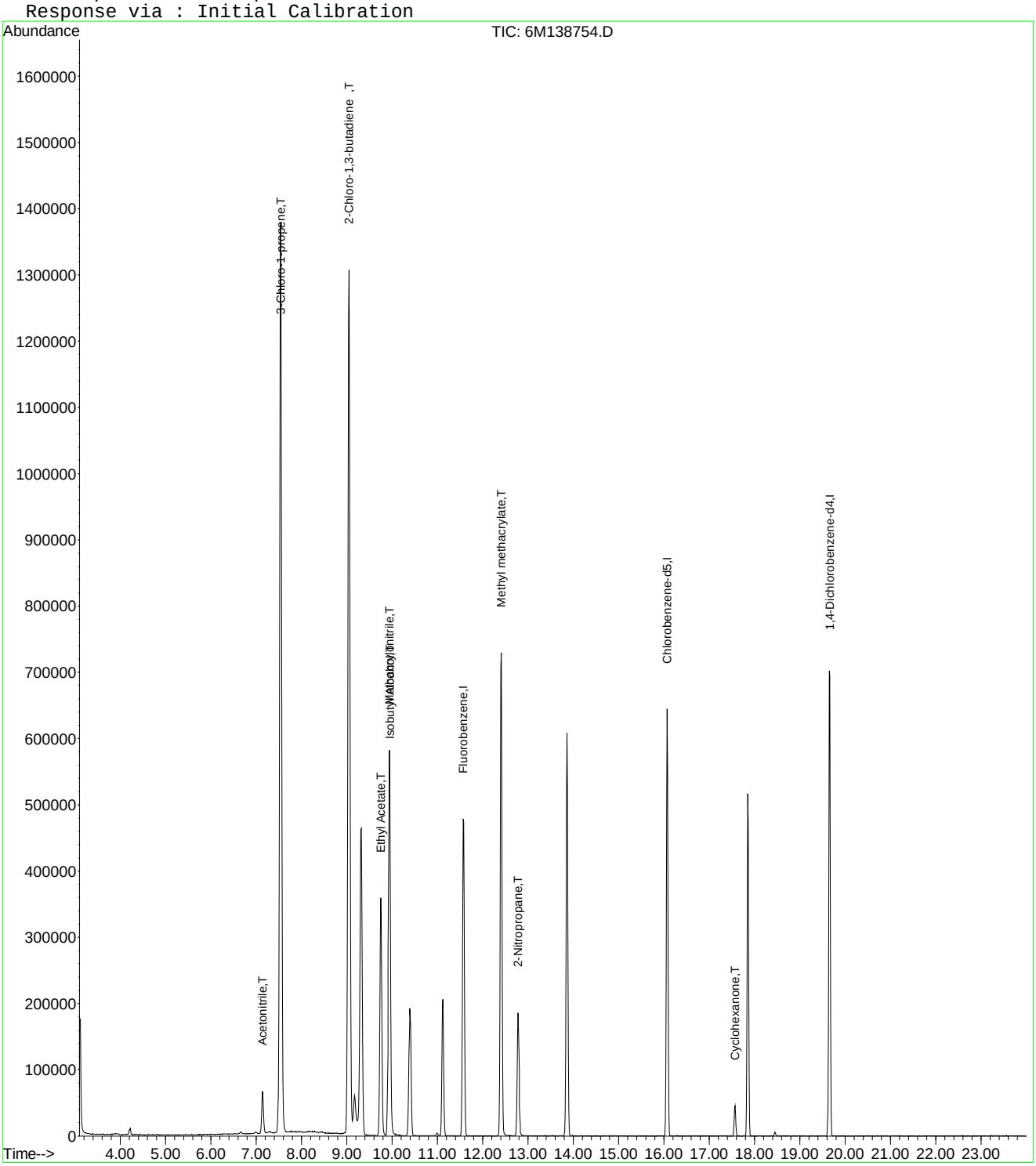
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	599121	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	467316	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.66	152	255798	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	90880	101.2731	ug/L		95
3) 3-Chloro-1-propene	7.54	41	1610716	107.7041	ug/L		93
4) 2-Chloro-1,3-butadiene	9.05	53	1413663	110.1648	ug/L		83
5) Ethyl Acetate	9.75	43	673221	104.7898	ug/L		93
6) Methacrylonitrile	9.94	67	237219	107.1014	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	33897	165.6613	ug/L	#	85
9) Methyl methacrylate	12.41	41	585839	108.4917	ug/L		80
10) 2-Nitropropane	12.78	43	197598	98.3932	ug/L		97
13) Cyclohexanone	17.57	55	27547	86.3902	ug/L		88

(#) = qualifier out of range (m) = manual integration
6M138754.D A9FOOWT.M Wed Apr 27 16:04:59 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138754.D Vial: 5
Acq On : 24 Apr 2016 18:36 Operator: JDS
Sample : WG566155-05 100ug/L STD 826-A Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:04 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138755.D Vial: 6
Acq On : 24 Apr 2016 19:08 Operator: JDS
Sample : WG566155-06 200ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:50 2016 Quant Results File: 8260WTR.RES

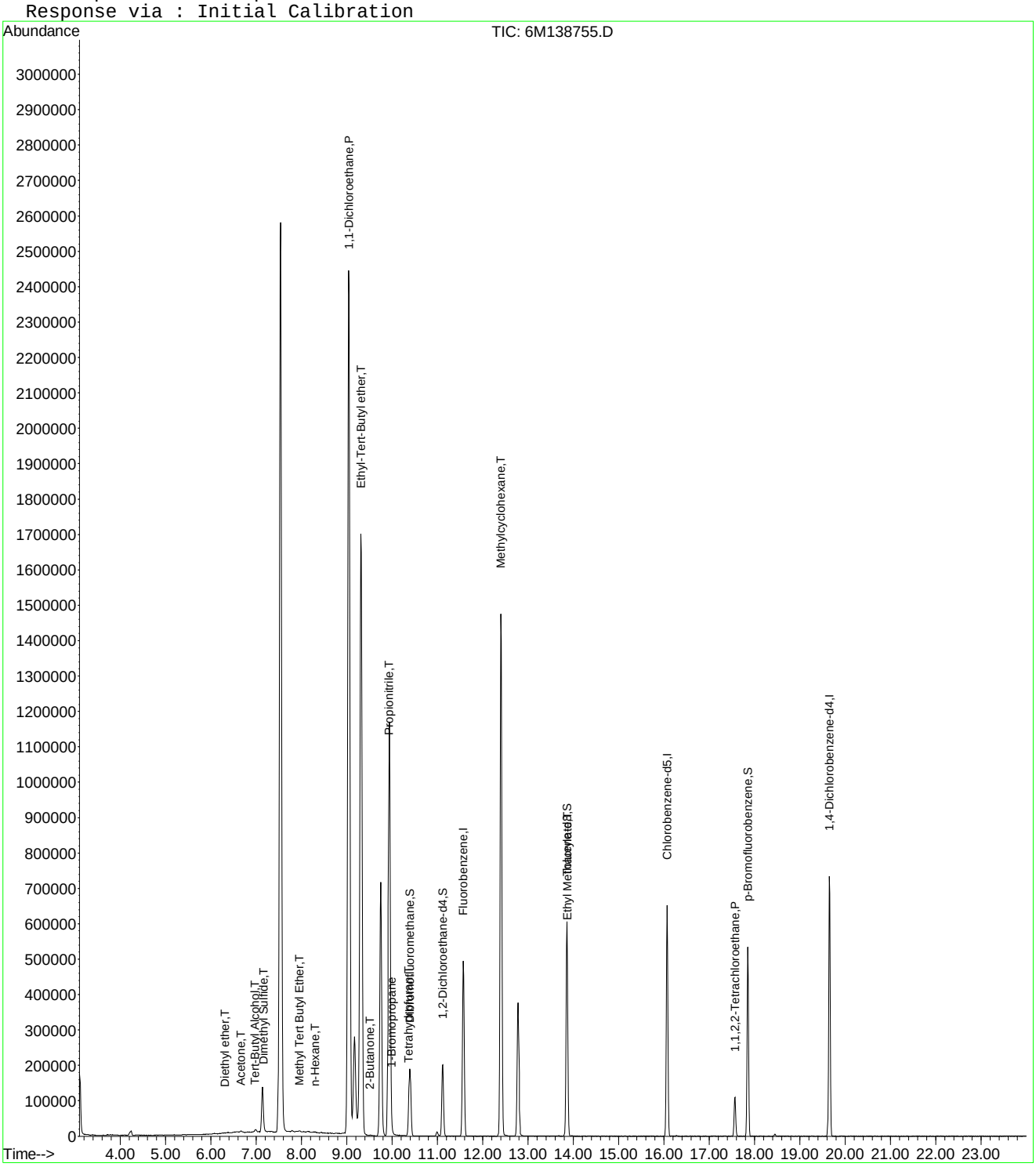
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	607157	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	473187	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	259046	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.40	111	172341	27.7160 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 110.88%		
43) 1,2-Dichloroethane-d4	11.12	65	211249	27.9923 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.96%		
58) Toluene-d8	13.86	98	552831	25.9510 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.80%		
80) p-Bromofluorobenzene	17.85	95	247709	28.6419 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 114.56%		
Target Compounds					Qvalue
9) Diethyl ether	6.31	59	653	0.1225 ug/L #	12
13) Acetone	6.66	43	9406	4.9959 ug/L #	64
15) Tert-Butyl Alcohol	6.98	59	449	0.8301 ug/L #	1
16) Dimethyl Sulfide	7.16	62	680	0.1328 ug/L #	1
22) Methyl Tert Butyl Ether	7.96	73	3926	0.2388 ug/L	83
24) n-Hexane	8.30	57	1777	0.2040 ug/L	87
27) 1,1-Dichloroethane	9.05	63	41640	3.2372 ug/L #	47
28) Ethyl-Tert-Butyl ether	9.31	59	272648	13.0615 ug/L #	38
29) 2-Butanone	9.51	43	2992	1.0767 ug/L #	67
30) Propionitrile	9.93	54	258	0.3232 ug/L #	57
34) 1-Bromopropane	9.99	122	1417	1.3579 ug/L #	1
36) Tetrahydrofuran	10.37	42	4839	2.6728 ug/L #	62
48) Methylcyclohexane	12.40	83	2976	0.3378 ug/L #	1
60) Ethyl Methacrylate	13.87	69	1202	0.1698 ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.57	83	5192	0.8231 ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M138755.D 8260WTR.M Mon Apr 25 09:22:50 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138755.D Vial: 6
Acq On : 24 Apr 2016 19:08 Operator: JDS
Sample : WG566155-06 200ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138755.D Vial: 6
Acq On : 24 Apr 2016 19:08 Operator: JDS
Sample : WG566155-06 200ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45:58 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

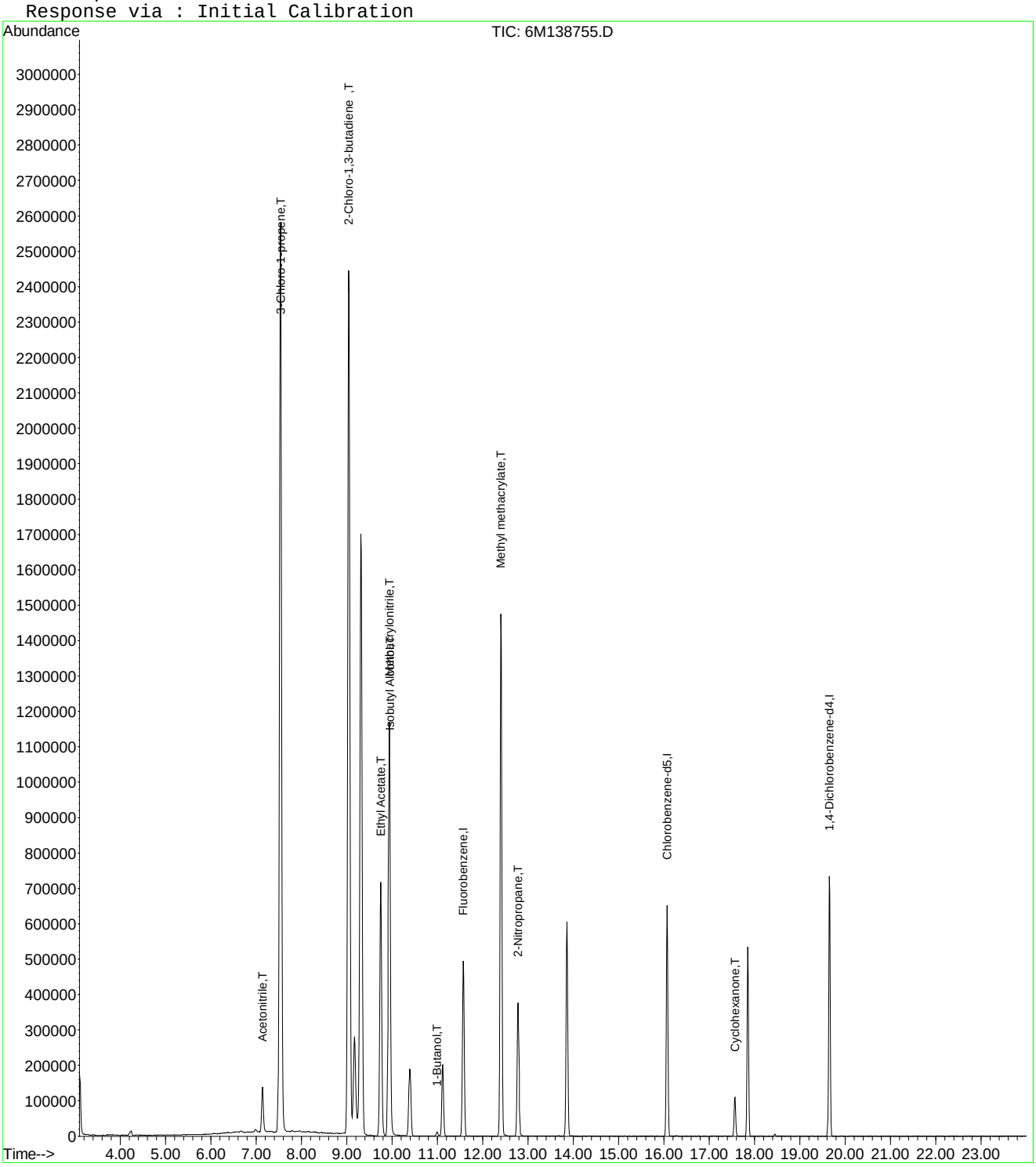
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	607157	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	473187	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.65	152	259046	25.00	ug/L		-0.03
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	183628	157.5150	ug/L		93
3) 3-Chloro-1-propene	7.54	41	3085939	189.6828	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	2709180	193.4336	ug/L		83
5) Ethyl Acetate	9.75	43	1346541	210.2391	ug/L		94
6) Methacrylonitrile	9.94	67	471538	191.4186	ug/L	#	64
7) Isobutyl Alcohol	9.95	43	72755	206.4864	ug/L	#	92
8) 1-Butanol	10.99	41	8815	58.1542	ug/L	#	64
9) Methyl methacrylate	12.40	41	1186381	186.0295	ug/L		80
10) 2-Nitropropane	12.79	43	410702	218.4428	ug/L		99
13) Cyclohexanone	17.57	55	67080	75.8254	ug/L		87

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

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138755.D Vial: 6
Acq On : 24 Apr 2016 19:08 Operator: JDS
Sample : WG566155-06 200ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



6M138755.D A9FOOWT.M Mon Apr 25 15:45:59 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138755.D Vial: 6
Acq On : 24 Apr 2016 19:08 Operator: JDS
Sample : WG566155-06 200ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05:00 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

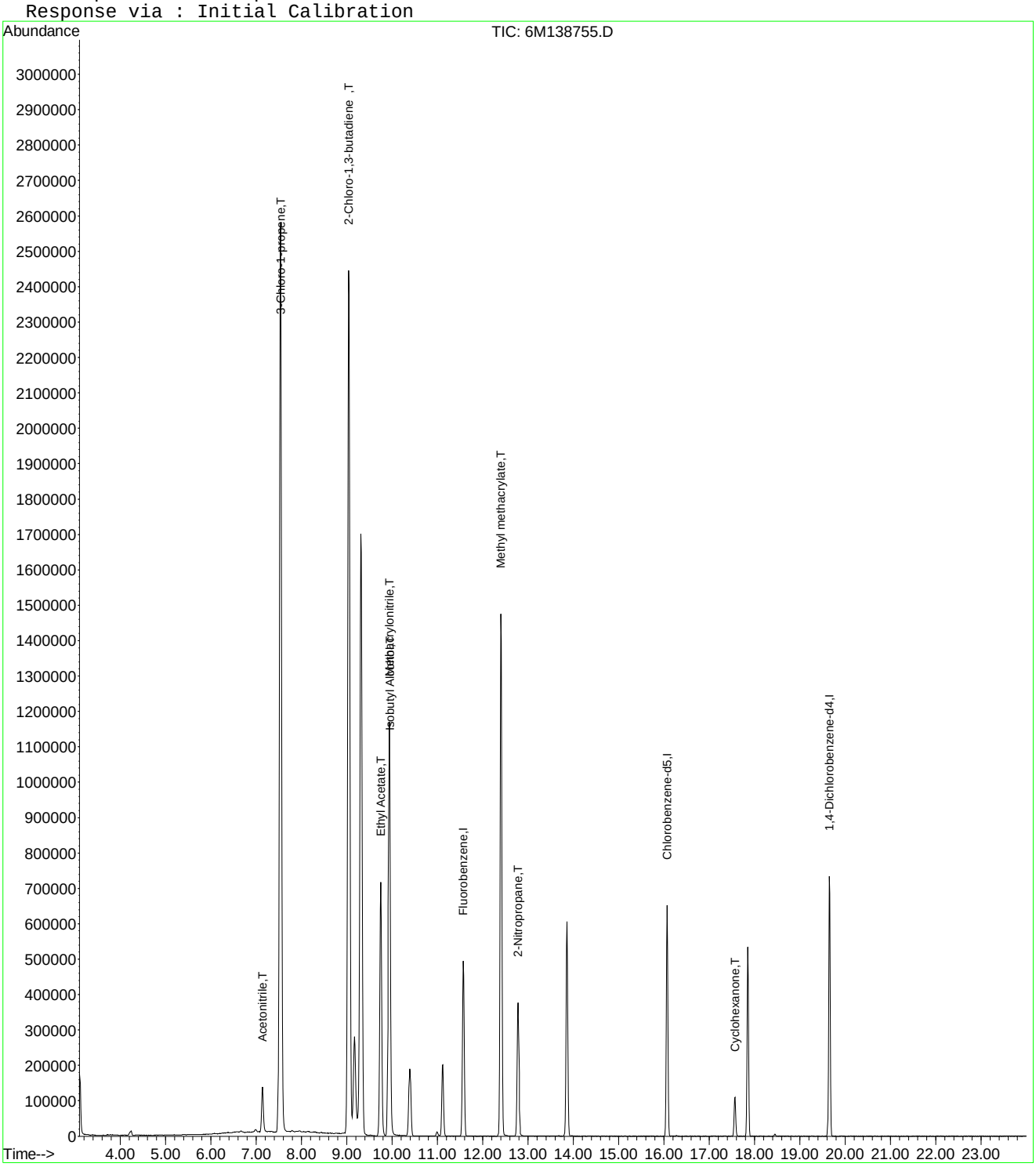
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	607157	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	473187	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.65	152	259046	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	183628	201.9195	ug/L		93
3) 3-Chloro-1-propene	7.54	41	3085939	203.6170	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	2709180	208.3284	ug/L		83
5) Ethyl Acetate	9.75	43	1346541	206.8209	ug/L		94
6) Methacrylonitrile	9.94	67	471538	210.0757	ug/L	#	64
7) Isobutyl Alcohol	9.95	43	72755	350.8618	ug/L	#	92
9) Methyl methacrylate	12.40	41	1186381	216.7982	ug/L		80
10) 2-Nitropropane	12.79	43	410702	201.8008	ug/L		99
13) Cyclohexanone	17.57	55	67080	207.7320	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138755.D A9FOOWT.M Wed Apr 27 16:05:00 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138755.D Vial: 6
Acq On : 24 Apr 2016 19:08 Operator: JDS
Sample : WG566155-06 200ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138756.D Vial: 7
Acq On : 24 Apr 2016 19:40 Operator: JDS
Sample : WG566155-07 300ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:50 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

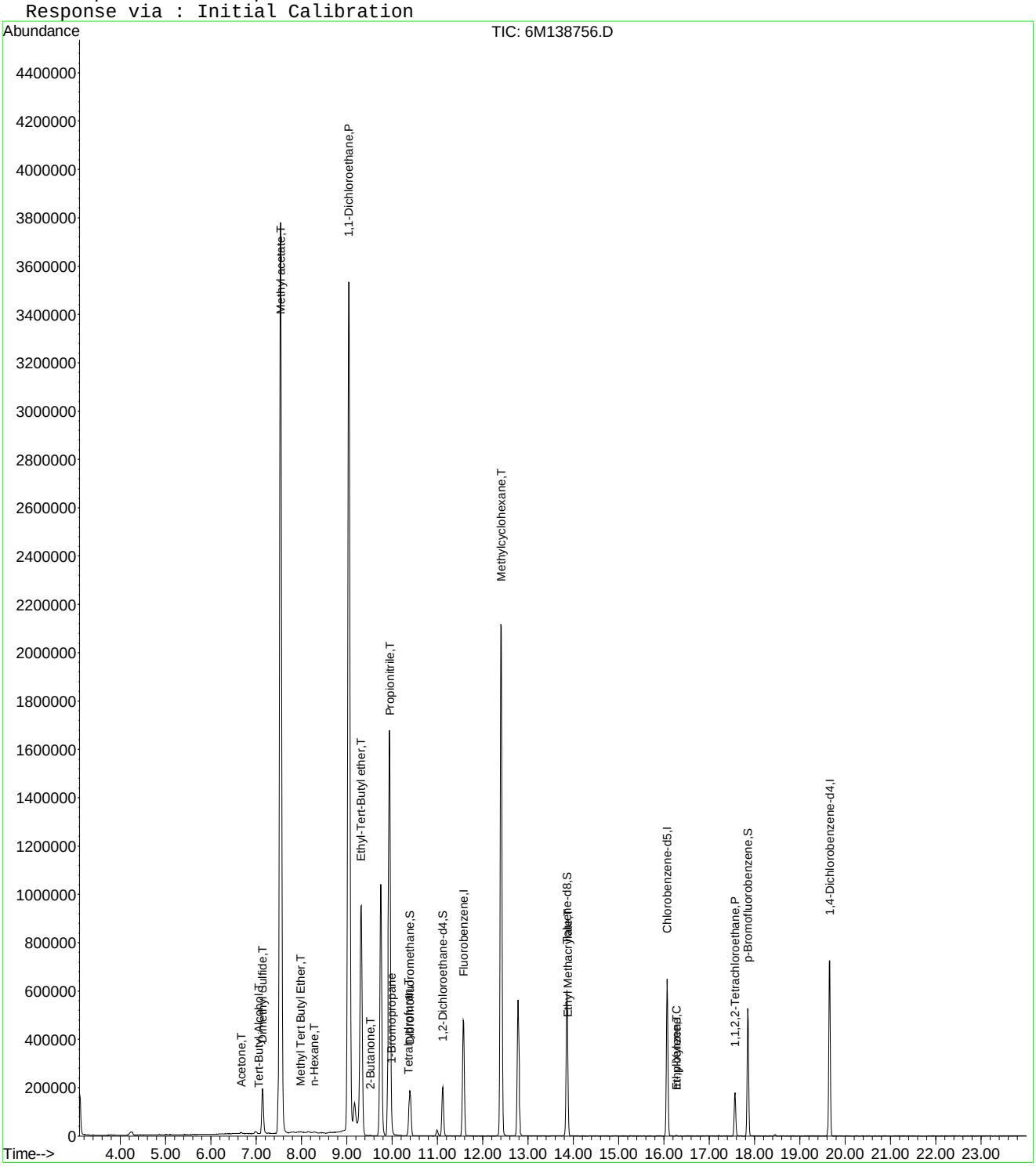
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	11.58	96	602356	25.00	ug/L	0.00
57) Chlorobenzene-d5	16.07	117	472685	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	264650	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	10.39	111	169983	27.5546	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 110.20%			
43) 1,2-Dichloroethane-d4	11.12	65	207199	27.6745	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 110.68%			
58) Toluene-d8	13.86	98	553023	25.9875	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.96%			
80) p-Bromofluorobenzene	17.85	95	247939	28.0615	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 112.24%			
Target Compounds						Qvalue
13) Acetone	6.67	43	13666	7.3164	ug/L #	77
15) Tert-Butyl Alcohol	7.06	59	467	0.8703	ug/L #	59
16) Dimethyl Sulfide	7.14	62	668	0.1315	ug/L #	1
18) Methyl acetate	7.54	43	3262	0.6289	ug/L #	1
22) Methyl Tert Butyl Ether	7.97	73	10591	0.6492	ug/L #	53
24) n-Hexane	8.28	57	3576	0.4138	ug/L #	56
27) 1,1-Dichloroethane	9.04	63	60743	4.7600	ug/L #	48
28) Ethyl-Tert-Butyl ether	9.31	59	155796	7.5231	ug/L #	39
29) 2-Butanone	9.52	43	4002	1.4516	ug/L	97
30) Propionitrile	9.95	54	1113	1.4052	ug/L #	1
34) 1-Bromopropane	9.99	122	1450	1.4006	ug/L #	1
36) Tetrahydrofuran	10.36	42	4902	2.7292	ug/L #	61
48) Methylcyclohexane	12.41	83	4626	0.5293	ug/L #	1
60) Ethyl Methacrylate	13.88	69	1599	0.2261	ug/L #	1
72) Ethylbenzene	16.28	106	1349	0.1427	ug/L	56
73) m-,p-Xylene	16.28	106	1349	0.1203	ug/L	81
79) 1,1,2,2-Tetrachloroethane	17.57	83	8744	1.3569	ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M138756.D 8260WTR.M Mon Apr 25 09:22:51 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138756.D Vial: 7
Acq On : 24 Apr 2016 19:40 Operator: JDS
Sample : WG566155-07 300ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138756.D Vial: 7
Acq On : 24 Apr 2016 19:40 Operator: JDS
Sample : WG566155-07 300ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45:59 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

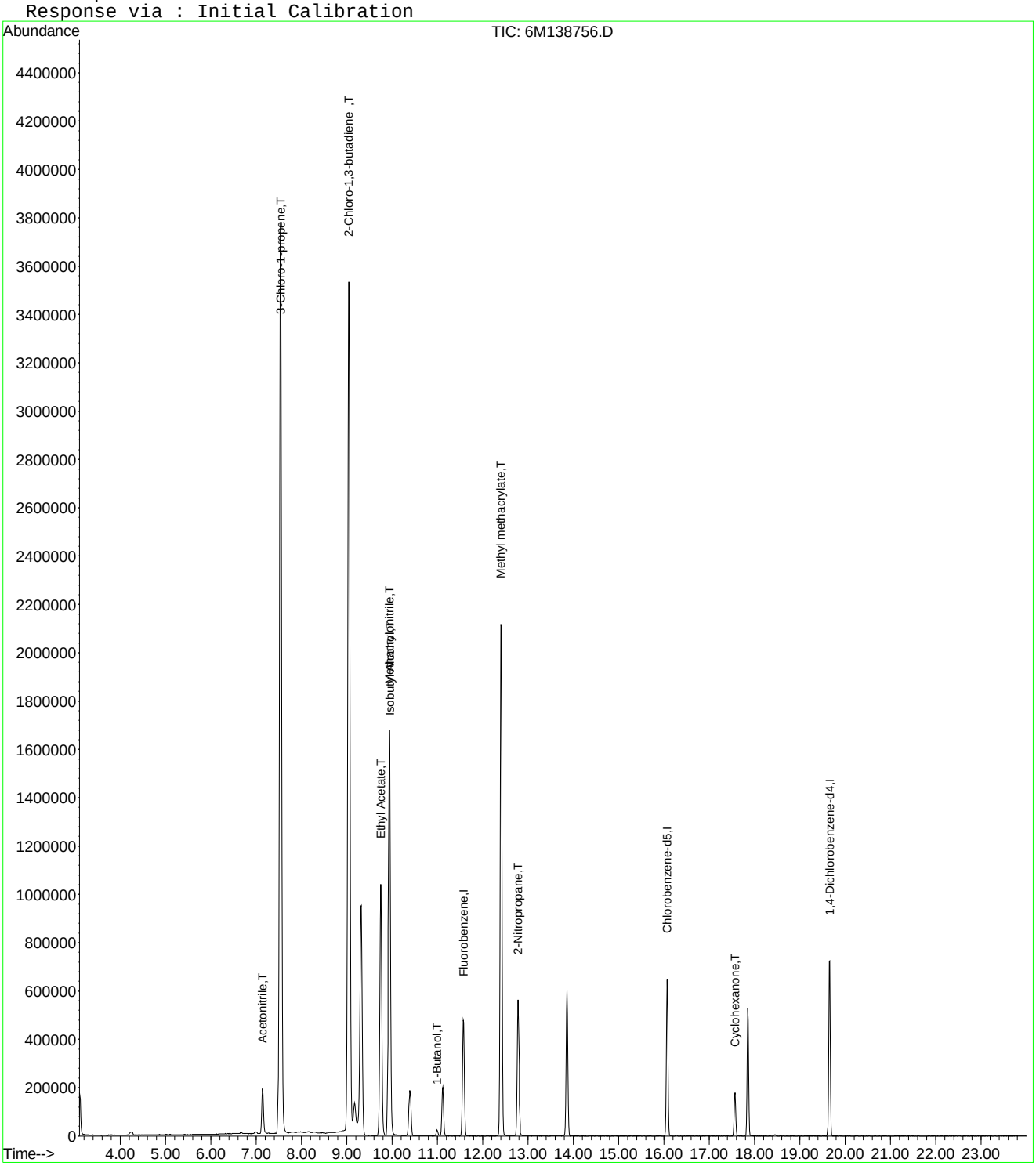
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.58	96	602356	25.00	ug/L		-0.02
11) Chlorobenzene-d5	16.07	117	472685	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	264650	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	273003	236.0468	ug/L		93
3) 3-Chloro-1-propene	7.54	41	4493022	278.3729	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	3994938	287.5093	ug/L		83
5) Ethyl Acetate	9.75	43	1967613	309.6573	ug/L		94
6) Methacrylonitrile	9.94	67	686612	280.9484	ug/L	#	63
7) Isobutyl Alcohol	9.95	43	121480	347.5212	ug/L	#	90
8) 1-Butanol	10.99	41	18116	120.4672	ug/L		69
9) Methyl methacrylate	12.40	41	1742413	275.3954	ug/L		81
10) 2-Nitropropane	12.78	43	613081	328.6824	ug/L		99
13) Cyclohexanone	17.57	55	106618	117.9661	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138756.D A9FOOWT.M Mon Apr 25 15:45:59 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138756.D Vial: 7
Acq On : 24 Apr 2016 19:40 Operator: JDS
Sample : WG566155-07 300ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:45 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138756.D Vial: 7
Acq On : 24 Apr 2016 19:40 Operator: JDS
Sample : WG566155-07 300ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05:00 2016 Quant Results File: A9FOOWT.RES

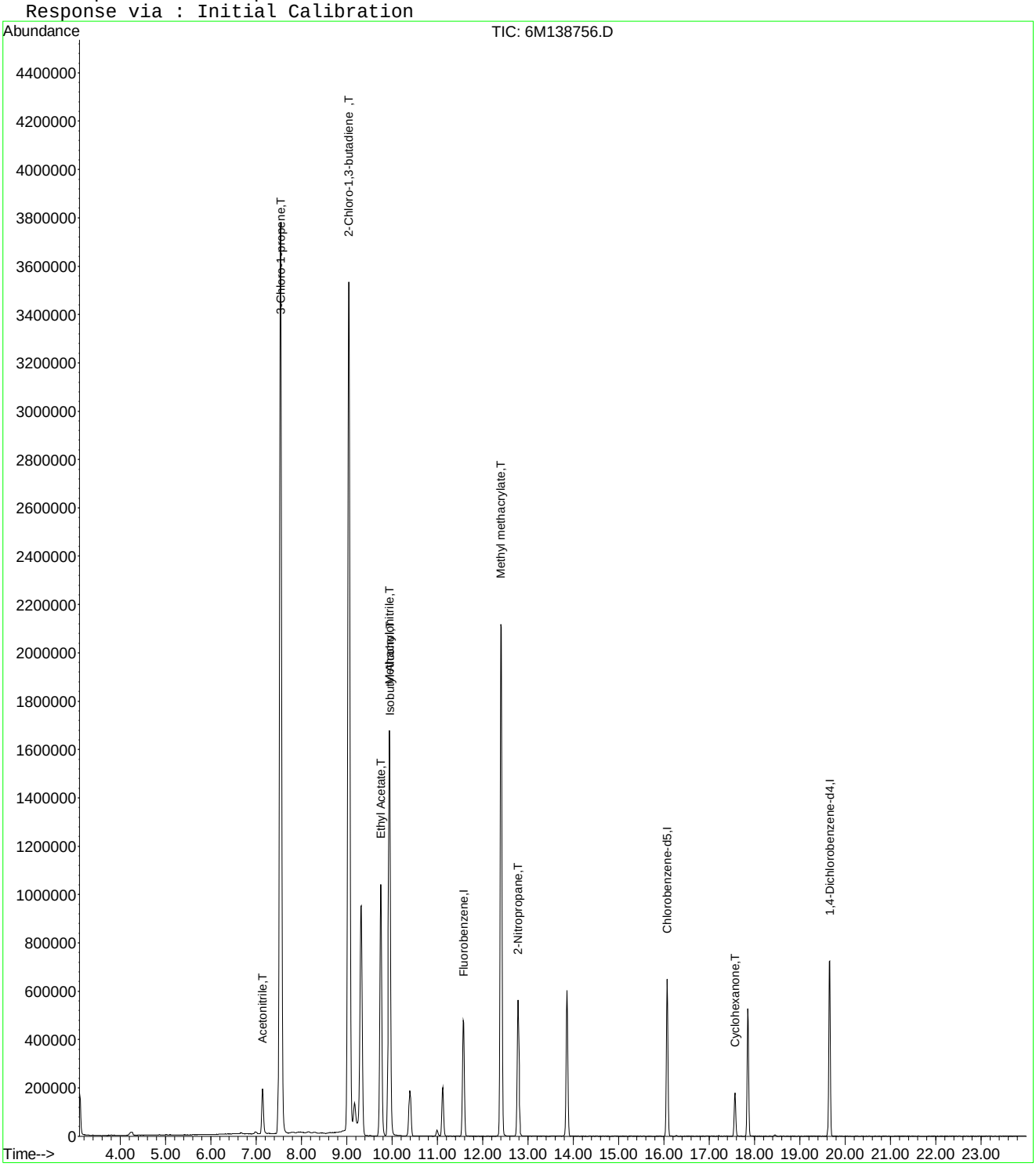
Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.58	96	602356	25.00	ug/L		0.01
11) Chlorobenzene-d5	16.07	117	472685	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.66	152	264650	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	273003	302.5900	ug/L		93
3) 3-Chloro-1-propene	7.54	41	4493022	298.8224	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	3994938	309.6481	ug/L		83
5) Ethyl Acetate	9.75	43	1967613	304.6228	ug/L		94
6) Methacrylonitrile	9.94	67	686612	308.3318	ug/L	#	63
7) Isobutyl Alcohol	9.95	43	121480	590.5081	ug/L	#	90
9) Methyl methacrylate	12.40	41	1742413	320.9449	ug/L		81
10) 2-Nitropropane	12.78	43	613081	303.6419	ug/L		99
13) Cyclohexanone	17.57	55	106618	323.1811	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138756.D A9FOOWT.M Wed Apr 27 16:05:00 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138756.D Vial: 7
Acq On : 24 Apr 2016 19:40 Operator: JDS
Sample : WG566155-07 300ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138757.D Vial: 8
Acq On : 24 Apr 2016 20:12 Operator: JDS
Sample : WG566155-08 400ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:51 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

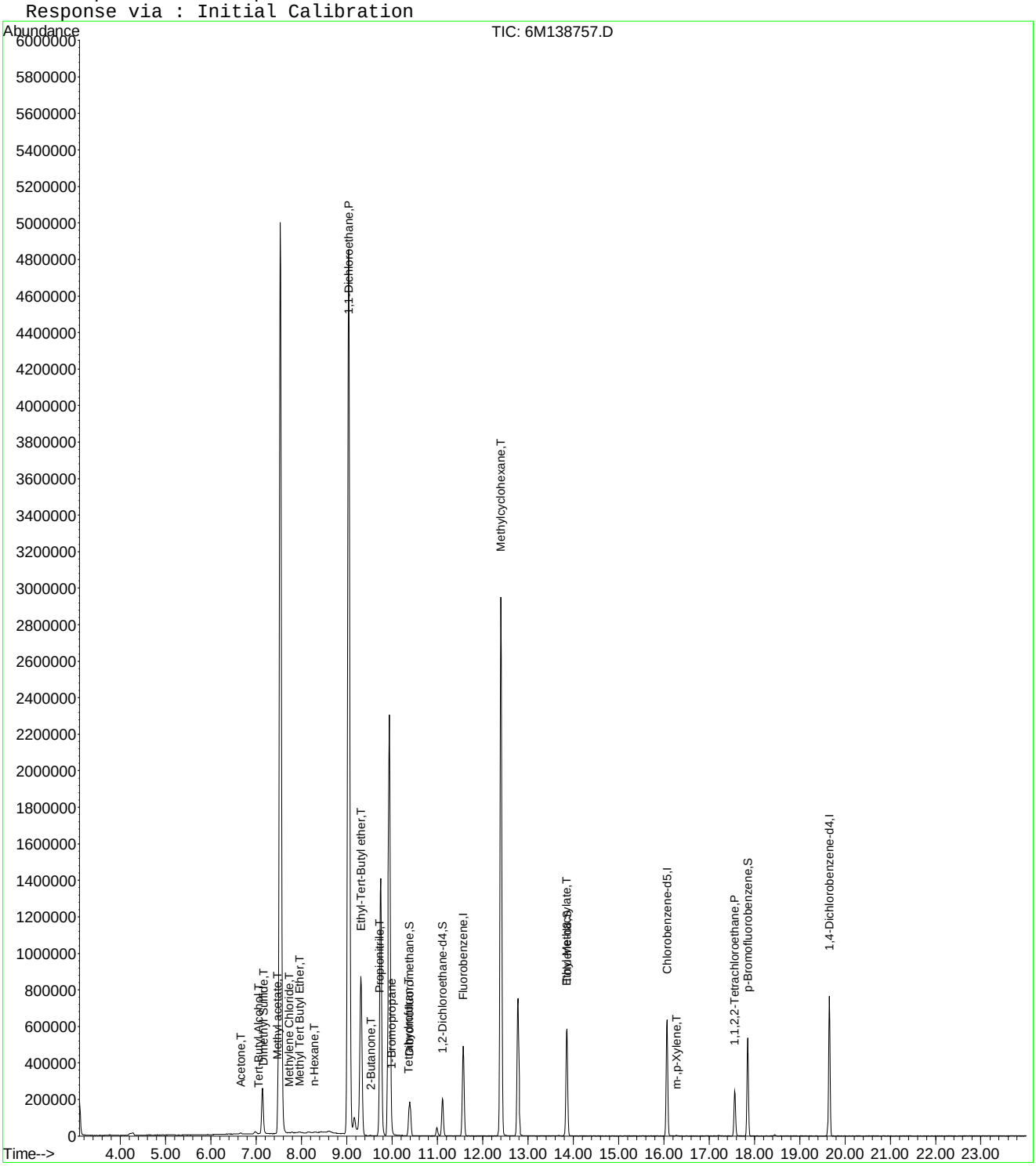
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	602625	25.00	ug/L		0.00
57) Chlorobenzene-d5	16.08	117	475117	25.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	264739	25.00	ug/L		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	10.39	111	170708	27.6598	ug/L		0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 110.64%				
43) 1,2-Dichloroethane-d4	11.11	65	208757	27.8702	ug/L		0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 111.48%				
58) Toluene-d8	13.86	98	554316	25.9150	ug/L		0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.64%				
80) p-Bromofluorobenzene	17.85	95	246698	27.9116	ug/L		0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 111.64%				
Target Compounds							Qvalue
13) Acetone	6.66	43	14063	7.5256	ug/L		99
15) Tert-Butyl Alcohol	7.05	59	807	1.5033	ug/L	#	59
16) Dimethyl Sulfide	7.16	62	1034	0.2034	ug/L	#	1
18) Methyl acetate	7.48	43	1103	0.2125	ug/L	#	60
19) Methylene Chloride	7.73	84	1123	0.1699	ug/L	#	40
22) Methyl Tert Butyl Ether	7.97	73	18318	1.1224	ug/L	#	53
24) n-Hexane	8.28	57	5609	0.6488	ug/L		75
27) 1,1-Dichloroethane	9.04	63	82912	6.4943	ug/L	#	48
28) Ethyl-Tert-Butyl ether	9.32	59	139043	6.7111	ug/L	#	38
29) 2-Butanone	9.53	43	4129	1.4970	ug/L		86
30) Propionitrile	9.72	54	202	0.2549	ug/L	#	1
34) 1-Bromopropane	9.99	122	1978	1.9098	ug/L	#	1
36) Tetrahydrofuran	10.37	42	5444	3.0296	ug/L	#	63
48) Methylcyclohexane	12.40	83	6593	0.7540	ug/L	#	1
60) Ethyl Methacrylate	13.85	69	1165	0.1639	ug/L	#	1
73) m-,p-Xylene	16.28	106	1795	0.1593	ug/L		72
79) 1,1,2,2-Tetrachloroethane	17.57	83	12875	1.9973	ug/L	#	18

(#) = qualifier out of range (m) = manual integration
6M138757.D 8260WTR.M Mon Apr 25 09:22:51 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138757.D Vial: 8
Acq On : 24 Apr 2016 20:12 Operator: JDS
Sample : WG566155-08 400ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138757.D Vial: 8
Acq On : 24 Apr 2016 20:12 Operator: JDS
Sample : WG566155-08 400ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:46:00 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

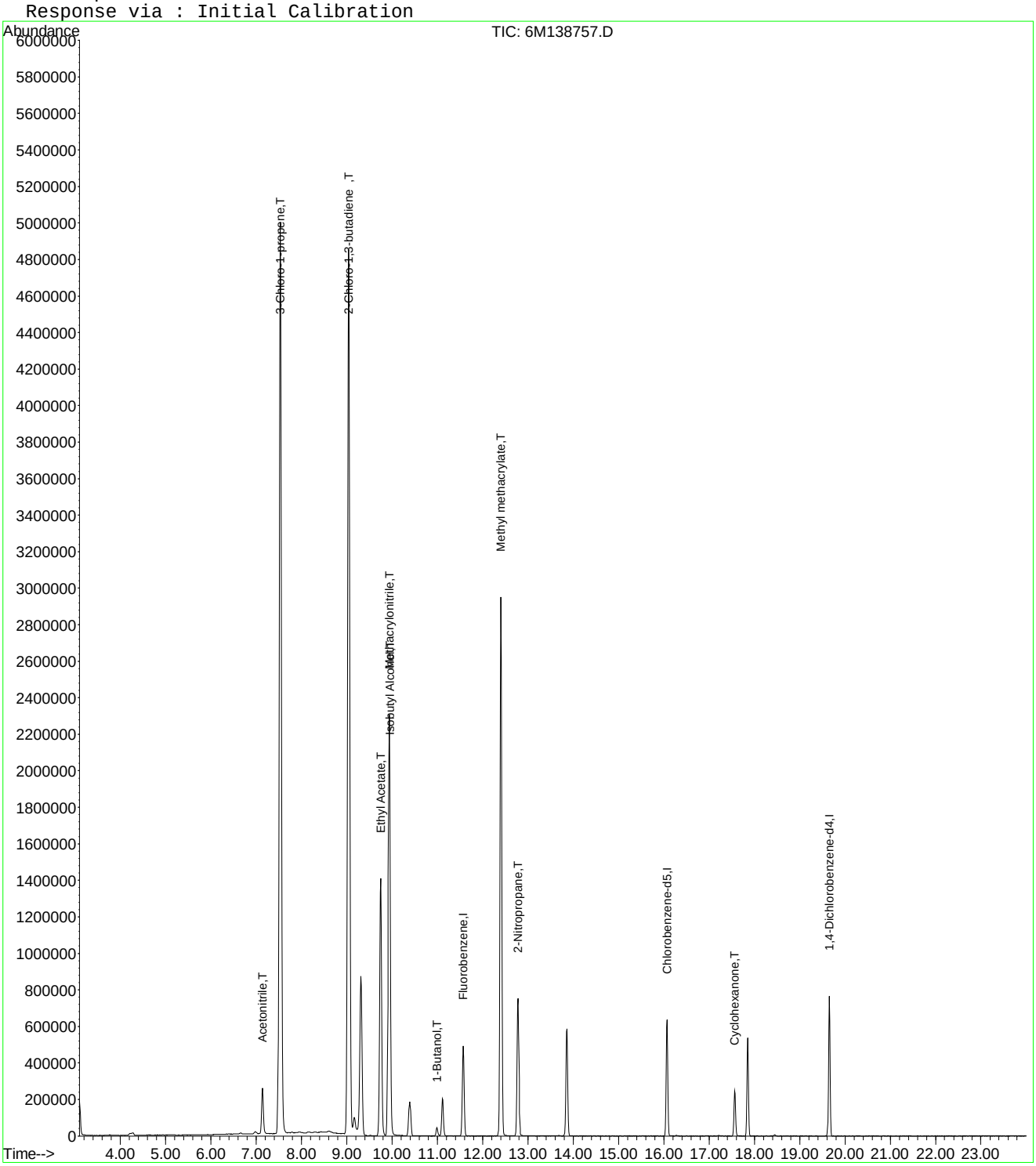
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	602625	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.08	117	475117	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.65	152	264739	25.00	ug/L		-0.03
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	368012	318.0524	ug/L		93
3) 3-Chloro-1-propene	7.53	41	5948883	368.4088	ug/L		94
4) 2-Chloro-1,3-butadiene	9.04	53	5359203	385.5211	ug/L		83
5) Ethyl Acetate	9.76	43	2690267	423.1975	ug/L		94
6) Methacrylonitrile	9.94	67	929265	380.0675	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	192560	550.6158	ug/L	#	89
8) 1-Butanol	10.99	41	29815	198.1744	ug/L		75
9) Methyl methacrylate	12.40	41	2375132	375.2316	ug/L		81
10) 2-Nitropropane	12.79	43	849210	455.0717	ug/L		98
13) Cyclohexanone	17.57	55	149420	165.2683	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138757.D A9FOOWT.M Mon Apr 25 15:46:00 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138757.D Vial: 8
Acq On : 24 Apr 2016 20:12 Operator: JDS
Sample : WG566155-08 400ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:46 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042416\6M138757.D Vial: 8
Acq On : 24 Apr 2016 20:12 Operator: JDS
Sample : WG566155-08 400ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05:01 2016 Quant Results File: A9FOOWT.RES

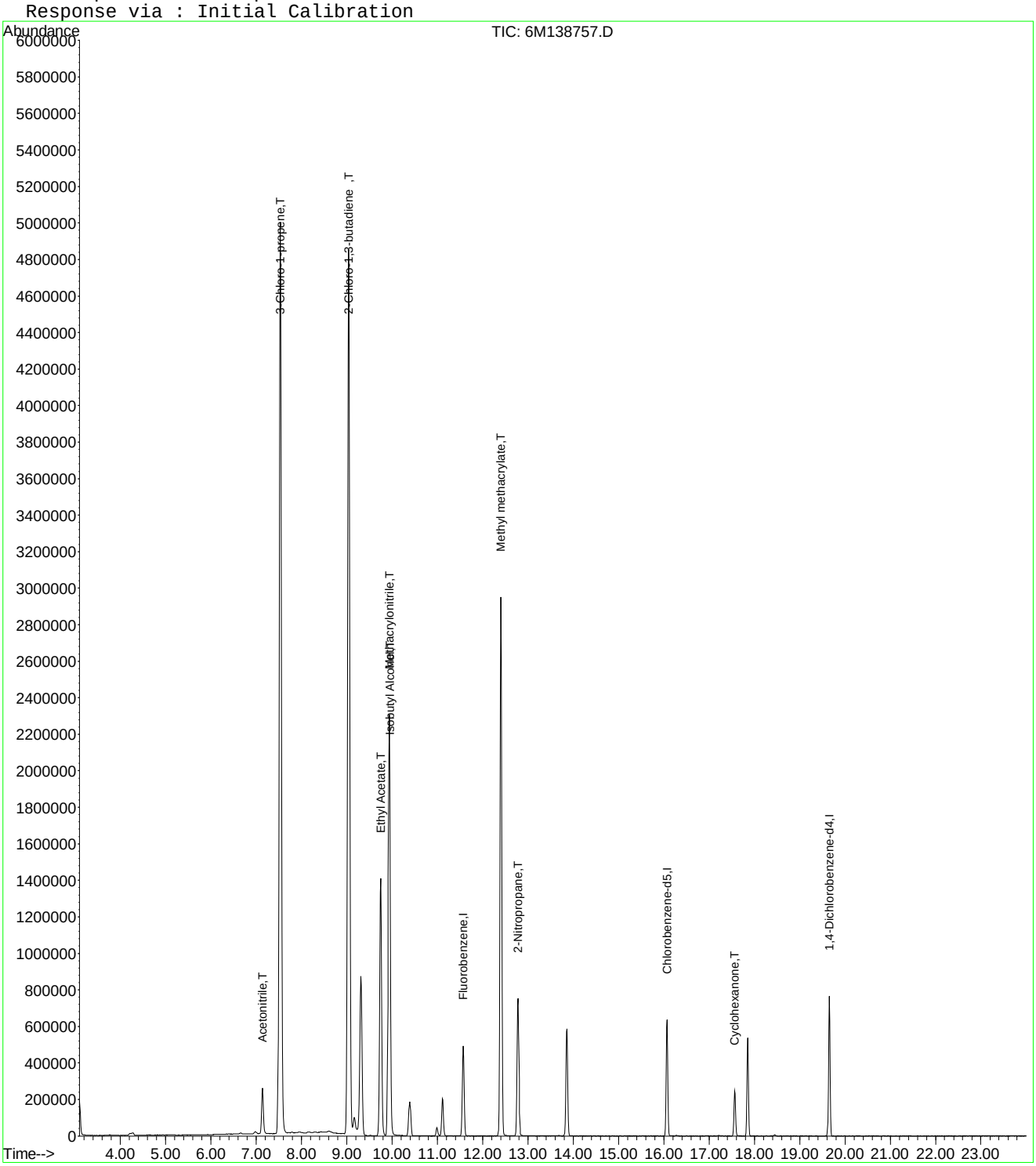
Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	602625	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.08	117	475117	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.65	152	264739	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	368012	407.7137	ug/L		93
3) 3-Chloro-1-propene	7.53	41	5948883	395.4723	ug/L		94
4) 2-Chloro-1,3-butadiene	9.04	53	5359203	415.2070	ug/L		83
5) Ethyl Acetate	9.76	43	2690267	416.3170	ug/L		94
6) Methacrylonitrile	9.94	67	929265	417.1119	ug/L	#	62
7) Isobutyl Alcohol	9.95	43	192560	935.6065	ug/L	#	89
9) Methyl methacrylate	12.40	41	2375132	437.2937	ug/L		81
10) 2-Nitropropane	12.79	43	849210	420.4022	ug/L		98
13) Cyclohexanone	17.57	55	149420	452.7705	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138757.D A9FOOWT.M Wed Apr 27 16:05:01 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138757.D Vial: 8
Acq On : 24 Apr 2016 20:12 Operator: JDS
Sample : WG566155-08 400ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138758.D Vial: 9
Acq On : 24 Apr 2016 20:44 Operator: JDS
Sample : WG566155-09 500ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:52 2016 Quant Results File: 8260WTR.RES

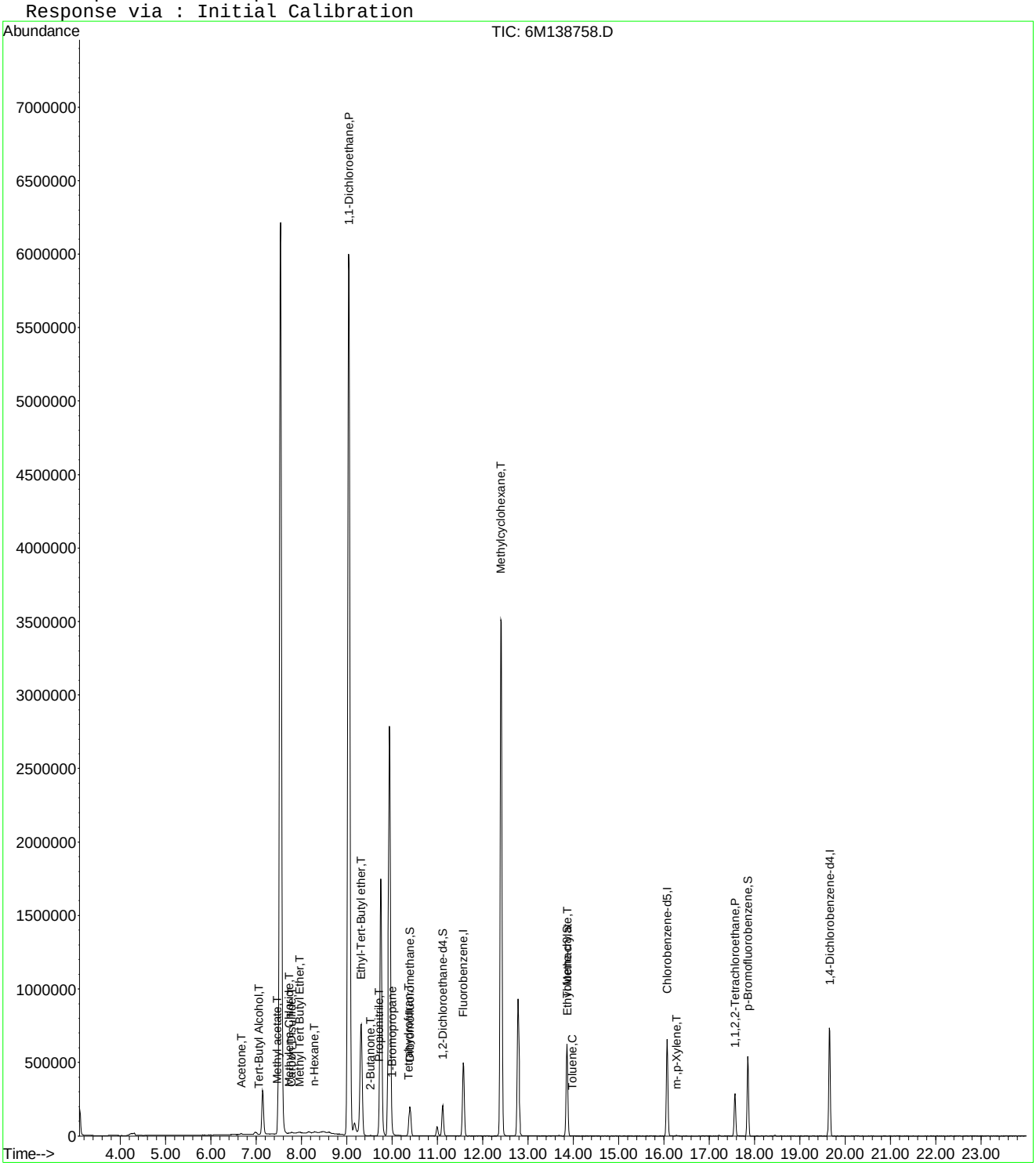
Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	616486	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	485048	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.66	152	268890	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.39	111	175239	27.7556 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 111.04%		
43) 1,2-Dichloroethane-d4	11.12	65	210644	27.4898 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 109.96%		
58) Toluene-d8	13.86	98	563297	25.7957 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 103.20%		
80) p-Bromofluorobenzene	17.85	95	249406	27.7824 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 111.12%		
Target Compounds					Qvalue
13) Acetone	6.67	43	15233	7.9684 ug/L	89
15) Tert-Butyl Alcohol	7.06	59	370	0.6737 ug/L #	59
18) Methyl acetate	7.46	43	1079	0.2032 ug/L #	34
19) Methylene Chloride	7.73	84	1471	0.2176 ug/L	66
20) Carbon Disulfide	7.78	76	2765	0.1407 ug/L #	74
22) Methyl Tert Butyl Ether	7.96	73	25284	1.5144 ug/L #	53
24) n-Hexane	8.28	57	5266	0.5954 ug/L	97
27) 1,1-Dichloroethane	9.05	63	105121	8.0488 ug/L #	48
28) Ethyl-Tert-Butyl ether	9.31	59	124099	5.8551 ug/L #	39
29) 2-Butanone	9.52	43	4475	1.5860 ug/L #	72
30) Propionitrile	9.71	54	473	0.5835 ug/L #	1
34) 1-Bromopropane	10.00	122	2117	1.9980 ug/L #	1
36) Tetrahydrofuran	10.36	42	5652	3.0747 ug/L #	54
48) Methylcyclohexane	12.40	83	8011	0.8956 ug/L #	1
59) Toluene	13.98	91	3373	0.1249 ug/L	84
60) Ethyl Methacrylate	13.87	69	1585	0.2184 ug/L #	1
73) m-,p-Xylene	16.28	106	2521	0.2191 ug/L	79
79) 1,1,2,2-Tetrachloroethane	17.57	83	14350	2.1917 ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M138758.D 8260WTR.M Mon Apr 25 09:22:52 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138758.D Vial: 9
Acq On : 24 Apr 2016 20:44 Operator: JDS
Sample : WG566155-09 500ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



6M138758.D 8260WTR.M Mon Apr 25 09:22:52 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138758.D Vial: 9
Acq On : 24 Apr 2016 20:44 Operator: JDS
Sample : WG566155-09 500ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:46:00 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

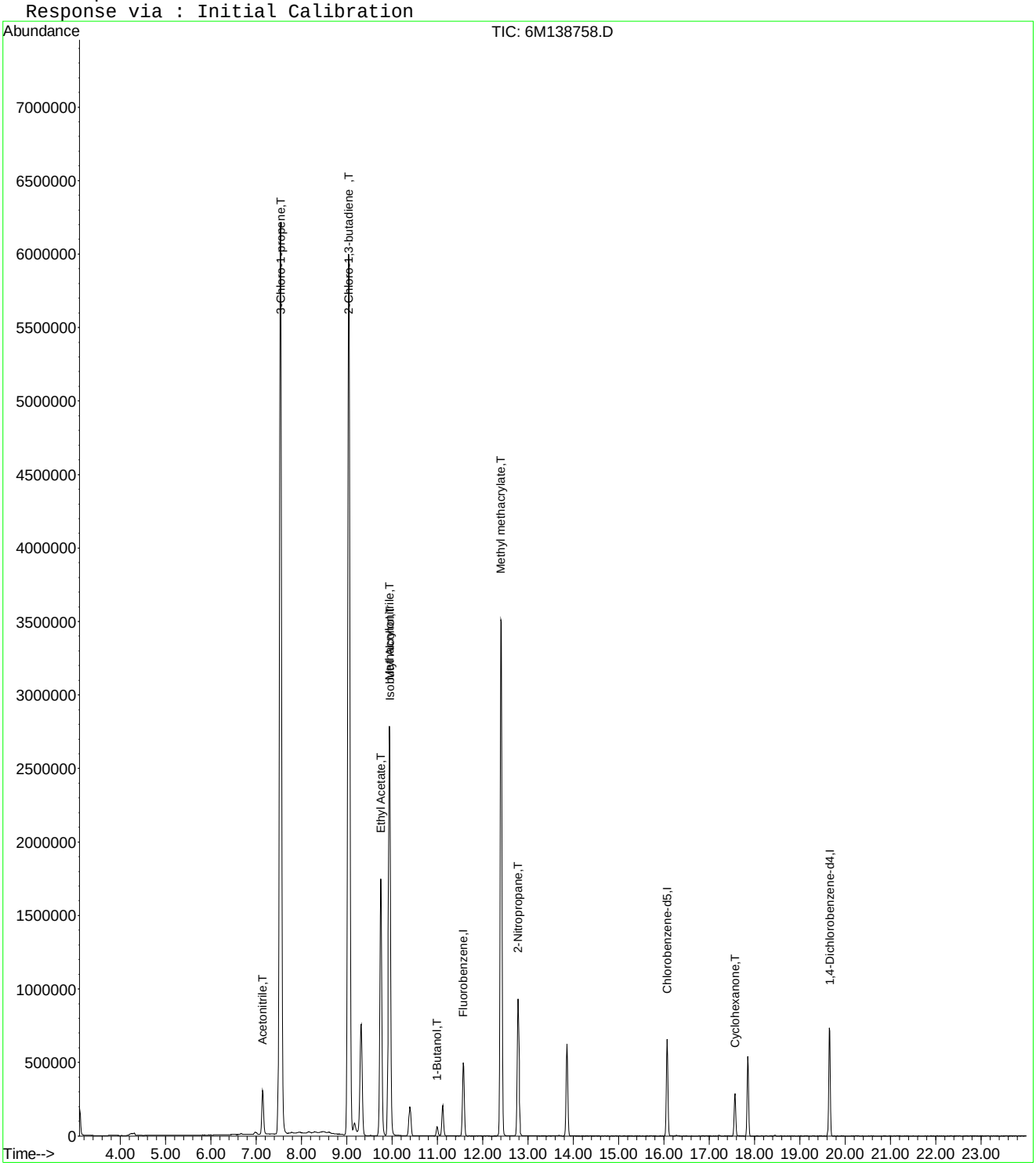
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	616486	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	485048	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.66	152	268890	25.00	ug/L		-0.02
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	449583	379.8136	ug/L		92
3) 3-Chloro-1-propene	7.54	41	7430577	449.8223	ug/L		94
4) 2-Chloro-1,3-butadiene	9.04	53	6752476	474.8265	ug/L		84
5) Ethyl Acetate	9.75	43	3307403	508.5794	ug/L		94
6) Methacrylonitrile	9.94	67	1145073	457.8027	ug/L	#	63
7) Isobutyl Alcohol	9.95	43	251034	701.6799	ug/L	#	90
8) 1-Butanol	10.99	41	42236	274.4224	ug/L		75
9) Methyl methacrylate	12.40	41	2914815	450.1389	ug/L		81
10) 2-Nitropropane	12.78	43	1036720	543.0629	ug/L		99
13) Cyclohexanone	17.57	55	176545	192.2558	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138758.D A9FOOWT.M Mon Apr 25 15:46:01 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138758.D Vial: 9
Acq On : 24 Apr 2016 20:44 Operator: JDS
Sample : WG566155-09 500ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:46 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



6M138758.D A9FOOWT.M Mon Apr 25 15:46:01 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138758.D Vial: 9
Acq On : 24 Apr 2016 20:44 Operator: JDS
Sample : WG566155-09 500ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05:01 2016 Quant Results File: A9FOOWT.RES

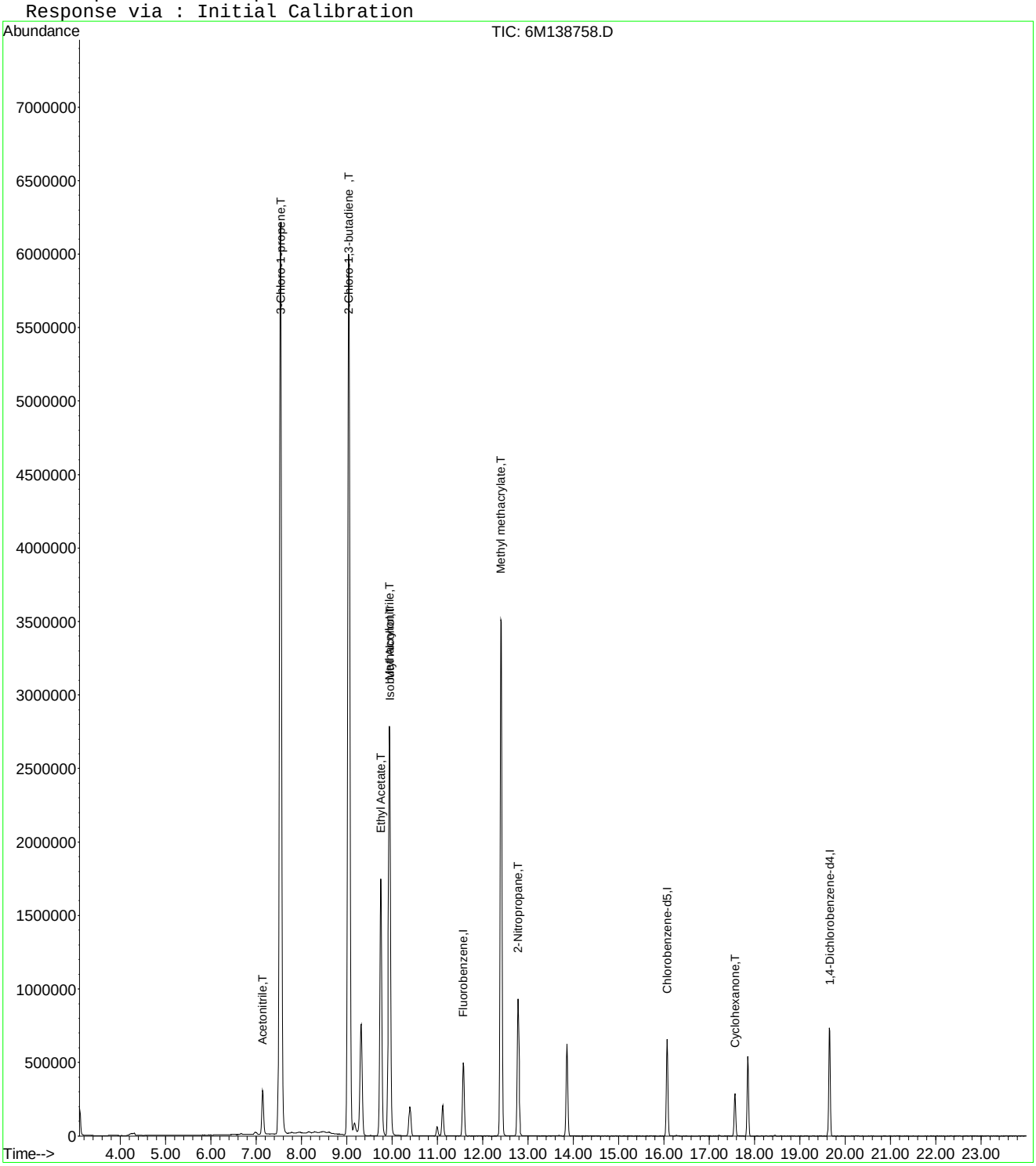
Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	616486	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	485048	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.66	152	268890	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	449583	486.8858	ug/L		92
3) 3-Chloro-1-propene	7.54	41	7430577	482.8665	ug/L		94
4) 2-Chloro-1,3-butadiene	9.04	53	6752476	511.3891	ug/L		84
5) Ethyl Acetate	9.75	43	3307403	500.3107	ug/L		94
6) Methacrylonitrile	9.94	67	1145073	502.4237	ug/L	#	63
7) Isobutyl Alcohol	9.95	43	251034	1192.2947	ug/L	#	90
9) Methyl methacrylate	12.40	41	2914815	524.5904	ug/L		81
10) 2-Nitropropane	12.78	43	1036720	501.6898	ug/L		99
13) Cyclohexanone	17.57	55	176545	526.7057	ug/L		87

(#) = qualifier out of range (m) = manual integration
6M138758.D A9FOOWT.M Wed Apr 27 16:05:01 2016 Page 1

Data File : C:\MSDCHEM\1\DATA\042416\6M138758.D Vial: 9
Acq On : 24 Apr 2016 20:44 Operator: JDS
Sample : WG566155-09 500ug/L STD 826-A9 Inst : HPMS6
Misc : 1,1 STD75791 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 09:22:54 2016 Quant Results File: 8260WTR.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

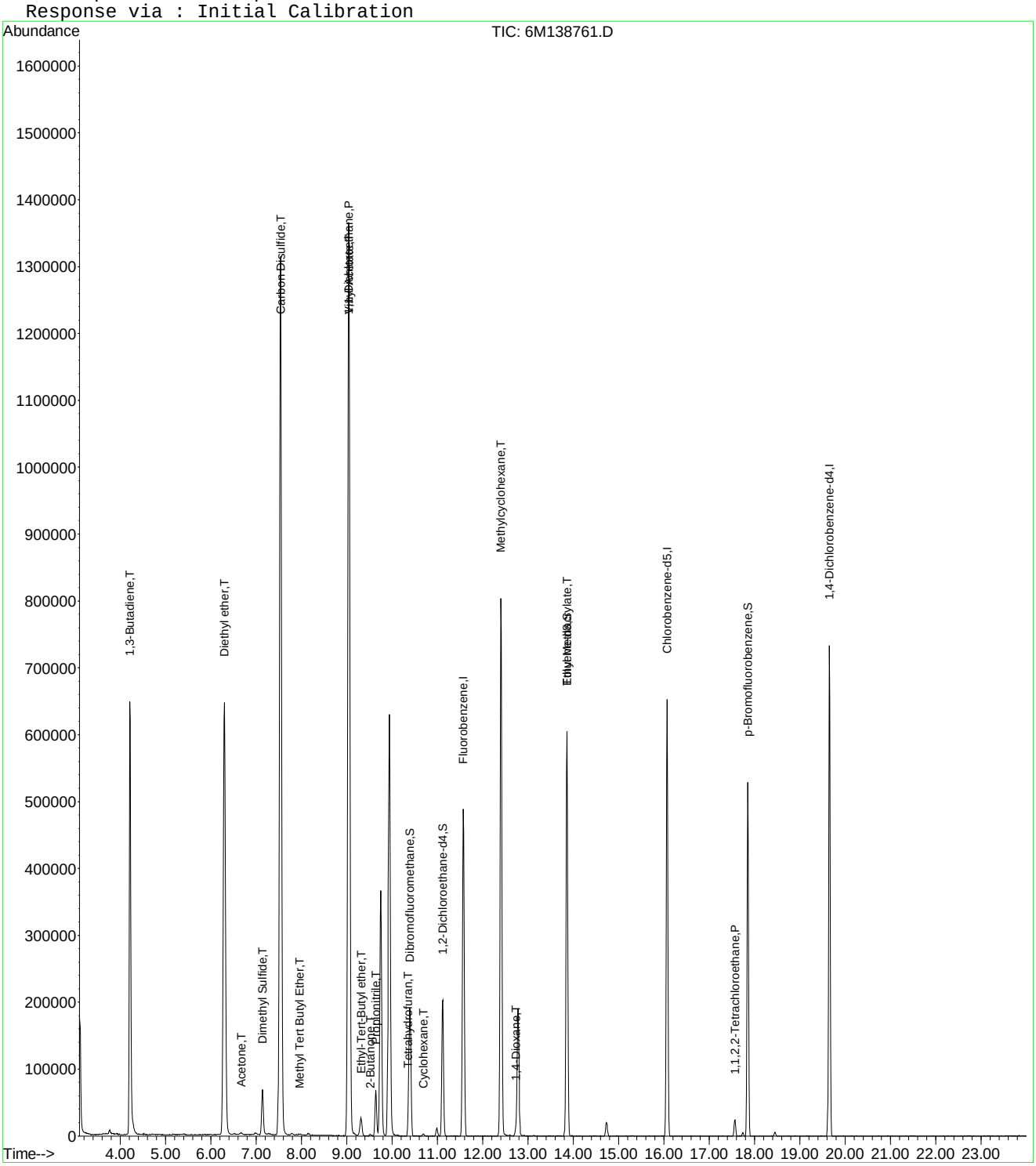
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	11.57	96	602884	25.00 ug/L	0.00
57) Chlorobenzene-d5	16.07	117	471639	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	19.65	152	256885	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	10.40	111	171708	27.8099 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 111.24%		
43) 1,2-Dichloroethane-d4	11.12	65	210067	28.0330 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 112.12%		
58) Toluene-d8	13.86	98	553825	26.0829 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 104.32%		
80) p-Bromofluorobenzene	17.85	95	243088	28.3441 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 113.36%		
Target Compounds					Qvalue
5) 1,3-Butadiene	4.21	54	367749	92.2302 ug/L	88
9) Diethyl ether	6.30	59	700386	132.3612 ug/L	92
13) Acetone	6.67	43	6570	3.5143 ug/L	81
16) Dimethyl Sulfide	7.14	62	2726	0.5361 ug/L #	1
20) Carbon Disulfide	7.54	76	432674	22.5096 ug/L #	36
22) Methyl Tert Butyl Ether	7.97	73	2916	0.1786 ug/L #	53
26) Vinyl Acetate	9.05	43	5230	0.5414 ug/L #	1
27) 1,1-Dichloroethane	9.04	63	22472	1.7594 ug/L #	42
28) Ethyl-Tert-Butyl ether	9.32	59	4063	0.1960 ug/L #	35
29) 2-Butanone	9.52	43	6076	2.2019 ug/L #	66
30) Propionitrile	9.64	54	91341	115.2239 ug/L	96
36) Tetrahydrofuran	10.36	42	4030	2.2418 ug/L #	52
39) Cyclohexane	10.69	56	2387	0.2138 ug/L	79
48) Methylcyclohexane	12.40	83	1353	0.1547 ug/L #	1
50) 1,4-Dioxane	12.73	88	9231	177.0935 ug/L	71
60) Ethyl Methacrylate	13.86	69	1222	0.1732 ug/L #	1
79) 1,1,2,2-Tetrachloroethane	17.57	83	1146	0.1832 ug/L #	18

(#) = qualifier out of range (m) = manual integration
6M138761.D 8260WTR.M Mon Apr 25 09:22:54 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 9:22 2016 Quant Results File: 8260WTR.RES

Method : C:\MSDCHEM\1\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 04-11-16 - HPMS6
Last Update : Tue Apr 12 15:28:54 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:46:01 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration
DataAcq Meth : 8260WTR

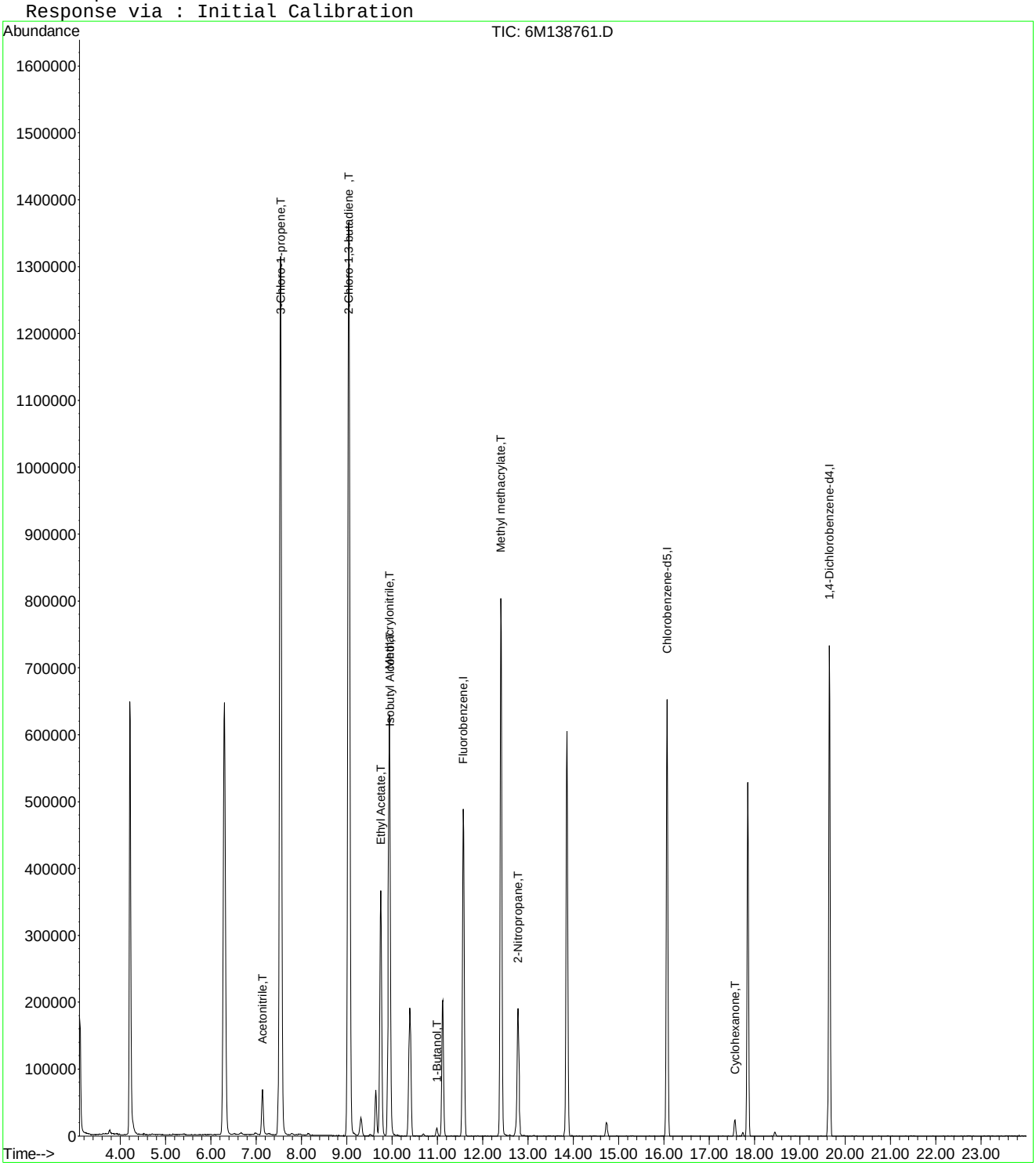
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	602884	25.00	ug/L		-0.03
11) Chlorobenzene-d5	16.07	117	471639	25.00	ug/L		-0.03
12) 1,4-Dichlorobenzene-d4	19.65	152	256885	25.00	ug/L		-0.03
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	96564	83.4191	ug/L		96
3) 3-Chloro-1-propene	7.54	41	1552115	96.0797	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	1512761	108.7756	ug/L		83
5) Ethyl Acetate	9.75	43	691566	108.7414	ug/L		93
6) Methacrylonitrile	9.94	67	252030	103.0355	ug/L	#	63
7) Isobutyl Alcohol	9.95	43	51165	146.2409	ug/L	#	93
8) 1-Butanol	10.99	41	7584	50.3877	ug/L		72
9) Methyl methacrylate	12.40	41	635574	100.3670	ug/L		81
10) 2-Nitropropane	12.79	43	211020	113.0321	ug/L		98
13) Cyclohexanone	17.57	55	15491	17.6579	ug/L		85

(#) = qualifier out of range (m) = manual integration
6M138761.D A9FOOWT.M Mon Apr 25 15:46:02 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 25 15:46 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042216 - HPMS6
Last Update : Wed Oct 07 14:05:31 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05:02 2016 Quant Results File: A9FOOWT.RES

Quant Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

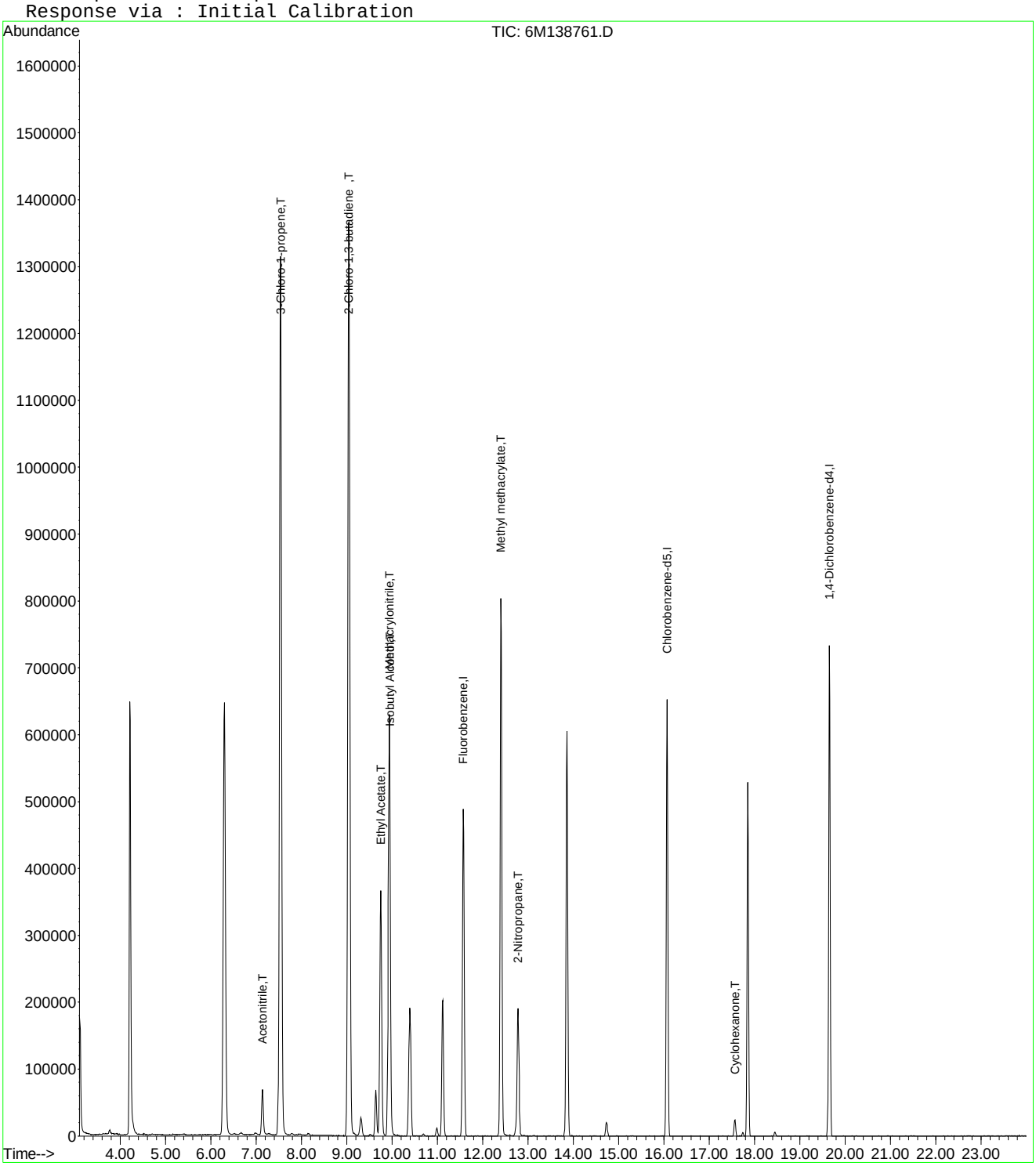
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	11.57	96	602884	25.00	ug/L		0.00
11) Chlorobenzene-d5	16.07	117	471639	25.00	ug/L		0.00
12) 1,4-Dichlorobenzene-d4	19.65	152	256885	25.00	ug/L		0.00
Target Compounds							Qvalue
2) Acetonitrile	7.14	41	96564	106.9355	ug/L		96
3) 3-Chloro-1-propene	7.54	41	1552115	103.1378	ug/L		93
4) 2-Chloro-1,3-butadiene	9.04	53	1512761	117.1516	ug/L		83
5) Ethyl Acetate	9.75	43	691566	106.9734	ug/L		93
6) Methacrylonitrile	9.94	67	252030	113.0781	ug/L	#	63
7) Isobutyl Alcohol	9.95	43	51165	248.4926	ug/L	#	93
9) Methyl methacrylate	12.40	41	635574	116.9674	ug/L		81
10) 2-Nitropropane	12.79	43	211020	104.4208	ug/L		98
13) Cyclohexanone	17.57	55	15491	48.3758	ug/L		85

(#) = qualifier out of range (m) = manual integration
6M138761.D A9FOOWT.M Wed Apr 27 16:05:02 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 27 16:05 2016 Quant Results File: A9FOOWT.RES

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\042416\6M138761.D Vial: 12
Acq On : 24 Apr 2016 22:21 Operator: JDS
Sample : WG566 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\A9FOOWT.M (RTE Integrator)
Title : A9-FOO Water - IC: 042416 - HPMS6
Last Update : Wed Apr 27 16:03:33 2016
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	25.0000	25.0000	0.0	101	0.00
2	T	Acetonitrile	100.0000	106.9355	-6.9	106	0.00
3	T	3-Chloro-1-propene	100.0000	103.1378	-3.1	96	0.00
4	T	2-Chloro-1,3-butadiene	100.0000	117.1516	-17.2	107	0.00
5	T	Ethyl Acetate	100.0000	106.9734	-7.0	103	0.00
6	T	Methacrylonitrile	100.0000	113.0781	-13.1	106	0.00
7	T	Isobutyl Alcohol	200.0000	248.4926	-24.2	151	0.00
8	T	1-Butanol	-1.0000	0.0000	0.0	0	0.00
9	T	Methyl methacrylate	100.0000	116.9674	-17.0	108	0.00
10	T	2-Nitropropane	100.0000	104.4208	-4.4	107	0.00
11	I	Chlorobenzene-d5	25.0000	25.0000	0.0	101	0.00
12	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
13	T	Cyclohexanone	100.0000	48.3758	51.6	56	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M138761.D A9FOOWT.M Wed Apr 27 16:05:40 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142178.D Vial: 2
Acq On : 26 Sep 2016 13:54 Operator: TMB
Sample : WG584797-02 0.3ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:18:45 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	873020	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	653659	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.79	152	339907	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.56	111	1131	0.1253 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	0.52%#	
43) 1,2-Dichloroethane-d4	10.30	65	1500	0.1657 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	0.68%#	
58) Toluene-d8	13.02	98	5843	0.1987 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.80%#	
80) p-Bromofluorobenzene	17.00	95	2008	0.1789 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery =	0.72%#	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.95	85	4032	0.2743 ug/L #	64
3) Chloromethane	3.37	50	7248	0.4279 ug/L	96
4) Vinyl Chloride	3.56	62	3344	0.3225 ug/L	90
5) 1,3-Butadiene	3.60	54	4134	Below Cal	85
6) Bromomethane	4.38	94	2323	0.3849 ug/L	78
7) Chloroethane	4.52	64	2237	0.3415 ug/L #	59
8) Trichlorofluoromethane	4.99	101	4729	0.3228 ug/L #	91
10) Isoprene	5.56	67	4416	0.3242 ug/L	92
12) 1,1,2-Trichloro-1,2,2-Trif	5.77	101	1937	0.2197 ug/L	96
13) Acetone	5.88	43	3144	Below Cal #	48
14) 1,1-Dichloroethene	6.09	61	4612	0.3173 ug/L	92
16) Dimethyl Sulfide	6.37	62	2353	0.2467 ug/L	92
17) Iodomethane	6.63	142	197	1.2321 ug/L #	32
18) Methyl acetate	6.69	43	1919	0.3130 ug/L #	66
19) Methylene Chloride	6.93	84	3565	0.3776 ug/L	89
20) Carbon Disulfide	6.95	76	11537	0.4194 ug/L	93
22) Methyl Tert Butyl Ether	7.15	73	5387	0.2540 ug/L #	72
23) trans-1,2-Dichloroethene	7.40	96	3131	0.3398 ug/L	91
24) n-Hexane	7.49	57	4412	0.3657 ug/L	83
26) Vinyl Acetate	8.07	43	3926	0.2325 ug/L #	78
27) 1,1-Dichloroethane	8.08	63	4951	0.2905 ug/L	82
29) 2-Butanone	8.72	43	1188	0.3701 ug/L #	57
31) 2,2-Dichloropropane	8.94	77	4013	0.3224 ug/L	77
32) cis-1,2-Dichloroethene	9.01	96	2843	0.2791 ug/L	88
33) Chloroform	9.25	83	5624	0.3426 ug/L	87
35) Bromochloromethane	9.49	130	1447	0.2321 ug/L	82
36) Tetrahydrofuran	9.54	42	2784	1.1948 ug/L #	67
38) 1,1,1-Trichloroethane	9.83	97	4190	0.2945 ug/L	86
39) Cyclohexane	9.86	56	5104	0.3278 ug/L	86
40) 1,1-Dichloropropene	10.05	75	3650	0.3003 ug/L	84
42) Carbon Tetrachloride	10.21	117	3444	0.2628 ug/L #	89
45) 1,2-Dichloroethane	10.42	62	3436	0.2876 ug/L #	76
46) Benzene	10.46	78	11845	0.3361 ug/L	92
47) Trichloroethene	11.32	130	2859	0.2760 ug/L	98
48) Methylcyclohexane	11.40	83	4493	0.3299 ug/L	93
49) 1,2-Dichloropropane	11.57	63	2487	0.2700 ug/L #	47
51) Bromodichloromethane	11.91	83	3601	0.2970 ug/L	95
52) Dibromomethane	12.00	93	1191	0.2331 ug/L	96
55) cis-1,3-Dichloropropene	12.66	75	3507	0.2586 ug/L #	82
56) Dimethyl Disulfide	12.94	79	1847	0.2233 ug/L #	47

(#) = qualifier out of range (m) = manual integration
6M142178.D 8260WTR.M Tue Sep 27 10:18:49 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142178.D Vial: 2
Acq On : 26 Sep 2016 13:54 Operator: TMB
Sample : WG584797-02 0.3ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:18:45 2016 Quant Results File: 8260WTR.RES

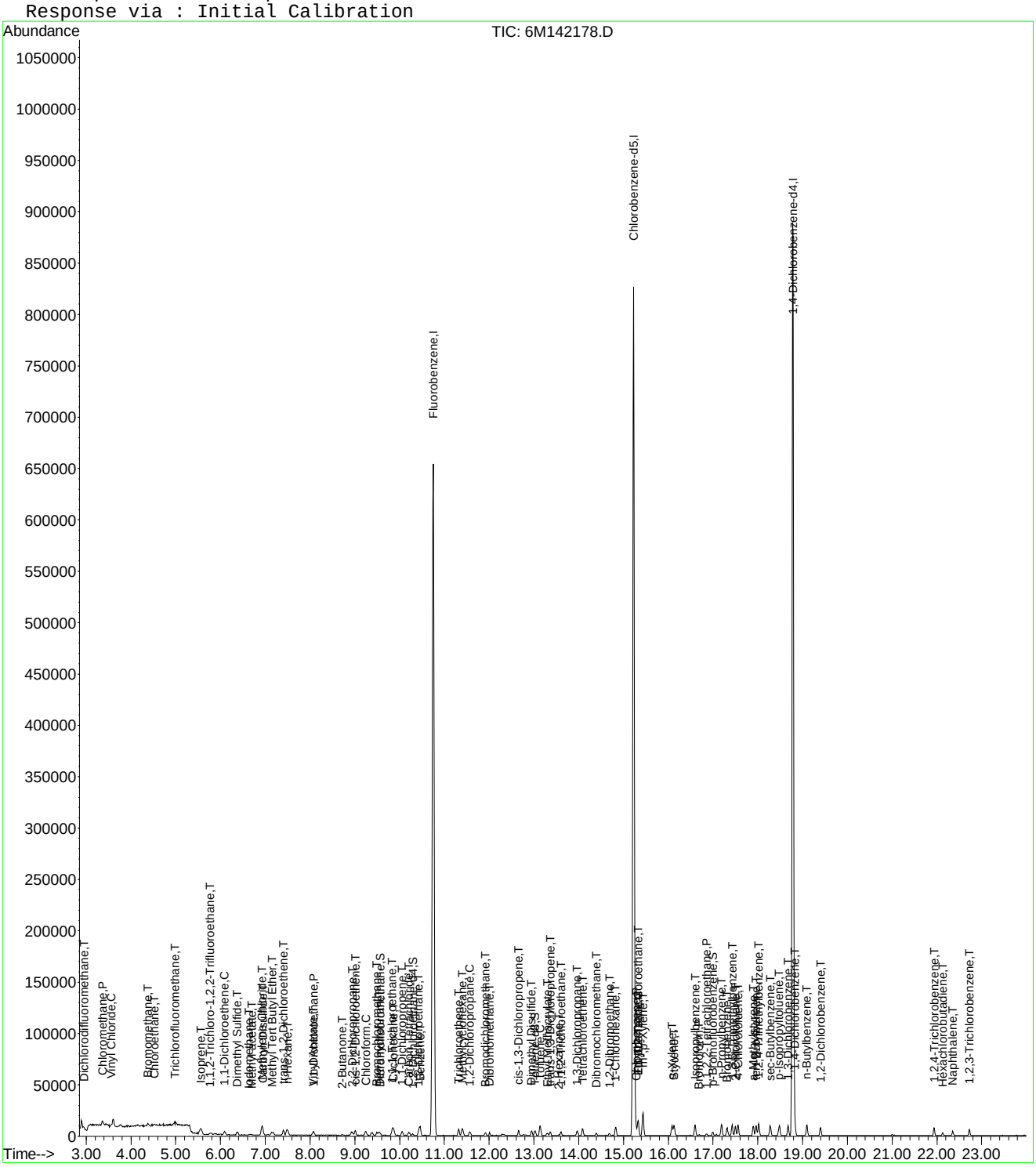
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Toluene	13.14	91	12343	0.3486	ug/L		92
60)	Ethyl Methacrylate	13.30	69	1725	0.2023	ug/L		65
62)	trans-1,3-Dichloropropene	13.36	75	3148	0.2710	ug/L	#	67
63)	1,1,2-Trichloroethane	13.61	97	1793	0.2714	ug/L		93
64)	2-Hexanone	13.56	43	1206	0.2494	ug/L	#	50
65)	1,3-Dichloropropane	13.97	76	3124	0.2824	ug/L		79
66)	Tetrachloroethene	14.09	166	3167	0.3179	ug/L		93
67)	Dibromochloromethane	14.39	129	2256	0.2500	ug/L		92
68)	1,2-Dibromoethane	14.69	107	1842	0.2659	ug/L		92
69)	1-Chlorohexane	14.82	91	3522	0.3145	ug/L		95
70)	Chlorobenzene	15.28	112	8338	0.3298	ug/L		88
71)	1,1,1,2-Tetrachloroethane	15.32	131	2514	0.2657	ug/L	#	85
72)	Ethylbenzene	15.32	106	4085	0.3012	ug/L		96
73)	m-,p-Xylene	15.44	106	10510	0.6538	ug/L		88
74)	o-Xylene	16.09	106	4810	0.3012	ug/L		98
75)	Styrene	16.13	104	8518	0.3124	ug/L		88
76)	Bromoform	16.68	173	999	0.7387	ug/L	#	56
77)	Isopropylbenzene	16.60	105	12547	0.3213	ug/L		96
79)	1,1,2,2-Tetrachloroethane	16.86	83	1963	0.2712	ug/L		86
83)	n-Propylbenzene	17.19	91	15181	0.3701	ug/L	#	97
84)	Bromobenzene	17.31	156	3376	0.3189	ug/L		96
85)	1,3,5-Trimethylbenzene	17.43	105	10468	0.3445	ug/L		98
86)	2-Chlorotoluene	17.50	91	9966	0.3699	ug/L		91
87)	4-Chlorotoluene	17.56	91	9529	0.3541	ug/L		97
88)	a-Methylstyrene	17.90	118	4689	0.2555	ug/L		88
89)	tert-Butylbenzene	17.96	134	2234	0.3170	ug/L		83
90)	1,2,4-Trimethylbenzene	18.02	105	10752	0.3378	ug/L		98
91)	sec-Butylbenzene	18.28	105	12804	0.3524	ug/L		96
92)	p-Isopropyltoluene	18.48	119	11529	0.3580	ug/L		92
93)	1,3-Dichlorobenzene	18.67	146	7260	0.3593	ug/L		92
94)	1,4-Dichlorobenzene	18.83	146	7332	0.3611	ug/L	#	60
95)	n-Butylbenzene	19.09	91	10560	0.3794	ug/L		93
96)	1,2-Dichlorobenzene	19.41	146	6216	0.3277	ug/L		98
98)	1,2,4-Trichlorobenzene	21.94	180	4279	0.3094	ug/L		90
99)	Hexachlorobutadiene	22.12	225	1849	0.3589	ug/L		81
100)	Naphthalene	22.35	128	6639	0.2640	ug/L		88
101)	1,2,3-Trichlorobenzene	22.73	180	3800	0.3071	ug/L		93

(#) = qualifier out of range (m) = manual integration
6M142178.D 8260WTR.M Tue Sep 27 10:18:49 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142178.D Vial: 2
Acq On : 26 Sep 2016 13:54 Operator: TMB
Sample : WG584797-02 0.3ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:18 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142178.D Vial: 2
Acq On : 26 Sep 2016 13:54 Operator: TMB
Sample : WG584797-02 0.3ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	-1.0000	0.2743	0.0	100	0.00
3	P	Chloromethane	-1.0000	0.4279	0.0	100	0.00
4	C	Vinyl Chloride	-1.0000	0.3225	0.0	100	0.02
5	T	1,3-Butadiene	-1.0000	-4.3346	0.0	0	0.02
6	T	Bromomethane	-1.0000	0.3849	0.0	100	0.00
7	T	Chloroethane	-1.0000	0.3415	0.0	100	0.00
8	T	Trichlorofluoromethane	-1.0000	0.3228	0.0	100	0.00
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-5.53#
10	T	Isoprene	-1.0000	0.3242	0.0	100	0.02
11	T	Acrolein	-1.0000	0.0000	0.0	0	-5.78#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.2197	0.0	100	0.00
13	T	Acetone	-1.0000	-0.7290	0.0	0	-0.01
14	C	1,1-Dichloroethene	-1.0000	0.3173	0.0	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-6.26#
16	T	Dimethyl Sulfide	-1.0000	0.2467	0.0	100	0.00
17	T	Iodomethane	-1.0000	1.2321	0.0	0	0.00
18	T	Methyl acetate	-1.0000	0.3130	0.0	100	0.03
19	T	Methylene Chloride	-1.0000	0.3776	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.4194	0.0	100	0.02
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.13#
22	T	Methyl Tert Butyl Ether	-1.0000	0.2540	0.0	100	0.00
23	T	trans-1,2-Dichloroethene	-1.0000	0.3398	0.0	100	0.00
24	T	n-Hexane	-1.0000	0.3657	0.0	100	0.00
25	T	Diisopropyl ether	-1.0000	0.0000	0.0	0	-7.88#
26	T	Vinyl Acetate	-1.0000	0.2325	0.0	100	0.00
27	P	1,1-Dichloroethane	-1.0000	0.2905	0.0	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-8.52#
29	T	2-Butanone	-1.0000	0.3701	0.0	100	0.00
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-8.84#
31	T	2,2-Dichloropropane	-1.0000	0.3224	0.0	100	0.00
32	T	cis-1,2-Dichloroethene	-1.0000	0.2791	0.0	100	0.00
33	C	Chloroform	0.3000	0.3426	-14.2	100	0.00
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-9.39#
35	T	Bromochloromethane	-1.0000	0.2321	0.0	100	0.00
36	T	Tetrahydrofuran	-1.0000	1.1948	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.1253	0.0	0	0.00
38	T	1,1,1-Trichloroethane	-1.0000	0.2945	0.0	100	0.00
39	T	Cyclohexane	-1.0000	0.3278	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.3003	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-10.20#
42	T	Carbon Tetrachloride	-1.0000	0.2628	0.0	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.1657	0.0	0	0.00
44		Heptane	-1.0000	0.0000	0.0	0	-10.20#
45	T	1,2-Dichloroethane	-1.0000	0.2876	0.0	100	0.00
46	T	Benzene	-1.0000	0.3361	0.0	100	0.00
47	T	Trichloroethene	-1.0000	0.2760	0.0	100	0.00
48	T	Methylcyclohexane	-1.0000	0.3299	0.0	100	0.00
49	C	1,2-Dichloropropane	-1.0000	0.2700	0.0	100	0.00
50	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.92#
51	T	Bromodichloromethane	-1.0000	0.2970	0.0	100	0.00
52	T	Dibromomethane	-1.0000	0.2331	0.0	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.1001	0.0	100	-0.01
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-12.33#

(#) = Out of Range
6M142178.D 8260WTR.M Tue Sep 27 10:21:09 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142178.D Vial: 2
Acq On : 26 Sep 2016 13:54 Operator: TMB
Sample : WG584797-02 0.3ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	-1.0000	0.2586	0.0	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.2233	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.1987	0.0	0	0.00
59	C	Toluene	-1.0000	0.3486	0.0	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.2023	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	-1.0000	0.2710	0.0	100	0.00
63	T	1,1,2-Trichloroethane	-1.0000	0.2714	0.0	100	0.00
64	T	2-Hexanone	-1.0000	0.2494	0.0	100	-0.01
65	T	1,3-Dichloropropane	-1.0000	0.2824	0.0	100	0.00
66	T	Tetrachloroethene	-1.0000	0.3179	0.0	100	0.00
67	T	Dibromochloromethane	-1.0000	0.2500	0.0	100	0.00
68	T	1,2-Dibromoethane	-1.0000	0.2659	0.0	100	0.00
69	T	1-Chlorohexane	-1.0000	0.3145	0.0	100	-0.01
70	P	Chlorobenzene	-1.0000	0.3298	0.0	100	0.00
71	T	1,1,1,2-Tetrachloroethane	-1.0000	0.2657	0.0	100	0.00
72	C	Ethylbenzene	-1.0000	0.3012	0.0	100	0.00
73	T	m-,p-Xylene	-1.0000	0.6538	0.0	100	0.00
74	T	o-Xylene	-1.0000	0.3012	0.0	100	0.00
75	T	Styrene	-1.0000	0.3124	0.0	100	-0.01
76	P	Bromoform	-1.0000	0.7387	0.0	100	-0.01
77	T	Isopropylbenzene	-1.0000	0.3213	0.0	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	-1.0000	0.2712	0.0	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.1789	0.0	0	0.00
81	T	1,2,3-Trichloropropane	-1.0000	0.0832	0.0	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.0947	0.0	100	-0.01
83	T	n-Propylbenzene	-1.0000	0.3701	0.0	100	0.00
84	T	Bromobenzene	0.3000	0.3189	-6.3	100	0.00
85	T	1,3,5-Trimethylbenzene	-1.0000	0.3445	0.0	100	0.00
86	T	2-Chlorotoluene	-1.0000	0.3699	0.0	100	0.00
87	T	4-Chlorotoluene	-1.0000	0.3541	0.0	100	0.00
88	T	a-Methylstyrene	-1.0000	0.2555	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.3170	0.0	100	-0.01
90	T	1,2,4-Trimethylbenzene	-1.0000	0.3378	0.0	100	-0.01
91	T	sec-Butylbenzene	-1.0000	0.3524	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.3580	0.0	100	0.00
93	T	1,3-Dichlorobenzene	-1.0000	0.3593	0.0	100	0.00
94	T	1,4-Dichlorobenzene	-1.0000	0.3611	0.0	100	-0.01
95	T	n-Butylbenzene	-1.0000	0.3794	0.0	100	-0.01
96	T	1,2-Dichlorobenzene	0.3000	0.3277	-9.2	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-20.58#
98	T	1,2,4-Trichlorobenzene	0.3000	0.3094	-3.1	100	0.00
99	T	Hexachlorobutadiene	-1.0000	0.3589	0.0	100	0.00
100	T	Naphthalene	-1.0000	0.2640	0.0	100	0.00
101	T	1,2,3-Trichlorobenzene	0.3000	0.3071	-2.4	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142178.D 8260WTR.M Tue Sep 27 10:21:09 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142179.D Vial: 3
Acq On : 26 Sep 2016 14:35 Operator: TMB
Sample : WG584797-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:18:54 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	801317	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	607446	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	326055	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	13.02	98	823	0.0301 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	0.12%#	
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	2.95	85	4660	0.3454 ug/L #	74
3) Chloromethane	3.36	50	7746	0.4982 ug/L	98
4) Vinyl Chloride	3.56	62	4030	0.4234 ug/L	92
5) 1,3-Butadiene	3.60	54	4330	Below Cal	73
6) Bromomethane	4.38	94	1797	0.3244 ug/L	89
7) Chloroethane	4.53	64	2131	0.3544 ug/L #	58
8) Trichlorofluoromethane	4.99	101	5548	0.4125 ug/L #	93
10) Isoprene	5.55	67	4779	0.3822 ug/L	94
12) 1,1,2-Trichloro-1,2,2-Trif	5.77	101	2731	0.3375 ug/L	86
13) Acetone	5.90	43	1669	Below Cal #	48
14) 1,1-Dichloroethene	6.09	61	5378	0.4031 ug/L	94
16) Dimethyl Sulfide	6.37	62	2967	0.3390 ug/L	96
18) Methyl acetate	6.67	43	2173	0.3861 ug/L #	66
19) Methylene Chloride	6.92	84	3845	0.4437 ug/L	94
20) Carbon Disulfide	6.95	76	10203	0.4041 ug/L	98
22) Methyl Tert Butyl Ether	7.16	73	7088	0.3642 ug/L #	73
23) trans-1,2-Dichloroethene	7.41	96	3170	0.3748 ug/L	92
24) n-Hexane	7.49	57	4830	0.4361 ug/L	80
26) Vinyl Acetate	8.06	43	5126	0.3308 ug/L #	78
27) 1,1-Dichloroethane	8.08	63	6232	0.3984 ug/L	86
29) 2-Butanone	8.72	43	1578	0.5356 ug/L #	57
31) 2,2-Dichloropropane	8.93	77	4342	0.3801 ug/L #	66
32) cis-1,2-Dichloroethene	9.01	96	3650	0.3905 ug/L	85
33) Chloroform	9.25	83	6142	0.4076 ug/L	87
35) Bromochloromethane	9.50	130	1987	0.3472 ug/L	99
36) Tetrahydrofuran	9.54	42	3367	1.5743 ug/L #	63
38) 1,1,1-Trichloroethane	9.83	97	4874	0.3732 ug/L	88
39) Cyclohexane	9.86	56	5981	0.4185 ug/L	94
40) 1,1-Dichloropropene	10.05	75	4011	0.3595 ug/L	88
42) Carbon Tetrachloride	10.22	117	4281	0.3560 ug/L #	92
45) 1,2-Dichloroethane	10.43	62	3923	0.3577 ug/L #	91
46) Benzene	10.46	78	13622	0.4211 ug/L	90
47) Trichloroethene	11.32	130	3655	0.3844 ug/L	95
48) Methylcyclohexane	11.41	83	4797	0.3838 ug/L	96
49) 1,2-Dichloropropane	11.57	63	3089	0.3653 ug/L	83
51) Bromodichloromethane	11.91	83	4136	0.3716 ug/L	95
52) Dibromomethane	12.01	93	1631	0.3478 ug/L	93
53) 2-Chloroethyl Vinyl Ether	12.29	63	671	0.1707 ug/L #	41
55) cis-1,3-Dichloropropene	12.66	75	4257	0.3419 ug/L #	87
56) Dimethyl Disulfide	12.95	79	2125	0.2799 ug/L #	47

(#) = qualifier out of range (m) = manual integration
6M142179.D 8260WTR.M Tue Sep 27 10:18:58 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142179.D Vial: 3
Acq On : 26 Sep 2016 14:35 Operator: TMB
Sample : WG584797-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:18:54 2016 Quant Results File: 8260WTR.RES

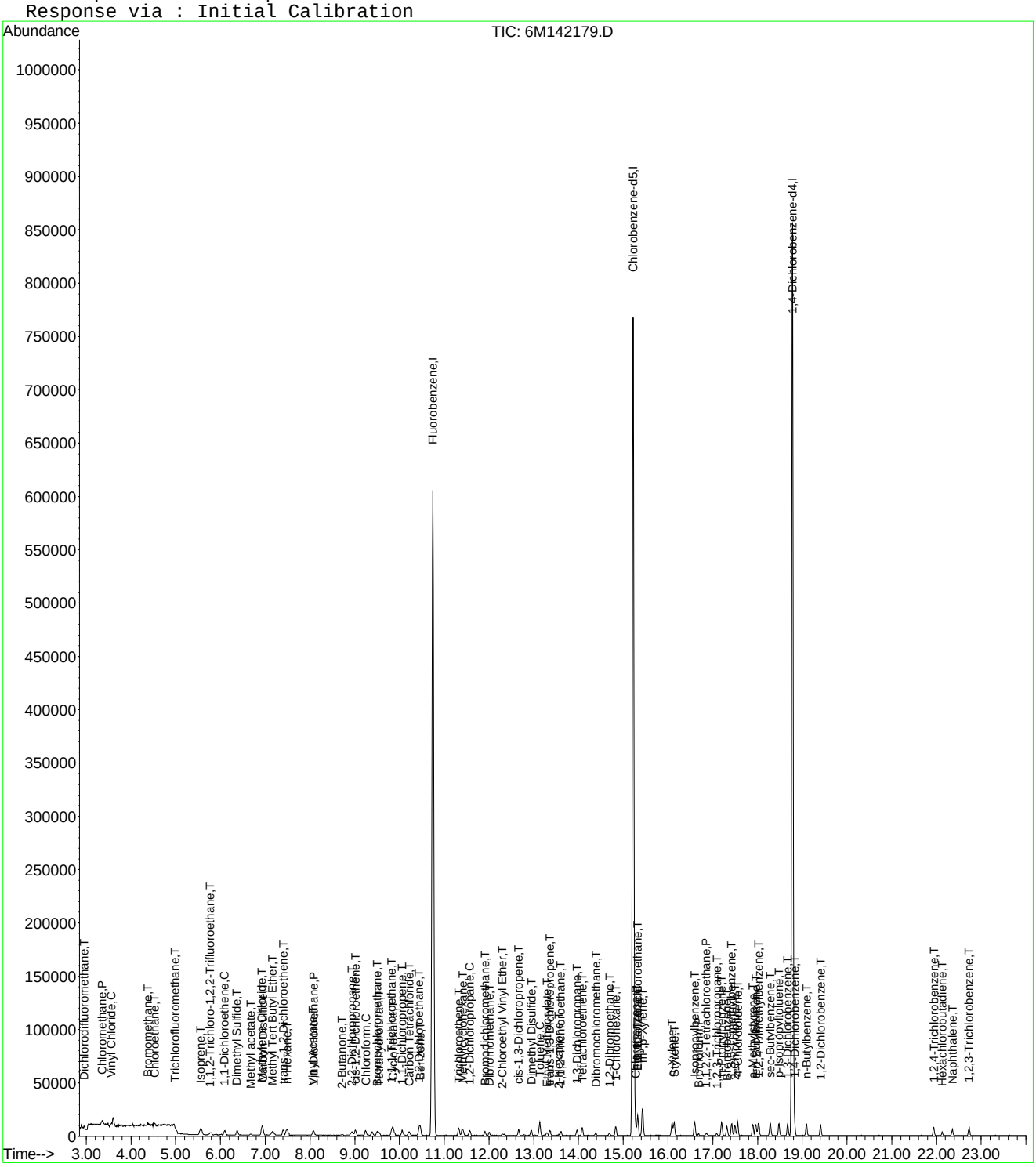
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Toluene	13.14	91	13511	0.4106	ug/L		98
60)	Ethyl Methacrylate	13.30	69	2208	0.2787	ug/L		72
62)	trans-1,3-Dichloropropene	13.36	75	3713	0.3439	ug/L		98
63)	1,1,2-Trichloroethane	13.60	97	2207	0.3595	ug/L		95
64)	2-Hexanone	13.56	43	1390	0.3093	ug/L	#	51
65)	1,3-Dichloropropane	13.97	76	3455	0.3361	ug/L		73
66)	Tetrachloroethene	14.09	166	3686	0.3981	ug/L		89
67)	Dibromochloromethane	14.39	129	2910	0.3470	ug/L		77
68)	1,2-Dibromoethane	14.69	107	2202	0.3420	ug/L		95
69)	1-Chlorohexane	14.83	91	3696	0.3551	ug/L		91
70)	Chlorobenzene	15.28	112	9138	0.3889	ug/L		86
71)	1,1,1,2-Tetrachloroethane	15.32	131	2861	0.3254	ug/L		91
72)	Ethylbenzene	15.32	106	4737	0.3759	ug/L		98
73)	m-,p-Xylene	15.44	106	11602	0.7766	ug/L		100
74)	o-Xylene	16.09	106	5656	0.3811	ug/L		99
75)	Styrene	16.14	104	9243	0.3648	ug/L		98
76)	Bromoform	16.69	173	1379	0.8111	ug/L	#	66
77)	Isopropylbenzene	16.60	105	14297	0.3940	ug/L		95
79)	1,1,2,2-Tetrachloroethane	16.85	83	2551	0.3675	ug/L		84
81)	1,2,3-Trichloropropane	17.09	110	423	0.1995	ug/L	#	19
83)	n-Propylbenzene	17.19	91	16655	0.4233	ug/L	#	97
84)	Bromobenzene	17.31	156	3824	0.3766	ug/L		91
85)	1,3,5-Trimethylbenzene	17.42	105	11314	0.3882	ug/L		92
86)	2-Chlorotoluene	17.50	91	10704	0.4142	ug/L		93
87)	4-Chlorotoluene	17.56	91	10304	0.3992	ug/L		96
88)	a-Methylstyrene	17.90	118	5813	0.3301	ug/L		99
89)	tert-Butylbenzene	17.97	134	2370	0.3506	ug/L		72
90)	1,2,4-Trimethylbenzene	18.03	105	11900	0.3897	ug/L		96
91)	sec-Butylbenzene	18.28	105	14356	0.4119	ug/L		99
92)	p-Isopropyltoluene	18.48	119	12377	0.4007	ug/L		88
93)	1,3-Dichlorobenzene	18.67	146	7897	0.4075	ug/L		94
94)	1,4-Dichlorobenzene	18.84	146	7790	0.3999	ug/L		96
95)	n-Butylbenzene	19.10	91	10787	0.4041	ug/L		100
96)	1,2-Dichlorobenzene	19.41	146	7113	0.3910	ug/L		90
98)	1,2,4-Trichlorobenzene	21.94	180	5184	0.3907	ug/L		93
99)	Hexachlorobutadiene	22.12	225	1809	0.3661	ug/L	#	79
100)	Naphthalene	22.36	128	8498	0.3522	ug/L		98
101)	1,2,3-Trichlorobenzene	22.73	180	4365	0.3678	ug/L		93

(#) = qualifier out of range (m) = manual integration
6M142179.D 8260WTR.M Tue Sep 27 10:18:58 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142179.D Vial: 3
Acq On : 26 Sep 2016 14:35 Operator: TMB
Sample : WG584797-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:18 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142179.D Vial: 3
Acq On : 26 Sep 2016 14:35 Operator: TMB
Sample : WG584797-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	-1.0000	0.3454	0.0	100	0.00
3	P	Chloromethane	-1.0000	0.4982	0.0	100	0.00
4	C	Vinyl Chloride	0.4000	0.4234	-5.9	100	0.02
5	T	1,3-Butadiene	-1.0000	-4.2195	0.0	0	0.02
6	T	Bromomethane	-1.0000	0.3244	0.0	100	0.00
7	T	Chloroethane	-1.0000	0.3544	0.0	100	0.02
8	T	Trichlorofluoromethane	0.4000	0.4125	-3.1	100	0.00
9	T	Diethyl ether	-1.0000	0.0000	0.0	0	-5.53#
10	T	Isoprene	-1.0000	0.3822	0.0	100	0.00
11	T	Acrolein	-1.0000	0.0000	0.0	0	-5.78#
12	T	1,1,2-Trichloro-1,2,2-Trifl	-1.0000	0.3375	0.0	100	0.00
13	T	Acetone	-1.0000	-1.4198	0.0	0	0.00
14	C	1,1-Dichloroethene	0.4000	0.4032	-0.8	100	0.00
15	T	Tert-Butyl Alcohol	-1.0000	0.0000	0.0	0	-6.26#
16	T	Dimethyl Sulfide	-1.0000	0.3390	0.0	100	0.00
17	T	Iodomethane	-1.0000	0.0000	0.0	0	-6.63#
18	T	Methyl acetate	-1.0000	0.3861	0.0	100	0.00
19	T	Methylene Chloride	-1.0000	0.4437	0.0	100	0.00
20	T	Carbon Disulfide	-1.0000	0.4041	0.0	100	0.02
21	T	Acrylonitrile	-1.0000	0.0000	0.0	0	-7.13#
22	T	Methyl Tert Butyl Ether	-1.0000	0.3642	0.0	100	0.00
23	T	trans-1,2-Dichloroethene	0.4000	0.3748	6.3	100	0.00
24	T	n-Hexane	-1.0000	0.4361	0.0	100	0.00
25	T	Diisopropyl ether	-1.0000	0.0000	0.0	0	-7.88#
26	T	Vinyl Acetate	-1.0000	0.3308	0.0	100	0.00
27	P	1,1-Dichloroethane	0.4000	0.3984	0.4	100	0.00
28	T	Ethyl-Tert-Butyl ether	-1.0000	0.0000	0.0	0	-8.52#
29	T	2-Butanone	-1.0000	0.5356	0.0	100	0.00
30	T	Propionitrile	-1.0000	0.0000	0.0	0	-8.84#
31	T	2,2-Dichloropropane	0.4000	0.3801	5.0	100	0.00
32	T	cis-1,2-Dichloroethene	0.4000	0.3905	2.4	100	0.00
33	C	Chloroform	0.4000	0.4076	-1.9	100	0.00
34		1-Bromopropane	-1.0000	0.0000	0.0	0	-9.39#
35	T	Bromochloromethane	0.4000	0.3472	13.2	100	0.00
36	T	Tetrahydrofuran	-1.0000	1.5743	0.0	100	0.00
37	S	Dibromofluoromethane	-1.0000	0.0000	0.0	0	-9.57#
38	T	1,1,1-Trichloroethane	0.4000	0.3732	6.7	100	0.00
39	T	Cyclohexane	-1.0000	0.4185	0.0	100	0.00
40	T	1,1-Dichloropropene	-1.0000	0.3595	0.0	100	0.00
41	T	Tert-Amyl-Methyl ether	-1.0000	0.0000	0.0	0	-10.20#
42	T	Carbon Tetrachloride	0.4000	0.3560	11.0	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.0000	0.0	0	-10.29#
44		Heptane	-1.0000	0.0000	0.0	0	-10.20#
45	T	1,2-Dichloroethane	0.4000	0.3577	10.6	100	0.00
46	T	Benzene	0.4000	0.4211	-5.3	100	0.00
47	T	Trichloroethene	0.4000	0.3844	3.9	100	0.00
48	T	Methylcyclohexane	-1.0000	0.3838	0.0	100	0.00
49	C	1,2-Dichloropropane	0.4000	0.3653	8.7	100	0.00
50	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.92#
51	T	Bromodichloromethane	0.4000	0.3716	7.1	100	0.00
52	T	Dibromomethane	0.4000	0.3478	13.0	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.1707	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.0000	0.0	0	-12.33#

(#) = Out of Range
6M142179.D 8260WTR.M Tue Sep 27 10:21:24 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142179.D Vial: 3
Acq On : 26 Sep 2016 14:35 Operator: TMB
Sample : WG584797-03 0.4ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	0.4000	0.3419	14.5	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.2799	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	-1.0000	0.0301	0.0	0	0.00
59	C	Toluene	0.4000	0.4107	-2.7	100	0.00
60	T	Ethyl Methacrylate	-1.0000	0.2787	0.0	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	0	-13.14#
62	T	trans-1,3-Dichloropropene	-1.0000	0.3439	0.0	100	0.00
63	T	1,1,2-Trichloroethane	0.4000	0.3595	10.1	100	-0.01
64	T	2-Hexanone	-1.0000	0.3093	0.0	100	-0.01
65	T	1,3-Dichloropropane	0.4000	0.3361	16.0	100	0.00
66	T	Tetrachloroethene	0.4000	0.3981	0.5	100	0.00
67	T	Dibromochloromethane	0.4000	0.3470	13.2	100	0.00
68	T	1,2-Dibromoethane	0.4000	0.3420	14.5	100	0.00
69	T	1-Chlorohexane	0.4000	0.3552	11.2	100	0.00
70	P	Chlorobenzene	0.4000	0.3889	2.8	100	0.00
71	T	1,1,1,2-Tetrachloroethane	0.4000	0.3254	18.7	100	0.00
72	C	Ethylbenzene	0.4000	0.3759	6.0	100	0.00
73	T	m-,p-Xylene	0.8000	0.7766	2.9	100	0.00
74	T	o-Xylene	-1.0000	0.3811	0.0	100	0.00
75	T	Styrene	0.4000	0.3648	8.8	100	0.00
76	P	Bromoform	-1.0000	0.8111	0.0	100	0.00
77	T	Isopropylbenzene	0.4000	0.3940	1.5	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	0.4000	0.3675	8.1	100	0.00
80	S	p-Bromofluorobenzene	-1.0000	0.0000	0.0	0	-17.00#
81	T	1,2,3-Trichloropropane	-1.0000	0.1995	0.0	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	-1.0000	0.0000	0.0	0	-17.16#
83	T	n-Propylbenzene	0.4000	0.4233	-5.8	100	0.00
84	T	Bromobenzene	0.4000	0.3766	5.9	100	0.00
85	T	1,3,5-Trimethylbenzene	0.4000	0.3882	3.0	100	-0.01
86	T	2-Chlorotoluene	0.4000	0.4142	-3.6	100	0.00
87	T	4-Chlorotoluene	0.4000	0.3992	0.2	100	0.00
88	T	a-Methylstyrene	-1.0000	0.3301	0.0	100	0.00
89	T	tert-Butylbenzene	-1.0000	0.3506	0.0	100	0.00
90	T	1,2,4-Trimethylbenzene	-1.0000	0.3897	0.0	100	0.00
91	T	sec-Butylbenzene	-1.0000	0.4119	0.0	100	0.00
92	T	p-Isopropyltoluene	-1.0000	0.4007	0.0	100	0.00
93	T	1,3-Dichlorobenzene	0.4000	0.4075	-1.9	100	0.00
94	T	1,4-Dichlorobenzene	0.4000	0.4000	0.0	100	0.00
95	T	n-Butylbenzene	-1.0000	0.4041	0.0	100	0.00
96	T	1,2-Dichlorobenzene	0.4000	0.3910	2.3	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.0000	0.0	0	-20.58#
98	T	1,2,4-Trichlorobenzene	0.4000	0.3907	2.3	100	0.00
99	T	Hexachlorobutadiene	0.4000	0.3661	8.5	100	0.00
100	T	Naphthalene	0.4000	0.3522	11.9	100	0.00
101	T	1,2,3-Trichlorobenzene	0.4000	0.3678	8.1	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142179.D 8260WTR.M Tue Sep 27 10:21:25 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142180.D Vial: 4
Acq On : 26 Sep 2016 15:07 Operator: TMB
Sample : WG584797-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:02 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	782986	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	600181	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	323891	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	3538	0.4372	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	1.76%#		
43) 1,2-Dichloroethane-d4	10.28	65	4172	0.5140	ug/L	-0.01
Spiked Amount 25.000	Range 80 - 120		Recovery =	2.04%#		
58) Toluene-d8	13.02	98	14131	0.5235	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	2.08%#		
80) p-Bromofluorobenzene	16.99	95	5736	0.5364	ug/L	-0.01
Spiked Amount 25.000	Range 86 - 115		Recovery =	2.16%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.94	85	12276	0.9313	ug/L	92
3) Chloromethane	3.36	50	17444	1.1482	ug/L	96
4) Vinyl Chloride	3.55	62	10178	1.0944	ug/L	93
5) 1,3-Butadiene	3.60	54	10772	Below Cal		91
6) Bromomethane	4.38	94	5772	1.0662	ug/L	94
7) Chloroethane	4.53	64	6114	1.0405	ug/L	81
8) Trichlorofluoromethane	4.99	101	12721	0.9680	ug/L	99
9) Diethyl ether	5.53	59	32874	5.0698	ug/L	96
10) Isoprene	5.56	67	12284	1.0055	ug/L	94
11) Acrolein	5.78	56	1913	2.1335	ug/L	79
12) 1,1,2-Trichloro-1,2,2-Trif	5.79	101	7622	0.9640	ug/L #	74
13) Acetone	5.89	43	3182	Below Cal #		48
14) 1,1-Dichloroethene	6.08	61	13140	1.0081	ug/L	90
15) Tert-Butyl Alcohol	6.24	59	4117	9.3387	ug/L #	75
16) Dimethyl Sulfide	6.37	62	7862	0.9192	ug/L	95
17) Iodomethane	6.63	142	1973	1.4199	ug/L #	49
18) Methyl acetate	6.67	43	5652	1.0278	ug/L #	71
19) Methylene Chloride	6.92	84	8611	1.0169	ug/L	94
20) Carbon Disulfide	6.94	76	25590	1.0373	ug/L	99
21) Acrylonitrile	7.14	53	5628	2.2931	ug/L	86
22) Methyl Tert Butyl Ether	7.17	73	18820	0.9895	ug/L	90
23) trans-1,2-Dichloroethene	7.40	96	8152	0.9863	ug/L	92
24) n-Hexane	7.48	57	11257	1.0402	ug/L	84
25) Diisopropyl ether	7.88	45	165212	5.3660	ug/L	98
26) Vinyl Acetate	8.08	43	13433	0.8871	ug/L	96
27) 1,1-Dichloroethane	8.08	63	15094	0.9876	ug/L	96
28) Ethyl-Tert-Butyl ether	8.51	59	123140	5.0661	ug/L	96
29) 2-Butanone	8.72	43	3309	1.1494	ug/L #	57
30) Propionitrile	8.83	54	3541	4.5866	ug/L #	56
31) 2,2-Dichloropropane	8.94	77	11006	0.9859	ug/L	73
32) cis-1,2-Dichloroethene	9.01	96	8779	0.9611	ug/L	98
33) Chloroform	9.24	83	14703	0.9987	ug/L	95
34) 1-Bromopropane	9.38	122	1173	0.7284	ug/L	98
35) Bromochloromethane	9.49	130	5347	0.9562	ug/L	96
36) Tetrahydrofuran	9.54	42	12913	6.1792	ug/L	91
38) 1,1,1-Trichloroethane	9.83	97	12778	1.0014	ug/L	94
39) Cyclohexane	9.85	56	14243	1.0200	ug/L	90
40) 1,1-Dichloropropene	10.06	75	11219	1.0291	ug/L	98
41) Tert-Amyl-Methyl ether	10.20	73	91758	4.9121	ug/L	91
42) Carbon Tetrachloride	10.21	117	11065	0.9416	ug/L	97

(#) = qualifier out of range (m) = manual integration
6M142180.D 8260WTR.M Tue Sep 27 10:19:06 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142180.D Vial: 4
Acq On : 26 Sep 2016 15:07 Operator: TMB
Sample : WG584797-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:02 2016 Quant Results File: 8260WTR.RES

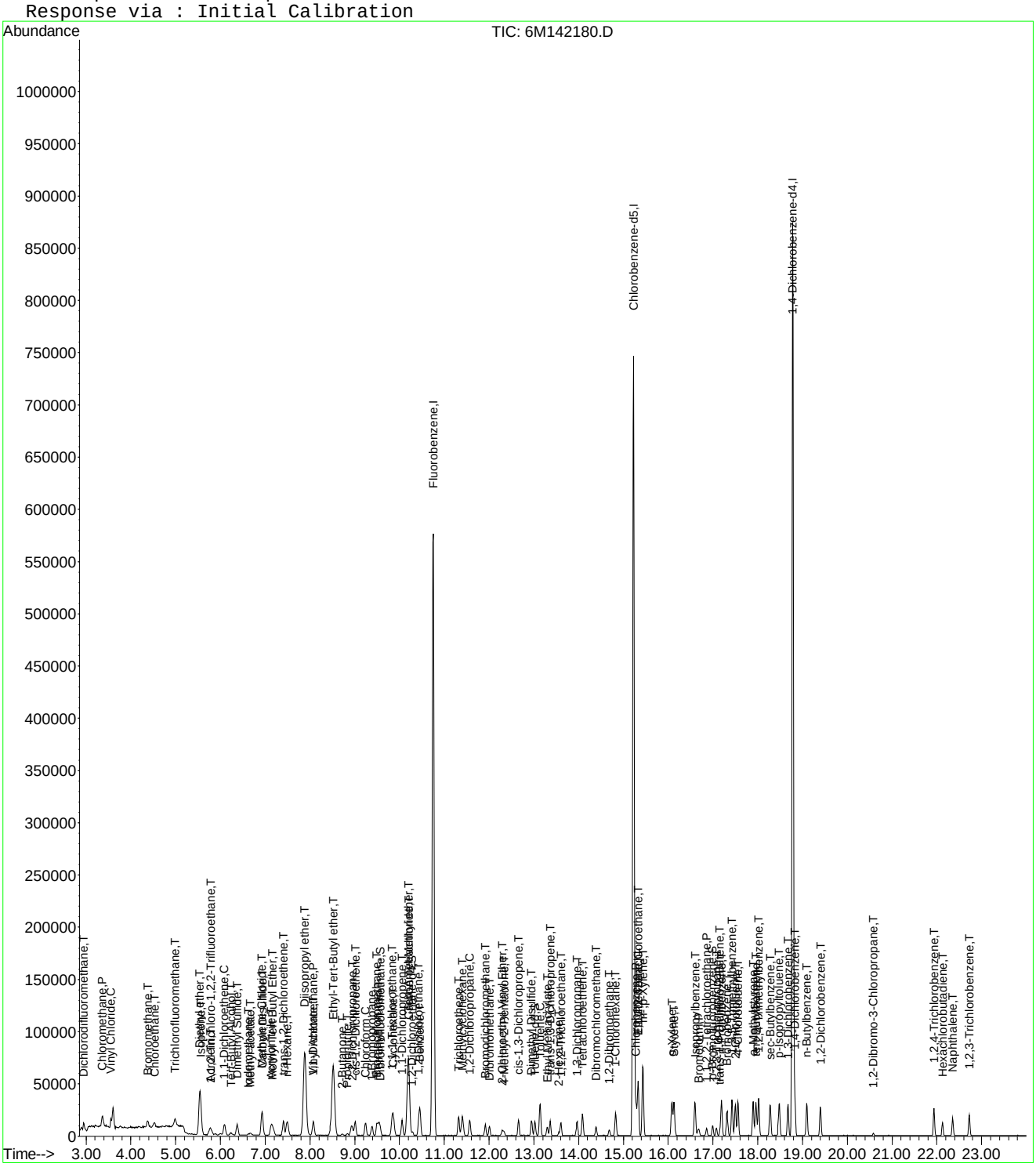
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	1,2-Dichloroethane	10.42	62	10728	1.0012 ug/L		94
46)	Benzene	10.45	78	32468	1.0271 ug/L		94
47)	Trichloroethene	11.32	130	9213	0.9916 ug/L		91
48)	Methylcyclohexane	11.40	83	12743	1.0434 ug/L		91
49)	1,2-Dichloropropane	11.57	63	8005	0.9689 ug/L		97
51)	Bromodichloromethane	11.91	83	10396	0.9559 ug/L		97
52)	Dibromomethane	12.01	93	4227	0.9226 ug/L		92
53)	2-Chloroethyl Vinyl Ether	12.29	63	2950	0.7678 ug/L		82
54)	4-Methyl-2-Pentanone	12.33	58	1782	0.7896 ug/L	#	55
55)	cis-1,3-Dichloropropene	12.66	75	11306	0.9294 ug/L		94
56)	Dimethyl Disulfide	12.95	79	5860	0.7898 ug/L		86
59)	Toluene	13.14	91	34827	1.0713 ug/L		95
60)	Ethyl Methacrylate	13.30	69	6568	0.8389 ug/L		87
62)	trans-1,3-Dichloropropene	13.36	75	9504	0.8910 ug/L		99
63)	1,1,2-Trichloroethane	13.61	97	5877	0.9688 ug/L		95
64)	2-Hexanone	13.56	43	4224	0.9512 ug/L		80
65)	1,3-Dichloropropane	13.97	76	10541	1.0377 ug/L		95
66)	Tetrachloroethene	14.08	166	8843	0.9667 ug/L		99
67)	Dibromochloromethane	14.39	129	7482	0.9030 ug/L		99
68)	1,2-Dibromoethane	14.68	107	6247	0.9821 ug/L		95
69)	1-Chlorohexane	14.82	91	10696	1.0402 ug/L		88
70)	Chlorobenzene	15.27	112	23778	1.0242 ug/L		86
71)	1,1,1,2-Tetrachloroethane	15.33	131	8342	0.9602 ug/L		94
72)	Ethylbenzene	15.33	106	12184	0.9785 ug/L		95
73)	m-,p-Xylene	15.44	106	29898	2.0255 ug/L		94
74)	o-Xylene	16.09	106	13989	0.9541 ug/L		97
75)	Styrene	16.13	104	24009	0.9591 ug/L		98
76)	Bromoform	16.68	173	4221	1.2755 ug/L		91
77)	Isopropylbenzene	16.60	105	36710	1.0240 ug/L		99
79)	1,1,2,2-Tetrachloroethane	16.86	83	6724	0.9751 ug/L		97
81)	1,2,3-Trichloropropane	17.08	110	1935	0.9186 ug/L		84
82)	trans-1,4-Dichloro-2-Buten	17.15	53	1483	0.7258 ug/L		94
83)	n-Propylbenzene	17.19	91	42493	1.0872 ug/L		99
84)	Bromobenzene	17.32	156	9964	0.9878 ug/L		96
85)	1,3,5-Trimethylbenzene	17.42	105	30352	1.0483 ug/L		100
86)	2-Chlorotoluene	17.50	91	26246	1.0224 ug/L		94
87)	4-Chlorotoluene	17.55	91	28439	1.1091 ug/L		96
88)	a-Methylstyrene	17.90	118	15511	0.8868 ug/L		96
89)	tert-Butylbenzene	17.96	134	6591	0.9814 ug/L		78
90)	1,2,4-Trimethylbenzene	18.02	105	31103	1.0254 ug/L		99
91)	sec-Butylbenzene	18.29	105	36520	1.0549 ug/L		99
92)	p-Isopropyltoluene	18.48	119	30595	0.9971 ug/L		98
93)	1,3-Dichlorobenzene	18.67	146	19228	0.9987 ug/L		97
94)	1,4-Dichlorobenzene	18.83	146	20155	1.0417 ug/L		96
95)	n-Butylbenzene	19.09	91	26865	1.0130 ug/L		99
96)	1,2-Dichlorobenzene	19.41	146	18823	1.0415 ug/L		97
97)	1,2-Dibromo-3-Chloropropan	20.58	75	740	0.6271 ug/L		74
98)	1,2,4-Trichlorobenzene	21.93	180	13079	0.9923 ug/L		98
99)	Hexachlorobutadiene	22.13	225	5112	1.0414 ug/L		93
100)	Naphthalene	22.35	128	21889	0.9133 ug/L		97
101)	1,2,3-Trichlorobenzene	22.73	180	11454	0.9715 ug/L		96

(#) = qualifier out of range (m) = manual integration
6M142180.D 8260WTR.M Tue Sep 27 10:19:07 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142180.D Vial: 4
Acq On : 26 Sep 2016 15:07 Operator: TMB
Sample : WG584797-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142180.D Vial: 4
Acq On : 26 Sep 2016 15:07 Operator: TMB
Sample : WG584797-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	1.0000	0.9313	6.9	100	0.00
3	P	Chloromethane	1.0000	1.1482	-14.8	100	0.00
4	C	Vinyl Chloride	1.0000	1.0944	-9.4	100	0.00
5	T	1,3-Butadiene	-1.0000	-2.7803	0.0	0	0.02
6	T	Bromomethane	1.0000	1.0662	-6.6	100	0.00
7	T	Chloroethane	1.0000	1.0405	-4.1	100	0.02
8	T	Trichlorofluoromethane	1.0000	0.9680	3.2	100	0.00
9	T	Diethyl ether	5.0000	5.0698	-1.4	100	0.00
10	T	Isoprene	-1.0000	1.0055	0.0	100	0.02
11	T	Acrolein	-1.0000	2.1335	0.0	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	1.0000	0.9640	3.6	100	0.02
13	T	Acetone	-1.0000	-0.5185	0.0	0	0.00
14	C	1,1-Dichloroethene	1.0000	1.0081	-0.8	100	0.00
15	T	Tert-Butyl Alcohol	10.0000	9.3386	6.6	100	-0.02
16	T	Dimethyl Sulfide	-1.0000	0.9192	0.0	100	0.00
17	T	Iodomethane	1.0000	1.4199	-42.0#	100	0.00
18	T	Methyl acetate	-1.0000	1.0278	0.0	100	0.00
19	T	Methylene Chloride	1.0000	1.0169	-1.7	100	0.00
20	T	Carbon Disulfide	1.0000	1.0374	-3.7	100	0.00
21	T	Acrylonitrile	2.5000	2.2931	8.3	100	0.00
22	T	Methyl Tert Butyl Ether	1.0000	0.9895	1.0	100	0.00
23	T	trans-1,2-Dichloroethene	1.0000	0.9863	1.4	100	0.00
24	T	n-Hexane	-1.0000	1.0402	0.0	100	0.00
25	T	Diisopropyl ether	5.0000	5.3660	-7.3	100	0.00
26	T	Vinyl Acetate	-1.0000	0.8871	0.0	100	0.00
27	P	1,1-Dichloroethane	1.0000	0.9876	1.2	100	0.00
28	T	Ethyl-Tert-Butyl ether	5.0000	5.0661	-1.3	100	0.00
29	T	2-Butanone	-1.0000	1.1494	0.0	100	0.00
30	T	Propionitrile	5.0000	4.5866	8.3	100	-0.01
31	T	2,2-Dichloropropane	1.0000	0.9859	1.4	100	0.00
32	T	cis-1,2-Dichloroethene	1.0000	0.9611	3.9	100	0.00
33	C	Chloroform	1.0000	0.9987	0.1	100	0.00
34		1-Bromopropane	1.0000	0.7284	27.2#	100	-0.01
35	T	Bromochloromethane	1.0000	0.9562	4.4	100	0.00
36	T	Tetrahydrofuran	5.0000	6.1792	-23.6#	100	0.00
37	S	Dibromofluoromethane	0.5000	0.4372	12.6	100	0.00
38	T	1,1,1-Trichloroethane	1.0000	1.0014	-0.1	100	0.00
39	T	Cyclohexane	1.0000	1.0200	-2.0	100	0.00
40	T	1,1-Dichloropropene	1.0000	1.0291	-2.9	100	0.00
41	T	Tert-Amyl-Methyl ether	5.0000	4.9121	1.8	100	0.00
42	T	Carbon Tetrachloride	1.0000	0.9416	5.8	100	0.00
43	S	1,2-Dichloroethane-d4	-1.0000	0.5140	0.0	0	-0.01
44		Heptane	-1.0000	0.0000	0.0	100	-0.01
45	T	1,2-Dichloroethane	1.0000	1.0012	-0.1	100	0.00
46	T	Benzene	1.0000	1.0271	-2.7	100	0.00
47	T	Trichloroethene	1.0000	0.9916	0.8	100	0.00
48	T	Methylcyclohexane	-1.0000	1.0434	0.0	100	0.00
49	C	1,2-Dichloropropane	1.0000	0.9689	3.1	100	0.00
50	T	1,4-Dioxane	-1.0000	0.0000	0.0	0	-11.92#
51	T	Bromodichloromethane	1.0000	0.9559	4.4	100	0.00
52	T	Dibromomethane	1.0000	0.9226	7.7	100	0.00
53	T	2-Chloroethyl Vinyl Ether	-1.0000	0.7678	0.0	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	0.7896	0.0	100	0.00

(#) = Out of Range
6M142180.D 8260WTR.M Tue Sep 27 10:21:38 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142180.D Vial: 4
Acq On : 26 Sep 2016 15:07 Operator: TMB
Sample : WG584797-04 1ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	1.0000	0.9294	7.1	100	0.00
56	T	Dimethyl Disulfide	-1.0000	0.7898	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	0.5000	0.5235	-4.7	100	0.00
59	C	Toluene	1.0000	1.0713	-7.1	100	0.00
60	T	Ethyl Methacrylate	1.0000	0.8389	16.1	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	100	0.00
62	T	trans-1,3-Dichloropropene	1.0000	0.8910	10.9	100	0.00
63	T	1,1,2-Trichloroethane	1.0000	0.9688	3.1	100	0.00
64	T	2-Hexanone	-1.0000	0.9512	0.0	100	-0.01
65	T	1,3-Dichloropropane	1.0000	1.0377	-3.8	100	0.00
66	T	Tetrachloroethene	1.0000	0.9667	3.3	100	0.00
67	T	Dibromochloromethane	1.0000	0.9030	9.7	100	0.00
68	T	1,2-Dibromoethane	1.0000	0.9821	1.8	100	0.00
69	T	1-Chlorohexane	1.0000	1.0402	-4.0	100	-0.01
70	P	Chlorobenzene	1.0000	1.0242	-2.4	100	-0.01
71	T	1,1,1,2-Tetrachloroethane	1.0000	0.9602	4.0	100	0.00
72	C	Ethylbenzene	1.0000	0.9785	2.2	100	0.00
73	T	m-,p-Xylene	2.0000	2.0255	-1.3	100	0.00
74	T	o-Xylene	1.0000	0.9541	4.6	100	0.00
75	T	Styrene	1.0000	0.9591	4.1	100	-0.01
76	P	Bromoform	1.0000	1.2755	-27.6#	100	-0.01
77	T	Isopropylbenzene	1.0000	1.0240	-2.4	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	-0.01
79	P	1,1,2,2-Tetrachloroethane	1.0000	0.9751	2.5	100	0.00
80	S	p-Bromofluorobenzene	0.5000	0.5364	-7.3	100	-0.01
81	T	1,2,3-Trichloropropane	1.0000	0.9186	8.1	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	1.0000	0.7258	27.4#	100	-0.01
83	T	n-Propylbenzene	1.0000	1.0872	-8.7	100	0.00
84	T	Bromobenzene	1.0000	0.9878	1.2	100	0.00
85	T	1,3,5-Trimethylbenzene	1.0000	1.0483	-4.8	100	-0.01
86	T	2-Chlorotoluene	1.0000	1.0224	-2.2	100	0.00
87	T	4-Chlorotoluene	1.0000	1.1091	-10.9	100	-0.01
88	T	a-Methylstyrene	-1.0000	0.8868	0.0	100	0.00
89	T	tert-Butylbenzene	1.0000	0.9814	1.9	100	-0.01
90	T	1,2,4-Trimethylbenzene	1.0000	1.0254	-2.5	100	-0.01
91	T	sec-Butylbenzene	1.0000	1.0549	-5.5	100	0.00
92	T	p-Isopropyltoluene	1.0000	0.9971	0.3	100	0.00
93	T	1,3-Dichlorobenzene	1.0000	0.9987	0.1	100	0.00
94	T	1,4-Dichlorobenzene	1.0000	1.0417	-4.2	100	-0.01
95	T	n-Butylbenzene	1.0000	1.0130	-1.3	100	-0.01
96	T	1,2-Dichlorobenzene	1.0000	1.0415	-4.2	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	-1.0000	0.6271	0.0	100	0.00
98	T	1,2,4-Trichlorobenzene	1.0000	0.9923	0.8	100	0.00
99	T	Hexachlorobutadiene	1.0000	1.0414	-4.1	100	0.00
100	T	Naphthalene	1.0000	0.9133	8.7	100	0.00
101	T	1,2,3-Trichlorobenzene	1.0000	0.9715	2.9	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142180.D 8260WTR.M Tue Sep 27 10:21:39 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142181.D Vial: 5
Acq On : 26 Sep 2016 15:39 Operator: TMB
Sample : WG584797-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:10 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	778559	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	599429	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	323593	25.00	ug/L	-0.01
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	7422	0.9223	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery =	3.68%#		
43) 1,2-Dichloroethane-d4	10.29	65	8122	1.0063	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery =	4.04%#		
58) Toluene-d8	13.02	98	26688	0.9899	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery =	3.96%#		
80) p-Bromofluorobenzene	16.99	95	10483	0.9813	ug/L	-0.01
Spiked Amount 25.000	Range 86 - 115		Recovery =	3.92%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.95	85	20719	1.5807	ug/L	91
3) Chloromethane	3.37	50	29354	1.9431	ug/L	100
4) Vinyl Chloride	3.55	62	18029	1.9496	ug/L	95
5) 1,3-Butadiene	3.60	54	16803	Below Cal		87
6) Bromomethane	4.38	94	9804	1.8213	ug/L	96
7) Chloroethane	4.53	64	10475	1.7929	ug/L	98
8) Trichlorofluoromethane	4.99	101	23101	1.7679	ug/L	99
9) Diethyl ether	5.53	59	155342	24.0931	ug/L	97
10) Isoprene	5.56	67	20637	1.6989	ug/L	92
11) Acrolein	5.78	56	10328	11.5839	ug/L	95
12) 1,1,2-Trichloro-1,2,2-Trif	5.78	101	13402	1.7047	ug/L	99
13) Acetone	5.89	43	5440	0.8114	ug/L #	78
14) 1,1-Dichloroethene	6.09	61	23218	1.7913	ug/L	97
15) Tert-Butyl Alcohol	6.23	59	20167	46.0052	ug/L #	85
16) Dimethyl Sulfide	6.37	62	14907	1.7529	ug/L	98
17) Iodomethane	6.63	142	4720	1.7099	ug/L	82
18) Methyl acetate	6.68	43	10297	1.8832	ug/L #	88
19) Methylene Chloride	6.92	84	15650	1.8587	ug/L	92
20) Carbon Disulfide	6.94	76	43412	1.7698	ug/L	98
21) Acrylonitrile	7.14	53	27829	11.4030	ug/L	96
22) Methyl Tert Butyl Ether	7.17	73	34177	1.8072	ug/L	97
23) trans-1,2-Dichloroethene	7.41	96	14874	1.8098	ug/L	90
24) n-Hexane	7.49	57	18936	1.7598	ug/L	90
25) Diisopropyl ether	7.88	45	752154	24.5684	ug/L	97
26) Vinyl Acetate	8.07	43	26872	1.7847	ug/L	98
27) 1,1-Dichloroethane	8.08	63	28009	1.8431	ug/L	98
28) Ethyl-Tert-Butyl ether	8.51	59	577609	23.8985	ug/L	96
29) 2-Butanone	8.72	43	5931	2.0718	ug/L #	78
30) Propionitrile	8.84	54	18340	23.8906	ug/L	98
31) 2,2-Dichloropropane	8.94	77	19481	1.7550	ug/L	83
32) cis-1,2-Dichloroethene	9.01	96	16602	1.8279	ug/L	93
33) Chloroform	9.25	83	26406	1.8038	ug/L	99
34) 1-Bromopropane	9.38	122	2709	1.6919	ug/L	99
35) Bromochloromethane	9.50	130	10173	1.8296	ug/L	96
36) Tetrahydrofuran	9.53	42	50768	24.4319	ug/L	95
38) 1,1,1-Trichloroethane	9.83	97	22104	1.7421	ug/L	97
39) Cyclohexane	9.86	56	24742	1.7820	ug/L	94
40) 1,1-Dichloropropene	10.06	75	19497	1.7986	ug/L	99
41) Tert-Amyl-Methyl ether	10.20	73	430453	23.1748	ug/L	91
42) Carbon Tetrachloride	10.21	117	18731	1.6030	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142181.D 8260WTR.M Tue Sep 27 10:19:14 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142181.D Vial: 5
Acq On : 26 Sep 2016 15:39 Operator: TMB
Sample : WG584797-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:10 2016 Quant Results File: 8260WTR.RES

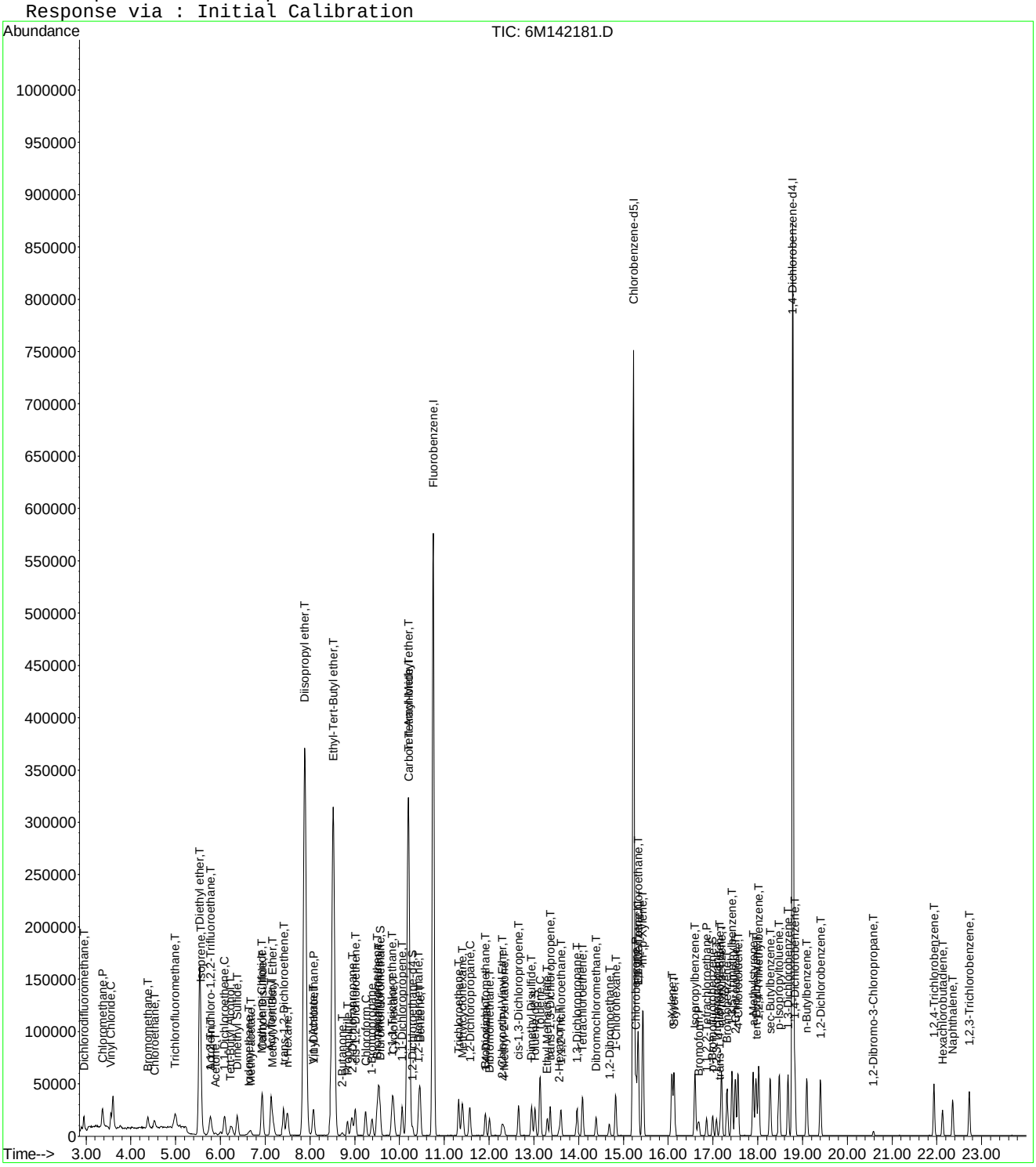
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	19891	1.8668	ug/L	96
46)	Benzene	10.46	78	59321	1.8873	ug/L	94
47)	Trichloroethene	11.32	130	16493	1.7852	ug/L	89
48)	Methylcyclohexane	11.40	83	20964	1.7262	ug/L	93
49)	1,2-Dichloropropane	11.58	63	15366	1.8705	ug/L	99
50)	1,4-Dioxane	11.92	88	1230	25.2526	ug/L	94
51)	Bromodichloromethane	11.91	83	18737	1.7326	ug/L	96
52)	Dibromomethane	12.01	93	8402	1.8442	ug/L	95
53)	2-Chloroethyl Vinyl Ether	12.29	63	6246	1.6349	ug/L	89
54)	4-Methyl-2-Pentanone	12.33	58	3125	1.3926	ug/L	98
55)	cis-1,3-Dichloropropene	12.66	75	20965	1.7332	ug/L	100
56)	Dimethyl Disulfide	12.95	79	11174	1.5146	ug/L	90
59)	Toluene	13.14	91	61410	1.8914	ug/L	99
60)	Ethyl Methacrylate	13.29	69	12597	1.6110	ug/L	91
62)	trans-1,3-Dichloropropene	13.36	75	18339	1.7214	ug/L	98
63)	1,1,2-Trichloroethane	13.61	97	11061	1.8256	ug/L	97
64)	2-Hexanone	13.57	43	7448	1.6794	ug/L	91
65)	1,3-Dichloropropane	13.97	76	19165	1.8890	ug/L	92
66)	Tetrachloroethene	14.08	166	16906	1.8504	ug/L	95
67)	Dibromochloromethane	14.39	129	14437	1.7446	ug/L	98
68)	1,2-Dibromoethane	14.69	107	12113	1.9067	ug/L	100
69)	1-Chlorohexane	14.83	91	17872	1.7403	ug/L	99
70)	Chlorobenzene	15.27	112	43882	1.8925	ug/L	97
71)	1,1,1,2-Tetrachloroethane	15.32	131	14816	1.7076	ug/L	98
72)	Ethylbenzene	15.32	106	22547	1.8129	ug/L	91
73)	m-,p-Xylene	15.43	106	54993	3.7303	ug/L	92
74)	o-Xylene	16.09	106	25617	1.7493	ug/L	96
75)	Styrene	16.13	104	44864	1.7945	ug/L	96
76)	Bromoform	16.68	173	7968	1.8860	ug/L	98
77)	Isopropylbenzene	16.59	105	65979	1.8427	ug/L	99
79)	1,1,2,2-Tetrachloroethane	16.86	83	12587	1.8270	ug/L	100
81)	1,2,3-Trichloropropane	17.08	110	3880	1.8437	ug/L	92
82)	trans-1,4-Dichloro-2-Buten	17.15	53	3465	1.6974	ug/L	86
83)	n-Propylbenzene	17.19	91	75709	1.9388	ug/L	98
84)	Bromobenzene	17.32	156	18278	1.8136	ug/L	93
85)	1,3,5-Trimethylbenzene	17.42	105	53611	1.8533	ug/L	98
86)	2-Chlorotoluene	17.50	91	46702	1.8210	ug/L	91
87)	4-Chlorotoluene	17.56	91	51161	1.9971	ug/L	99
88)	a-Methylstyrene	17.90	118	29308	1.6772	ug/L	95
89)	tert-Butylbenzene	17.97	134	11942	1.7798	ug/L	97
90)	1,2,4-Trimethylbenzene	18.02	105	56209	1.8549	ug/L	96
91)	sec-Butylbenzene	18.29	105	64062	1.8522	ug/L	100
92)	p-Isopropyltoluene	18.48	119	56114	1.8304	ug/L	98
93)	1,3-Dichlorobenzene	18.67	146	36320	1.8883	ug/L	98
94)	1,4-Dichlorobenzene	18.83	146	36261	1.8759	ug/L	86
95)	n-Butylbenzene	19.09	91	48240	1.8207	ug/L	99
96)	1,2-Dichlorobenzene	19.41	146	33361	1.8477	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	20.58	75	1685	1.4293	ug/L	94
98)	1,2,4-Trichlorobenzene	21.93	180	23857	1.8117	ug/L	97
99)	Hexachlorobutadiene	22.13	225	8904	1.8156	ug/L	99
100)	Naphthalene	22.35	128	42589	1.7786	ug/L	97
101)	1,2,3-Trichlorobenzene	22.73	180	21394	1.8162	ug/L	97

(#) = qualifier out of range (m) = manual integration
6M142181.D 8260WTR.M Tue Sep 27 10:19:15 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142181.D Vial: 5
Acq On : 26 Sep 2016 15:39 Operator: TMB
Sample : WG584797-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142181.D Vial: 5
Acq On : 26 Sep 2016 15:39 Operator: TMB
Sample : WG584797-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	2.0000	1.5808	21.0#	100	0.00
3	P	Chloromethane	2.0000	1.9431	2.8	100	0.00
4	C	Vinyl Chloride	2.0000	1.9496	2.5	100	0.00
5	T	1,3-Butadiene	-1.0000	-1.4322	0.0	0	0.02
6	T	Bromomethane	2.0000	1.8214	8.9	100	0.00
7	T	Chloroethane	2.0000	1.7929	10.4	100	0.02
8	T	Trichlorofluoromethane	2.0000	1.7679	11.6	100	0.00
9	T	Diethyl ether	25.0000	24.0931	3.6	100	0.00
10	T	Isoprene	-1.0000	1.6989	0.0	100	0.02
11	T	Acrolein	12.5000	11.5839	7.3	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	2.0000	1.7047	14.8	100	0.00
13	T	Acetone	-1.0000	0.8114	0.0	0	0.00
14	C	1,1-Dichloroethene	2.0000	1.7913	10.4	100	0.00
15	T	Tert-Butyl Alcohol	50.0000	46.0052	8.0	100	-0.03
16	T	Dimethyl Sulfide	-1.0000	1.7529	0.0	100	0.00
17	T	Iodomethane	2.0000	1.7099	14.5	100	0.00
18	T	Methyl acetate	-1.0000	1.8832	0.0	100	0.00
19	T	Methylene Chloride	2.0000	1.8587	7.1	100	0.00
20	T	Carbon Disulfide	2.0000	1.7698	11.5	100	0.00
21	T	Acrylonitrile	12.5000	11.4030	8.8	100	0.00
22	T	Methyl Tert Butyl Ether	2.0000	1.8072	9.6	100	0.00
23	T	trans-1,2-Dichloroethene	2.0000	1.8099	9.5	100	0.00
24	T	n-Hexane	-1.0000	1.7598	0.0	100	0.00
25	T	Diisopropyl ether	25.0000	24.5684	1.7	100	0.00
26	T	Vinyl Acetate	-1.0000	1.7847	0.0	100	0.00
27	P	1,1-Dichloroethane	2.0000	1.8431	7.8	100	0.00
28	T	Ethyl-Tert-Butyl ether	25.0000	23.8986	4.4	100	0.00
29	T	2-Butanone	-1.0000	2.0718	0.0	100	0.00
30	T	Propionitrile	25.0000	23.8906	4.4	100	0.00
31	T	2,2-Dichloropropane	2.0000	1.7550	12.3	100	0.00
32	T	cis-1,2-Dichloroethene	2.0000	1.8279	8.6	100	0.00
33	C	Chloroform	2.0000	1.8038	9.8	100	0.00
34		1-Bromopropane	2.0000	1.6919	15.4	100	-0.01
35	T	Bromochloromethane	2.0000	1.8296	8.5	100	0.00
36	T	Tetrahydrofuran	25.0000	24.4319	2.3	100	0.00
37	S	Dibromofluoromethane	1.0000	0.9223	7.8	100	0.00
38	T	1,1,1-Trichloroethane	2.0000	1.7421	12.9	100	0.00
39	T	Cyclohexane	2.0000	1.7820	10.9	100	0.00
40	T	1,1-Dichloropropene	2.0000	1.7986	10.1	100	0.00
41	T	Tert-Amyl-Methyl ether	25.0000	23.1748	7.3	100	0.00
42	T	Carbon Tetrachloride	2.0000	1.6030	19.9	100	0.00
43	S	1,2-Dichloroethane-d4	1.0000	1.0063	-0.6	100	0.00
44		Heptane	-1.0000	0.0000	0.0	100	0.00
45	T	1,2-Dichloroethane	2.0000	1.8668	6.7	100	0.00
46	T	Benzene	2.0000	1.8873	5.6	100	0.00
47	T	Trichloroethene	2.0000	1.7852	10.7	100	0.00
48	T	Methylcyclohexane	-1.0000	1.7262	0.0	100	0.00
49	C	1,2-Dichloropropane	2.0000	1.8705	6.5	100	0.00
50	T	1,4-Dioxane	-1.0000	25.2526	0.0	100	0.00
51	T	Bromodichloromethane	2.0000	1.7326	13.4	100	0.00
52	T	Dibromomethane	2.0000	1.8442	7.8	100	0.00
53	T	2-Chloroethyl Vinyl Ether	2.0000	1.6349	18.3	100	0.00
54	T	4-Methyl-2-Pentanone	-1.0000	1.3926	0.0	100	0.00

(#) = Out of Range
6M142181.D 8260WTR.M Tue Sep 27 10:21:51 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142181.D Vial: 5
Acq On : 26 Sep 2016 15:39 Operator: TMB
Sample : WG584797-05 2ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	2.0000	1.7332	13.3	100	0.00
56	T	Dimethyl Disulfide	-1.0000	1.5146	0.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	1.0000	0.9899	1.0	100	0.00
59	C	Toluene	2.0000	1.8914	5.4	100	0.00
60	T	Ethyl Methacrylate	2.0000	1.6110	19.4	100	-0.01
61		Paraldehyde	-1.0000	0.0000	0.0	100	-0.01
62	T	trans-1,3-Dichloropropene	2.0000	1.7214	13.9	100	0.00
63	T	1,1,2-Trichloroethane	2.0000	1.8256	8.7	100	0.00
64	T	2-Hexanone	-1.0000	1.6794	0.0	100	0.00
65	T	1,3-Dichloropropane	2.0000	1.8890	5.5	100	0.00
66	T	Tetrachloroethene	2.0000	1.8504	7.5	100	0.00
67	T	Dibromochloromethane	2.0000	1.7446	12.8	100	0.00
68	T	1,2-Dibromoethane	2.0000	1.9067	4.7	100	0.00
69	T	1-Chlorohexane	2.0000	1.7403	13.0	100	0.00
70	P	Chlorobenzene	2.0000	1.8925	5.4	100	-0.01
71	T	1,1,1,2-Tetrachloroethane	2.0000	1.7076	14.6	100	0.00
72	C	Ethylbenzene	2.0000	1.8129	9.4	100	0.00
73	T	m-,p-Xylene	4.0000	3.7302	6.7	100	-0.01
74	T	o-Xylene	2.0000	1.7493	12.5	100	0.00
75	T	Styrene	2.0000	1.7945	10.3	100	-0.01
76	P	Bromoform	2.0000	1.8860	5.7	100	-0.01
77	T	Isopropylbenzene	2.0000	1.8427	7.9	100	-0.01
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	-0.01
79	P	1,1,2,2-Tetrachloroethane	2.0000	1.8270	8.7	100	0.00
80	S	p-Bromofluorobenzene	1.0000	0.9813	1.9	100	-0.01
81	T	1,2,3-Trichloropropane	2.0000	1.8437	7.8	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	2.0000	1.6974	15.1	100	-0.01
83	T	n-Propylbenzene	2.0000	1.9388	3.1	100	0.00
84	T	Bromobenzene	2.0000	1.8136	9.3	100	0.00
85	T	1,3,5-Trimethylbenzene	2.0000	1.8533	7.3	100	-0.01
86	T	2-Chlorotoluene	2.0000	1.8210	9.0	100	0.00
87	T	4-Chlorotoluene	2.0000	1.9971	0.1	100	0.00
88	T	a-Methylstyrene	-1.0000	1.6772	0.0	100	0.00
89	T	tert-Butylbenzene	2.0000	1.7798	11.0	100	0.00
90	T	1,2,4-Trimethylbenzene	2.0000	1.8549	7.3	100	-0.01
91	T	sec-Butylbenzene	2.0000	1.8522	7.4	100	0.00
92	T	p-Isopropyltoluene	2.0000	1.8304	8.5	100	0.00
93	T	1,3-Dichlorobenzene	2.0000	1.8883	5.6	100	0.00
94	T	1,4-Dichlorobenzene	2.0000	1.8759	6.2	100	-0.01
95	T	n-Butylbenzene	2.0000	1.8207	9.0	100	-0.01
96	T	1,2-Dichlorobenzene	2.0000	1.8477	7.6	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	2.0000	1.4293	28.5#	100	0.00
98	T	1,2,4-Trichlorobenzene	2.0000	1.8117	9.4	100	0.00
99	T	Hexachlorobutadiene	2.0000	1.8156	9.2	100	0.00
100	T	Naphthalene	2.0000	1.7786	11.1	100	0.00
101	T	1,2,3-Trichlorobenzene	2.0000	1.8162	9.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142181.D 8260WTR.M Tue Sep 27 10:21:52 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142182.D Vial: 6
Acq On : 26 Sep 2016 16:11 Operator: TMB
Sample : WG584797-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:19 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	773156	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	599407	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	328032	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	19865	2.4859	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 9.96%#			
43) 1,2-Dichloroethane-d4	10.29	65	20241	2.5253	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 10.12%#			
58) Toluene-d8	13.02	98	67410	2.5004	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 10.00%#			
80) p-Bromofluorobenzene	17.00	95	27209	2.5125	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 10.04%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.95	85	58214	4.4725	ug/L	97
3) Chloromethane	3.36	50	74965	4.9969	ug/L	99
4) Vinyl Chloride	3.55	62	45882	4.9963	ug/L	95
5) 1,3-Butadiene	3.59	54	37803	3.2731	ug/L	95
6) Bromomethane	4.38	94	24687	4.6183	ug/L	99
7) Chloroethane	4.53	64	28172	4.8555	ug/L	100
8) Trichlorofluoromethane	5.00	101	64446	4.9665	ug/L	98
9) Diethyl ether	5.53	59	317994	49.6646	ug/L	97
10) Isoprene	5.56	67	57046	4.7289	ug/L	96
11) Acrolein	5.77	56	21404	24.1745	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	5.76	101	38079	4.8774	ug/L	99
13) Acetone	5.89	43	12935	5.2438	ug/L	94
14) 1,1-Dichloroethene	6.09	61	61680	4.7921	ug/L	92
15) Tert-Butyl Alcohol	6.24	59	45903	105.4463	ug/L	88
16) Dimethyl Sulfide	6.37	62	40719	4.8215	ug/L	99
17) Iodomethane	6.63	142	21079	3.4456	ug/L	99
18) Methyl acetate	6.67	43	28699	5.2853	ug/L	94
19) Methylene Chloride	6.93	84	40660	4.8627	ug/L	91
20) Carbon Disulfide	6.94	76	120146	4.9323	ug/L	100
21) Acrylonitrile	7.13	53	57452	23.7057	ug/L	91
22) Methyl Tert Butyl Ether	7.16	73	92141	4.9063	ug/L	97
23) trans-1,2-Dichloroethene	7.40	96	40085	4.9116	ug/L	90
24) n-Hexane	7.49	57	53964	5.0501	ug/L	94
25) Diisopropyl ether	7.88	45	1515604	49.8517	ug/L	97
26) Vinyl Acetate	8.07	43	74250	4.9659	ug/L	100
27) 1,1-Dichloroethane	8.08	63	73340	4.8598	ug/L	99
28) Ethyl-Tert-Butyl ether	8.51	59	1191304	49.6346	ug/L	96
29) 2-Butanone	8.72	43	15948	5.6099	ug/L	92
30) Propionitrile	8.84	54	39152	51.3578	ug/L	100
31) 2,2-Dichloropropane	8.93	77	54127	4.9102	ug/L	86
32) cis-1,2-Dichloroethene	9.01	96	44714	4.9575	ug/L	100
33) Chloroform	9.25	83	70139	4.8246	ug/L	99
34) 1-Bromopropane	9.39	122	7358	4.6275	ug/L	87
35) Bromochloromethane	9.50	130	27082	4.9047	ug/L	98
36) Tetrahydrofuran	9.54	42	100087	48.5031	ug/L	96
38) 1,1,1-Trichloroethane	9.83	97	61232	4.8595	ug/L	95
39) Cyclohexane	9.86	56	67663	4.9073	ug/L	92
40) 1,1-Dichloropropene	10.05	75	52250	4.8539	ug/L	96
41) Tert-Amyl-Methyl ether	10.20	73	900486	48.8192	ug/L	93
42) Carbon Tetrachloride	10.21	117	55370	4.7717	ug/L	96

(#) = qualifier out of range (m) = manual integration
6M142182.D 8260WTR.M Tue Sep 27 10:19:22 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142182.D Vial: 6
Acq On : 26 Sep 2016 16:11 Operator: TMB
Sample : WG584797-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:19 2016 Quant Results File: 8260WTR.RES

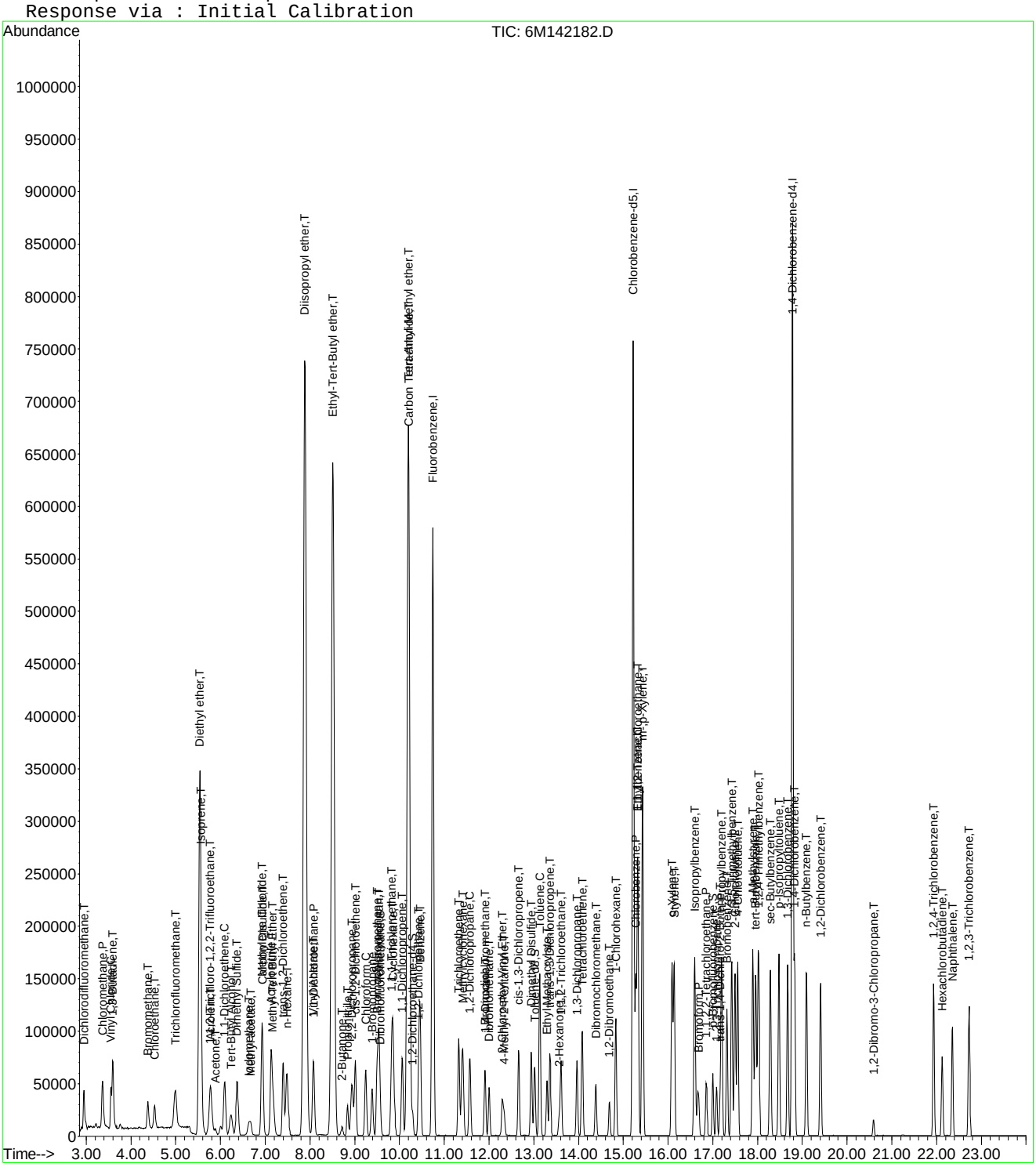
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	53277	5.0352	ug/L	97
46)	Benzene	10.46	78	153313	4.9116	ug/L	95
47)	Trichloroethene	11.32	130	44372	4.8363	ug/L	90
48)	Methylcyclohexane	11.41	83	60030	4.9775	ug/L	93
49)	1,2-Dichloropropane	11.56	63	40480	4.9620	ug/L	99
50)	1,4-Dioxane	11.92	88	4148	85.7559	ug/L	93
51)	Bromodichloromethane	11.91	83	52443	4.8833	ug/L	99
52)	Dibromomethane	12.00	93	22476	4.9678	ug/L	99
53)	2-Chloroethyl Vinyl Ether	12.29	63	17633	4.6478	ug/L	96
54)	4-Methyl-2-Pentanone	12.33	58	10361	4.6494	ug/L	99
55)	cis-1,3-Dichloropropene	12.66	75	59375	4.9430	ug/L	97
56)	Dimethyl Disulfide	12.94	79	31502	4.2999	ug/L	95
59)	Toluene	13.14	91	161527	4.9752	ug/L	100
60)	Ethyl Methacrylate	13.30	69	37501	4.7961	ug/L	95
62)	trans-1,3-Dichloropropene	13.36	75	50605	4.7503	ug/L	96
63)	1,1,2-Trichloroethane	13.61	97	30781	5.0806	ug/L	98
64)	2-Hexanone	13.57	43	22011	4.9632	ug/L	94
65)	1,3-Dichloropropane	13.96	76	51991	5.1248	ug/L	98
66)	Tetrachloroethene	14.09	166	45066	4.9327	ug/L	97
67)	Dibromochloromethane	14.39	129	40061	4.8413	ug/L	98
68)	1,2-Dibromoethane	14.68	107	31455	4.9515	ug/L	99
69)	1-Chlorohexane	14.83	91	49799	4.8494	ug/L	94
70)	Chlorobenzene	15.28	112	115190	4.9680	ug/L	94
71)	1,1,1,2-Tetrachloroethane	15.32	131	40731	4.6946	ug/L	97
72)	Ethylbenzene	15.32	106	59449	4.7803	ug/L	94
73)	m-,p-Xylene	15.43	106	145970	9.9017	ug/L	91
74)	o-Xylene	16.09	106	70598	4.8212	ug/L	93
75)	Styrene	16.14	104	121381	4.8552	ug/L	94
76)	Bromoform	16.69	173	23594	4.4282	ug/L	97
77)	Isopropylbenzene	16.60	105	179041	5.0006	ug/L	98
79)	1,1,2,2-Tetrachloroethane	16.85	83	35910	5.1417	ug/L	96
81)	1,2,3-Trichloropropane	17.08	110	10622	4.9790	ug/L	99
82)	trans-1,4-Dichloro-2-Buten	17.16	53	10107	4.8840	ug/L	99
83)	n-Propylbenzene	17.19	91	202897	5.1255	ug/L	97
84)	Bromobenzene	17.31	156	50229	4.9165	ug/L	91
85)	1,3,5-Trimethylbenzene	17.43	105	147243	5.0211	ug/L	98
86)	2-Chlorotoluene	17.50	91	134365	5.1683	ug/L	96
87)	4-Chlorotoluene	17.56	91	125952	4.8500	ug/L	95
88)	a-Methylstyrene	17.90	118	83466	4.7118	ug/L	93
89)	tert-Butylbenzene	17.96	134	32891	4.8357	ug/L	99
90)	1,2,4-Trimethylbenzene	18.03	105	153518	4.9975	ug/L	95
91)	sec-Butylbenzene	18.28	105	179635	5.1233	ug/L	99
92)	p-Isopropyltoluene	18.48	119	157319	5.0622	ug/L	100
93)	1,3-Dichlorobenzene	18.67	146	96965	4.9729	ug/L	99
94)	1,4-Dichlorobenzene	18.82	146	99419	5.0736	ug/L	97
95)	n-Butylbenzene	19.09	91	134804	5.0191	ug/L	96
96)	1,2-Dichlorobenzene	19.41	146	90228	4.9296	ug/L	99
97)	1,2-Dibromo-3-Chloropropan	20.59	75	5625	4.7068	ug/L	84
98)	1,2,4-Trichlorobenzene	21.93	180	65482	4.9055	ug/L	98
99)	Hexachlorobutadiene	22.12	225	24631	4.9544	ug/L	98
100)	Naphthalene	22.36	128	123435	5.0853	ug/L	99
101)	1,2,3-Trichlorobenzene	22.73	180	58533	4.9018	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142182.D 8260WTR.M Tue Sep 27 10:19:23 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142182.D Vial: 6
Acq On : 26 Sep 2016 16:11 Operator: TMB
Sample : WG584797-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142182.D Vial: 6
Acq On : 26 Sep 2016 16:11 Operator: TMB
Sample : WG584797-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	100	0.00
2	T	Dichlorodifluoromethane	5.0000	4.4725	10.6	100	0.00
3	P	Chloromethane	5.0000	4.9969	0.1	100	0.00
4	C	Vinyl Chloride	5.0000	4.9963	0.1	100	0.00
5	T	1,3-Butadiene	5.0000	3.2731	34.5#	100	0.00
6	T	Bromomethane	5.0000	4.6183	7.6	100	0.00
7	T	Chloroethane	5.0000	4.8555	2.9	100	0.02
8	T	Trichlorofluoromethane	5.0000	4.9665	0.7	100	0.02
9	T	Diethyl ether	50.0000	49.6646	0.7	100	0.00
10	T	Isoprene	5.0000	4.7289	5.4	100	0.02
11	T	Acrolein	25.0000	24.1745	3.3	100	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	5.0000	4.8774	2.5	100	0.00
13	T	Acetone	5.0000	5.2438	-4.9	100	0.00
14	C	1,1-Dichloroethene	5.0000	4.7921	4.2	100	0.00
15	T	Tert-Butyl Alcohol	100.0000	105.4463	-5.4	100	-0.01
16	T	Dimethyl Sulfide	5.0000	4.8215	3.6	100	0.00
17	T	Iodomethane	5.0000	3.4456	31.1#	100	0.00
18	T	Methyl acetate	5.0000	5.2853	-5.7	100	0.00
19	T	Methylene Chloride	5.0000	4.8627	2.7	100	0.00
20	T	Carbon Disulfide	5.0000	4.9323	1.4	100	0.00
21	T	Acrylonitrile	25.0000	23.7057	5.2	100	0.00
22	T	Methyl Tert Butyl Ether	5.0000	4.9063	1.9	100	0.00
23	T	trans-1,2-Dichloroethene	5.0000	4.9116	1.8	100	0.00
24	T	n-Hexane	5.0000	5.0501	-1.0	100	0.00
25	T	Diisopropyl ether	50.0000	49.8517	0.3	100	0.00
26	T	Vinyl Acetate	5.0000	4.9659	0.7	100	0.00
27	P	1,1-Dichloroethane	5.0000	4.8598	2.8	100	0.00
28	T	Ethyl-Tert-Butyl ether	50.0000	49.6346	0.7	100	0.00
29	T	2-Butanone	5.0000	5.6099	-12.2	100	0.00
30	T	Propionitrile	50.0000	51.3578	-2.7	100	0.00
31	T	2,2-Dichloropropane	5.0000	4.9102	1.8	100	0.00
32	T	cis-1,2-Dichloroethene	5.0000	4.9575	0.9	100	0.00
33	C	Chloroform	5.0000	4.8246	3.5	100	0.00
34		1-Bromopropane	5.0000	4.6274	7.5	100	0.00
35	T	Bromochloromethane	5.0000	4.9047	1.9	100	0.00
36	T	Tetrahydrofuran	50.0000	48.5031	3.0	100	0.00
37	S	Dibromofluoromethane	2.5000	2.4859	0.6	100	0.00
38	T	1,1,1-Trichloroethane	5.0000	4.8595	2.8	100	0.00
39	T	Cyclohexane	5.0000	4.9073	1.9	100	0.00
40	T	1,1-Dichloropropene	5.0000	4.8539	2.9	100	0.00
41	T	Tert-Amyl-Methyl ether	50.0000	48.8192	2.4	100	0.00
42	T	Carbon Tetrachloride	5.0000	4.7717	4.6	100	0.00
43	S	1,2-Dichloroethane-d4	2.5000	2.5254	-1.0	100	0.00
44		Heptane	-1.0000	0.0000	0.0	100	0.00
45	T	1,2-Dichloroethane	5.0000	5.0352	-0.7	100	0.00
46	T	Benzene	5.0000	4.9116	1.8	100	0.00
47	T	Trichloroethene	5.0000	4.8363	3.3	100	0.00
48	T	Methylcyclohexane	5.0000	4.9775	0.4	100	0.00
49	C	1,2-Dichloropropane	5.0000	4.9619	0.8	100	0.00
50	T	1,4-Dioxane	100.0000	85.7559	14.2	100	0.00
51	T	Bromodichloromethane	5.0000	4.8833	2.3	100	0.00
52	T	Dibromomethane	5.0000	4.9678	0.6	100	0.00
53	T	2-Chloroethyl Vinyl Ether	5.0000	4.6478	7.0	100	0.00
54	T	4-Methyl-2-Pentanone	5.0000	4.6494	7.0	100	0.00

(#) = Out of Range
6M142182.D 8260WTR.M Tue Sep 27 10:22:05 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142182.D Vial: 6
Acq On : 26 Sep 2016 16:11 Operator: TMB
Sample : WG584797-06 5ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	5.0000	4.9429	1.1	100	0.00
56	T	Dimethyl Disulfide	5.0000	4.2999	14.0	100	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	100	0.00
58	S	Toluene-d8	2.5000	2.5004	-0.0	100	0.00
59	C	Toluene	5.0000	4.9752	0.5	100	0.00
60	T	Ethyl Methacrylate	5.0000	4.7961	4.1	100	0.00
61		Paraldehyde	-1.0000	0.0000	0.0	100	0.00
62	T	trans-1,3-Dichloropropene	5.0000	4.7503	5.0	100	0.00
63	T	1,1,2-Trichloroethane	5.0000	5.0806	-1.6	100	0.00
64	T	2-Hexanone	5.0000	4.9632	0.7	100	0.00
65	T	1,3-Dichloropropane	5.0000	5.1248	-2.5	100	0.00
66	T	Tetrachloroethene	5.0000	4.9327	1.3	100	0.00
67	T	Dibromochloromethane	5.0000	4.8413	3.2	100	0.00
68	T	1,2-Dibromoethane	5.0000	4.9515	1.0	100	0.00
69	T	1-Chlorohexane	5.0000	4.8494	3.0	100	0.00
70	P	Chlorobenzene	5.0000	4.9680	0.6	100	0.00
71	T	1,1,1,2-Tetrachloroethane	5.0000	4.6946	6.1	100	0.00
72	C	Ethylbenzene	5.0000	4.7803	4.4	100	0.00
73	T	m-,p-Xylene	10.0000	9.9017	1.0	100	0.00
74	T	o-Xylene	5.0000	4.8212	3.6	100	0.00
75	T	Styrene	5.0000	4.8552	2.9	100	0.00
76	P	Bromoform	5.0000	4.4282	11.4	100	0.00
77	T	Isopropylbenzene	5.0000	5.0006	-0.0	100	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	100	0.00
79	P	1,1,2,2-Tetrachloroethane	5.0000	5.1417	-2.8	100	0.00
80	S	p-Bromofluorobenzene	2.5000	2.5125	-0.5	100	0.00
81	T	1,2,3-Trichloropropane	5.0000	4.9790	0.4	100	0.00
82	T	trans-1,4-Dichloro-2-Butene	5.0000	4.8840	2.3	100	0.00
83	T	n-Propylbenzene	5.0000	5.1255	-2.5	100	0.00
84	T	Bromobenzene	5.0000	4.9165	1.7	100	0.00
85	T	1,3,5-Trimethylbenzene	5.0000	5.0211	-0.4	100	0.00
86	T	2-Chlorotoluene	5.0000	5.1682	-3.4	100	0.00
87	T	4-Chlorotoluene	5.0000	4.8500	3.0	100	0.00
88	T	a-Methylstyrene	5.0000	4.7118	5.8	100	0.00
89	T	tert-Butylbenzene	5.0000	4.8357	3.3	100	-0.01
90	T	1,2,4-Trimethylbenzene	5.0000	4.9975	0.1	100	0.00
91	T	sec-Butylbenzene	5.0000	5.1233	-2.5	100	0.00
92	T	p-Isopropyltoluene	5.0000	5.0622	-1.2	100	0.00
93	T	1,3-Dichlorobenzene	5.0000	4.9729	0.5	100	0.00
94	T	1,4-Dichlorobenzene	5.0000	5.0736	-1.5	100	-0.01
95	T	n-Butylbenzene	5.0000	5.0191	-0.4	100	-0.01
96	T	1,2-Dichlorobenzene	5.0000	4.9296	1.4	100	0.00
97	T	1,2-Dibromo-3-Chloropropane	5.0000	4.7068	5.9	100	0.00
98	T	1,2,4-Trichlorobenzene	5.0000	4.9055	1.9	100	0.00
99	T	Hexachlorobutadiene	5.0000	4.9544	0.9	100	0.00
100	T	Naphthalene	5.0000	5.0853	-1.7	100	0.00
101	T	1,2,3-Trichlorobenzene	5.0000	4.9018	2.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142182.D 8260WTR.M Tue Sep 27 10:22:06 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142183.D Vial: 7
Acq On : 26 Sep 2016 16:43 Operator: TMB
Sample : WG584797-07 20ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:27 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	777242	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	607167	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	345507	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.57	111	84323	10.4967 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 42.00%#		
43) 1,2-Dichloroethane-d4	10.29	65	82442	10.2317 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 40.92%#		
58) Toluene-d8	13.02	98	278880	10.2120 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 40.84%#		
80) p-Bromofluorobenzene	17.00	95	115076	10.0889 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 40.36%#		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.94	85	292930	22.3869 ug/L	98
3) Chloromethane	3.37	50	340840	22.5999 ug/L	100
4) Vinyl Chloride	3.55	62	192878	20.8930 ug/L	100
5) 1,3-Butadiene	3.59	54	137750	25.3827 ug/L	95
6) Bromomethane	4.38	94	97732	18.1870 ug/L	100
7) Chloroethane	4.52	64	126102	21.6198 ug/L	100
8) Trichlorofluoromethane	4.99	101	287249	22.0204 ug/L	99
9) Diethyl ether	5.53	59	506293	78.6576 ug/L	97
10) Isoprene	5.56	67	231642	19.1012 ug/L	94
11) Acrolein	5.78	56	32514	36.5295 ug/L	96
12) 1,1,2-Trichloro-1,2,2-Trif	5.78	101	163178	20.7911 ug/L	98
13) Acetone	5.88	43	37526	19.5975 ug/L	95
14) 1,1-Dichloroethene	6.09	61	272597	21.0674 ug/L	93
15) Tert-Butyl Alcohol	6.24	59	72481	165.6248 ug/L	89
16) Dimethyl Sulfide	6.37	62	162899	19.1872 ug/L	100
17) Iodomethane	6.62	142	167163	18.8209 ug/L	99
18) Methyl acetate	6.67	43	105356	19.3006 ug/L	99
19) Methylene Chloride	6.92	84	174838	20.7999 ug/L	89
20) Carbon Disulfide	6.94	76	478375	19.5353 ug/L	100
21) Acrylonitrile	7.13	53	95805	39.3230 ug/L	98
22) Methyl Tert Butyl Ether	7.16	73	395312	20.9388 ug/L	99
23) trans-1,2-Dichloroethene	7.40	96	174047	21.2137 ug/L	89
24) n-Hexane	7.49	57	202315	18.8337 ug/L	97
25) Diisopropyl ether	7.88	45	2399493	78.5099 ug/L	97
26) Vinyl Acetate	8.06	43	290877	19.3517 ug/L	99
27) 1,1-Dichloroethane	8.07	63	318335	20.9833 ug/L	100
28) Ethyl-Tert-Butyl ether	8.51	59	1925137	79.7874 ug/L	96
29) 2-Butanone	8.72	43	55786	19.5201 ug/L	98
30) Propionitrile	8.83	54	62193	81.1531 ug/L	99
31) 2,2-Dichloropropane	8.93	77	225288	20.3300 ug/L	91
32) cis-1,2-Dichloroethene	9.01	96	192219	21.1994 ug/L	99
33) Chloroform	9.24	83	300166	20.5389 ug/L	98
34) 1-Bromopropane	9.39	122	33480	20.9449 ug/L	99
35) Bromochloromethane	9.49	130	119404	21.5110 ug/L	100
36) Tetrahydrofuran	9.54	42	156320	75.3560 ug/L	98
38) 1,1,1-Trichloroethane	9.83	97	264343	20.8686 ug/L	97
39) Cyclohexane	9.85	56	262593	18.9445 ug/L	92
40) 1,1-Dichloropropene	10.06	75	224037	20.7030 ug/L	97
41) Tert-Amyl-Methyl ether	10.20	73	1471407	79.3519 ug/L	94
42) Carbon Tetrachloride	10.21	117	248920	21.3387 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142183.D 8260WTR.M Tue Sep 27 10:19:31 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142183.D Vial: 7
Acq On : 26 Sep 2016 16:43 Operator: TMB
Sample : WG584797-07 20ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:27 2016 Quant Results File: 8260WTR.RES

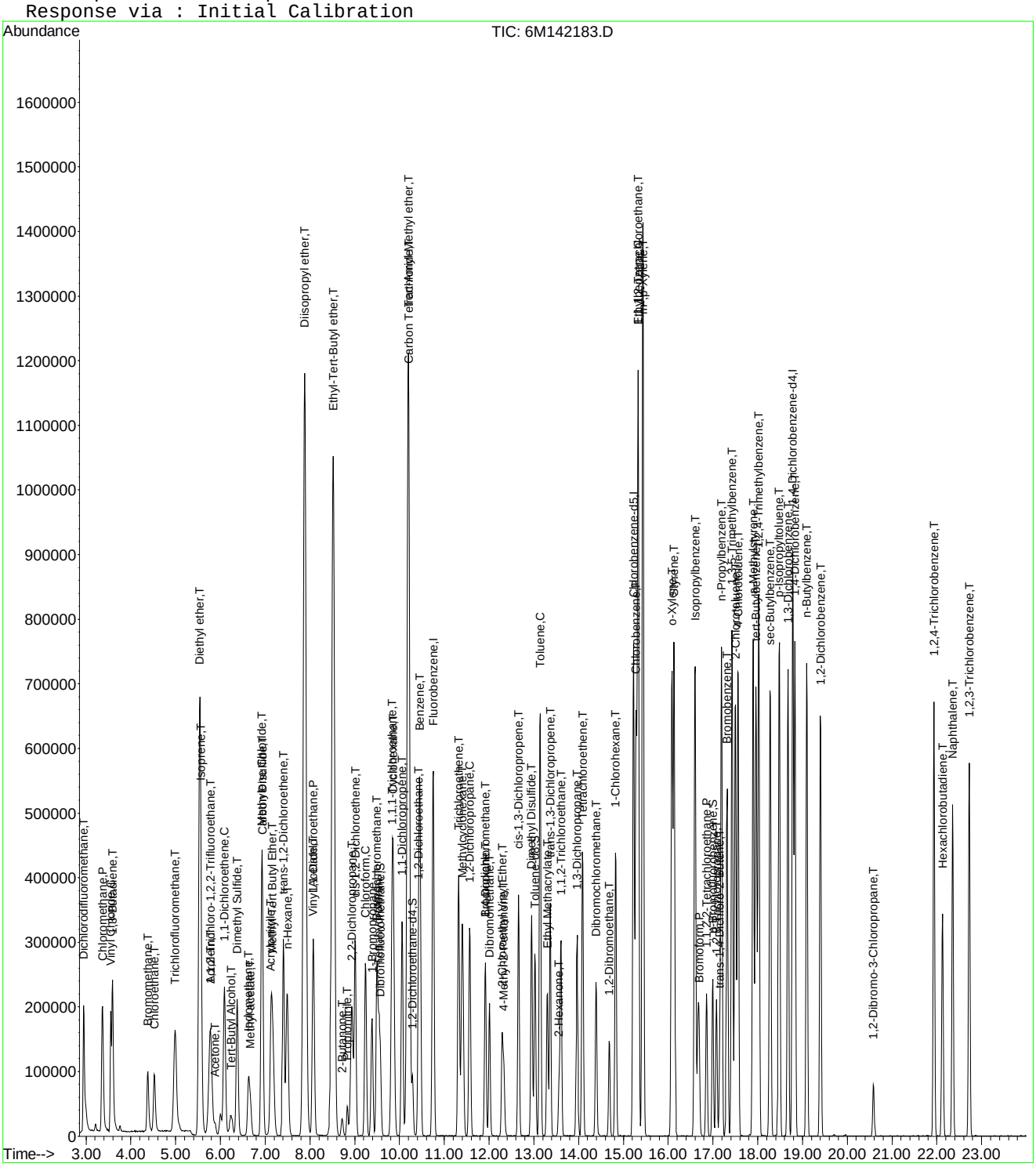
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	227215	21.3611	ug/L	96
46)	Benzene	10.45	78	658810	20.9952	ug/L	96
47)	Trichloroethene	11.32	130	197161	21.3763	ug/L	89
48)	Methylcyclohexane	11.40	83	229730	18.9485	ug/L	92
49)	1,2-Dichloropropane	11.57	63	173921	21.2068	ug/L	97
50)	1,4-Dioxane	11.91	88	8260	169.8698	ug/L	91
51)	Bromodichloromethane	11.91	83	232128	21.5014	ug/L	99
52)	Dibromomethane	12.01	93	97791	21.5009	ug/L	97
53)	2-Chloroethyl Vinyl Ether	12.29	63	81341	21.3277	ug/L	99
54)	4-Methyl-2-Pentanone	12.32	58	43774	19.5398	ug/L	95
55)	cis-1,3-Dichloropropene	12.66	75	262843	21.7666	ug/L	99
56)	Dimethyl Disulfide	12.95	79	137466	18.6651	ug/L	96
59)	Toluene	13.14	91	697905	21.2215	ug/L	100
60)	Ethyl Methacrylate	13.30	69	160265	20.2348	ug/L	97
62)	trans-1,3-Dichloropropene	13.36	75	231775	21.4785	ug/L	95
63)	1,1,2-Trichloroethane	13.61	97	132647	21.6146	ug/L	98
64)	2-Hexanone	13.56	43	88662	19.7367	ug/L	95
65)	1,3-Dichloropropane	13.97	76	221684	21.5722	ug/L	99
66)	Tetrachloroethene	14.09	166	193893	20.9513	ug/L	98
67)	Dibromochloromethane	14.39	129	181662	21.6730	ug/L	99
68)	1,2-Dibromoethane	14.68	107	138567	21.5338	ug/L	99
69)	1-Chlorohexane	14.82	91	204845	19.6926	ug/L	92
70)	Chlorobenzene	15.27	112	497865	21.1980	ug/L	90
71)	1,1,1,2-Tetrachloroethane	15.32	131	189182	21.5260	ug/L	97
72)	Ethylbenzene	15.32	106	264489	20.9957	ug/L	90
73)	m-,p-Xylene	15.44	106	633337	42.4126	ug/L	92
74)	o-Xylene	16.09	106	313016	21.1029	ug/L	91
75)	Styrene	16.13	104	546140	21.5663	ug/L	94
76)	Bromoform	16.69	173	114283	18.9450	ug/L	99
77)	Isopropylbenzene	16.60	105	779289	21.4872	ug/L	97
79)	1,1,2,2-Tetrachloroethane	16.86	83	156974	21.3390	ug/L	97
81)	1,2,3-Trichloropropane	17.08	110	47853	21.2965	ug/L	96
82)	trans-1,4-Dichloro-2-Buten	17.15	53	43625	20.0147	ug/L	92
83)	n-Propylbenzene	17.19	91	893634	21.4327	ug/L	97
84)	Bromobenzene	17.32	156	227879	21.1771	ug/L	89
85)	1,3,5-Trimethylbenzene	17.42	105	658525	21.3206	ug/L	96
86)	2-Chlorotoluene	17.50	91	554354	20.2444	ug/L	91
87)	4-Chlorotoluene	17.56	91	593636	21.7026	ug/L	98
88)	a-Methylstyrene	17.90	118	357681	19.1705	ug/L	96
89)	tert-Butylbenzene	17.96	134	148517	20.7311	ug/L	100
90)	1,2,4-Trimethylbenzene	18.02	105	691435	21.3699	ug/L	95
91)	sec-Butylbenzene	18.28	105	795262	21.5343	ug/L	99
92)	p-Isopropyltoluene	18.48	119	710144	21.6951	ug/L	100
93)	1,3-Dichlorobenzene	18.67	146	435553	21.2079	ug/L	98
94)	1,4-Dichlorobenzene	18.83	146	436008	21.1250	ug/L	99
95)	n-Butylbenzene	19.09	91	607411	21.4716	ug/L	96
96)	1,2-Dichlorobenzene	19.41	146	406313	21.0760	ug/L	98
97)	1,2-Dibromo-3-Chloropropan	20.58	75	26464	21.0242	ug/L	82
98)	1,2,4-Trichlorobenzene	21.93	180	298389	21.2226	ug/L	98
99)	Hexachlorobutadiene	22.13	225	110100	21.0259	ug/L	100
100)	Naphthalene	22.35	128	578575	22.6305	ug/L	100
101)	1,2,3-Trichlorobenzene	22.73	180	270482	21.5057	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142183.D 8260WTR.M Tue Sep 27 10:19:32 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142183.D Vial: 7
Acq On : 26 Sep 2016 16:43 Operator: TMB
Sample : WG584797-07 20ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142184.D Vial: 8
Acq On : 26 Sep 2016 17:15 Operator: TMB
Sample : WG584797-08 50ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:36 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	791212	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	623465	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.79	152	358963	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.56	111	211052	25.8083 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 103.24%		
43) 1,2-Dichloroethane-d4	10.29	65	204642	24.9493 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.80%		
58) Toluene-d8	13.03	98	692250	24.6860 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 98.76%		
80) p-Bromofluorobenzene	17.00	95	289882	24.4617 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.84%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.95	85	711269	53.3982 ug/L	97
3) Chloromethane	3.37	50	784632	51.1076 ug/L	100
4) Vinyl Chloride	3.55	62	462790	49.2454 ug/L	100
5) 1,3-Butadiene	3.59	54	270426	53.7328 ug/L	94
6) Bromomethane	4.38	94	259309	47.4030 ug/L	99
7) Chloroethane	4.53	64	308368	51.9353 ug/L	100
8) Trichlorofluoromethane	4.99	101	697917	52.5573 ug/L	99
9) Diethyl ether	5.53	59	654924	99.9524 ug/L	97
10) Isoprene	5.56	67	630362	51.0620 ug/L	95
11) Acrolein	5.78	56	44916	49.5722 ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	5.78	101	405099	50.7038 ug/L	98
13) Acetone	5.89	43	91027	49.9721 ug/L	99
14) 1,1-Dichloroethene	6.09	61	658227	49.9721 ug/L	92
15) Tert-Butyl Alcohol	6.24	59	93606	210.1204 ug/L	90
16) Dimethyl Sulfide	6.37	62	444702	51.4547 ug/L	99
17) Iodomethane	6.62	142	501225	53.0756 ug/L	99
18) Methyl acetate	6.67	43	281695	50.6938 ug/L	99
19) Methylene Chloride	6.92	84	421171	49.2206 ug/L	89
20) Carbon Disulfide	6.94	76	1301047	52.1925 ug/L	99
21) Acrylonitrile	7.13	53	129606	52.2573 ug/L	99
22) Methyl Tert Butyl Ether	7.16	73	979215	50.9511 ug/L	99
23) trans-1,2-Dichloroethene	7.40	96	421122	50.4220 ug/L	89
24) n-Hexane	7.49	57	562526	51.4415 ug/L	97
25) Diisopropyl ether	7.88	45	3104399	99.7806 ug/L	97
26) Vinyl Acetate	8.07	43	775094	50.6556 ug/L	98
27) 1,1-Dichloroethane	8.08	63	772248	50.0044 ug/L	99
28) Ethyl-Tert-Butyl ether	8.51	59	2492856	101.4924 ug/L	96
29) 2-Butanone	8.72	43	145564	50.0350 ug/L	98
30) Propionitrile	8.83	54	81417	104.3619 ug/L	99
31) 2,2-Dichloropropane	8.93	77	571768	50.6855 ug/L	95
32) cis-1,2-Dichloroethene	9.01	96	464944	50.3723 ug/L	90
33) Chloroform	9.25	83	729168	49.0124 ug/L	99
34) 1-Bromopropane	9.39	122	90810	55.8072 ug/L	99
35) Bromochloromethane	9.50	130	291444	51.5775 ug/L	99
36) Tetrahydrofuran	9.53	42	203801	96.5101 ug/L	98
38) 1,1,1-Trichloroethane	9.83	97	655057	50.8005 ug/L	96
39) Cyclohexane	9.86	56	728424	51.6235 ug/L	93
40) 1,1-Dichloropropene	10.05	75	550073	49.9340 ug/L	97
41) Tert-Amyl-Methyl ether	10.20	73	1928967	102.1911 ug/L	94
42) Carbon Tetrachloride	10.21	117	625285	52.6562 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142184.D 8260WTR.M Tue Sep 27 10:19:40 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142184.D Vial: 8
Acq On : 26 Sep 2016 17:15 Operator: TMB
Sample : WG584797-08 50ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:36 2016 Quant Results File: 8260WTR.RES

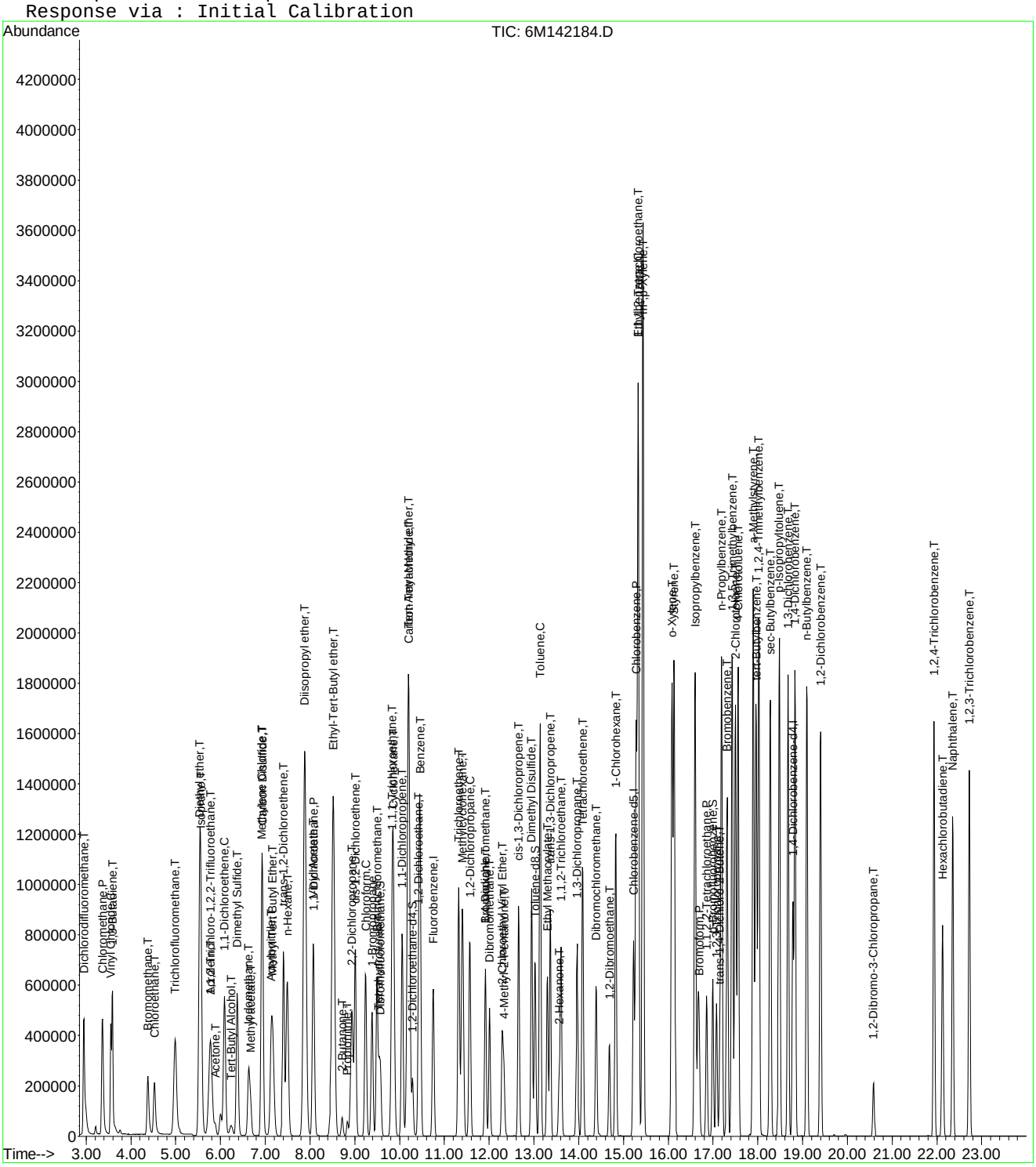
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	548986	50.7003	ug/L	98
46)	Benzene	10.46	78	1596793	49.9886	ug/L	96
47)	Trichloroethene	11.32	130	477028	50.8065	ug/L	89
48)	Methylcyclohexane	11.40	83	631082	51.1337	ug/L	91
49)	1,2-Dichloropropane	11.58	63	424523	50.8496	ug/L	97
50)	1,4-Dioxane	11.91	88	11212	226.5076	ug/L	91
51)	Bromodichloromethane	11.91	83	572350	52.0791	ug/L	100
52)	Dibromomethane	12.00	93	240870	52.0241	ug/L	97
53)	2-Chloroethyl Vinyl Ether	12.29	63	212508	54.7361	ug/L	99
54)	4-Methyl-2-Pentanone	12.33	58	115460	50.6290	ug/L	95
55)	cis-1,3-Dichloropropene	12.66	75	647986	52.7136	ug/L	99
56)	Dimethyl Disulfide	12.94	79	389399	51.9391	ug/L	96
59)	Toluene	13.14	91	1704691	50.4802	ug/L	100
60)	Ethyl Methacrylate	13.30	69	448006	55.0860	ug/L	96
62)	trans-1,3-Dichloropropene	13.36	75	577195	52.0903	ug/L	95
63)	1,1,2-Trichloroethane	13.61	97	325353	51.6298	ug/L	98
64)	2-Hexanone	13.57	43	230640	49.9998	ug/L	97
65)	1,3-Dichloropropane	13.97	76	542732	51.4330	ug/L	99
66)	Tetrachloroethene	14.09	166	476590	50.1521	ug/L	98
67)	Dibromochloromethane	14.38	129	454762	52.8366	ug/L	100
68)	1,2-Dibromoethane	14.69	107	345240	52.2489	ug/L	100
69)	1-Chlorohexane	14.83	91	572716	53.6183	ug/L	91
70)	Chlorobenzene	15.28	112	1220601	50.6119	ug/L	90
71)	1,1,1,2-Tetrachloroethane	15.32	131	478329	53.0037	ug/L	97
72)	Ethylbenzene	15.32	106	649705	50.2268	ug/L	91
73)	m-,p-Xylene	15.44	106	1581267	103.1245	ug/L	91
74)	o-Xylene	16.09	106	776463	50.9791	ug/L	90
75)	Styrene	16.13	104	1362705	52.4045	ug/L	94
76)	Bromoform	16.69	173	299691	47.4655	ug/L	99
77)	Isopropylbenzene	16.60	105	1925404	51.7010	ug/L	97
79)	1,1,2,2-Tetrachloroethane	16.86	83	393788	51.5248	ug/L	99
81)	1,2,3-Trichloropropane	17.08	110	120830	51.7583	ug/L	96
82)	trans-1,4-Dichloro-2-Buten	17.15	53	123399	54.4920	ug/L	84
83)	n-Propylbenzene	17.19	91	2203134	50.8588	ug/L	96
84)	Bromobenzene	17.31	156	563052	50.3638	ug/L	89
85)	1,3,5-Trimethylbenzene	17.43	105	1640701	51.1286	ug/L	96
86)	2-Chlorotoluene	17.50	91	1471693	51.7299	ug/L	95
87)	4-Chlorotoluene	17.56	91	1372233	48.2867	ug/L	94
88)	a-Methylstyrene	17.90	118	1006488	51.9222	ug/L	96
89)	tert-Butylbenzene	17.97	134	371924	49.9697	ug/L	82
90)	1,2,4-Trimethylbenzene	18.02	105	1735189	51.6185	ug/L	94
91)	sec-Butylbenzene	18.28	105	1965492	51.2269	ug/L	98
92)	p-Isopropyltoluene	18.48	119	1766926	51.9567	ug/L	99
93)	1,3-Dichlorobenzene	18.67	146	1078851	50.5622	ug/L	98
94)	1,4-Dichlorobenzene	18.83	146	1076817	50.2171	ug/L	98
95)	n-Butylbenzene	19.09	91	1506560	51.2597	ug/L	95
96)	1,2-Dichlorobenzene	19.41	146	998516	49.8529	ug/L	100
97)	1,2-Dibromo-3-Chloropropan	20.58	75	70601	53.9862	ug/L	86
98)	1,2,4-Trichlorobenzene	21.93	180	728140	49.8470	ug/L	99
99)	Hexachlorobutadiene	22.12	225	267811	49.2270	ug/L	100
100)	Naphthalene	22.35	128	1456744	54.8434	ug/L	100
101)	1,2,3-Trichlorobenzene	22.73	180	667939	51.1164	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142184.D 8260WTR.M Tue Sep 27 10:19:41 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142184.D Vial: 8
Acq On : 26 Sep 2016 17:15 Operator: TMB
Sample : WG584797-08 50ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142185.D Vial: 9
Acq On : 26 Sep 2016 17:47 Operator: TMB
Sample : WG584797-09 100ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:45 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	788165	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	621408	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	364124	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.57	111	427587	52.4893 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 209.96%#		
43) 1,2-Dichloroethane-d4	10.29	65	408854	50.0388 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 200.16%#		
58) Toluene-d8	13.02	98	1405225	50.2769 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 201.12%#		
80) p-Bromofluorobenzene	17.00	95	593296	49.3557 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 197.44%#		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.95	85	1436942	108.2948 ug/L	98
3) Chloromethane	3.36	50	1398173	91.4231 ug/L	100
4) Vinyl Chloride	3.55	62	922646	98.5581 ug/L	100
5) 1,3-Butadiene	3.59	54	494147	102.8623 ug/L	98
6) Bromomethane	4.38	94	553914	101.6497 ug/L	100
7) Chloroethane	4.52	64	580026	98.0655 ug/L	100
8) Trichlorofluoromethane	4.99	101	1310289	99.0541 ug/L	99
9) Diethyl ether	5.54	59	1307830	200.3684 ug/L	97
10) Isoprene	5.56	67	1232889	100.2553 ug/L	95
11) Acrolein	5.77	56	91228	101.0743 ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	5.77	101	828673	104.1209 ug/L	98
13) Acetone	5.89	43	168732	95.0267 ug/L	98
14) 1,1-Dichloroethene	6.09	61	1327872	101.2009 ug/L	92
15) Tert-Butyl Alcohol	6.24	59	178727	402.7452 ug/L	92
16) Dimethyl Sulfide	6.37	62	857924	99.6507 ug/L	99
17) Iodomethane	6.63	142	988885	103.9296 ug/L	99
18) Methyl acetate	6.67	43	542963	98.0893 ug/L	98
19) Methylene Chloride	6.92	84	855296	100.3414 ug/L	90
20) Carbon Disulfide	6.94	76	2520789	101.5143 ug/L	99
21) Acrylonitrile	7.13	53	255894	103.5757 ug/L	99
22) Methyl Tert Butyl Ether	7.16	73	1938003	101.2292 ug/L	98
23) trans-1,2-Dichloroethene	7.41	96	855255	102.7978 ug/L	89
24) n-Hexane	7.49	57	1083119	99.4312 ug/L	97
25) Diisopropyl ether	7.89	45	6151073	198.4701 ug/L	96
26) Vinyl Acetate	8.07	43	1470603	96.4816 ug/L	97
27) 1,1-Dichloroethane	8.08	63	1566543	101.8286 ug/L	100
28) Ethyl-Tert-Butyl ether	8.51	59	4963450	202.8596 ug/L	96
29) 2-Butanone	8.72	43	277773	95.8486 ug/L	99
30) Propionitrile	8.84	54	158288	203.6811 ug/L	98
31) 2,2-Dichloropropane	8.94	77	1170966	104.2038 ug/L	97
32) cis-1,2-Dichloroethene	9.01	96	939093	102.1351 ug/L	98
33) Chloroform	9.25	83	1467020	98.9897 ug/L	98
34) 1-Bromopropane	9.39	122	177067	109.2370 ug/L	99
35) Bromochloromethane	9.50	130	591936	105.1612 ug/L	100
36) Tetrahydrofuran	9.53	42	393631	187.1249 ug/L	99
38) 1,1,1-Trichloroethane	9.84	97	1328552	103.4293 ug/L	96
39) Cyclohexane	9.86	56	1421068	101.1006 ug/L	93
40) 1,1-Dichloropropene	10.06	75	1105588	100.7500 ug/L	97
41) Tert-Amyl-Methyl ether	10.20	73	3891891	206.9781 ug/L	95
42) Carbon Tetrachloride	10.22	117	1292915	109.2993 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142185.D 8260WTR.M Tue Sep 27 10:19:48 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142185.D Vial: 9
Acq On : 26 Sep 2016 17:47 Operator: TMB
Sample : WG584797-09 100ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:45 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

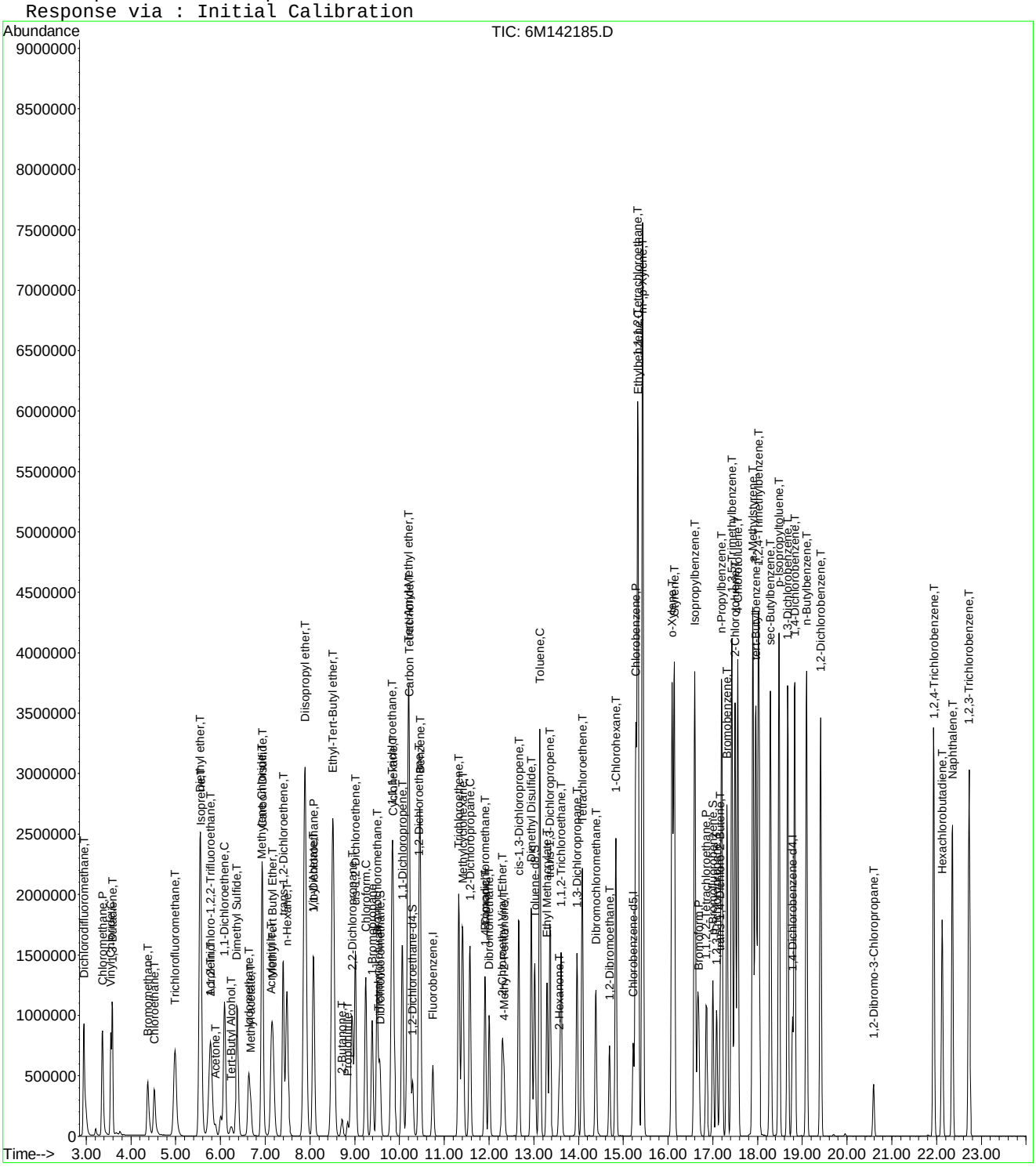
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	1,2-Dichloroethane	10.43	62	1105350	102.4766 ug/L	98
46)	Benzene	10.46	78	3207859	100.8123 ug/L	96
47)	Trichloroethene	11.32	130	968083	103.5055 ug/L	89
48)	Methylcyclohexane	11.41	83	1229581	100.0125 ug/L	93
49)	1,2-Dichloropropane	11.57	63	854514	102.7499 ug/L	97
50)	1,4-Dioxane	11.92	88	19721	399.9487 ug/L	91
51)	Bromodichloromethane	11.91	83	1144255	104.5202 ug/L	99
52)	Dibromomethane	12.00	93	483748	104.8858 ug/L	98
53)	2-Chloroethyl Vinyl Ether	12.29	63	405175	104.7651 ug/L	100
54)	4-Methyl-2-Pentanone	12.33	58	227824	100.2867 ug/L	94
55)	cis-1,3-Dichloropropene	12.67	75	1305601	106.6212 ug/L	99
56)	Dimethyl Disulfide	12.94	79	764702	102.3923 ug/L	96
59)	Toluene	13.14	91	3417780	101.5441 ug/L	99
60)	Ethyl Methacrylate	13.30	69	880419	108.6130 ug/L	97
62)	trans-1,3-Dichloropropene	13.36	75	1170364	105.9719 ug/L	95
63)	1,1,2-Trichloroethane	13.61	97	650344	103.5437 ug/L	99
64)	2-Hexanone	13.57	43	449630	97.7967 ug/L	98
65)	1,3-Dichloropropane	13.96	76	1078245	102.5201 ug/L	99
66)	Tetrachloroethene	14.09	166	966674	102.0609 ug/L	98
67)	Dibromochloromethane	14.39	129	931039	108.5310 ug/L	100
68)	1,2-Dibromoethane	14.69	107	687688	104.4198 ug/L	100
69)	1-Chlorohexane	14.83	91	1121300	105.3248 ug/L	91
70)	Chlorobenzene	15.28	112	2474843	102.9584 ug/L	91
71)	1,1,1,2-Tetrachloroethane	15.32	131	982107	109.1877 ug/L	98
72)	Ethylbenzene	15.33	106	1355081	105.1042 ug/L	88
73)	m-,p-Xylene	15.43	106	3237803	211.8567 ug/L	87
74)	o-Xylene	16.09	106	1583630	104.3183 ug/L	90
75)	Styrene	16.14	104	2789328	107.6222 ug/L	95
76)	Bromoform	16.69	173	616536	97.3436 ug/L	99
77)	Isopropylbenzene	16.60	105	3897818	105.0108 ug/L	97
79)	1,1,2,2-Tetrachloroethane	16.85	83	780727	100.7056 ug/L	99
81)	1,2,3-Trichloropropane	17.08	110	240211	101.4376 ug/L	95
82)	trans-1,4-Dichloro-2-Buten	17.16	53	251548	109.5072 ug/L	83
83)	n-Propylbenzene	17.19	91	4460338	101.5063 ug/L	95
84)	Bromobenzene	17.31	156	1152022	101.5854 ug/L	90
85)	1,3,5-Trimethylbenzene	17.43	105	3386982	104.0513 ug/L	95
86)	2-Chlorotoluene	17.50	91	2931940	101.5967 ug/L	94
87)	4-Chlorotoluene	17.56	91	2895857	100.4563 ug/L	94
88)	a-Methylstyrene	17.90	118	2033197	103.4008 ug/L	95
89)	tert-Butylbenzene	17.97	134	777799	103.0198 ug/L	84
90)	1,2,4-Trimethylbenzene	18.03	105	3574509	104.8276 ug/L	96
91)	sec-Butylbenzene	18.28	105	4033014	103.6232 ug/L	97
92)	p-Isopropyltoluene	18.48	119	3648695	105.7697 ug/L	98
93)	1,3-Dichlorobenzene	18.67	146	2214904	102.3339 ug/L	99
94)	1,4-Dichlorobenzene	18.83	146	2215429	101.8515 ug/L	99
95)	n-Butylbenzene	19.10	91	3127780	104.9122 ug/L	94
96)	1,2-Dichlorobenzene	19.41	146	2053358	101.0649 ug/L	99
97)	1,2-Dibromo-3-Chloropropan	20.59	75	141624	106.7601 ug/L	84
98)	1,2,4-Trichlorobenzene	21.94	180	1520596	102.6214 ug/L	99
99)	Hexachlorobutadiene	22.12	225	567598	102.8528 ug/L	100
100)	Naphthalene	22.36	128	2951709	109.5507 ug/L	99
101)	1,2,3-Trichlorobenzene	22.73	180	1383857	104.4034 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142185.D 8260WTR.M Tue Sep 27 10:19:49 2016 Page 2

Quantitation Report (Not Reviewed)

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142185.D Vial: 9
Acq On : 26 Sep 2016 17:47 Operator: TMB
Sample : WG584797-09 100ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142186.D Vial: 10
Acq On : 26 Sep 2016 18:19 Operator: TMB
Sample : WG584797-10 200ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:53 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	770327	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	625299	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	371195	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.56	111	824047	103.4999	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 414.00%#			
43) 1,2-Dichloroethane-d4	10.29	65	780095	97.6852	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 390.76%#			
58) Toluene-d8	13.02	98	2721130	96.7523	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 387.00%#			
80) p-Bromofluorobenzene	17.00	95	1196674	97.6538	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 390.60%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.95	85	2846425	219.4877	ug/L	98
3) Chloromethane	3.35	50	2800847	187.3813	ug/L	100
4) Vinyl Chloride	3.55	62	1766182	193.0344	ug/L	99
5) 1,3-Butadiene	3.58	54	936433	204.2788	ug/L	98
6) Bromomethane	4.36	94	1180525	221.6568	ug/L	100
7) Chloroethane	4.52	64	1149620	198.8681	ug/L	100
8) Trichlorofluoromethane	4.98	101	2556971	197.7758	ug/L	99
9) Diethyl ether	5.54	59	998	0.1564	ug/L #	11
10) Isoprene	5.55	67	2434761	202.5730	ug/L	94
11) Acrolein	5.78	56	1550	1.7571	ug/L	94
12) 1,1,2-Trichloro-1,2,2-Trif	5.77	101	1648411	211.9153	ug/L	97
13) Acetone	5.89	43	347180	202.6693	ug/L	98
14) 1,1-Dichloroethene	6.09	61	2650918	206.7123	ug/L	92
15) Tert-Butyl Alcohol	6.24	59	20284	46.7666	ug/L	85
16) Dimethyl Sulfide	6.37	62	1720015	204.4118	ug/L	98
17) Iodomethane	6.62	142	1920203	205.2846	ug/L	99
18) Methyl acetate	6.67	43	1061262	196.1625	ug/L	97
19) Methylene Chloride	6.92	84	1721777	206.6725	ug/L	90
20) Carbon Disulfide	6.94	76	5050385	208.0929	ug/L	98
21) Acrylonitrile	7.16	53	45129	18.6894	ug/L #	35
22) Methyl Tert Butyl Ether	7.16	73	3822211	204.2717	ug/L	99
23) trans-1,2-Dichloroethene	7.40	96	1702897	209.4201	ug/L	89
24) n-Hexane	7.49	57	2137923	200.8079	ug/L	97
25) Diisopropyl ether	7.88	45	3766	0.1243	ug/L #	79
26) Vinyl Acetate	8.07	43	2919304	195.9613	ug/L	97
27) 1,1-Dichloroethane	8.08	63	3092687	205.6864	ug/L	99
29) 2-Butanone	8.72	43	551247	194.6184	ug/L	100
30) Propionitrile	8.84	54	2292	3.0176	ug/L #	76
31) 2,2-Dichloropropane	8.93	77	2331374	212.2723	ug/L	99
32) cis-1,2-Dichloroethene	9.01	96	1865893	207.6325	ug/L	90
33) Chloroform	9.25	83	2886245	199.2642	ug/L	99
34) 1-Bromopropane	9.39	122	352429	222.4569	ug/L	99
35) Bromochloromethane	9.50	130	1171927	213.0215	ug/L	99
36) Tetrahydrofuran	9.55	42	6444	3.1343	ug/L	87
38) 1,1,1-Trichloroethane	9.84	97	2672099	212.8430	ug/L	97
39) Cyclohexane	9.86	56	2877895	209.4864	ug/L	94
40) 1,1-Dichloropropene	10.05	75	2208829	205.9471	ug/L	96
41) Tert-Amyl-Methyl ether	10.21	73	2458	0.1337	ug/L #	66
42) Carbon Tetrachloride	10.21	117	2506287	216.7806	ug/L	98
45) 1,2-Dichloroethane	10.43	62	2183883	207.1555	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142186.D 8260WTR.M Tue Sep 27 10:19:57 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142186.D Vial: 10
Acq On : 26 Sep 2016 18:19 Operator: TMB
Sample : WG584797-10 200ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19:53 2016 Quant Results File: 8260WTR.RES

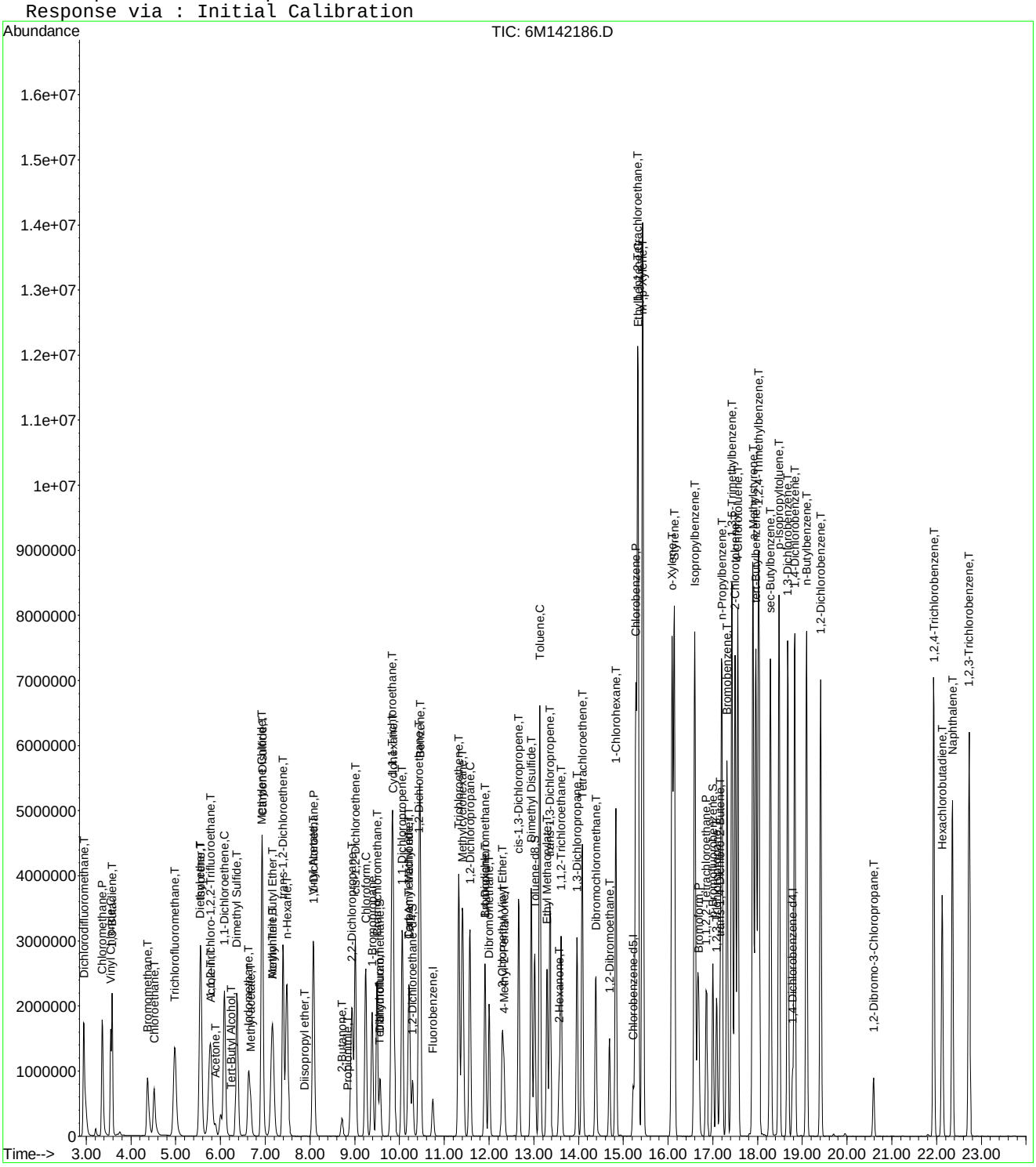
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Benzene	10.46	78	6193824	199.1586	ug/L	98
47)	Trichloroethene	11.32	130	1911509	209.1074	ug/L	89
48)	Methylcyclohexane	11.40	83	2441589	203.1943	ug/L	92
49)	1,2-Dichloropropane	11.57	63	1703097	209.5288	ug/L	98
50)	1,4-Dioxane	11.91	88	9673	200.7144	ug/L	73
51)	Bromodichloromethane	11.91	83	2283490	213.4118	ug/L	99
52)	Dibromomethane	12.00	93	964809	214.0331	ug/L	98
53)	2-Chloroethyl Vinyl Ether	12.29	63	807147	213.5349	ug/L	100
54)	4-Methyl-2-Pentanone	12.33	58	463785	208.8827	ug/L	93
55)	cis-1,3-Dichloropropene	12.66	75	2608135	217.9240	ug/L	99
56)	Dimethyl Disulfide	12.94	79	1560194	213.7449	ug/L	96
59)	Toluene	13.14	91	6595728	194.7433	ug/L	96
60)	Ethyl Methacrylate	13.30	69	1768885	216.8609	ug/L	98
62)	trans-1,3-Dichloropropene	13.36	75	2355621	211.9650	ug/L	95
63)	1,1,2-Trichloroethane	13.61	97	1300224	205.7254	ug/L	99
64)	2-Hexanone	13.57	43	934606	202.0164	ug/L	98
65)	1,3-Dichloropropane	13.96	76	2148205	202.9815	ug/L	100
66)	Tetrachloroethene	14.09	166	1947639	204.3511	ug/L	98
67)	Dibromochloromethane	14.39	129	1873392	217.0219	ug/L	100
68)	1,2-Dibromoethane	14.69	107	1376349	207.6869	ug/L	100
69)	1-Chlorohexane	14.83	91	2278597	212.6990	ug/L	92
70)	Chlorobenzene	15.28	112	4914458	203.1790	ug/L	95
71)	1,1,1,2-Tetrachloroethane	15.32	131	2029800	224.2627	ug/L	99
72)	Ethylbenzene	15.33	106	2801517	215.9420	ug/L	78
73)	m-,p-Xylene	15.43	106	6339241	412.2097	ug/L	73
74)	o-Xylene	16.09	106	3271104	214.1363	ug/L	86
75)	Styrene	16.14	104	5613069	215.2245	ug/L	99
76)	Bromoform	16.69	173	1292689	202.1910	ug/L	98
77)	Isopropylbenzene	16.60	105	7610674	203.7627	ug/L	93
79)	1,1,2,2-Tetrachloroethane	16.85	83	1614821	204.3271	ug/L	100
81)	1,2,3-Trichloropropane	17.08	110	493389	204.3820	ug/L	97
82)	trans-1,4-Dichloro-2-Buten	17.16	53	521938	222.8886	ug/L	83
83)	n-Propylbenzene	17.20	91	8467615	189.0312	ug/L	90
84)	Bromobenzene	17.31	156	2374837	205.4241	ug/L	90
85)	1,3,5-Trimethylbenzene	17.43	105	6704496	202.0448	ug/L	92
86)	2-Chlorotoluene	17.50	91	5813791	197.6201	ug/L	93
87)	4-Chlorotoluene	17.56	91	5812861	197.8049	ug/L	92
88)	a-Methylstyrene	17.91	118	4132942	206.1821	ug/L	95
89)	tert-Butylbenzene	17.97	134	1626142	211.2802	ug/L	89
90)	1,2,4-Trimethylbenzene	18.03	105	6983079	200.8878	ug/L	92
91)	sec-Butylbenzene	18.28	105	7817684	197.0392	ug/L	94
92)	p-Isopropyltoluene	18.48	119	7033869	200.0161	ug/L	95
93)	1,3-Dichlorobenzene	18.67	146	4429750	200.7663	ug/L	98
94)	1,4-Dichlorobenzene	18.83	146	4409011	198.8374	ug/L	99
95)	n-Butylbenzene	19.10	91	6119231	201.3417	ug/L	92
96)	1,2-Dichlorobenzene	19.41	146	4082175	197.0945	ug/L	98
97)	1,2-Dibromo-3-Chloropropan	20.59	75	291385	215.4698	ug/L	84
98)	1,2,4-Trichlorobenzene	21.94	180	3112658	206.0643	ug/L	99
99)	Hexachlorobutadiene	22.12	225	1167630	207.5524	ug/L	99
100)	Naphthalene	22.36	128	5725947	208.4664	ug/L	97
101)	1,2,3-Trichlorobenzene	22.73	180	2824645	209.0425	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142186.D 8260WTR.M Tue Sep 27 10:19:58 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142186.D Vial: 10
Acq On : 26 Sep 2016 18:19 Operator: TMB
Sample : WG584797-10 200ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:19 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142187.D Vial: 11
Acq On : 26 Sep 2016 18:51 Operator: TMB
Sample : WG584797-11 300ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:20:02 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.74	96	805636	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	634317	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.79	152	374014	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	1301639	156.3201	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 625.28%#			
43) 1,2-Dichloroethane-d4	10.29	65	1233722	147.7184	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 590.88%#			
58) Toluene-d8	13.02	98	4199758	147.2033	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 588.80%#			
80) p-Bromofluorobenzene	17.00	95	1833183	148.4681	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 593.88%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.94	85	4134566	304.8433	ug/L	98
3) Chloromethane	3.36	50	4115863	263.2898	ug/L	99
4) Vinyl Chloride	3.54	62	2562458	267.7888	ug/L	99
5) 1,3-Butadiene	3.58	54	1359032	285.4703	ug/L	99
6) Bromomethane	4.37	94	1862324	334.3469	ug/L	100
7) Chloroethane	4.51	64	1808367	299.1118	ug/L	99
8) Trichlorofluoromethane	4.98	101	4023049	297.5356	ug/L	99
9) Diethyl ether	5.53	59	2090479	313.3300	ug/L	98
10) Isoprene	5.54	67	4006733	318.7513	ug/L	95
11) Acrolein	5.78	56	164805	178.6328	ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	5.77	101	2571638	316.1134	ug/L	97
13) Acetone	5.89	43	539864	302.4905	ug/L	100
14) 1,1-Dichloroethene	6.08	61	4150801	309.4840	ug/L	91
15) Tert-Butyl Alcohol	6.26	59	272291	600.2771	ug/L	90
16) Dimethyl Sulfide	6.37	62	2715785	308.6067	ug/L	98
17) Iodomethane	6.63	142	2844972	290.3138	ug/L	100
18) Methyl acetate	6.67	43	1701386	300.6993	ug/L	97
19) Methylene Chloride	6.92	84	2666187	306.0080	ug/L	90
20) Carbon Disulfide	6.93	76	7729348	304.5173	ug/L	97
21) Acrylonitrile	7.13	53	438780	173.7492	ug/L	96
22) Methyl Tert Butyl Ether	7.16	73	6023198	307.7917	ug/L	99
23) trans-1,2-Dichloroethene	7.40	96	2666919	313.6001	ug/L	89
24) n-Hexane	7.48	57	3410903	306.3334	ug/L	97
25) Diisopropyl ether	7.88	45	9271028	292.6513	ug/L	95
26) Vinyl Acetate	8.07	43	5055015	324.4515	ug/L	97
27) 1,1-Dichloroethane	8.08	63	4843846	308.0322	ug/L	99
28) Ethyl-Tert-Butyl ether	8.52	59	7589817	303.4740	ug/L	95
29) 2-Butanone	8.72	43	861797	290.9236	ug/L	98
30) Propionitrile	8.84	54	243899	307.0372	ug/L	98
31) 2,2-Dichloropropane	8.93	77	3689938	321.2452	ug/L	99
32) cis-1,2-Dichloroethene	9.01	96	2905168	309.1121	ug/L	89
33) Chloroform	9.24	83	4453596	293.9972	ug/L	98
34) 1-Bromopropane	9.39	122	562720	339.6275	ug/L	100
35) Bromochloromethane	9.50	130	1823104	316.8623	ug/L	99
36) Tetrahydrofuran	9.54	42	628382	292.2431	ug/L	99
38) 1,1,1-Trichloroethane	9.83	97	4193825	319.4137	ug/L	97
39) Cyclohexane	9.85	56	4609493	320.8266	ug/L	94
40) 1,1-Dichloropropene	10.06	75	3465042	308.9146	ug/L	96
41) Tert-Amyl-Methyl ether	10.20	73	6143717	319.6490	ug/L	96
42) Carbon Tetrachloride	10.21	117	4047112	334.7118	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142187.D 8260WTR.M Tue Sep 27 10:20:06 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142187.D Vial: 11
Acq On : 26 Sep 2016 18:51 Operator: TMB
Sample : WG584797-11 300ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:20:02 2016 Quant Results File: 8260WTR.RES

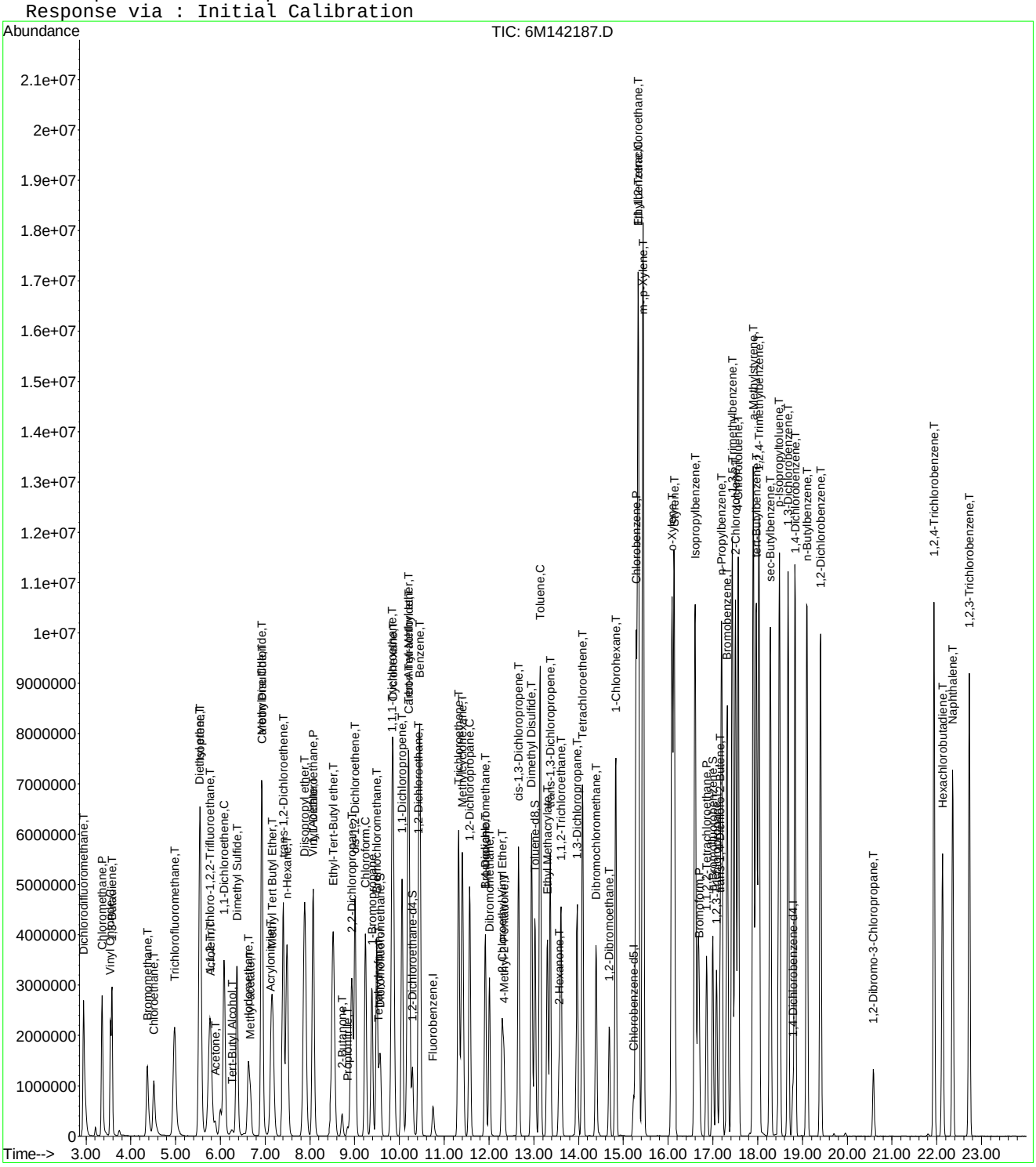
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

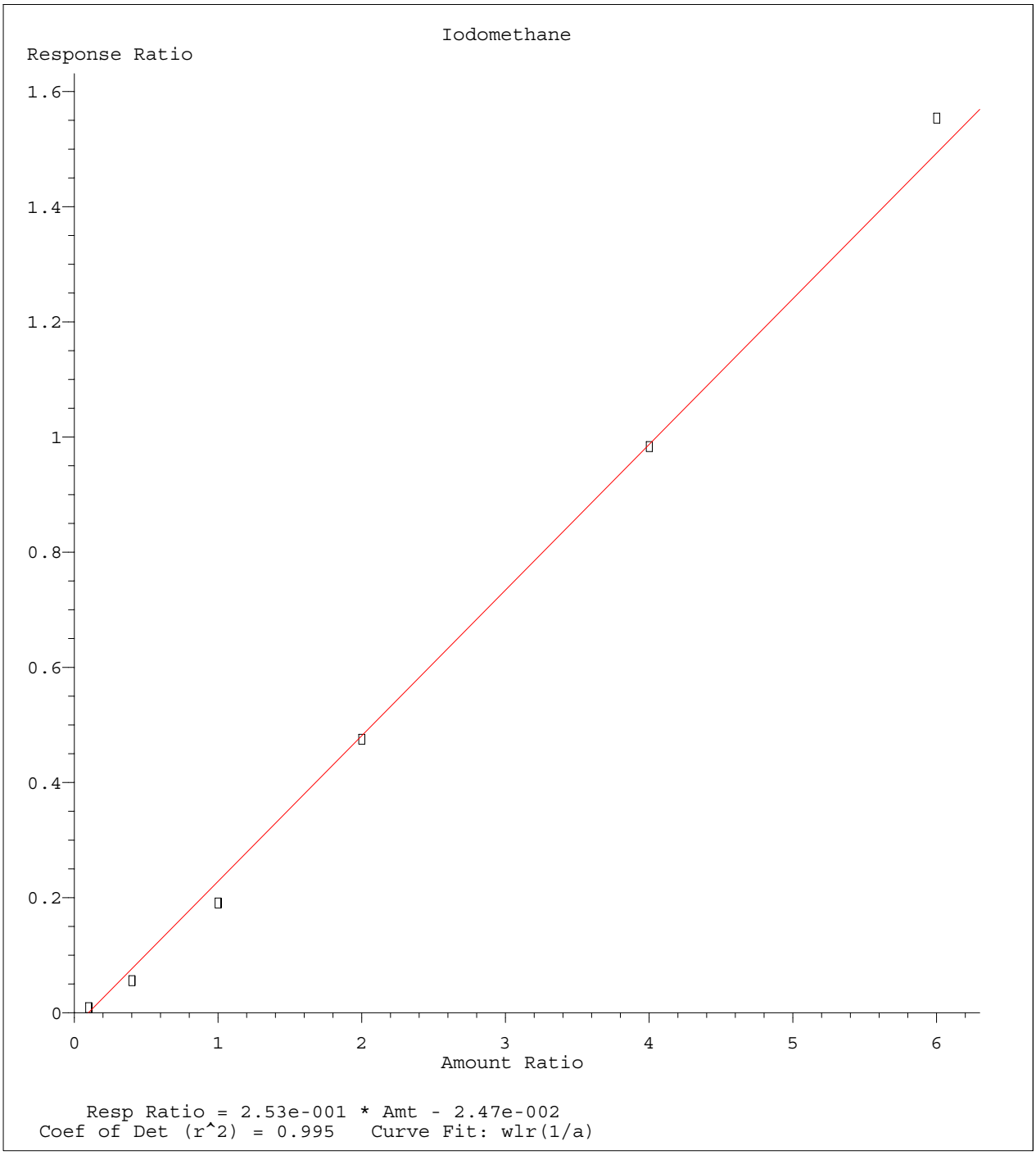
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	1,2-Dichloroethane	10.42	62	3378571	306.4336	ug/L		99
46)	Benzene	10.46	78	9180134	282.2445	ug/L		99
47)	Trichloroethene	11.32	130	2931616	306.6453	ug/L		90
48)	Methylcyclohexane	11.40	83	3839012	305.4884	ug/L		92
49)	1,2-Dichloropropane	11.57	63	2646241	311.2934	ug/L		98
50)	1,4-Dioxane	11.92	88	28679	569.0070	ug/L		87
51)	Bromodichloromethane	11.92	83	3502275	312.9723	ug/L		99
52)	Dibromomethane	12.01	93	1495861	317.2979	ug/L		98
53)	2-Chloroethyl Vinyl Ether	12.29	63	1158123	292.9592	ug/L		100
54)	4-Methyl-2-Pentanone	12.33	58	719802	309.9810	ug/L		94
55)	cis-1,3-Dichloropropene	12.66	75	3988231	318.6336	ug/L		99
56)	Dimethyl Disulfide	12.95	79	2462678	322.5975	ug/L		97
59)	Toluene	13.14	91	9291621	270.4411	ug/L		91
60)	Ethyl Methacrylate	13.30	69	2761466	333.7358	ug/L		98
62)	trans-1,3-Dichloropropene	13.37	75	3595056	318.8936	ug/L		94
63)	1,1,2-Trichloroethane	13.61	97	1973834	307.8660	ug/L		99
64)	2-Hexanone	13.57	43	1453655	309.7424	ug/L		98
65)	1,3-Dichloropropane	13.97	76	3237918	301.5976	ug/L		100
66)	Tetrachloroethene	14.08	166	2997280	310.0111	ug/L		97
67)	Dibromochloromethane	14.39	129	2832113	323.4201	ug/L		99
68)	1,2-Dibromoethane	14.68	107	2046728	304.4542	ug/L		100
69)	1-Chlorohexane	14.84	91	3449782	317.4468	ug/L		93
70)	Chlorobenzene	15.29	112	6964100	283.8243	ug/L		100
71)	1,1,1,2-Tetrachloroethane	15.33	131	2985879	325.2052	ug/L		98
72)	Ethylbenzene	15.33	106	4083568	310.2881	ug/L		65
73)	m-,p-Xylene	15.44	106	8540443	547.4478	ug/L		64
74)	o-Xylene	16.09	106	4734434	305.5240	ug/L		80
75)	Styrene	16.14	104	7792336	294.5374	ug/L		96
76)	Bromoform	16.69	173	1976583	304.4652	ug/L		98
77)	Isopropylbenzene	16.60	105	10141228	267.6538	ug/L		87
79)	1,1,2,2-Tetrachloroethane	16.86	83	2480475	311.4947	ug/L		100
81)	1,2,3-Trichloropropane	17.08	110	749745	308.2344	ug/L		92
82)	trans-1,4-Dichloro-2-Buten	17.16	53	813051	344.5887	ug/L		79
83)	n-Propylbenzene	17.19	91	10983212	243.3414	ug/L	#	84
84)	Bromobenzene	17.32	156	3524444	302.5677	ug/L		90
85)	1,3,5-Trimethylbenzene	17.43	105	9139237	273.3417	ug/L		87
86)	2-Chlorotoluene	17.50	91	8421256	284.0945	ug/L		90
87)	4-Chlorotoluene	17.56	91	7817104	264.0020	ug/L		87
88)	a-Methylstyrene	17.90	118	6033473	298.7262	ug/L		93
89)	tert-Butylbenzene	17.97	134	2417172	311.6895	ug/L		96
90)	1,2,4-Trimethylbenzene	18.03	105	9394107	268.2108	ug/L		86
91)	sec-Butylbenzene	18.29	105	10454237	261.5056	ug/L		88
92)	p-Isopropyltoluene	18.48	119	9499350	268.0890	ug/L		89
93)	1,3-Dichlorobenzene	18.68	146	6303338	283.5284	ug/L		95
94)	1,4-Dichlorobenzene	18.84	146	6250210	279.7473	ug/L		95
95)	n-Butylbenzene	19.10	91	8435113	275.4496	ug/L		87
96)	1,2-Dichlorobenzene	19.41	146	5833806	279.5434	ug/L		95
97)	1,2-Dibromo-3-Chloropropan	20.58	75	436618	320.4314	ug/L		85
98)	1,2,4-Trichlorobenzene	21.93	180	4557742	299.4576	ug/L		100
99)	Hexachlorobutadiene	22.13	225	1773016	312.7875	ug/L		99
100)	Naphthalene	22.35	128	7750800	280.0590	ug/L		94
101)	1,2,3-Trichlorobenzene	22.73	180	4125684	303.0267	ug/L		99

(#) = qualifier out of range (m) = manual integration
6M142187.D 8260WTR.M Tue Sep 27 10:20:06 2016 Page 2

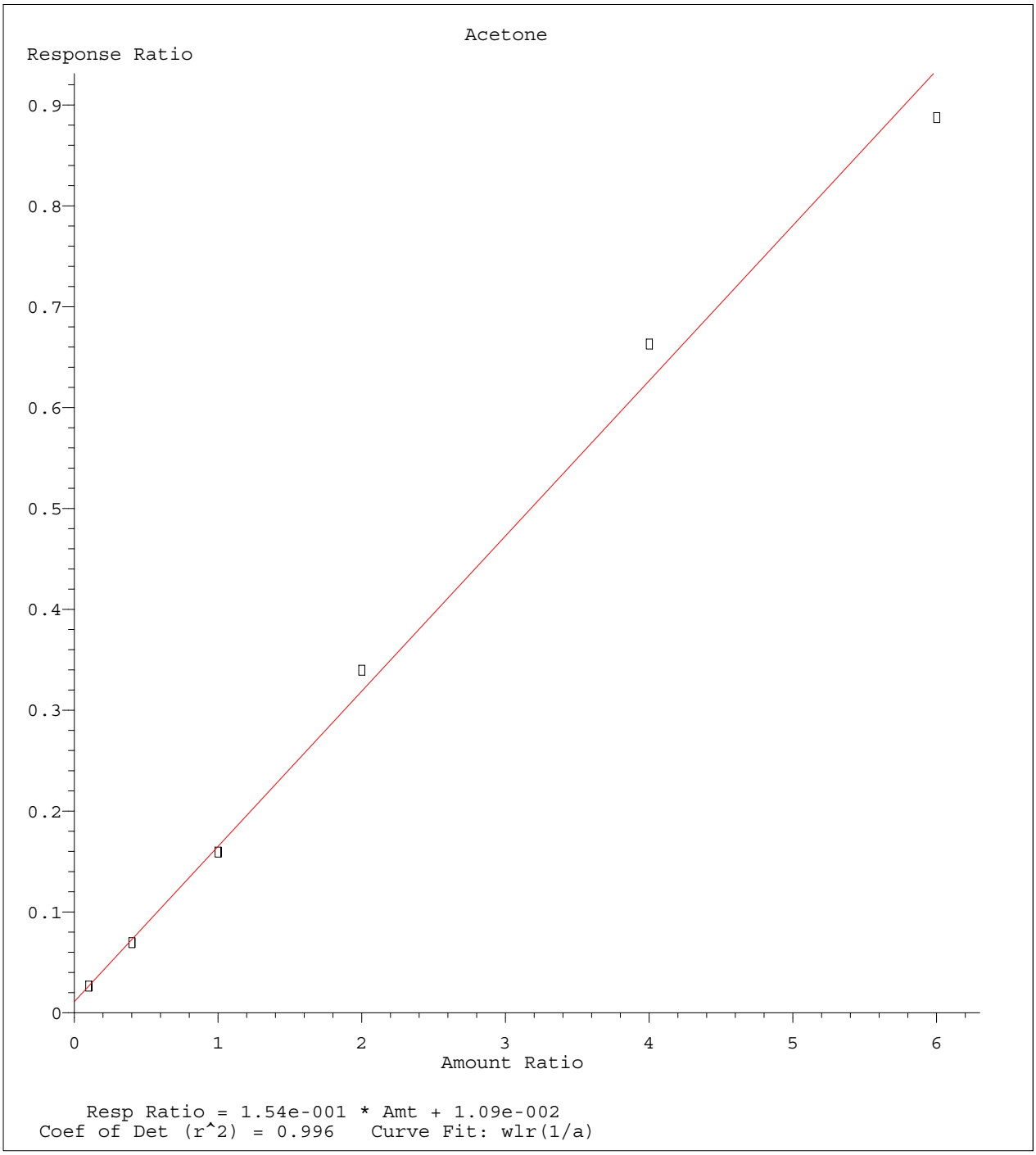
Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142187.D Vial: 11
Acq On : 26 Sep 2016 18:51 Operator: TMB
Sample : WG584797-11 300ug/L STD 8260 Inst : HPMS6
Misc : 1,1 STD78143 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:20 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

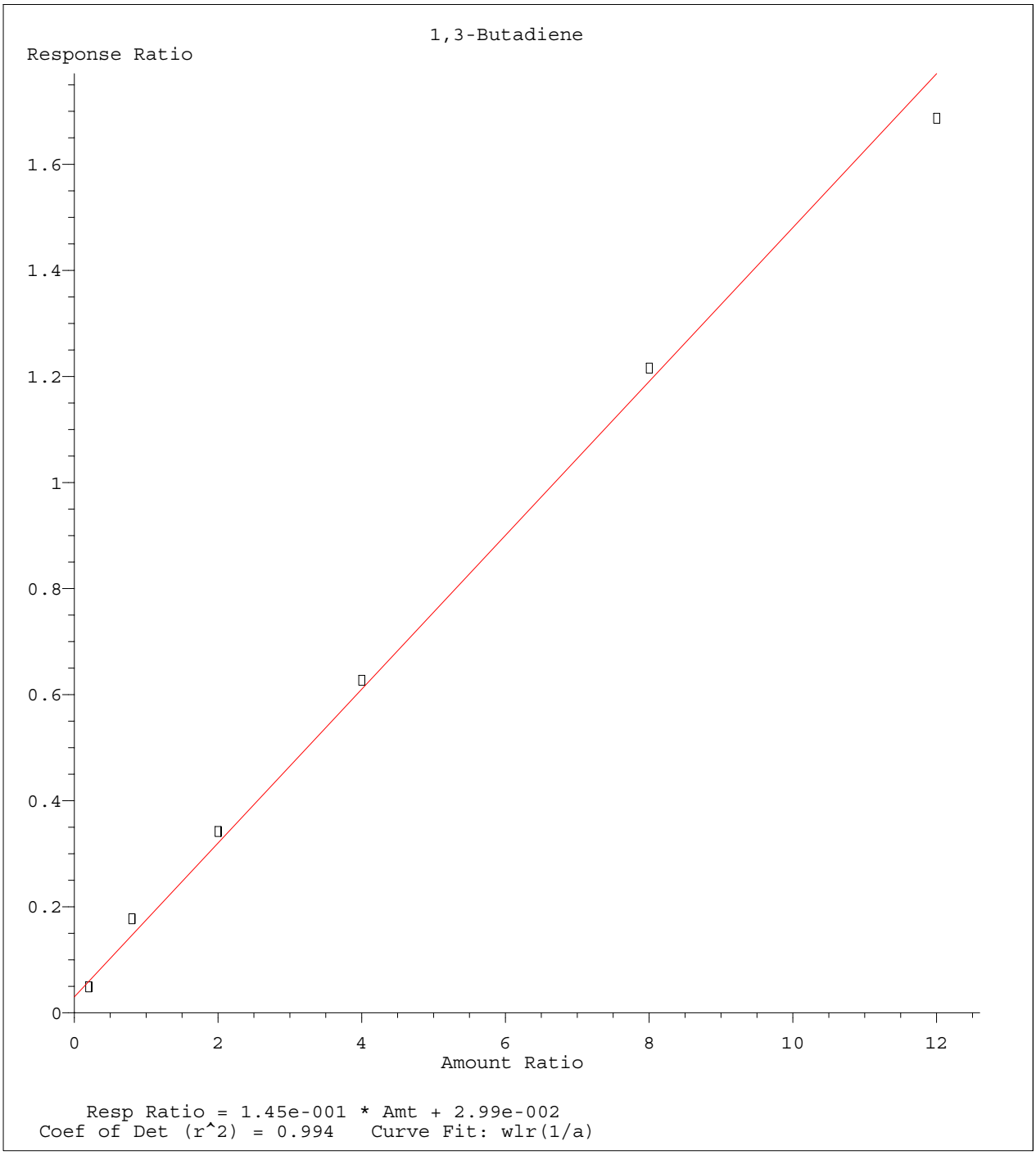




Method Name: C:\MSDCHEM\1\METHODS\8260S.M
Calibration Table Last Updated: Fri Sep 16 14:56:12 2016



Method Name: C:\MSDCHEM\1\METHODS\8260S.M
Calibration Table Last Updated: Fri Sep 16 14:56:12 2016



Method Name: K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M
Calibration Table Last Updated: Tue Sep 27 09:13:49 2016

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142190.D Vial: 14
Acq On : 26 Sep 2016 20:27 Operator: TMB
Sample : WG584797-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD78183 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:20:25 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.74	96	756396	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	593341	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	343109	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.57	111	189415	24.2286 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 96.92%		
43) 1,2-Dichloroethane-d4	10.29	65	181146	23.1013 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 92.40%		
58) Toluene-d8	13.02	98	614079	23.0102 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 92.04%		
80) p-Bromofluorobenzene	16.99	95	253251	22.3581 ug/L	-0.01
Spiked Amount 25.000	Range 86 - 115		Recovery = 89.44%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.94	85	717443	56.3409 ug/L	98
3) Chloromethane	3.36	50	696075	47.4263 ug/L	100
4) Vinyl Chloride	3.54	62	474149	52.7764 ug/L	100
5) 1,3-Butadiene	3.58	54	161593	31.6548 ug/L	98
6) Bromomethane	4.36	94	237160	45.3496 ug/L	99
7) Chloroethane	4.51	64	312782	55.1034 ug/L	99
8) Trichlorofluoromethane	4.98	101	631879	49.7745 ug/L	99
9) Diethyl ether	5.53	59	648247	103.4871 ug/L	97
10) Isoprene	5.55	67	520504	44.1037 ug/L	95
11) Acrolein	5.78	56	106191	122.5937 ug/L	100
12) 1,1,2-Trichloro-1,2,2-Trif	5.77	101	401255	52.5343 ug/L	96
13) Acetone	5.89	43	97383	56.2041 ug/L	98
14) 1,1-Dichloroethene	6.08	61	528016	41.9317 ug/L	91
15) Tert-Butyl Alcohol	6.25	59	88981	208.9322 ug/L	91
16) Dimethyl Sulfide	6.37	62	426959	51.6756 ug/L	98
17) Iodomethane	6.63	142	321106	35.9679 ug/L	98
18) Methyl acetate	6.67	43	261810	49.2839 ug/L	98
19) Methylene Chloride	6.92	84	376354	46.0075 ug/L	87
20) Carbon Disulfide	6.94	76	981658	41.1926 ug/L	99
21) Acrylonitrile	7.13	53	121578	51.2768 ug/L	100
22) Methyl Tert Butyl Ether	7.16	73	936951	50.9960 ug/L	97
23) trans-1,2-Dichloroethene	7.40	96	374766	46.9371 ug/L	88
24) n-Hexane	7.48	57	446596	42.7198 ug/L	97
25) Diisopropyl ether	7.88	45	3025176	101.7098 ug/L	97
26) Vinyl Acetate	8.06	43	690511	47.2050 ug/L	97
27) 1,1-Dichloroethane	8.08	63	654965	44.3622 ug/L	100
28) Ethyl-Tert-Butyl ether	8.51	59	2306541	98.2293 ug/L	96
29) 2-Butanone	8.72	43	148560	53.4153 ug/L	100
30) Propionitrile	8.83	54	76773	102.9388 ug/L	99
31) 2,2-Dichloropropane	8.93	77	491283	45.5553 ug/L	95
32) cis-1,2-Dichloroethene	9.00	96	430486	48.7858 ug/L	86
33) Chloroform	9.24	83	652245	45.8599 ug/L	99
34) 1-Bromopropane	9.39	122	91662	58.9236 ug/L	99
35) Bromochloromethane	9.49	130	263166	48.7168 ug/L	100
36) Tetrahydrofuran	9.54	42	189118	93.6792 ug/L	98
38) 1,1,1-Trichloroethane	9.83	97	583395	47.3255 ug/L	96
39) Cyclohexane	9.85	56	636437	47.1805 ug/L	92
40) 1,1-Dichloropropene	10.06	75	476112	45.2094 ug/L	96
41) Tert-Amyl-Methyl ether	10.20	73	1897845	105.1701 ug/L	95
42) Carbon Tetrachloride	10.21	117	549020	48.3619 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142190.D 8260WTR.M Tue Sep 27 10:20:29 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142190.D Vial: 14
Acq On : 26 Sep 2016 20:27 Operator: TMB
Sample : WG584797-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD78183 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:20:25 2016 Quant Results File: 8260WTR.RES

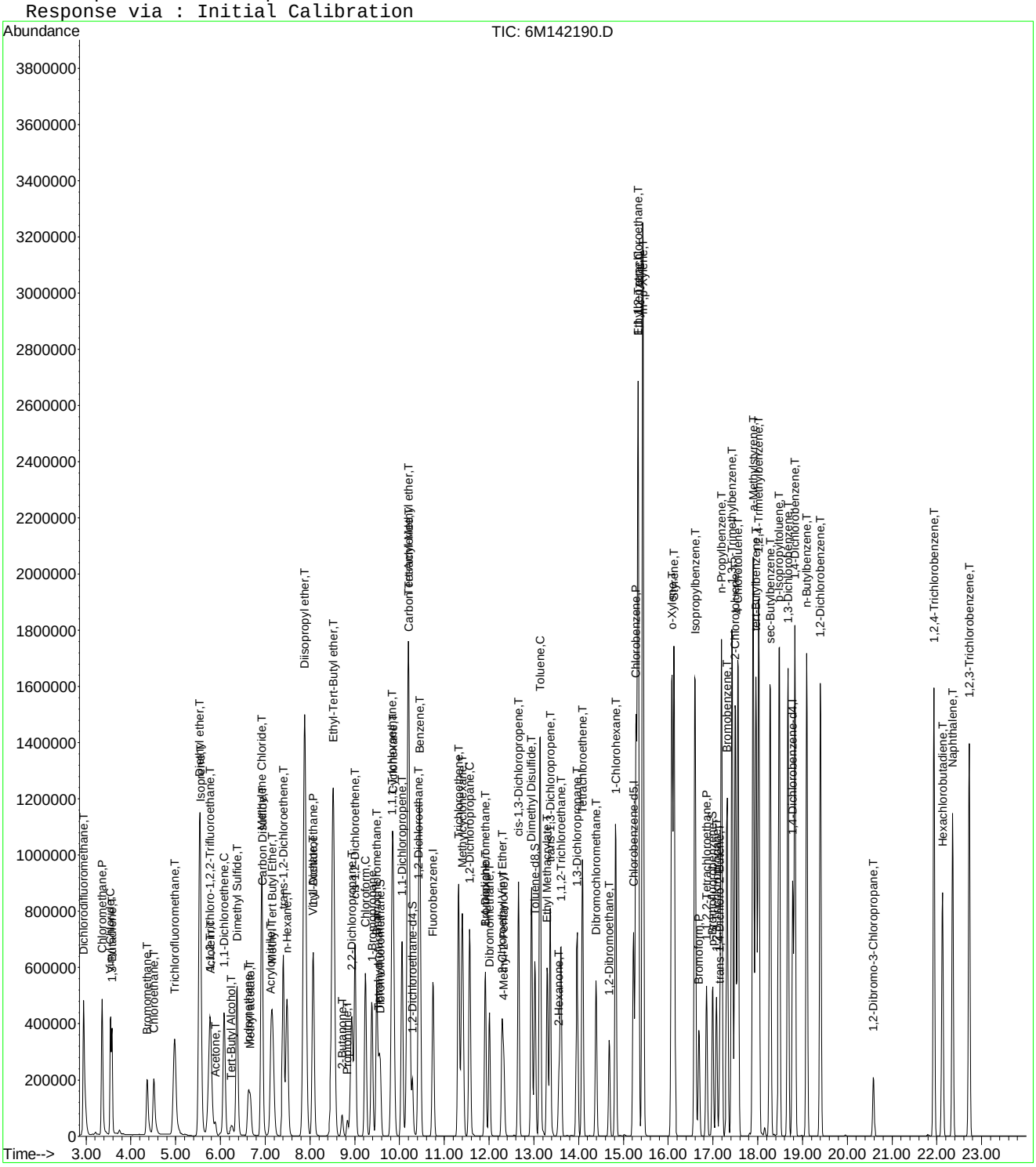
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	501354	48.4326	ug/L	96
46)	Benzene	10.45	78	1429954	46.8261	ug/L	96
47)	Trichloroethene	11.32	130	446252	49.7163	ug/L	88
48)	Methylcyclohexane	11.40	83	559057	47.3828	ug/L	91
49)	1,2-Dichloropropane	11.57	63	398213	49.8937	ug/L	98
50)	1,4-Dioxane	11.91	88	7949	167.9793	ug/L	94
51)	Bromodichloromethane	11.91	83	516594	49.1694	ug/L	99
52)	Dibromomethane	12.01	93	210361	47.5259	ug/L	97
53)	2-Chloroethyl Vinyl Ether	12.29	63	211809	57.0672	ug/L	99
54)	4-Methyl-2-Pentanone	12.32	58	116352	53.3686	ug/L	93
55)	cis-1,3-Dichloropropene	12.66	75	632531	53.8248	ug/L	99
56)	Dimethyl Disulfide	12.95	79	360567	50.3071	ug/L	95
59)	Toluene	13.14	91	1532475	47.6844	ug/L	100
60)	Ethyl Methacrylate	13.29	69	428324	55.3398	ug/L	99
62)	trans-1,3-Dichloropropene	13.36	75	527393	50.0123	ug/L	95
63)	1,1,2-Trichloroethane	13.61	97	300972	50.1856	ug/L	99
64)	2-Hexanone	13.56	43	231527	52.7403	ug/L	96
65)	1,3-Dichloropropane	13.97	76	526671	52.4449	ug/L	99
66)	Tetrachloroethene	14.08	166	431439	47.7058	ug/L	97
67)	Dibromochloromethane	14.39	129	417100	50.9212	ug/L	100
68)	1,2-Dibromoethane	14.68	107	319133	50.7499	ug/L	100
69)	1-Chlorohexane	14.84	91	527272	51.8700	ug/L	90
70)	Chlorobenzene	15.27	112	1132112	49.3260	ug/L	89
71)	1,1,1,2-Tetrachloroethane	15.33	131	433285	50.4500	ug/L	98
72)	Ethylbenzene	15.33	106	590332	47.9539	ug/L	90
73)	m-,p-Xylene	15.44	106	1453898	99.6319	ug/L	90
74)	o-Xylene	16.09	106	727873	50.2152	ug/L	90
75)	Styrene	16.13	104	1247820	50.4228	ug/L	94
76)	Bromoform	16.68	173	263824	43.9505	ug/L	99
77)	Isopropylbenzene	16.60	105	1769088	49.9154	ug/L	97
79)	1,1,2,2-Tetrachloroethane	16.86	83	374640	51.2844	ug/L	100
81)	1,2,3-Trichloropropane	17.08	110	116299	52.1194	ug/L	93
82)	trans-1,4-Dichloro-2-Buten	17.15	53	101372	46.8335	ug/L	87
83)	n-Propylbenzene	17.19	91	2056882	49.6766	ug/L	96
84)	Bromobenzene	17.32	156	511079	47.8273	ug/L	89
85)	1,3,5-Trimethylbenzene	17.42	105	1515341	49.4040	ug/L	95
86)	2-Chlorotoluene	17.49	91	1264646	46.5062	ug/L	90
87)	4-Chlorotoluene	17.55	91	1379067	50.7694	ug/L	98
88)	a-Methylstyrene	17.90	118	961845	51.9119	ug/L	96
89)	tert-Butylbenzene	17.96	134	352941	49.6104	ug/L	84
90)	1,2,4-Trimethylbenzene	18.02	105	1572000	48.9248	ug/L	95
91)	sec-Butylbenzene	18.29	105	1834591	50.0246	ug/L	98
92)	p-Isopropyltoluene	18.48	119	1630088	50.1478	ug/L	99
93)	1,3-Dichlorobenzene	18.67	146	1018475	49.9381	ug/L	98
94)	1,4-Dichlorobenzene	18.83	146	1044169	50.9446	ug/L	98
95)	n-Butylbenzene	19.09	91	1391288	49.5249	ug/L	94
96)	1,2-Dichlorobenzene	19.40	146	988954	51.6570	ug/L	98
97)	1,2-Dibromo-3-Chloropropan	20.58	75	69829	55.8631	ug/L	83
98)	1,2,4-Trichlorobenzene	21.93	180	719350	51.5207	ug/L	99
99)	Hexachlorobutadiene	22.13	225	280104	53.8656	ug/L	99
100)	Naphthalene	22.35	128	1298557	51.1470	ug/L	100
101)	1,2,3-Trichlorobenzene	22.73	180	650164	52.0551	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142190.D 8260WTR.M Tue Sep 27 10:20:30 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142190.D Vial: 14
Acq On : 26 Sep 2016 20:27 Operator: TMB
Sample : WG584797-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD78183 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 27 10:20 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142190.D Vial: 14
Acq On : 26 Sep 2016 20:27 Operator: TMB
Sample : WG584797-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD78183 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	96	0.00
2	T	Dichlorodifluoromethane	50.0000	56.3409	-12.7	101	0.00
3	P	Chloromethane	50.0000	47.4263	5.1	89	0.00
4	C	Vinyl Chloride	50.0000	52.7764	-5.6	102	0.00
5	T	1,3-Butadiene	50.0000	31.6548	36.7#	60	0.00
6	T	Bromomethane	50.0000	45.3496	9.3	91	-0.01
7	T	Chloroethane	50.0000	55.1034	-10.2	101	0.00
8	T	Trichlorofluoromethane	50.0000	49.7745	0.5	91	0.00
9	T	Diethyl ether	100.0000	103.4871	-3.5	99	0.00
10	T	Isoprene	50.0000	44.1037	11.8	83	0.00
11	T	Acrolein	50.0000	122.5937	-145.2#	236	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	52.5343	-5.1	99	0.00
13	T	Acetone	50.0000	56.2041	-12.4	107	0.00
14	C	1,1-Dichloroethene	50.0000	41.9318	16.1	80	0.00
15	T	Tert-Butyl Alcohol	200.0000	208.9322	-4.5	95	-0.01
16	T	Dimethyl Sulfide	50.0000	51.6756	-3.4	96	0.00
17	T	Iodomethane	50.0000	35.9679	28.1#	64	0.00
18	T	Methyl acetate	50.0000	49.2839	1.4	93	0.00
19	T	Methylene Chloride	50.0000	46.0075	8.0	89	0.00
20	T	Carbon Disulfide	50.0000	41.1926	17.6	75	0.00
21	T	Acrylonitrile	50.0000	51.2768	-2.6	94	0.00
22	T	Methyl Tert Butyl Ether	50.0000	50.9960	-2.0	96	0.00
23	T	trans-1,2-Dichloroethene	50.0000	46.9371	6.1	89	0.00
24	T	n-Hexane	50.0000	42.7198	14.6	79	0.00
25	T	Diisopropyl ether	100.0000	101.7098	-1.7	97	0.00
26	T	Vinyl Acetate	50.0000	47.2049	5.6	89	0.00
27	P	1,1-Dichloroethane	50.0000	44.3623	11.3	85	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	98.2293	1.8	93	0.00
29	T	2-Butanone	50.0000	53.4153	-6.8	102	0.00
30	T	Propionitrile	100.0000	102.9388	-2.9	94	-0.01
31	T	2,2-Dichloropropane	50.0000	45.5553	8.9	86	0.00
32	T	cis-1,2-Dichloroethene	50.0000	48.7858	2.4	93	0.00
33	C	Chloroform	50.0000	45.8599	8.3	89	0.00
34		1-Bromopropane	50.0000	58.9236	-17.8	101	0.00
35	T	Bromochloromethane	50.0000	48.7168	2.6	90	0.00
36	T	Tetrahydrofuran	100.0000	93.6792	6.3	93	0.00
37	S	Dibromofluoromethane	25.0000	24.2286	3.1	90	0.00
38	T	1,1,1-Trichloroethane	50.0000	47.3255	5.3	89	0.00
39	T	Cyclohexane	50.0000	47.1805	5.6	87	0.00
40	T	1,1-Dichloropropene	50.0000	45.2094	9.6	87	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	105.1702	-5.2	98	0.00
42	T	Carbon Tetrachloride	50.0000	48.3619	3.3	88	0.00
43	S	1,2-Dichloroethane-d4	25.0000	23.1013	7.6	89	0.00
44		Heptane	-1.0000	0.0000	0.0	96	0.00
45	T	1,2-Dichloroethane	50.0000	48.4326	3.1	91	0.00
46	T	Benzene	50.0000	46.8261	6.3	90	0.00
47	T	Trichloroethene	50.0000	49.7163	0.6	94	0.00
48	T	Methylcyclohexane	50.0000	47.3828	5.2	89	0.00
49	C	1,2-Dichloropropane	50.0000	49.8937	0.2	94	0.00
50	T	1,4-Dioxane	200.0000	167.9793	16.0	71	0.00
51	T	Bromodichloromethane	50.0000	49.1694	1.7	90	0.00
52	T	Dibromomethane	50.0000	47.5260	4.9	87	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	57.0672	-14.1	100	0.00
54	T	4-Methyl-2-Pentanone	50.0000	53.3686	-6.7	101	-0.01

(#) = Out of Range
6M142190.D 8260WTR.M Tue Sep 27 10:23:08 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142190.D Vial: 14
Acq On : 26 Sep 2016 20:27 Operator: TMB
Sample : WG584797-12 50ug/L ALT SRC STD 8260 Inst : HPMS6
Misc : 1,1 STD78183 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	50.0000	53.8248	-7.6	98	0.00
56	T	Dimethyl Disulfide	50.0000	50.3071	-0.6	93	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	95	0.00
58	S	Toluene-d8	25.0000	23.0101	8.0	89	0.00
59	C	Toluene	50.0000	47.6844	4.6	90	0.00
60	T	Ethyl Methacrylate	50.0000	55.3398	-10.7	96	-0.01
61		Paraldehyde	-1.0000	0.0000	0.0	89	0.00
62	T	trans-1,3-Dichloropropene	50.0000	50.0123	-0.0	91	0.00
63	T	1,1,2-Trichloroethane	50.0000	50.1856	-0.4	93	0.00
64	T	2-Hexanone	50.0000	52.7403	-5.5	100	-0.01
65	T	1,3-Dichloropropane	50.0000	52.4449	-4.9	97	0.00
66	T	Tetrachloroethene	50.0000	47.7058	4.6	91	0.00
67	T	Dibromochloromethane	50.0000	50.9212	-1.8	92	0.00
68	T	1,2-Dibromoethane	50.0000	50.7499	-1.5	92	0.00
69	T	1-Chlorohexane	50.0000	51.8700	-3.7	92	0.00
70	P	Chlorobenzene	50.0000	49.3260	1.3	93	-0.01
71	T	1,1,1,2-Tetrachloroethane	50.0000	50.4500	-0.9	91	0.00
72	C	Ethylbenzene	50.0000	47.9539	4.1	91	0.00
73	T	m-,p-Xylene	100.0000	99.6319	0.4	92	0.00
74	T	o-Xylene	50.0000	50.2152	-0.4	94	0.00
75	T	Styrene	50.0000	50.4228	-0.8	92	-0.01
76	P	Bromoform	50.0000	43.9505	12.1	88	-0.01
77	T	Isopropylbenzene	50.0000	49.9154	0.2	92	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	96	-0.01
79	P	1,1,2,2-Tetrachloroethane	50.0000	51.2844	-2.6	95	0.00
80	S	p-Bromofluorobenzene	25.0000	22.3581	10.6	87	-0.01
81	T	1,2,3-Trichloropropane	50.0000	52.1194	-4.2	96	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	46.8335	6.3	82	-0.01
83	T	n-Propylbenzene	50.0000	49.6766	0.6	93	0.00
84	T	Bromobenzene	50.0000	47.8273	4.3	91	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	49.4040	1.2	92	-0.01
86	T	2-Chlorotoluene	50.0000	46.5062	7.0	86	-0.01
87	T	4-Chlorotoluene	50.0000	50.7694	-1.5	100	-0.01
88	T	a-Methylstyrene	50.0000	51.9119	-3.8	96	0.00
89	T	tert-Butylbenzene	50.0000	49.6104	0.8	95	-0.01
90	T	1,2,4-Trimethylbenzene	50.0000	48.9248	2.2	91	-0.01
91	T	sec-Butylbenzene	50.0000	50.0246	-0.0	93	0.00
92	T	p-Isopropyltoluene	50.0000	50.1478	-0.3	92	0.00
93	T	1,3-Dichlorobenzene	50.0000	49.9381	0.1	94	0.00
94	T	1,4-Dichlorobenzene	50.0000	50.9446	-1.9	97	-0.01
95	T	n-Butylbenzene	50.0000	49.5249	1.0	92	-0.01
96	T	1,2-Dichlorobenzene	50.0000	51.6570	-3.3	99	-0.01
97	T	1,2-Dibromo-3-Chloropropane	50.0000	55.8631	-11.7	99	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	51.5207	-3.0	99	0.00
99	T	Hexachlorobutadiene	50.0000	53.8656	-7.7	105	0.00
100	T	Naphthalene	50.0000	51.1470	-2.3	89	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	52.0551	-4.1	97	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142190.D 8260WTR.M Tue Sep 27 10:23:09 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 08:12:09 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	721810	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	575891	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	351037	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.56	111	200681	26.8996 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 107.60%		
43) 1,2-Dichloroethane-d4	10.29	65	187735	25.0887 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.36%		
58) Toluene-d8	13.02	98	662790	25.5879 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.36%		
80) p-Bromofluorobenzene	17.00	95	267825	23.1107 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 92.44%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.95	85	674909	55.5403 ug/L	97
3) Chloromethane	3.36	50	593001	42.3394 ug/L	100
4) Vinyl Chloride	3.55	62	436675	50.9342 ug/L	99
5) 1,3-Butadiene	3.58	54	296439	65.6031 ug/L	96
6) Bromomethane	4.38	94	195887	39.2522 ug/L	96
7) Chloroethane	4.52	64	256588	47.3696 ug/L	97
8) Trichlorofluoromethane	4.99	101	731219	60.3597 ug/L	99
9) Diethyl ether	5.53	59	558951	93.5074 ug/L	97
10) Isoprene	5.55	67	529568	47.0218 ug/L	95
11) Acrolein	5.78	56	36755	44.4655 ug/L	98
12) 1,1,2-Trichloro-1,2,2-Trif	5.78	101	396006	54.3314 ug/L	97
13) Acetone	5.89	43	88698	53.5367 ug/L	99
14) 1,1-Dichloroethene	6.09	61	594990	49.5144 ug/L	90
15) Tert-Butyl Alcohol	6.23	59	87018	214.1132 ug/L	90
16) Dimethyl Sulfide	6.37	62	365184	46.3167 ug/L	99
17) Iodomethane	6.62	142	433944	50.4312 ug/L	100
18) Methyl acetate	6.66	43	234334	46.2254 ug/L	99
19) Methylene Chloride	6.92	84	381951	48.9289 ug/L	87
20) Carbon Disulfide	6.94	76	1117876	49.1562 ug/L	99
21) Acrylonitrile	7.13	53	112530	49.7348 ug/L	98
22) Methyl Tert Butyl Ether	7.16	73	827898	47.2196 ug/L	98
23) trans-1,2-Dichloroethene	7.40	96	386688	50.7508 ug/L	85
24) n-Hexane	7.48	57	477558	47.8704 ug/L	96
25) Diisopropyl ether	7.88	45	2617871	92.2331 ug/L	96
26) Vinyl Acetate	8.06	43	767885	55.0097 ug/L	98
27) 1,1-Dichloroethane	8.08	63	688221	48.8483 ug/L	100
28) Ethyl-Tert-Butyl ether	8.51	59	2069944	92.3772 ug/L	95
29) 2-Butanone	8.72	43	135092	50.9002 ug/L	98
30) Propionitrile	8.83	54	71053	99.8342 ug/L	100
31) 2,2-Dichloropropane	8.93	77	540591	52.5294 ug/L	99
32) cis-1,2-Dichloroethene	9.01	96	418915	49.7493 ug/L	100
33) Chloroform	9.24	83	659137	48.5651 ug/L	98
34) 1-Bromopropane	9.39	122	82435	55.5313 ug/L	99
35) Bromochloromethane	9.49	130	271358	52.6402 ug/L	100
36) Tetrahydrofuran	9.53	42	178104	92.4507 ug/L	98
38) 1,1,1-Trichloroethane	9.83	97	601829	51.1602 ug/L	94
39) Cyclohexane	9.86	56	610933	47.4599 ug/L	91
40) 1,1-Dichloropropene	10.05	75	492788	49.0350 ug/L	94
41) Tert-Amyl-Methyl ether	10.20	73	1635366	94.9671 ug/L	95
42) Carbon Tetrachloride	10.21	117	592755	54.7163 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142657.D 8260WTR.M Thu Oct 13 08:12:25 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 08:12:09 2016 Quant Results File: 8260WTR.RES

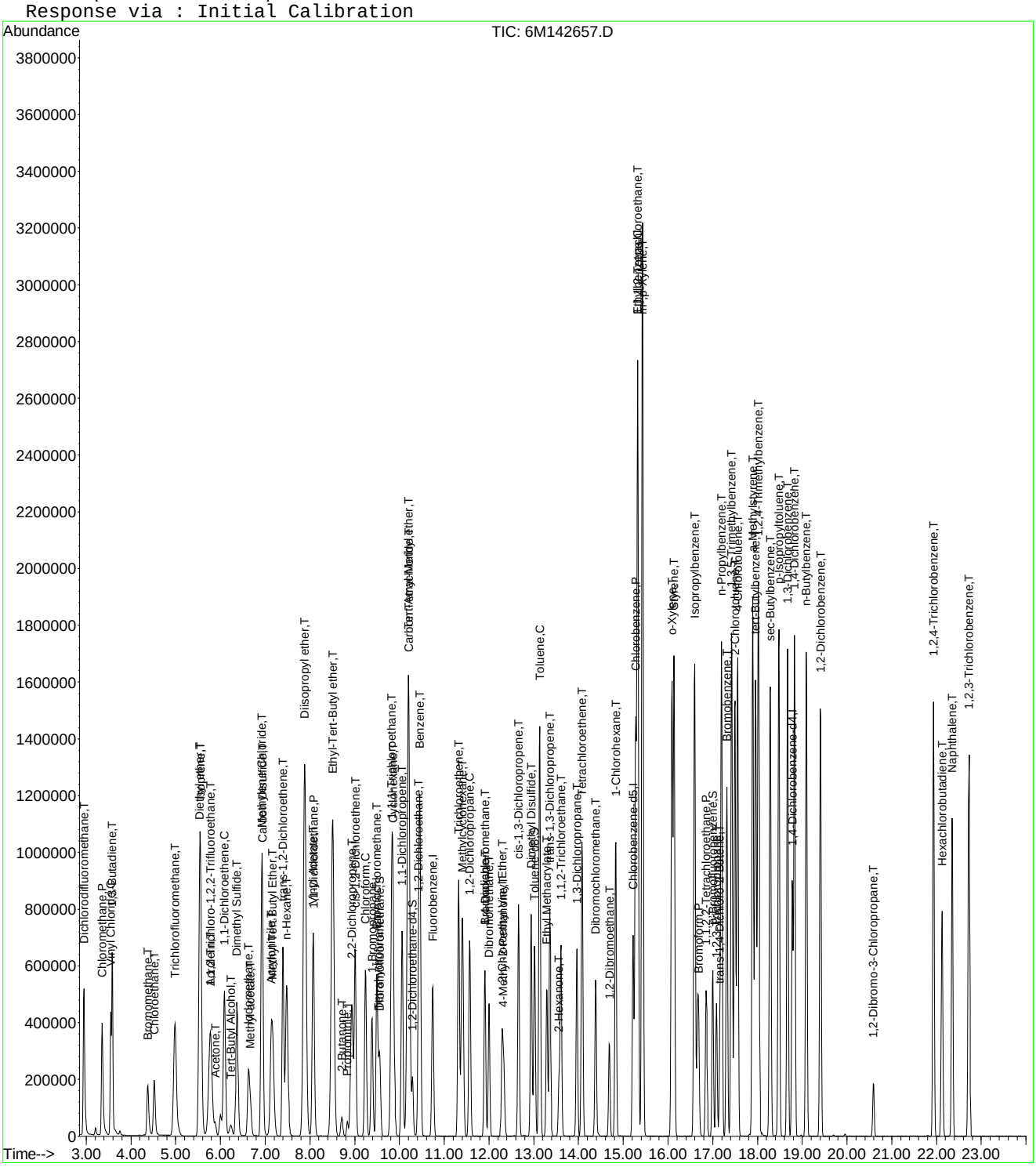
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	483207	48.9162 ug/L	98
46)	Benzene	10.45	78	1420683	48.7517 ug/L	95
47)	Trichloroethene	11.32	130	440854	51.4683 ug/L	85
48)	Methylcyclohexane	11.40	83	536902	47.6855 ug/L	91
49)	1,2-Dichloropropane	11.57	63	370284	48.6174 ug/L	97
50)	1,4-Dioxane	11.91	88	9841	217.9259 ug/L	93
51)	Bromodichloromethane	11.91	83	506679	50.5364 ug/L	99
52)	Dibromomethane	12.00	93	215834	51.0989 ug/L	97
53)	2-Chloroethyl Vinyl Ether	12.29	63	181860	51.3459 ug/L	100
54)	4-Methyl-2-Pentanone	12.32	58	103592	49.7925 ug/L	93
55)	cis-1,3-Dichloropropene	12.66	75	566793	50.5419 ug/L	98
56)	Dimethyl Disulfide	12.94	79	303807	44.4188 ug/L	95
59)	Toluene	13.14	91	1527797	48.9793 ug/L	99
60)	Ethyl Methacrylate	13.29	69	370878	49.3697 ug/L	98
62)	trans-1,3-Dichloropropene	13.36	75	510049	49.8331 ug/L	93
63)	1,1,2-Trichloroethane	13.61	97	291516	50.0818 ug/L	98
64)	2-Hexanone	13.56	43	209160	49.0890 ug/L	96
65)	1,3-Dichloropropane	13.97	76	472577	48.4842 ug/L	98
66)	Tetrachloroethene	14.08	166	458424	52.2256 ug/L	97
67)	Dibromochloromethane	14.38	129	419441	52.7586 ug/L	100
68)	1,2-Dibromoethane	14.69	107	306464	50.2120 ug/L	99
69)	1-Chlorohexane	14.83	91	494781	50.1485 ug/L	89
70)	Chlorobenzene	15.28	112	1111463	49.8937 ug/L	88
71)	1,1,1,2-Tetrachloroethane	15.32	131	444207	53.2889 ug/L	97
72)	Ethylbenzene	15.32	106	584282	48.9006 ug/L	91
73)	m-,p-Xylene	15.44	106	1414846	99.8936 ug/L	91
74)	o-Xylene	16.09	106	693692	49.3072 ug/L	91
75)	Styrene	16.13	104	1213687	50.5296 ug/L	93
76)	Bromoform	16.69	173	283323	48.5662 ug/L	98
77)	Isopropylbenzene	16.60	105	1753128	50.9639 ug/L	97
79)	1,1,2,2-Tetrachloroethane	16.85	83	356681	47.7233 ug/L	99
81)	1,2,3-Trichloropropane	17.08	110	109595	48.0057 ug/L	92
82)	trans-1,4-Dichloro-2-Buten	17.15	53	103841	46.8907 ug/L	86
83)	n-Propylbenzene	17.19	91	2009667	47.4401 ug/L	95
84)	Bromobenzene	17.31	156	538947	49.2961 ug/L	85
85)	1,3,5-Trimethylbenzene	17.42	105	1506403	48.0034 ug/L	95
86)	2-Chlorotoluene	17.50	91	1346604	48.4017 ug/L	93
87)	4-Chlorotoluene	17.56	91	1233519	44.3856 ug/L	92
88)	a-Methylstyrene	17.90	118	881083	46.4791 ug/L	95
89)	tert-Butylbenzene	17.96	134	350865	48.2047 ug/L	84
90)	1,2,4-Trimethylbenzene	18.02	105	1612108	49.0399 ug/L	95
91)	sec-Butylbenzene	18.28	105	1815840	48.3951 ug/L	97
92)	p-Isopropyltoluene	18.48	119	1650789	49.6377 ug/L	98
93)	1,3-Dichlorobenzene	18.67	146	1044419	50.0536 ug/L	95
94)	1,4-Dichlorobenzene	18.83	146	1045088	49.8378 ug/L	95
95)	n-Butylbenzene	19.09	91	1388783	48.3193 ug/L	93
96)	1,2-Dichlorobenzene	19.41	146	961896	49.1089 ug/L	96
97)	1,2-Dibromo-3-Chloropropan	20.58	75	60332	47.1755 ug/L	79
98)	1,2,4-Trichlorobenzene	21.93	180	691460	48.4047 ug/L	99
99)	Hexachlorobutadiene	22.12	225	257502	48.4008 ug/L	100
100)	Naphthalene	22.35	128	1274751	49.0753 ug/L	100
101)	1,2,3-Trichlorobenzene	22.73	180	630190	49.3164 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142657.D 8260WTR.M Thu Oct 13 08:12:26 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 8:12 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Continuing Calibration Area and RT check

Instrument: HPMS6
Initial cal date: 26 Sep 2016 17:15
CCV date: 12 Oct 2016 15:32
CCV Filename: 6M142657.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Amount	RT	Amount	RT	Amount	RT
InitCal	791212	10.75	623465	15.22	358963	18.79
CCV	721810	10.75	575891	15.22	351037	18.78

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.0000	1.0000	0.0	91	0.00
2	T	Dichlorodifluoromethane	0.4209	0.4675	-11.1	95	0.00
3	P	Chloromethane	0.4851	0.4108	15.3	76	0.00
4	C	Vinyl Chloride	0.2969	0.3025	-1.9	94	0.00
5	T	1,3-Butadiene	0.1810	0.2053	-13.4	110	0.00
6	T	Bromomethane	0.1729	0.1357	21.5#	76	0.00
7	T	Chloroethane	0.1876	0.1777	5.3	83	0.00
8	T	Trichlorofluoromethane	0.4196	0.5065	-20.7#	105	0.00
9	T	Diethyl ether	0.2070	0.1936	6.5	85	0.00
10	T	Isoprene	0.3901	0.3668	6.0	84	0.00
11	T	Acrolein	0.0286	0.0255	11.1	82	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	0.2525	0.2743	-8.7	98	0.00
13	T	Acetone	0.0612	0.0614	-0.4	97	0.00
14	C	1,1-Dichloroethene	0.4162	0.4122	1.0	90	0.00
15	T	Tert-Butyl Alcohol	0.0141	0.0151	-7.0	93	-0.02
16	T	Dimethyl Sulfide	0.2731	0.2530	7.4	82	0.00
17	T	Iodomethane	0.2225	0.3006	-35.1#	87	0.00
18	T	Methyl acetate	0.1756	0.1623	7.6	83	0.00
19	T	Methylene Chloride	0.2704	0.2646	2.1	91	0.00
20	T	Carbon Disulfide	0.7876	0.7744	1.7	86	0.00
21	T	Acrylonitrile	0.0784	0.0780	0.5	87	0.00
22	T	Methyl Tert Butyl Ether	0.6073	0.5735	5.6	85	0.00
23	T	trans-1,2-Dichloroethene	0.2639	0.2679	-1.5	92	0.00
24	T	n-Hexane	0.3455	0.3308	4.3	85	0.00
25	T	Diisopropyl ether	0.9831	0.9067	7.8	84	0.00
26	T	Vinyl Acetate	0.4835	0.5319	-10.0	99	0.00
27	P	1,1-Dichloroethane	0.4880	0.4767	2.3	89	0.00
28	T	Ethyl-Tert-Butyl ether	0.7761	0.7169	7.6	83	0.00
29	T	2-Butanone	0.0919	0.0936	-1.8	93	0.00
30	T	Propionitrile	0.0246	0.0246	0.2	87	-0.01
31	T	2,2-Dichloropropane	0.3564	0.3745	-5.1	95	0.00
32	T	cis-1,2-Dichloroethene	0.2917	0.2902	0.5	90	0.00
33	C	Chloroform	0.4701	0.4566	2.9	90	0.00
34		1-Bromopropane	0.0514	0.0571	-11.0	91	0.00
35	T	Bromochloromethane	0.1785	0.1880	-5.3	93	0.00
36	T	Tetrahydrofuran	0.0667	0.0617	7.5	87	0.00
37	S	Dibromofluoromethane	0.2584	0.2780	-7.6	95	0.00
38	T	1,1,1-Trichloroethane	0.4074	0.4169	-2.3	92	0.00
39	T	Cyclohexane	0.4459	0.4232	5.1	84	0.00
40	T	1,1-Dichloropropene	0.3481	0.3414	1.9	90	0.00
41	T	Tert-Amyl-Methyl ether	0.5964	0.5664	5.0	85	0.00
42	T	Carbon Tetrachloride	0.3752	0.4106	-9.4	95	0.00
43	S	1,2-Dichloroethane-d4	0.2592	0.2601	-0.4	92	0.00
44		Heptane	0.0000	0.0000	0.0	85	-0.01
45	T	1,2-Dichloroethane	0.3421	0.3347	2.2	88	0.00
46	T	Benzene	1.0093	0.9841	2.5	89	0.00
47	T	Trichloroethene	0.2967	0.3054	-2.9	92	0.00
48	T	Methylcyclohexane	0.3900	0.3719	4.6	85	0.00
49	C	1,2-Dichloropropane	0.2638	0.2565	2.8	87	0.00
50	T	1,4-Dioxane	0.0016	0.0017	-9.0	88	0.00
51	T	Bromodichloromethane	0.3473	0.3510	-1.1	89	0.00
52	T	Dibromomethane	0.1463	0.1495	-2.2	90	0.00
53	T	2-Chloroethyl Vinyl Ether	0.1227	0.1260	-2.7	86	0.00
54	T	4-Methyl-2-Pentanone	0.0721	0.0718	0.4	90	-0.01

(#) = Out of Range
6M142657.D 8260WTR.M Thu Oct 13 08:22:16 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	0.3884	0.3926	-1.1	87	0.00
56	T	Dimethyl Disulfide	0.2369	0.2105	11.2	78	0.00
57	I	Chlorobenzene-d5	1.0000	1.0000	0.0	92	0.00
58	S	Toluene-d8	1.1244	1.1509	-2.4	96	0.00
59	C	Toluene	1.3541	1.3265	2.0	90	0.00
60	T	Ethyl Methacrylate	0.3261	0.3220	1.3	83	-0.01
61		Paraldehyde	0.0000	0.0000	0.0	90	0.00
62	T	trans-1,3-Dichloropropene	0.4443	0.4428	0.3	88	0.00
63	T	1,1,2-Trichloroethane	0.2527	0.2531	-0.2	90	0.00
64	T	2-Hexanone	0.1850	0.1816	1.8	91	-0.01
65	T	1,3-Dichloropropane	0.4231	0.4103	3.0	87	0.00
66	T	Tetrachloroethene	0.3811	0.3980	-4.5	96	0.00
67	T	Dibromochloromethane	0.3451	0.3642	-5.5	92	0.00
68	T	1,2-Dibromoethane	0.2650	0.2661	-0.4	89	0.00
69	T	1-Chlorohexane	0.4283	0.4296	-0.3	86	0.00
70	P	Chlorobenzene	0.9670	0.9650	0.2	91	0.00
71	T	1,1,1,2-Tetrachloroethane	0.3619	0.3857	-6.6	93	0.00
72	C	Ethylbenzene	0.5187	0.5073	2.2	90	0.00
73	T	m-,p-Xylene	0.6149	0.6142	0.1	89	0.00
74	T	o-Xylene	0.6107	0.6023	1.4	89	0.00
75	T	Styrene	1.0427	1.0538	-1.1	89	-0.01
76	P	Bromoform	0.2226	0.2460	-10.5	95	0.00
77	T	Isopropylbenzene	1.4933	1.5221	-1.9	91	0.00
78	I	1,4-Dichlorobenzene-d4	1.0000	1.0000	0.0	98	0.00
79	P	1,1,2,2-Tetrachloroethane	0.5323	0.5080	4.6	91	0.00
80	S	p-Bromofluorobenzene	0.8253	0.7630	7.6	92	0.00
81	T	1,2,3-Trichloropropane	0.1626	0.1561	4.0	91	0.00
82	T	trans-1,4-Dichloro-2-Butene	0.1577	0.1479	6.2	84	-0.01
83	T	n-Propylbenzene	3.0169	2.8625	5.1	91	0.00
84	T	Bromobenzene	0.7786	0.7677	1.4	96	0.00
85	T	1,3,5-Trimethylbenzene	2.2349	2.1456	4.0	92	-0.01
86	T	2-Chlorotoluene	1.9814	1.9180	3.2	92	0.00
87	T	4-Chlorotoluene	1.9792	1.7570	11.2	90	0.00
88	T	a-Methylstyrene	1.3500	1.2550	7.0	88	0.00
89	T	tert-Butylbenzene	0.5184	0.4998	3.6	94	-0.01
90	T	1,2,4-Trimethylbenzene	2.3412	2.2962	1.9	93	-0.01
91	T	sec-Butylbenzene	2.6722	2.5864	3.2	92	0.00
92	T	p-Isopropyltoluene	2.3685	2.3513	0.7	93	0.00
93	T	1,3-Dichlorobenzene	1.4860	1.4876	-0.1	97	0.00
94	T	1,4-Dichlorobenzene	1.4934	1.4886	0.3	97	-0.01
95	T	n-Butylbenzene	2.0469	1.9781	3.4	92	-0.01
96	T	1,2-Dichlorobenzene	1.3949	1.3701	1.8	96	0.00
97	T	1,2-Dibromo-3-Chloropropane	0.0911	0.0859	5.7	85	0.00
98	T	1,2,4-Trichlorobenzene	1.0173	0.9849	3.2	95	0.00
99	T	Hexachlorobutadiene	0.3789	0.3668	3.2	96	0.00
100	T	Naphthalene	1.8499	1.8157	1.8	88	0.00
101	T	1,2,3-Trichlorobenzene	0.9101	0.8976	1.4	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142657.D 8260WTR.M Thu Oct 13 08:22:17 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	25.0000	25.0000	0.0	91	0.00
2	T	Dichlorodifluoromethane	50.0000	55.5403	-11.1	95	0.00
3	P	Chloromethane	50.0000	42.3394	15.3	76	0.00
4	C	Vinyl Chloride	50.0000	50.9342	-1.9	94	0.00
5	T	1,3-Butadiene	50.0000	65.6031	-31.2#	110	0.00
6	T	Bromomethane	50.0000	39.2522	21.5#	76	0.00
7	T	Chloroethane	50.0000	47.3695	5.3	83	0.00
8	T	Trichlorofluoromethane	50.0000	60.3597	-20.7#	105	0.00
9	T	Diethyl ether	100.0000	93.5074	6.5	85	0.00
10	T	Isoprene	50.0000	47.0218	6.0	84	0.00
11	T	Acrolein	50.0000	44.4655	11.1	82	0.00
12	T	1,1,2-Trichloro-1,2,2-Trifl	50.0000	54.3314	-8.7	98	0.00
13	T	Acetone	50.0000	53.5367	-7.1	97	0.00
14	C	1,1-Dichloroethene	50.0000	49.5144	1.0	90	0.00
15	T	Tert-Butyl Alcohol	200.0000	214.1132	-7.1	93	-0.02
16	T	Dimethyl Sulfide	50.0000	46.3167	7.4	82	0.00
17	T	Iodomethane	50.0000	50.4312	-0.9	87	0.00
18	T	Methyl acetate	50.0000	46.2254	7.5	83	0.00
19	T	Methylene Chloride	50.0000	48.9289	2.1	91	0.00
20	T	Carbon Disulfide	50.0000	49.1562	1.7	86	0.00
21	T	Acrylonitrile	50.0000	49.7348	0.5	87	0.00
22	T	Methyl Tert Butyl Ether	50.0000	47.2196	5.6	85	0.00
23	T	trans-1,2-Dichloroethene	50.0000	50.7508	-1.5	92	0.00
24	T	n-Hexane	50.0000	47.8704	4.3	85	0.00
25	T	Diisopropyl ether	100.0000	92.2331	7.8	84	0.00
26	T	Vinyl Acetate	50.0000	55.0097	-10.0	99	0.00
27	P	1,1-Dichloroethane	50.0000	48.8483	2.3	89	0.00
28	T	Ethyl-Tert-Butyl ether	100.0000	92.3772	7.6	83	0.00
29	T	2-Butanone	50.0000	50.9002	-1.8	93	0.00
30	T	Propionitrile	100.0000	99.8342	0.2	87	-0.01
31	T	2,2-Dichloropropane	50.0000	52.5294	-5.1	95	0.00
32	T	cis-1,2-Dichloroethene	50.0000	49.7493	0.5	90	0.00
33	C	Chloroform	50.0000	48.5651	2.9	90	0.00
34		1-Bromopropane	50.0000	55.5313	-11.1	91	0.00
35	T	Bromochloromethane	50.0000	52.6402	-5.3	93	0.00
36	T	Tetrahydrofuran	100.0000	92.4507	7.5	87	0.00
37	S	Dibromofluoromethane	25.0000	26.8996	-7.6	95	0.00
38	T	1,1,1-Trichloroethane	50.0000	51.1602	-2.3	92	0.00
39	T	Cyclohexane	50.0000	47.4599	5.1	84	0.00
40	T	1,1-Dichloropropene	50.0000	49.0350	1.9	90	0.00
41	T	Tert-Amyl-Methyl ether	100.0000	94.9671	5.0	85	0.00
42	T	Carbon Tetrachloride	50.0000	54.7163	-9.4	95	0.00
43	S	1,2-Dichloroethane-d4	25.0000	25.0887	-0.4	92	0.00
44		Heptane	-1.0000	0.0000	0.0	85	-0.01
45	T	1,2-Dichloroethane	50.0000	48.9162	2.2	88	0.00
46	T	Benzene	50.0000	48.7517	2.5	89	0.00
47	T	Trichloroethene	50.0000	51.4683	-2.9	92	0.00
48	T	Methylcyclohexane	50.0000	47.6855	4.6	85	0.00
49	C	1,2-Dichloropropane	50.0000	48.6174	2.8	87	0.00
50	T	1,4-Dioxane	200.0000	217.9259	-9.0	88	0.00
51	T	Bromodichloromethane	50.0000	50.5364	-1.1	89	0.00
52	T	Dibromomethane	50.0000	51.0989	-2.2	90	0.00
53	T	2-Chloroethyl Vinyl Ether	50.0000	51.3459	-2.7	86	0.00
54	T	4-Methyl-2-Pentanone	50.0000	49.7925	0.4	90	-0.01

(#) = Out of Range
6M142657.D 8260WTR.M Thu Oct 13 08:22:20 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142657.D Vial: 3
Acq On : 12 Oct 2016 15:32 Operator: TMB
Sample : WG587314-02 50ug/L CCV STD 8260 Inst : HPMS6
Misc : 1,1 STD78469 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

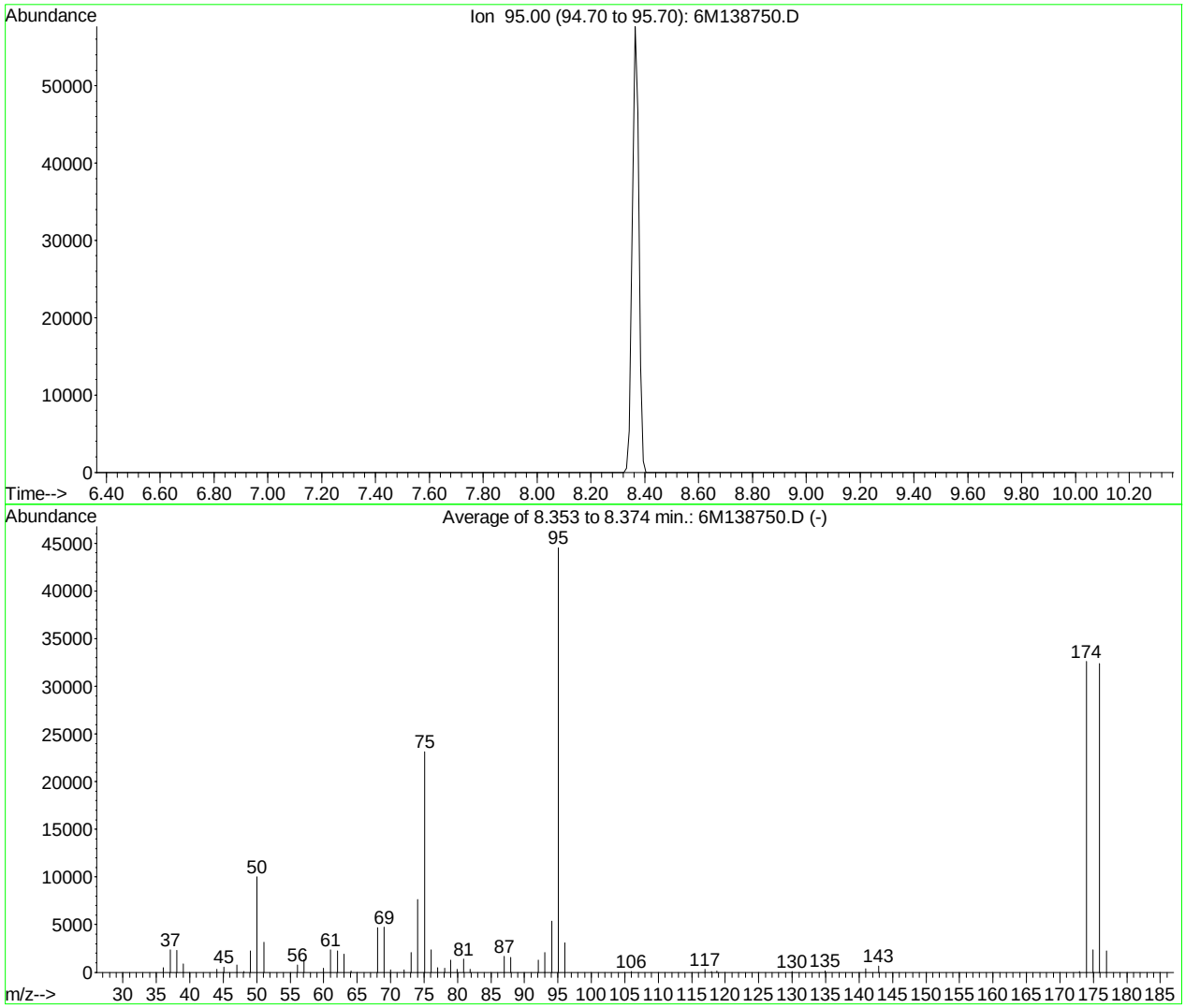
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55	T	cis-1,3-Dichloropropene	50.0000	50.5419	-1.1	87	0.00
56	T	Dimethyl Disulfide	50.0000	44.4188	11.2	78	0.00
57	I	Chlorobenzene-d5	25.0000	25.0000	0.0	92	0.00
58	S	Toluene-d8	25.0000	25.5879	-2.4	96	0.00
59	C	Toluene	50.0000	48.9793	2.0	90	0.00
60	T	Ethyl Methacrylate	50.0000	49.3697	1.3	83	-0.01
61		Paraldehyde	-1.0000	0.0000	0.0	90	0.00
62	T	trans-1,3-Dichloropropene	50.0000	49.8331	0.3	88	0.00
63	T	1,1,2-Trichloroethane	50.0000	50.0818	-0.2	90	0.00
64	T	2-Hexanone	50.0000	49.0890	1.8	91	-0.01
65	T	1,3-Dichloropropane	50.0000	48.4843	3.0	87	0.00
66	T	Tetrachloroethene	50.0000	52.2256	-4.5	96	0.00
67	T	Dibromochloromethane	50.0000	52.7586	-5.5	92	0.00
68	T	1,2-Dibromoethane	50.0000	50.2120	-0.4	89	0.00
69	T	1-Chlorohexane	50.0000	50.1486	-0.3	86	0.00
70	P	Chlorobenzene	50.0000	49.8937	0.2	91	0.00
71	T	1,1,1,2-Tetrachloroethane	50.0000	53.2889	-6.6	93	0.00
72	C	Ethylbenzene	50.0000	48.9006	2.2	90	0.00
73	T	m-,p-Xylene	100.0000	99.8936	0.1	89	0.00
74	T	o-Xylene	50.0000	49.3072	1.4	89	0.00
75	T	Styrene	50.0000	50.5296	-1.1	89	-0.01
76	P	Bromoform	50.0000	48.5662	2.9	95	0.00
77	T	Isopropylbenzene	50.0000	50.9639	-1.9	91	0.00
78	I	1,4-Dichlorobenzene-d4	25.0000	25.0000	0.0	98	0.00
79	P	1,1,2,2-Tetrachloroethane	50.0000	47.7233	4.6	91	0.00
80	S	p-Bromofluorobenzene	25.0000	23.1107	7.6	92	0.00
81	T	1,2,3-Trichloropropane	50.0000	48.0057	4.0	91	0.00
82	T	trans-1,4-Dichloro-2-Butene	50.0000	46.8907	6.2	84	-0.01
83	T	n-Propylbenzene	50.0000	47.4401	5.1	91	0.00
84	T	Bromobenzene	50.0000	49.2961	1.4	96	0.00
85	T	1,3,5-Trimethylbenzene	50.0000	48.0034	4.0	92	-0.01
86	T	2-Chlorotoluene	50.0000	48.4017	3.2	92	0.00
87	T	4-Chlorotoluene	50.0000	44.3856	11.2	90	0.00
88	T	a-Methylstyrene	50.0000	46.4791	7.0	88	0.00
89	T	tert-Butylbenzene	50.0000	48.2047	3.6	94	-0.01
90	T	1,2,4-Trimethylbenzene	50.0000	49.0399	1.9	93	-0.01
91	T	sec-Butylbenzene	50.0000	48.3951	3.2	92	0.00
92	T	p-Isopropyltoluene	50.0000	49.6377	0.7	93	0.00
93	T	1,3-Dichlorobenzene	50.0000	50.0536	-0.1	97	0.00
94	T	1,4-Dichlorobenzene	50.0000	49.8378	0.3	97	-0.01
95	T	n-Butylbenzene	50.0000	48.3193	3.4	92	-0.01
96	T	1,2-Dichlorobenzene	50.0000	49.1089	1.8	96	0.00
97	T	1,2-Dibromo-3-Chloropropane	50.0000	47.1754	5.6	85	0.00
98	T	1,2,4-Trichlorobenzene	50.0000	48.4047	3.2	95	0.00
99	T	Hexachlorobutadiene	50.0000	48.4008	3.2	96	0.00
100	T	Naphthalene	50.0000	49.0753	1.8	88	0.00
101	T	1,2,3-Trichlorobenzene	50.0000	49.3164	1.4	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6M142657.D 8260WTR.M Thu Oct 13 08:22:21 2016 Page 2

2.1.1.5 Raw QC Data

BFB

Data File : C:\MSDCHEM\1\DATA\042416\6M138750.D Vial: 1
Acq On : 24 Apr 2016 16:33 Operator: JDS
Sample : WG566155-01 50ng BFB 826-A9 Inst : HPMS6
Misc : 1,1 STD75485 Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\BFB.M (RTE Integrator)
Title : SOP: OVL MSV01



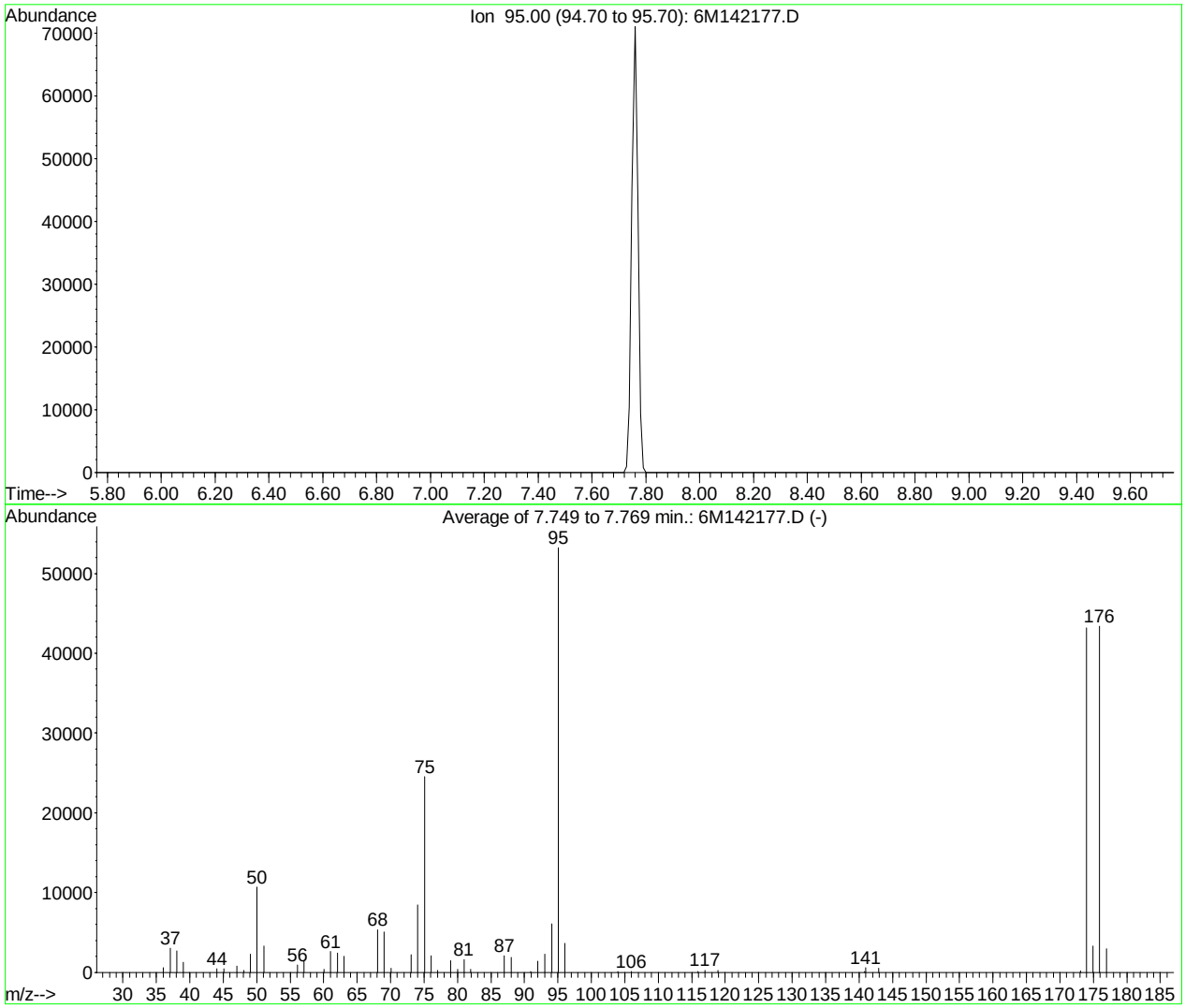
AutoFind: Scans 320, 321, 322; Background Corrected with Scan 315

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.5	10010	PASS
75	95	30	60	52.0	23152	PASS
95	95	100	100	100.0	44552	PASS
96	95	5	9	6.9	3085	PASS
173	174	0.00	2	0.3	113	PASS
174	95	50	100	73.2	32632	PASS
175	174	5	9	7.2	2336	PASS
176	174	95	101	99.2	32384	PASS
177	176	5	9	7.0	2251	PASS

6M138750.D BFB.M Mon Apr 25 09:21:54 2016

BFB

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\092616\6M142177.D Vial: 1
Acq On : 26 Sep 2016 13:29 Operator: TMB
Sample : WG584797-01 50ng BFB STD 8260 Inst : HPMS6
Misc : 1,1 STD77992 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6



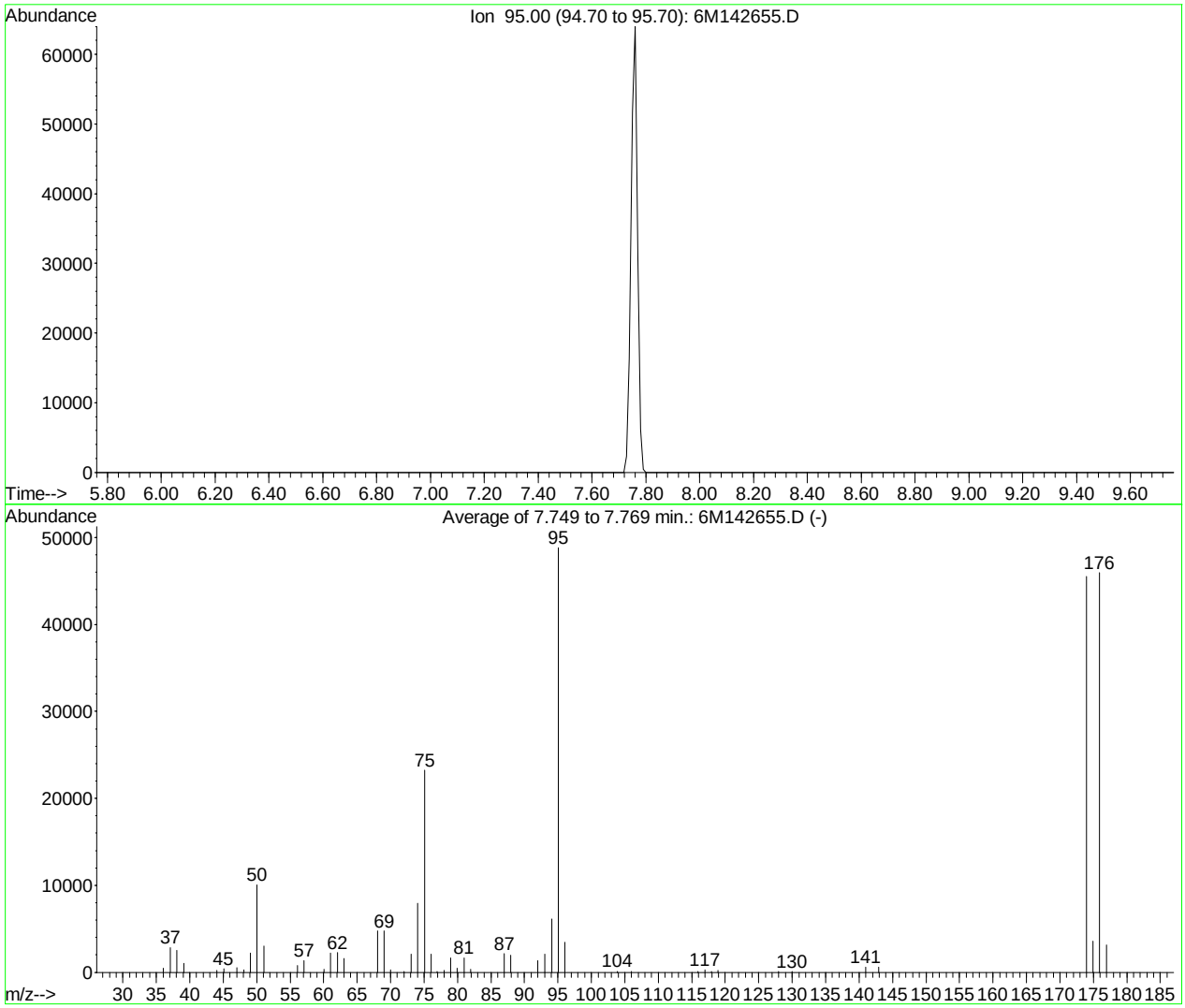
AutoFind: Scans 261, 262, 263; Background Corrected with Scan 256

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.0	10661	PASS
75	95	30	60	46.1	24528	PASS
95	95	100	100	100.0	53242	PASS
96	95	5	9	6.8	3617	PASS
173	174	0.00	2	0.4	192	PASS
174	95	50	100	81.1	43162	PASS
175	174	5	9	7.6	3287	PASS
176	174	95	101	100.5	43386	PASS
177	176	5	9	6.9	2974	PASS

6M142177.D 8260WTR.M Tue Sep 27 10:20:56 2016

BFB

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142655.D Vial: 4
Acq On : 12 Oct 2016 14:33 Operator: TMB
Sample : WG587314-01 50ng BFB STD 8260 Inst : HPMS6
Misc : 1,1 STD77992 Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6



AutoFind: Scans 261, 262, 263; Background Corrected with Scan 256

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.6	10040	PASS
75	95	30	60	47.6	23243	PASS
95	95	100	100	100.0	48837	PASS
96	95	5	9	7.1	3473	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	93.2	45528	PASS
175	174	5	9	7.8	3559	PASS
176	174	95	101	100.9	45952	PASS
177	176	5	9	6.9	3167	PASS

6M142655.D 8260WTR.M Thu Oct 13 08:21:51 2016

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142659.D Vial: 5
Acq On : 12 Oct 2016 16:35 Operator: TMB
Sample : WG587315-01 VBLK1012 BLANK STD 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:25:50 2016 Quant Results File: 8260WTR.RES

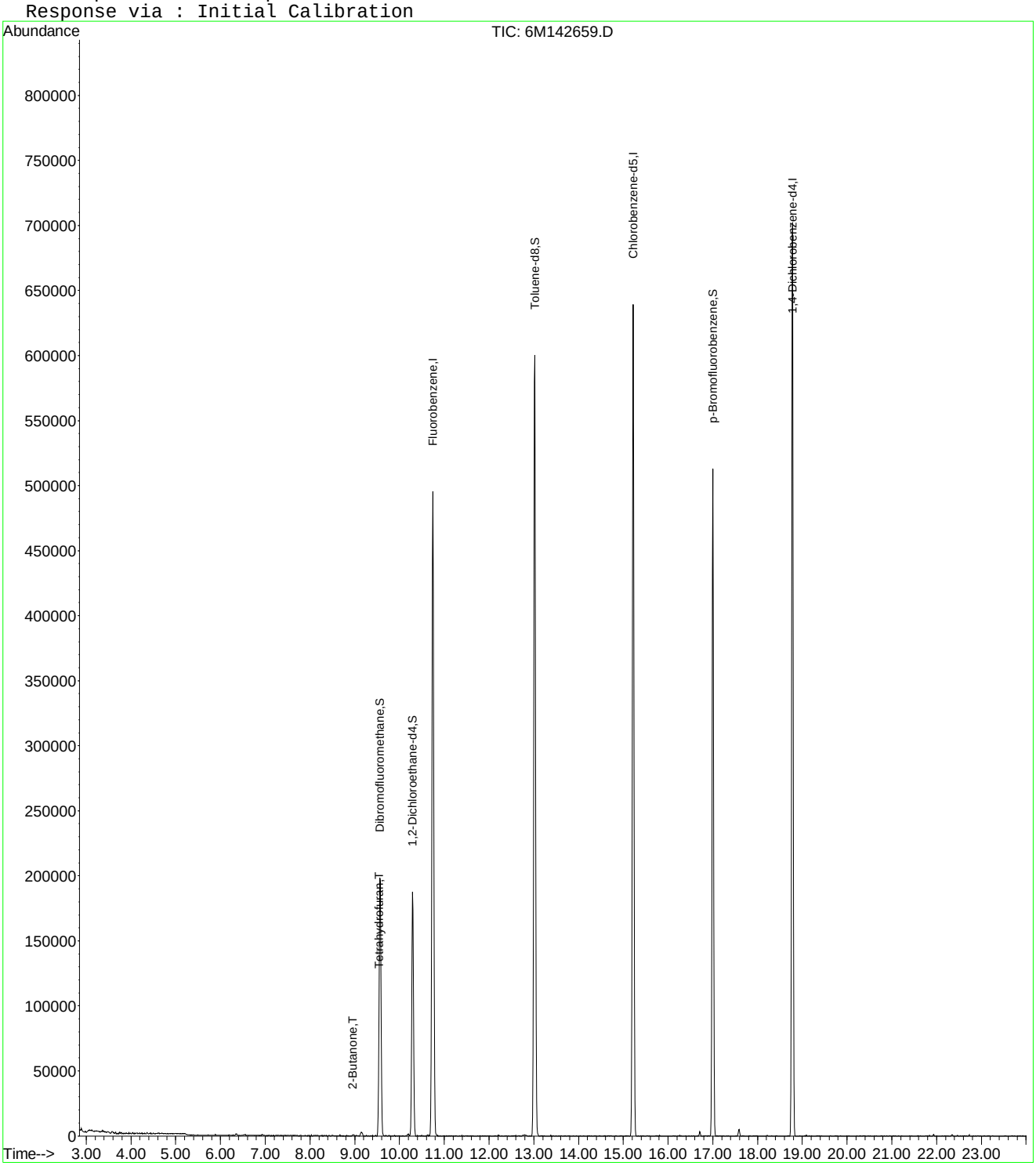
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

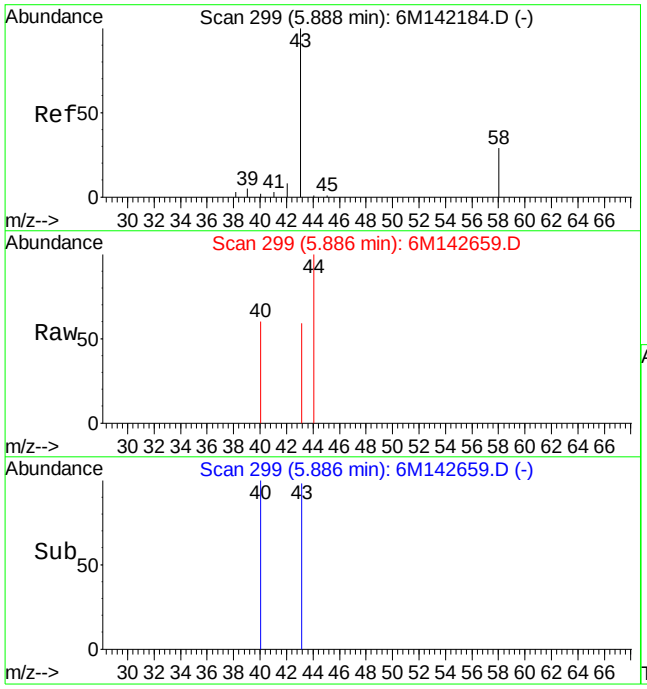
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	660535	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	513733	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	275383	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.56	111	183637	26.8985 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 107.60%		
43) 1,2-Dichloroethane-d4	10.29	65	174785	25.5249 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 102.08%		
58) Toluene-d8	13.02	98	590125	25.5391 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.16%		
80) p-Bromofluorobenzene	17.00	95	224376	24.6805 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 98.72%		
Target Compounds					Qvalue
13) Acetone	5.89	43	196	Below Cal #	48
29) 2-Butanone	8.95	43	1386	0.5707 ug/L #	57
36) Tetrahydrofuran	9.54	42	4101	2.3262 ug/L	79

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

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142659.D Vial: 5
Acq On : 12 Oct 2016 16:35 Operator: TMB
Sample : WG587315-01 VBLK1012 BLANK STD 8260 Inst : HPMS6
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:25 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

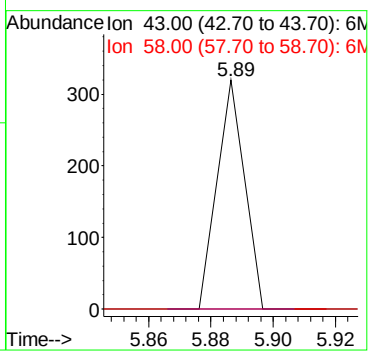


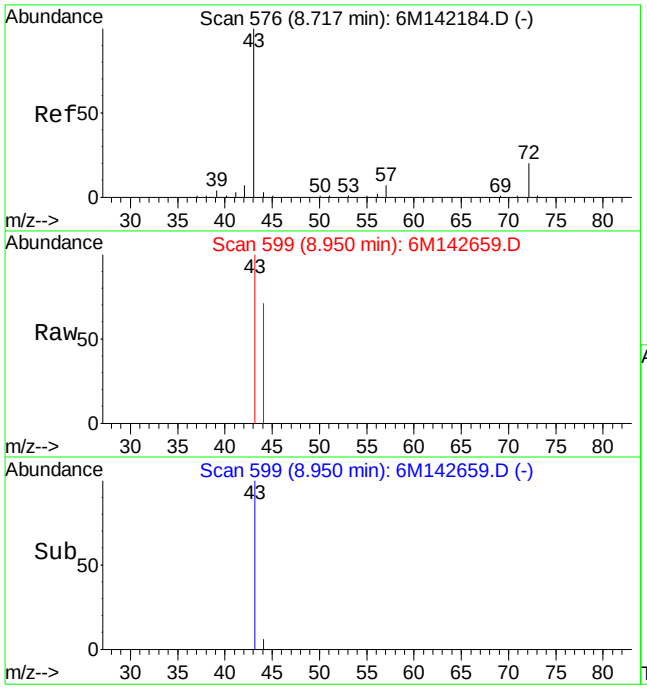


#13
Acetone
Concen: Below Cal
RT: 5.89 min Scan# 299
Delta R.T. -0.00 min
Lab File: 6M142659.D
Acq: 12 Oct 2016 16:35

Tgt Ion: 43 Resp: 196

Ion	Ratio	Lower	Upper
43	100		
58	0.0	16.4	38.2#

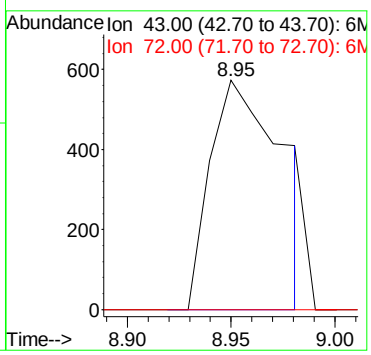


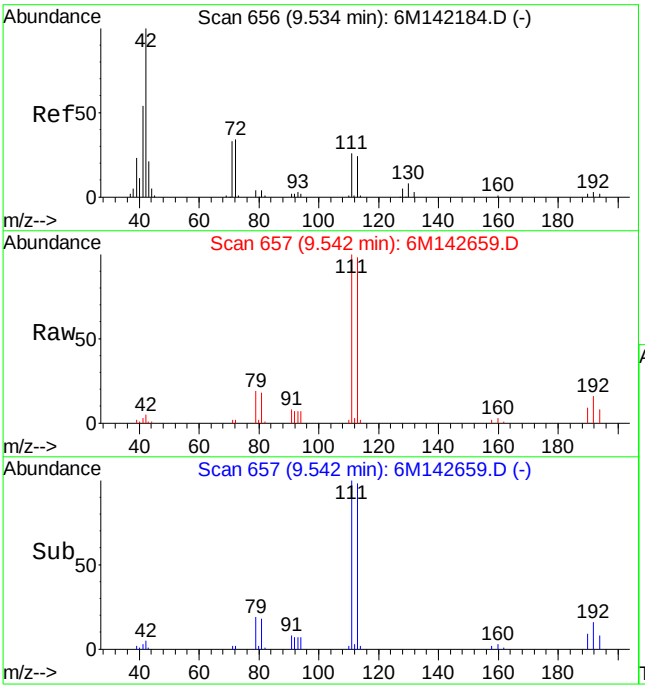


#29
2-Butanone
Concen: 0.57 ug/L
RT: 8.95 min Scan# 599
Delta R.T. 0.23 min
Lab File: 6M142659.D
Acq: 12 Oct 2016 16:35

Tgt Ion: 43 Resp: 1386

Ion	Ratio	Lower	Upper
43	100		
72	0.0	11.9	27.9#

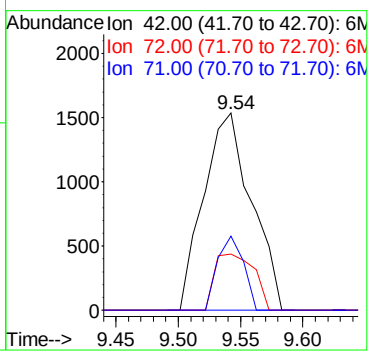




#36
Tetrahydrofuran
Concen: 2.33 ug/L
RT: 9.54 min Scan# 657
Delta R.T. 0.01 min
Lab File: 6M142659.D
Acq: 12 Oct 2016 16:35

Tgt Ion: 42 Resp: 4101

Ion	Ratio	Lower	Upper
42	100		
72	23.4	20.8	48.4
71	20.5	19.9	46.5



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142679.D Vial: 25
Acq On : 13 Oct 2016 3:18 Operator: TMB
Sample : WG587315-04 VBLK1012 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 09:27:55 2016 Quant Results File: 8260WTR.RES

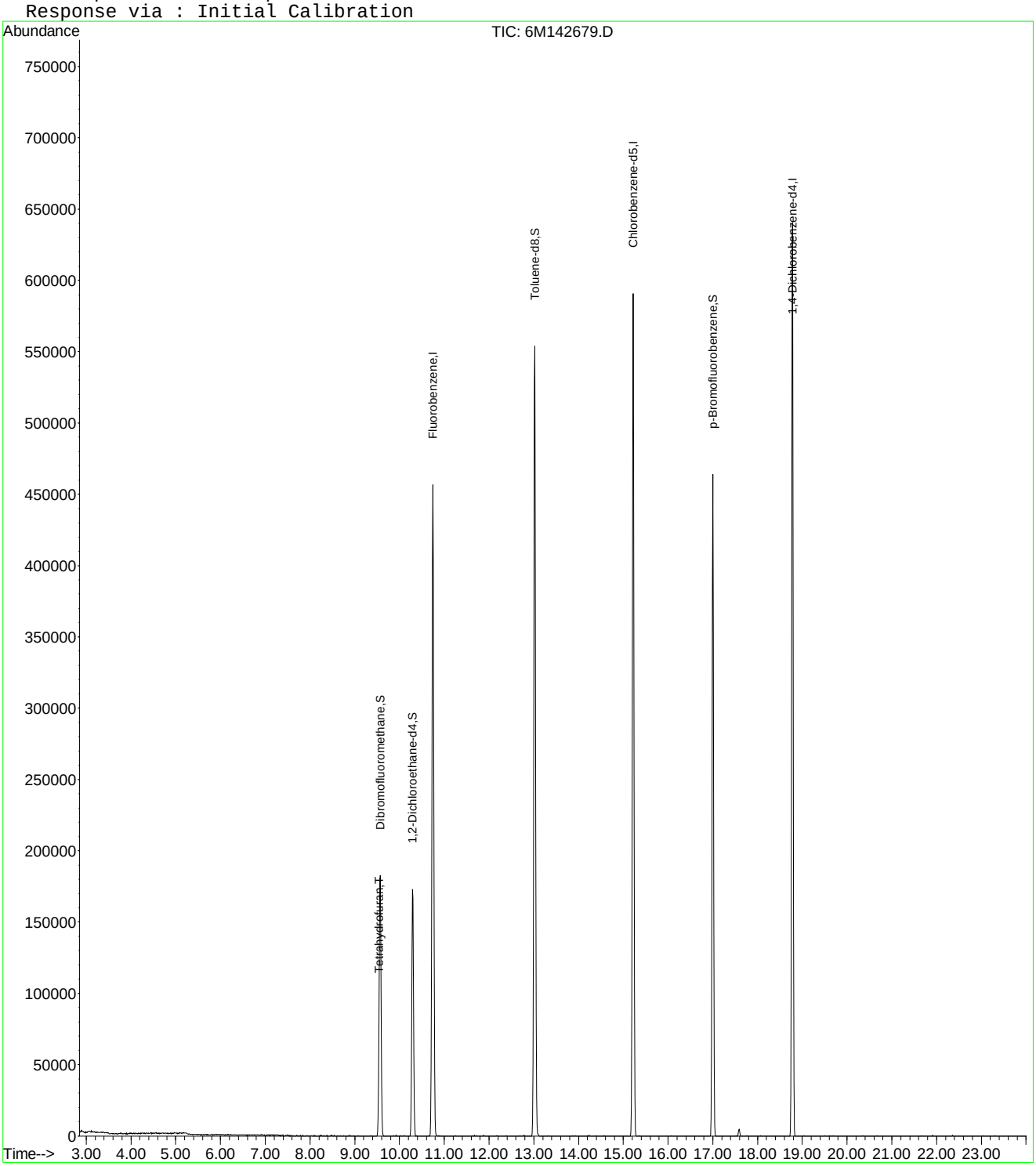
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

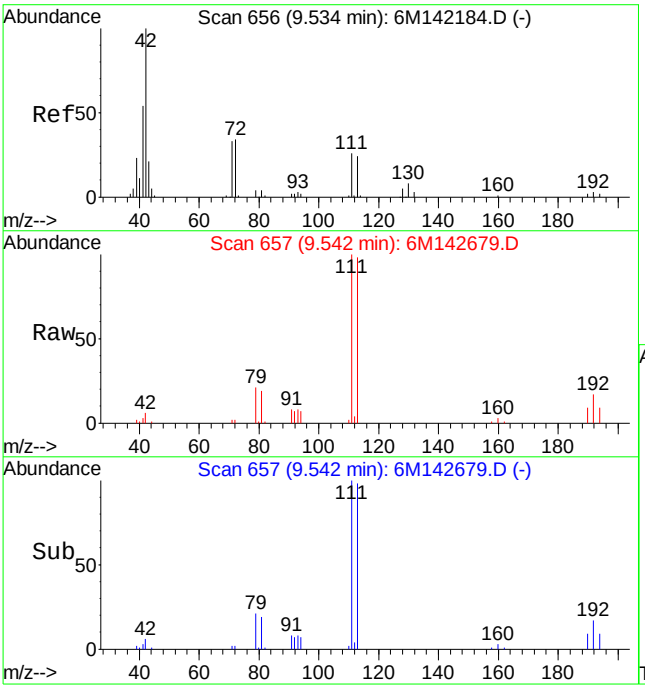
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.75	96	606684	25.00	ug/L	0.00
57) Chlorobenzene-d5	15.22	117	472776	25.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.78	152	251326	25.00	ug/L	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.57	111	171119	27.2897	ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 109.16%			
43) 1,2-Dichloroethane-d4	10.29	65	161430	25.6672	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 102.68%			
58) Toluene-d8	13.02	98	541221	25.4518	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.80%			
80) p-Bromofluorobenzene	17.00	95	201280	24.2593	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 97.04%			
Target Compounds						Qvalue
36) Tetrahydrofuran	9.54	42	3860	2.3839	ug/L #	63

(#) = qualifier out of range (m) = manual integration
6M142679.D 8260WTR.M Thu Oct 13 09:27:58 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142679.D Vial: 25
Acq On : 13 Oct 2016 3:18 Operator: TMB
Sample : WG587315-04 VBLK1012 BLANK STD 624 Inst : HPMS6
Misc : 2,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 9:27 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration

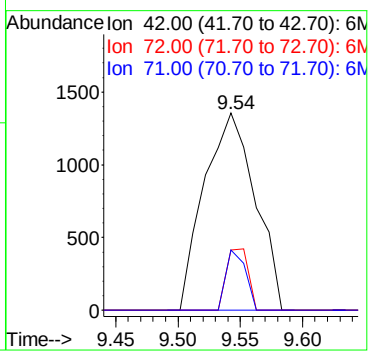




#36
Tetrahydrofuran
Concen: 2.38 ug/L
RT: 9.54 min Scan# 657
Delta R.T. 0.01 min
Lab File: 6M142679.D
Acq: 13 Oct 2016 3:18

Tgt Ion: 42 Resp: 3860

Ion	Ratio	Lower	Upper
42	100		
72	13.3	20.8	48.4#
71	11.7	19.9	46.5#



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142676.D Vial: 22
Acq On : 13 Oct 2016 1:42 Operator: TMB
Sample : WG587315-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD78472 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 08:15:28 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	621588	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	498165	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.79	152	306991	25.00 ug/L	0.00
System Monitoring Compounds					
37) Dibromofluoromethane	9.56	111	174984	27.2370 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.96%		
43) 1,2-Dichloroethane-d4	10.29	65	162506	25.2187 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 100.88%		
58) Toluene-d8	13.03	98	574420	25.6363 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 102.56%		
80) p-Bromofluorobenzene	17.00	95	228014	22.4984 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 90.00%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.95	85	251378	24.0221 ug/L	96
3) Chloromethane	3.36	50	204778	16.9782 ug/L	99
4) Vinyl Chloride	3.55	62	181620	24.6000 ug/L	100
5) 1,3-Butadiene	3.58	54	120688	28.2997 ug/L	97
6) Bromomethane	4.37	94	57842	13.4593 ug/L	99
7) Chloroethane	4.52	64	103061	22.0942 ug/L	98
8) Trichlorofluoromethane	4.98	101	281504	26.9839 ug/L	99
9) Diethyl ether	5.53	59	500919	97.3105 ug/L	97
10) Isoprene	5.55	67	183866	18.9583 ug/L	95
11) Acrolein	5.78	56	69017	96.9579 ug/L	100
12) 1,1,2-Trichloro-1,2,2-Trif	5.78	101	138081	21.9990 ug/L	96
13) Acetone	5.89	43	36205	24.1310 ug/L	100
14) 1,1-Dichloroethene	6.09	61	183088	17.6930 ug/L	91
15) Tert-Butyl Alcohol	6.25	59	77048	220.1487 ug/L	86
16) Dimethyl Sulfide	6.37	62	139109	20.4881 ug/L	98
17) Iodomethane	6.62	142	100716	14.4786 ug/L	99
18) Methyl acetate	6.67	43	89335	20.4639 ug/L	98
19) Methylene Chloride	6.92	84	125994	18.7425 ug/L	88
20) Carbon Disulfide	6.94	76	359777	18.3712 ug/L	99
21) Acrylonitrile	7.13	53	40831	20.9557 ug/L	98
22) Methyl Tert Butyl Ether	7.16	73	285239	18.8919 ug/L	96
23) trans-1,2-Dichloroethene	7.40	96	124160	18.9228 ug/L	84
24) n-Hexane	7.49	57	137358	15.9888 ug/L	96
25) Diisopropyl ether	7.89	45	2354632	96.3345 ug/L	96
26) Vinyl Acetate	8.07	43	138771	11.5442 ug/L	99
27) 1,1-Dichloroethane	8.08	63	221324	18.2419 ug/L	98
28) Ethyl-Tert-Butyl ether	8.51	59	1739298	90.1365 ug/L	95
29) 2-Butanone	8.72	43	48962	21.4225 ug/L	96
30) Propionitrile	8.84	54	66007	107.6979 ug/L	99
31) 2,2-Dichloropropane	8.93	77	137330	15.4960 ug/L	95
32) cis-1,2-Dichloroethene	9.01	96	137410	18.9496 ug/L	85
33) Chloroform	9.25	83	224206	19.1830 ug/L	98
34) 1-Bromopropane	9.39	122	31232	24.4313 ug/L	99
35) Bromochloromethane	9.50	130	91628	20.6407 ug/L	100
36) Tetrahydrofuran	9.53	42	154642	93.2147 ug/L	97
38) 1,1,1-Trichloroethane	9.84	97	202172	19.9572 ug/L	96
39) Cyclohexane	9.86	56	209308	18.8816 ug/L	90
40) 1,1-Dichloropropene	10.05	75	158118	18.2704 ug/L	95
41) Tert-Amyl-Methyl ether	10.20	73	1459315	98.4073 ug/L	93
42) Carbon Tetrachloride	10.21	117	200321	21.4728 ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142676.D 8260WTR.M Thu Oct 13 08:15:32 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142676.D Vial: 22
Acq On : 13 Oct 2016 1:42 Operator: TMB
Sample : WG587315-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD78472 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 08:15:28 2016 Quant Results File: 8260WTR.RES

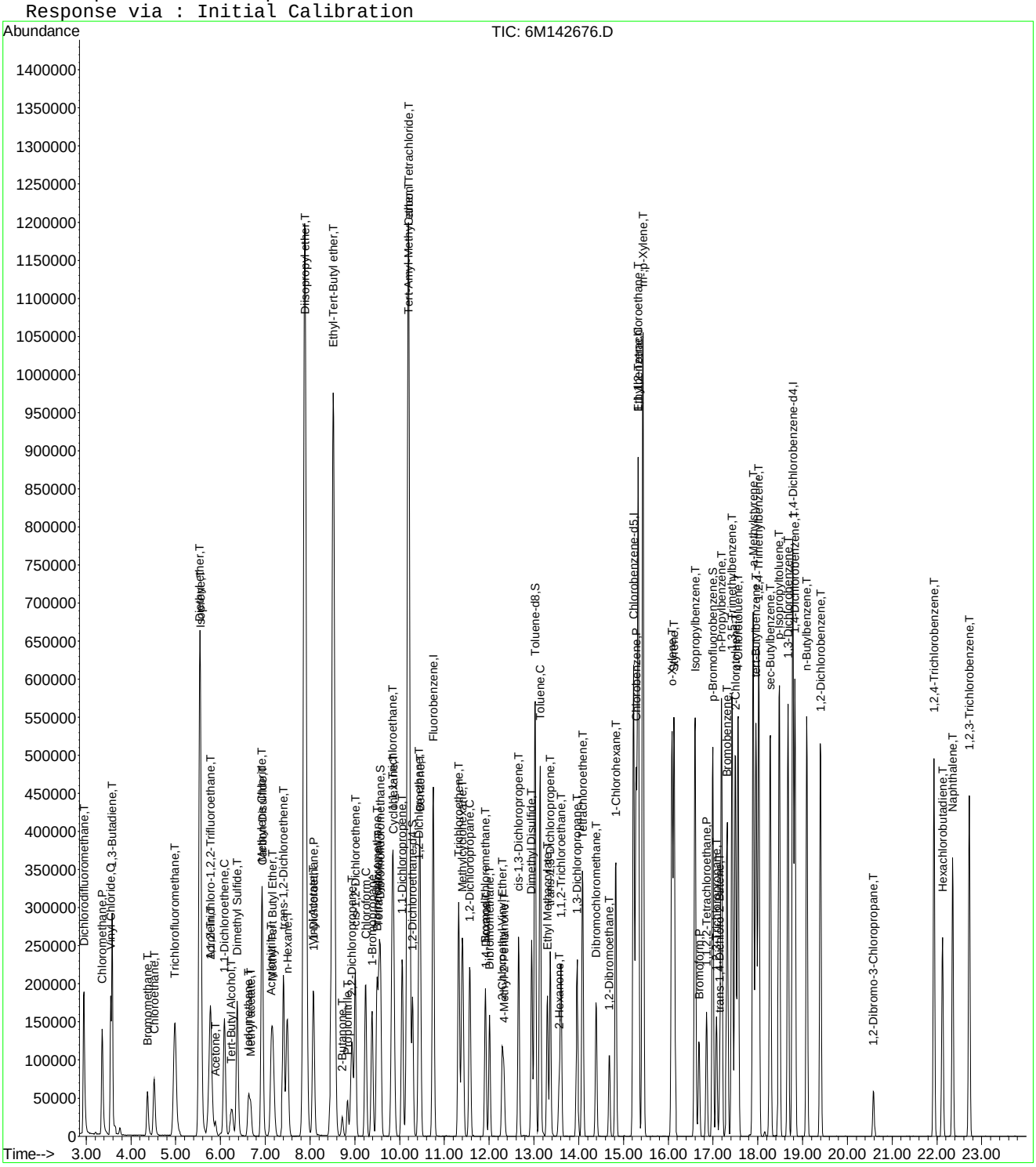
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.43	62	160085	18.8187	ug/L	97
46)	Benzene	10.46	78	473771	18.8791	ug/L	95
47)	Trichloroethene	11.32	130	151115	20.4868	ug/L	84
48)	Methylcyclohexane	11.40	83	179782	18.5420	ug/L	91
49)	1,2-Dichloropropane	11.57	63	121133	18.4688	ug/L	97
50)	1,4-Dioxane	11.92	88	7005	180.1349	ug/L	96
51)	Bromodichloromethane	11.91	83	161676	18.7257	ug/L	100
52)	Dibromomethane	12.00	93	73531	20.2154	ug/L	98
53)	2-Chloroethyl Vinyl Ether	12.29	63	56573	18.5480	ug/L	99
54)	4-Methyl-2-Pentanone	12.33	58	35026	19.5501	ug/L	96
55)	cis-1,3-Dichloropropene	12.66	75	181122	18.7551	ug/L	98
56)	Dimethyl Disulfide	12.94	79	96376	16.3628	ug/L	95
59)	Toluene	13.14	91	511407	18.9531	ug/L	99
60)	Ethyl Methacrylate	13.30	69	128963	19.8455	ug/L	100
62)	trans-1,3-Dichloropropene	13.36	75	156078	17.6285	ug/L	94
63)	1,1,2-Trichloroethane	13.61	97	100353	19.9303	ug/L	97
64)	2-Hexanone	13.57	43	69109	18.7503	ug/L	95
65)	1,3-Dichloropropane	13.97	76	163533	19.3955	ug/L	97
66)	Tetrachloroethene	14.09	166	157865	20.7907	ug/L	96
67)	Dibromochloromethane	14.38	129	135691	19.7306	ug/L	99
68)	1,2-Dibromoethane	14.68	107	100355	19.0079	ug/L	100
69)	1-Chlorohexane	14.83	91	168445	19.7365	ug/L	90
70)	Chlorobenzene	15.28	112	369918	19.1965	ug/L	88
71)	1,1,1,2-Tetrachloroethane	15.32	131	142611	19.7775	ug/L	97
72)	Ethylbenzene	15.32	106	193719	18.7426	ug/L	91
73)	m-,p-Xylene	15.44	106	474514	38.7297	ug/L	90
74)	o-Xylene	16.09	106	227146	18.6645	ug/L	89
75)	Styrene	16.13	104	404955	19.4900	ug/L	92
76)	Bromoform	16.69	173	88754	17.9638	ug/L	98
77)	Isopropylbenzene	16.60	105	570590	19.1752	ug/L	98
79)	1,1,2,2-Tetrachloroethane	16.86	83	112612	17.2291	ug/L	98
81)	1,2,3-Trichloropropane	17.08	110	37787	18.9266	ug/L	92
82)	trans-1,4-Dichloro-2-Buten	17.15	53	27640	14.2720	ug/L	91
83)	n-Propylbenzene	17.19	91	671295	18.1202	ug/L	96
84)	Bromobenzene	17.31	156	182146	19.0508	ug/L	83
85)	1,3,5-Trimethylbenzene	17.42	105	494897	18.0332	ug/L	95
86)	2-Chlorotoluene	17.50	91	446220	18.3399	ug/L	92
87)	4-Chlorotoluene	17.56	91	411019	16.9116	ug/L	92
88)	a-Methylstyrene	17.90	118	318815	19.2312	ug/L	95
89)	tert-Butylbenzene	17.96	134	119364	18.7521	ug/L	98
90)	1,2,4-Trimethylbenzene	18.02	105	530339	18.4475	ug/L	94
91)	sec-Butylbenzene	18.28	105	599069	18.2569	ug/L	97
92)	p-Isopropyltoluene	18.48	119	550900	18.9417	ug/L	99
93)	1,3-Dichlorobenzene	18.67	146	346435	18.9850	ug/L	95
94)	1,4-Dichlorobenzene	18.83	146	359364	19.5960	ug/L	95
95)	n-Butylbenzene	19.09	91	446159	17.7502	ug/L	93
96)	1,2-Dichlorobenzene	19.41	146	331839	19.3726	ug/L	95
97)	1,2-Dibromo-3-Chloropropan	20.58	75	19822	17.7232	ug/L	78
98)	1,2,4-Trichlorobenzene	21.93	180	227370	18.2004	ug/L	98
99)	Hexachlorobutadiene	22.12	225	85273	18.3278	ug/L	100
100)	Naphthalene	22.35	128	414491	18.2465	ug/L	100
101)	1,2,3-Trichlorobenzene	22.73	180	212889	19.0502	ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142676.D 8260WTR.M Thu Oct 13 08:15:33 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142676.D Vial: 22
Acq On : 13 Oct 2016 1:42 Operator: TMB
Sample : WG587315-02 20ug/L LCS STD 8260 Inst : HPMS6
Misc : 1,1 STD78472 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 8:15 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142677.D Vial: 23
Acq On : 13 Oct 2016 2:14 Operator: TMB
Sample : WG587315-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD78472 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 08:15:37 2016 Quant Results File: 8260WTR.RES

Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.75	96	642986	25.00 ug/L	0.00
57) Chlorobenzene-d5	15.22	117	516481	25.00 ug/L	0.00
78) 1,4-Dichlorobenzene-d4	18.77	152	310406	25.00 ug/L	-0.01
System Monitoring Compounds					
37) Dibromofluoromethane	9.56	111	180296	27.1299 ug/L	0.00
Spiked Amount 25.000	Range 86 - 118		Recovery = 108.52%		
43) 1,2-Dichloroethane-d4	10.29	65	165389	24.8120 ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 99.24%		
58) Toluene-d8	13.02	98	588135	25.3176 ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 101.28%		
80) p-Bromofluorobenzene	17.00	95	233813	22.8168 ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 91.28%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.95	85	261687	24.1750 ug/L	96
3) Chloromethane	3.35	50	212326	17.0182 ug/L	99
4) Vinyl Chloride	3.55	62	177690	23.2668 ug/L	99
5) 1,3-Butadiene	3.58	54	112913	25.1033 ug/L	98
6) Bromomethane	4.37	94	63478	14.2792 ug/L	99
7) Chloroethane	4.52	64	101561	21.0480 ug/L	98
8) Trichlorofluoromethane	4.99	101	266259	24.6732 ug/L	98
9) Diethyl ether	5.54	59	506993	95.2128 ug/L	97
10) Isoprene	5.55	67	180856	18.0273 ug/L	95
11) Acrolein	5.78	56	69304	94.1210 ug/L	99
12) 1,1,2-Trichloro-1,2,2-Trif	5.78	101	137629	21.1973 ug/L	98
13) Acetone	5.89	43	36785	23.6595 ug/L	97
14) 1,1-Dichloroethene	6.09	61	179042	16.7262 ug/L	91
15) Tert-Butyl Alcohol	6.24	59	80009	221.0012 ug/L	88
16) Dimethyl Sulfide	6.37	62	140039	19.9387 ug/L	98
17) Iodomethane	6.62	142	115012	15.8573 ug/L	98
18) Methyl acetate	6.67	43	90978	20.1467 ug/L	99
19) Methylene Chloride	6.92	84	126416	18.1795 ug/L	88
20) Carbon Disulfide	6.94	76	353786	17.4641 ug/L	100
21) Acrylonitrile	7.13	53	40883	20.2841 ug/L	98
22) Methyl Tert Butyl Ether	7.16	73	291161	18.6423 ug/L	96
23) trans-1,2-Dichloroethene	7.40	96	121481	17.8983 ug/L	86
24) n-Hexane	7.49	57	137874	15.5147 ug/L	96
25) Diisopropyl ether	7.88	45	2372014	93.8160 ug/L	96
26) Vinyl Acetate	8.07	43	133043	10.6993 ug/L	99
27) 1,1-Dichloroethane	8.08	63	221522	17.6506 ug/L	99
28) Ethyl-Tert-Butyl ether	8.51	59	1753365	87.8415 ug/L	96
29) 2-Butanone	8.72	43	48255	20.4105 ug/L	97
30) Propionitrile	8.84	54	64449	101.6564 ug/L	96
31) 2,2-Dichloropropane	8.93	77	135997	14.8349 ug/L	97
32) cis-1,2-Dichloroethene	9.01	96	135837	18.1092 ug/L	96
33) Chloroform	9.25	83	222977	18.4429 ug/L	99
34) 1-Bromopropane	9.39	122	30174	22.8182 ug/L	99
35) Bromochloromethane	9.50	130	90962	19.8087 ug/L	99
36) Tetrahydrofuran	9.53	42	151408	88.2281 ug/L	98
38) 1,1,1-Trichloroethane	9.83	97	199011	18.9914 ug/L	95
39) Cyclohexane	9.86	56	205565	17.9268 ug/L	90
40) 1,1-Dichloropropene	10.05	75	155519	17.3720 ug/L	95
41) Tert-Amyl-Methyl ether	10.20	73	1455403	94.8774 ug/L	94
42) Carbon Tetrachloride	10.21	117	190627	19.7537 ug/L	98

(#) = qualifier out of range (m) = manual integration
6M142677.D 8260WTR.M Thu Oct 13 08:15:41 2016 Page 1

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142677.D Vial: 23
Acq On : 13 Oct 2016 2:14 Operator: TMB
Sample : WG587315-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD78472 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 08:15:37 2016 Quant Results File: 8260WTR.RES

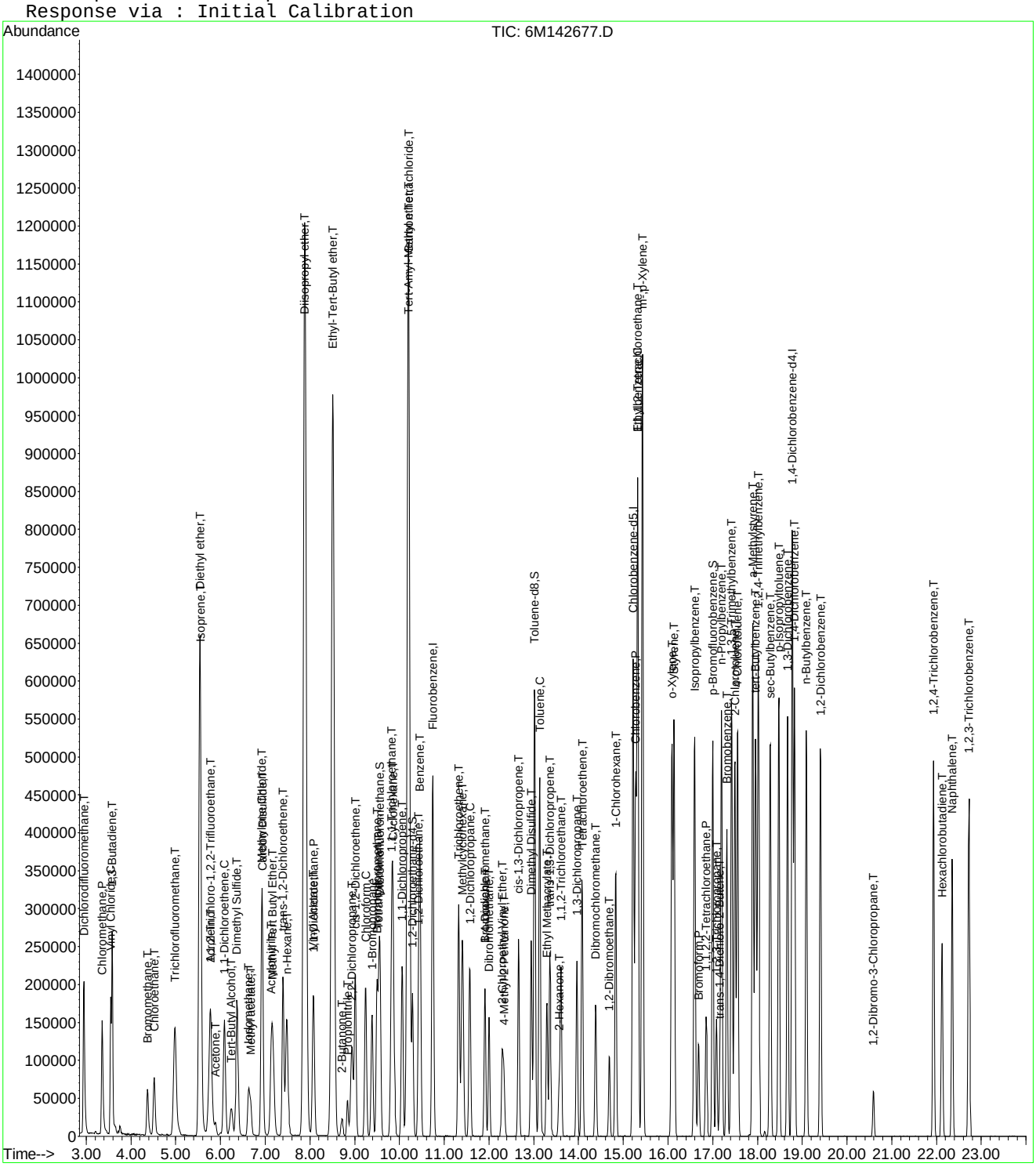
Quant Method : K:\ORGANICS\V...\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration
DataAcq Meth : 8260WTR

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45)	1,2-Dichloroethane	10.42	62	158448	18.0064	ug/L	98
46)	Benzene	10.45	78	465581	17.9353	ug/L	95
47)	Trichloroethene	11.32	130	150378	19.7084	ug/L	85
48)	Methylcyclohexane	11.40	83	178416	17.7888	ug/L	91
49)	1,2-Dichloropropane	11.58	63	121542	17.9145	ug/L	97
50)	1,4-Dioxane	11.91	88	8824	219.3595	ug/L	96
51)	Bromodichloromethane	11.91	83	162533	18.1985	ug/L	100
52)	Dibromomethane	12.00	93	72817	19.3529	ug/L	98
53)	2-Chloroethyl Vinyl Ether	12.29	63	55754	17.6712	ug/L	100
54)	4-Methyl-2-Pentanone	12.33	58	33982	18.3362	ug/L	94
55)	cis-1,3-Dichloropropene	12.66	75	179504	17.9690	ug/L	98
56)	Dimethyl Disulfide	12.94	79	97957	16.0778	ug/L	94
59)	Toluene	13.14	91	502306	17.9557	ug/L	99
60)	Ethyl Methacrylate	13.30	69	126156	18.7250	ug/L	99
62)	trans-1,3-Dichloropropene	13.36	75	153280	16.6985	ug/L	92
63)	1,1,2-Trichloroethane	13.61	97	95681	18.3286	ug/L	99
64)	2-Hexanone	13.57	43	69787	18.2627	ug/L	94
65)	1,3-Dichloropropane	13.96	76	162832	18.6275	ug/L	97
66)	Tetrachloroethene	14.09	166	149813	19.0306	ug/L	97
67)	Dibromochloromethane	14.38	129	132931	18.6438	ug/L	99
68)	1,2-Dibromoethane	14.68	107	98981	18.0828	ug/L	99
69)	1-Chlorohexane	14.83	91	163150	18.4382	ug/L	92
70)	Chlorobenzene	15.27	112	363135	18.1763	ug/L	88
71)	1,1,1,2-Tetrachloroethane	15.32	131	140413	18.7821	ug/L	96
72)	Ethylbenzene	15.32	106	188189	17.5619	ug/L	92
73)	m-,p-Xylene	15.44	106	464672	36.5814	ug/L	90
74)	o-Xylene	16.09	106	223649	17.7254	ug/L	92
75)	Styrene	16.13	104	399789	18.5590	ug/L	92
76)	Bromoform	16.69	173	85400	16.7144	ug/L	97
77)	Isopropylbenzene	16.60	105	555059	17.9918	ug/L	97
79)	1,1,2,2-Tetrachloroethane	16.85	83	107529	16.2704	ug/L	100
81)	1,2,3-Trichloropropane	17.08	110	36997	18.3270	ug/L	93
82)	trans-1,4-Dichloro-2-Buten	17.15	53	27465	14.0256	ug/L	93
83)	n-Propylbenzene	17.19	91	647983	17.2985	ug/L	95
84)	Bromobenzene	17.31	156	178331	18.4466	ug/L	84
85)	1,3,5-Trimethylbenzene	17.42	105	486901	17.5467	ug/L	95
86)	2-Chlorotoluene	17.50	91	404417	16.4389	ug/L	89
87)	4-Chlorotoluene	17.55	91	438503	17.8440	ug/L	97
88)	a-Methylstyrene	17.90	118	315499	18.8218	ug/L	95
89)	tert-Butylbenzene	17.96	134	116391	18.0839	ug/L	98
90)	1,2,4-Trimethylbenzene	18.02	105	526260	18.1042	ug/L	95
91)	sec-Butylbenzene	18.28	105	587182	17.6978	ug/L	97
92)	p-Isopropyltoluene	18.48	119	537242	18.2689	ug/L	98
93)	1,3-Dichlorobenzene	18.67	146	342529	18.5644	ug/L	95
94)	1,4-Dichlorobenzene	18.83	146	354512	19.1188	ug/L	96
95)	n-Butylbenzene	19.09	91	436157	17.1614	ug/L	93
96)	1,2-Dichlorobenzene	19.41	146	326537	18.8533	ug/L	96
97)	1,2-Dibromo-3-Chloropropan	20.58	75	20233	17.8917	ug/L	83
98)	1,2,4-Trichlorobenzene	21.93	180	225165	17.8256	ug/L	99
99)	Hexachlorobutadiene	22.12	225	84333	17.9264	ug/L	99
100)	Naphthalene	22.35	128	414035	18.0259	ug/L	99
101)	1,2,3-Trichlorobenzene	22.73	180	207521	18.3656	ug/L	99

(#) = qualifier out of range (m) = manual integration
6M142677.D 8260WTR.M Thu Oct 13 08:15:41 2016 Page 2

Data File : K:\ORGANICS\VOLATILE\HPMS6\DATA\101216\6M142677.D Vial: 23
Acq On : 13 Oct 2016 2:14 Operator: TMB
Sample : WG587315-03 20ug/L LCS2 STD 8260 Inst : HPMS6
Misc : 1,1 STD78472 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 8:15 2016 Quant Results File: 8260WTR.RES

Method : K:\ORGANICS\VOLATILE\HPMS6\METHODS\8260WTR.M (RTE Integrator)
Title : 8260B/624_WATER SOP:MSV01 09-26-16 - HPMS6
Last Update : Tue Sep 27 09:13:49 2016
Response via : Initial Calibration



2.1.2 RSK 175

2.1.2.1 Summary Data

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW09-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 18:59
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	16G50812
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	7.57		5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-01	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW09-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:13
Collect Date:	10/03/2016 08:25	**Dilution:**	10	**File ID:**	16G50832
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	706000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW10-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 19:10
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	16G50813
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	2.00	U	5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-03	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW10-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:35
Collect Date:	10/03/2016 09:40	**Dilution:**	10	**File ID:**	16G50834
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	525000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW11-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 19:21
Collect Date:	10/03/2016 10:50	**Dilution:**	1	**File ID:**	16G50814
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	2.00	U	5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-05	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW11-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:47
Collect Date:	10/03/2016 10:50	**Dilution:**	10	**File ID:**	16G50835
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	855000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW06-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586463	**Analyst:**	JDS	**Run Date:**	10/05/2016 19:45
Collect Date:	10/03/2016 13:30	**Dilution:**	1	**File ID:**	16G50816
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Methane	74-82-8	2.00	U	5.00	2.00	1.00
ethene	74-85-1	2.00	U	5.00	2.00	1.00
ethane	74-84-0	2.00	U	5.00	2.00	1.00

J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-07	**PrePrep Method:**	N/A	**Instrument:**	HP16
Client ID:	35AWW06-100316	**Prep Method:**	5021	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	RSK175	**Cal Date:**	03/25/2016 12:34
Workgroup #:	WG586612	**Analyst:**	JDS	**Run Date:**	10/06/2016 17:58
Collect Date:	10/03/2016 13:30	**Dilution:**	10	**File ID:**	16G50836
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Carbon Dioxide	124-38-9	997000		100000	50000	25000

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

2.1.2.2 QC Summary Data

RSK-175 - Example Calculation for Methane

1.0 Linear Calibration Models

Option A - Average RF Method

ICAL_x	ICAL_r		RF
1.67	19901		11917
6.67	69174		10371
16.7	176923		10594
66.7	685135		10272
133	1324853		9961
300	2845104		9484
		Average RF:	**10433**

Where:
ICAL_x = the ICAL concentration
ICAL_r = the ICAL response (area)
RF = calibration factor = ICAL_r / ICAL_x

Option B - Agilent Linear Regression Constant

ICAL_x	ICAL_r	[ICAL_r}^2	[ICAL-x][ICAL-r]
1.67	19901	396049801	33235
6.67	69174	4785042276	461391
16.7	176923	31301747929	2954614
66.7	685135	4.6941E+11	45698505
133	1324853	1.75524E+12	176205449
300	2845104	8.09462E+12	853531200
Summation:		**1.03557E+13**	**1078884393**

Agilent Linear Regression Constant : **9598.567853**
(1.03557E+13)/1078884393)

2.0 Calculate the concentration in extract, Cx

Where:	
y = area response of methane from quant report	**1157414**
a = average RF (or Agilent regression constant)	**10433.00**
Cx = y/a	**110.9377935**

3.0 Calculate the concentration in sample

Cs = Cx (MW/Tf) (HS/S) (DF)

Where:		
Cx = Concentration in extract	**110.9377935**	umol/mol
MW = molecular weight of analyte	**16.04**	ug/umol
TF = temperature factor = (22.4)(313/273)	**25.68**	L/mol
HS = headspace volume	**0.015**	L
S = sample volume remaining after headspace removal	**0.00547**	L
DF = dilution factor	**2**	
Cs = calculated sample concentration	**380.034301**	ug/L

RSK-175 - Example Calculation for Carbon Dioxide

ICAL Plot - Quadratic Regression (y = Ax^2 + Bx +C)

Ax^2 + Bx + (C - y) = 0

Step 1 - Calculate the concentration in extract, Cx

Data from quadratic regression plot:		
Value of A from plot:	**0.916**	
Value of B from plot:	**1540**	
Value of C from plot:	**0**	
Response for methane from quantitation report (y):	**8763828**	
Value of C - y	**-8763828**	
Solving for Cx using the quadratic formula:		
Root 1 - Computed Cx1:	**2364.716284**	umol/mol
Root 2 - Computed Cx2:	**-4045.938991**	

Step 2 - Calculate the concentration in sample

Cs = Cx (MW/Tf) (HS/S) (DF)

Where:

Cx = Concentration in extract :	**2364.716284**	umol/mol
MW = molecular weight of analyte:	**44.0**	ug/umol
TF = temperature factor = (22.4)(313/273):	**25.68**	L/mol
HS = initial headspace volume (extraction log):	**0.015**	L
S = final volume (extraction log):	**0.00547**	L
DF = dilution factor:	**10**	
Cs = calculated sample concentration:	**111106.798**	ug/L

Other Notes:

Temperature of headspace = 40 C = 313 K

Analyte	**MW (g/mol)**
Methane	16.04
Ethane	30.07
Ethene	28.05
Propane	44.1
Carbon Dioxide	44.0

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 032516
Analyst1: JDS Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 19
Method: 5021 SOP: RSK01 Rev: 19

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD75351 LCS: STD68250 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG562401 WG562514

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
16G49625	RINSE	NA	1	1		03/25/16 11:11
16G49626	WG562401-01 0.67umol/moL STD RSK175	NA	1	1	STD67276	03/25/16 11:22
16G49627	WG562401-02 1.67umol/moL STD RSK175	NA	1	1	STD67276	03/25/16 11:34
16G49628	WG562401-03 33.3umol/moL STD RSK175	NA	1	1	STD67276	03/25/16 11:46
16G49629	WG562401-04 66.7umol/moL STD RSK175	NA	1	1	STD67276	03/25/16 11:58
16G49630	WG562401-05 133umol/moL STD RSK175	NA	1	1	STD75351	03/25/16 12:10
16G49631	WG562401-06 333umol/moL STD RSK175	NA	1	1	STD75351	03/25/16 12:22
16G49632	WG562401-07 533umol/moL STD RSK175	NA	1	1	STD75351	03/25/16 12:34
16G49633	RINSE	NA	1	1		03/25/16 12:46
16G49634	WG562401-08 133umol/moL ALT SRC STD	NA	1	1	STD68250	03/25/16 13:47
16G49635	WG562401-08 133umol/moL ALT SRC STD	NA	1	1	STD68250	03/25/16 18:26
16G49636	WG562514-01 BLANK STD RSK175	NA	1	1		03/25/16 18:38
16G49637	WG562514-02 67umol/moL LCS STD RSK1	NA	1	1	STD68250	03/25/16 18:50
16G49638	WG562514-03 67umol/moL LCS2 STD RSK	NA	1	1	STD68250	03/25/16 19:02
16G49639	L16031272-14 B A1 RSK175	<2	1	1		03/25/16 19:14
16G49640	L16031272-15 B A1 RSK175	<2	1	1		03/25/16 19:26
16G49641	L16031272-22 B A1 RSK175	<2	1	1		03/25/16 19:38
16G49642	L16031272-03 B D1 10X RSK175	<2	1	10		03/25/16 19:50
16G49643	L16031272-04 B D1 5X RSK175	<2	1	5		03/25/16 20:01
16G49644	L16031272-08 B D1 50X RSK175	<2	1	50		03/25/16 20:13
16G49645	L16031272-19 B D1 10X RSK175	<2	1	10		03/25/16 20:25
16G49646	WG562401-09 133umol/moL CCV STD RSK	NA	1	1	STD75351	03/25/16 20:37
16G49647	L16031363-04 A RSK175	<2	1	1		03/25/16 20:49
16G49648	L16031363-05 A RSK175	<2	1	1		03/25/16 21:01
16G49649	L16031363-11 A RSK175	<2	1	1		03/25/16 21:12
16G49650	L16031363-12 A RSK175	<2	1	1		03/25/16 21:24
16G49651	L16031363-17 A RSK175	<2	1	1		03/25/16 21:36
16G49652	L16031388-01 A RSK175	<2	1	1		03/25/16 21:48
16G49653	WG562401-10 133umol/moL CCV STD RSK	NA	1	1	STD75351	03/25/16 21:59

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10	X			CO2

Approved: April 01, 2016

Page: 1

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 032516
Analyst1: JDS Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 19
Method: 5021 SOP: RSK01 Rev: 19

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD75351 LCS: STD68250 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG562401 WG562514

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 16G49634				
	Alt. Src. failed low for CO2			
23	X	50	Over Calibration Range	m
File ID: 16G49647				
	L16031363-04			
24	X	20	Over Calibration Range	m
File ID: 16G49648				
	L16031363-05			
25	X	5	Over Calibration Range	m
File ID: 16G49649				
	L16031363-11			
26	X	5	Over Calibration Range	m
File ID: 16G49650				
	L16031363-12			
27	X	10	Over Calibration Range	m
File ID: 16G49651				
	L16031363-17			
28	X	5	Over Calibration Range	m, p
File ID: 16G49652				
	L16031388-01 took prop. hit with high failing prop result in CCV.			
33			Check Standard Failure	p
File ID: 16G49653				
	WG562401-10 failed high for prop.			

Approved: April 01, 2016

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 100516
Analyst1: JDS Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 19
Method: 5021 SOP: RSK01 Rev: 19

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD75351 LCS: STD68250 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG586463

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
16G50804	WG586462-01 133umol/mol CCV RSK175	NA	1	1	STD75351	10/05/16 16:56
16G50805	WG586463-01 BLANK RSK175	NA	1	1		10/05/16 17:40
16G50806	WG586463-02 67umol/mol LCS RSK175	NA	1	1	STD68250	10/05/16 17:51
16G50807	WG586463-03 67umol/mol LCS2 RSK175	NA	1	1	STD68250	10/05/16 18:02
16G50808	L16091324-02 C D1 20X RSK175	NA	1	20		10/05/16 18:14
16G50809	L16091324-04 C D1 50X RSK175	NA	1	50		10/05/16 18:25
16G50810	L16091324-06 C D1 50X RSK175	NA	1	50		10/05/16 18:36
16G50811	L16091324-07 C D1 20X RSK175	NA	1	20		10/05/16 18:48
16G50812	L16100123-01 A RSK175	7	1	1		10/05/16 18:59
16G50813	L16100123-03 A RSK175	7	1	1		10/05/16 19:10
16G50814	L16100123-05 A RSK175	7	1	1		10/05/16 19:21
16G50815	WG586462-02 133umol/mol CCV RSK175	NA	1	1	STD75351	10/05/16 19:34
16G50816	L16100123-07 A RSK175	7	1	1		10/05/16 19:45
16G50817	L16100194-05 A RSK175	7	1	1		10/05/16 19:57
16G50818	L16100194-06 A RSK175	7	1	1		10/05/16 20:08
16G50819	L16100194-01 A 10X RSK175	7	1	10		10/05/16 20:19
16G50820	L16100194-03 A 10X RSK175	7	1	10		10/05/16 20:31
16G50821	WG586462-03 133umol/mol CCV RSK175	NA	1	1	STD75351	10/05/16 20:43

Comments

Seq.	Rerun	Dil.	Reason	Analytes
9	X	10	Over Calibration Range	CO2
File ID: 16G50812				
	L16100123-01			
10	X	10	Over Calibration Range	CO2
File ID: 16G50813				
	L16100123-03			
11	X	10	Over Calibration Range	CO2
File ID: 16G50814				
	L16100123-05			
13	X	10	Over Calibration Range	CO2
File ID: 16G50816				
	L16100123-07			
14	X	10	Over Calibration Range	CO2

Approved: October 11, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 100516
Analyst1: JDS Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 19
Method: 5021 SOP: RSK01 Rev: 19

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD75351 LCS: STD68250 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG586463

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 16G50817				
	L16100194-05			
15	X	10	Over Calibration Range	CO2
File ID: 16G50818				
	L16100194-06			
16				
File ID: 16G50819				
	L16100194-01 ran at dilution due to dark/discolored matrix			
17				
File ID: 16G50820				
	L16100194-03 ran at dilution due to dark/discolored matrix			

Approved: October 11, 2016

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 100616
Analyst1: JDS Analyst2: NA
Method: RSK175 SOP: RSK01 Rev: 19
Method: 5021 SOP: RSK01 Rev: 19

Maintenance Log ID:

Internal Standard: NA Surrogate Standard: NA
CCV: STD75351 LCS: STD68250 MS/MSD: NA

Column 1 ID: RTQBOND Column 2 ID: RTQBOND
Workgroups: WG586612

Comments:

File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
16G50822	WG586611-01 133umol/mol CCV RSK175	NA	1	1	STD75351	10/06/16 14:52
16G50823	WG586612-01 BLANK RSK175	NA	1	1		10/06/16 15:17
16G50824	WG586612-02 67umol/mol LCS RSK175	NA	1	1	STD68250	10/06/16 15:29
16G50825	WG586612-03 67umol/mol LCS2 RSK175	NA	1	1	STD68250	10/06/16 15:40
16G50826	L16100002-01 .133umol/mol LOD RSK175	NA	1	1	STD67276	10/06/16 16:05
16G50827	L16100002-01 .33umol/mol LOD RSK175	NA	1	1	STD72872	10/06/16 16:16
16G50828	L16100004-01 .67umol/mol LOD RSK175	NA	1	1	STD69638	10/06/16 16:27
16G50829	L16100004-01 1.67umol/mol LOD RSK175	NA	1	1	STD72871	10/06/16 16:39
16G50830	L16100004-09 .67umol/mol LOD RSK175	NA	1	1	STD69638	10/06/16 16:50
16G50831	L16100004-09 1.67umol/mol LOD RSK175	NA	1	1	STD72871	10/06/16 17:01
16G50832	L16100123-01 B D1 10X RSK175	7	1	10		10/06/16 17:13
16G50833	WG586611-02 133umol/mol CCV RSK175	NA	1	1	STD75351	10/06/16 17:24
16G50834	L16100123-03 B D1 10X RSK175	5	1	10		10/06/16 17:35
16G50835	L16100123-05 B D1 10X RSK175	7	1	10		10/06/16 17:47
16G50836	L16100123-07 B D1 10X RSK175	7	1	10		10/06/16 17:58
16G50837	L16100194-05 B D1 10X RSK175	7	1	10		10/06/16 18:09
16G50838	L16100194-06 B D1 10X RSK175	7	1	10		10/06/16 18:21
16G50839	WG586611-03 133umol/mol CCV RSK175	NA	1	1	STD75351	10/06/16 18:32

Approved: October 18, 2016

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Microbac Laboratories Inc.
UPLOAD BATCH EXTRACTION INFORMATION

Batch #: B220401

	Initial Amount		Nominal Amount		Spike Amount		Surrogate Spike Amount		Final Amount		Final Nominal Amount		Temp (C)
WG562401-01	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-02	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-03	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-04	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-05	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-06	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-07	15	mL	15	mL					5.47	mL	5.47	mL	40
WG562401-08	15	mL	15	mL					5.47	mL	5.47	mL	40

Microbac Laboratories Inc.
UPLOAD BATCH EXTRACTION INFORMATION

Batch #: B229337

	Initial Amount		Nominal Amount		Spike Amount		Surrogate Spike Amount		Final Amount		Final Nominal Amount		Temp (C)
WG586462-01	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586462-02	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586462-03	15	mL	15	mL					5.47	mL	5.47	mL	40
L16091324-07	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-01	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586463-03	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40
L16100194-06	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100194-01	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586463-02	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40
L16091324-06	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-05	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-07	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100194-03	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586463-01	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100194-05	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-03	15	mL	15	mL					5.47	mL	5.47	mL	40
L16091324-02	15	mL	15	mL					5.47	mL	5.47	mL	40
L16091324-04	15	mL	15	mL					5.47	mL	5.47	mL	40

Microbac Laboratories Inc.
UPLOAD BATCH EXTRACTION INFORMATION

Batch #: B229510

	Initial Amount		Nominal Amount		Spike Amount		Surrogate Spike Amount		Final Amount		Final Nominal Amount		Temp (C)
WG586611-01	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586611-02	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586611-03	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100194-06	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586612-03	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40
L16100002-01	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40
L16100004-01	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40
L16100194-05	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-05	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586612-01	15	mL	15	mL					5.47	mL	5.47	mL	40
WG586612-02	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40
L16100123-01	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-07	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100123-03	15	mL	15	mL					5.47	mL	5.47	mL	40
L16100004-09	15	mL	15	mL	.1	mL			5.47	mL	5.47	mL	40

Microbac Laboratories Inc.

Data Checklist

Date: 25-MAR-2016
Analyst: JDS
Analyst: NA
Method: RSK175
Instrument: HP16
Curve Workgroup: NA
Runlog ID: 74110
Analytical Workgroups: WG562401 WG562514

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	NA
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
Surrogates	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	JDS
Secondary Reviewer	FJB
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 resonableness of the results	X

Primary Reviewer:
31-MAR-2016

Secondary Reviewer:
01-APR-2016

CHECKLIST1 - Modified 03/05/2008
Generated: APR-01-2016 11:20:23

Microbac Laboratories Inc.

Data Checklist

Date: 05-OCT-2016
Analyst: JDS
Analyst: NA
Method: RSK175
Instrument: HP16
Curve Workgroup: NA
Runlog ID: 77956
Analytical Workgroups: WG586463

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	NA
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
Surrogates	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	JDS
Secondary Reviewer	FJB
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 resonableness of the results	X

Primary Reviewer:
11-OCT-2016

Secondary Reviewer:
11-OCT-2016

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-11-2016 14:03:04

Microbac Laboratories Inc.

Data Checklist

Date: 06-OCT-2016
Analyst: JDS
Analyst: NA
Method: RSK175
Instrument: HP16
Curve Workgroup: NA
Runlog ID: 78043
Analytical Workgroups: WG586612

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	NA
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
Surrogates	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	JDS
Secondary Reviewer	FJB
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 resonableness of the results	X

Primary Reviewer:
14-OCT-2016

Secondary Reviewer:
18-OCT-2016

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-18-2016 16:56:09

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: RSK175 AAB#: WG586463

Login Number: L16100123

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
35AWW09-100316	01	10/03/16					10/05/2016	2.4	7		10/05/16	2.4	7	
35AWW10-100316	03	10/03/16					10/05/2016	2.4	7		10/05/16	2.4	7	
35AWW11-100316	05	10/03/16					10/05/2016	2.4	7		10/05/16	2.4	7	
35AWW06-100316	07	10/03/16					10/05/2016	2.3	7		10/05/16	2.3	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4968641
Report generated 10/18/2016 17:00

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: RSK175 **AAB#:** WG586612

Login Number: L16100123

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
35AWW09-100316	01	10/03/16					10/06/2016	3.4	7		10/06/16	3.4	7	
35AWW10-100316	03	10/03/16					10/06/2016	3.3	7		10/06/16	3.3	7	
35AWW11-100316	05	10/03/16					10/06/2016	3.3	7		10/06/16	3.3	7	
35AWW06-100316	07	10/03/16					10/06/2016	3.2	7		10/06/16	3.2	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4968641
Report generated 10/18/2016 17:00

METHOD BLANK SUMMARY

Login Number: L16100123
Work Group: WG586463
Blank File ID: 16G50805
Blank Sample ID: WG586463-01
Prep Date: 10/05/16 17:40
Instrument ID: HP16
Analyzed Date: 10/05/16 17:40
Method: RSK175
Analyst: JDS

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG586463-02	16G50806	10/05/16 17:51	01
LCS2	WG586463-03	16G50807	10/05/16 18:02	01
35AWW09-100316	L16100123-01	16G50812	10/05/16 18:59	01
35AWW10-100316	L16100123-03	16G50813	10/05/16 19:10	01
35AWW11-100316	L16100123-05	16G50814	10/05/16 19:21	01
35AWW06-100316	L16100123-07	16G50816	10/05/16 19:45	01

Report Name: BLANK_SUMMARY
PDF File ID: 4968643
Report generated 10/18/2016 17:00

METHOD BLANK SUMMARY

Login Number: L16100123
Work Group: WG586612
Blank File ID: 16G50823
Blank Sample ID: WG586612-01
Prep Date: 10/06/16 15:17
Instrument ID: HP16
Analyzed Date: 10/06/16 15:17
Method: RSK175
Analyst: JDS

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG586612-02	16G50824	10/06/16 15:29	01
LCS2	WG586612-03	16G50825	10/06/16 15:40	01
35AWW09-100316	L16100123-01	16G50832	10/06/16 17:13	DL01
35AWW10-100316	L16100123-03	16G50834	10/06/16 17:35	DL01
35AWW11-100316	L16100123-05	16G50835	10/06/16 17:47	DL01
35AWW06-100316	L16100123-07	16G50836	10/06/16 17:58	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 4968643
Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16100123 Prep Date: 10/05/16 17:40 Sample ID: WG586463-01
Instrument ID: HP16 Run Date: 10/05/16 17:40 Prep Method: 5021
File ID: 16G50805 Analyst: JDS Method: RSK175
Workgroup (AAB#): WG586463 Matrix: Water Units: ug/L
Contract #: Cal ID: HP16-25-MAR-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Methane	1.00	5.00	1.00	1	U
ethene	1.00	5.00	1.00	1	U
ethane	1.00	5.00	1.00	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: 4968644
18-OCT-2016 17:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16100123 Prep Date: 10/06/16 15:17 Sample ID: WG586612-01
Instrument ID: HP16 Run Date: 10/06/16 15:17 Prep Method: 5021
File ID: 16G50823 Analyst: JDS Method: RSK175
Workgroup (AAB#): WG586612 Matrix: Water Units: ug/L
Contract #: Cal ID: HP16-25-MAR-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Carbon Dioxide	2500	10000	2500	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: 4968644
18-OCT-2016 17:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16100123 Analyst: JDS Prep Method: 5021
Instrument ID: HP16 Matrix: Water Method: RSK175
Workgroup (AAB#): WG586612 Units: ug/L
QC Key: DOD4 Lot #: STD68250

Sample ID: WG586612-02 LCS File ID: 16G50824 Run Date: 10/06/2016 15:29
Sample ID: WG586612-03 LCS2 File ID: 16G50825 Run Date: 10/06/2016 15:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Carbon Dioxide	31300	24300	77.5	31300	30200	96.5	21.9	53.1- 130	40	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4968645
Report generated: 10/18/2016 17:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16100123 Analyst: JDS Prep Method: 5021
Instrument ID: HP16 Matrix: Water Method: RSK175
Workgroup (AAB#): WG586463 Units: ug/L
QC Key: DOD4 Lot #: STD68250

Sample ID: WG586463-02 LCS File ID: 16G50806 Run Date: 10/05/2016 17:51
Sample ID: WG586463-03 LCS2 File ID: 16G50807 Run Date: 10/05/2016 18:02

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Methane	114	112	98.0	114	115	100	2.48	85 - 115	20	
ethene	200	183	91.7	200	190	95.4	3.93	85 - 115	20	
ethane	214	199	93.0	214	208	97.0	4.17	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4968645
Report generated: 10/18/2016 17:00

Calibration Table Report
Method: RSKEXT1.M
Title: RSK175 HP16 (SOP: OVL RSK01) 032516
Last Calibration: Fri Mar 25 13:38:01 2016
Curve: WG562401
Calibration Files

		0.67	1.67	33.3	66.7	133	333	533			
		16G49626.	16G49627.	16G49628.	16G49629.	16G49630.	16G49631.	16G49632.D			
	Compound								Avg	%RSD	Linear
T	methane		357678.3	191763.4	178440.8	176333.2	180289.8	181011.4	210919.0	34.2	1.00
T	ethene		326426.9	323789.7	303078.0	300924.8	311353.3	306803.0	312063.0	3.4	
T	acetylene		320308.2	339363.3	305153.5	300205.1	309436.5	299142.0	312268.0	4.9	
T	ethane	315183.9	335780.5	332335.5	309080.0	306732.7	318673.0	314718.5	318929.0	3.5	
T	propane	455610.0	490813.9	490102.0	464477.8	457676.8	478108.3	465536.1	471761.0	3.1	
T	n-butane	583900.4	644607.5	634321.2	604644.0	590464.7	622084.9	599806.6	611404.0	3.7	
	Signal #2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
T	carbon dioxide		4817.9	5324.5	5339.4	5356.8	5546.3	5286.4	5278.5	4.6	

Mon Mar 28 10:00:37 2016

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16100123 Run Date: 03/25/2016 Sample ID: WG562401-08
Instrument ID: HP16 Run Time: 18:26 Method: RSK175
File ID: 16G49635 Analyst: JDS QC Key: DOD4
ICal Workgroup: WG562401 Cal ID: HP16 - 25-MAR-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
carbon dioxide		62500	68700	ug/L	5800	9.90	15	
methane		228	235	ug/L	187000	3.20	15	
ethene		398	400	ug/L	314000	0.500	15	
ethane		427	434	ug/L	324000	1.70	15	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4968646
Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/05/2016 Sample ID: WG586462-01

Instrument ID: HP16 Run Time: 16:56 Method: RSK175

File ID: 16G50804 Analyst: JDS QC Key: DOD4

Workgroup (AAB#): WG586463 Cal ID: HP16 - 25-MAR-16

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
methane		228	220	ug/L	175000	3.54	15	
ethene		398	370	ug/L	290000	7.14	15	
ethane		427	395	ug/L	295000	7.48	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 4968648

Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/05/2016 Sample ID: WG586462-02

Instrument ID: HP16 Run Time: 19:34 Method: RSK175

File ID: 16G50815 Analyst: JDS QC Key: DOD4

Workgroup (AAB#): WG586463 Cal ID: HP16 - 25-MAR-16

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
methane		228	219	ug/L	174000	3.97	15	
ethene		398	363	ug/L	285000	8.81	15	
ethane		427	390	ug/L	292000	8.58	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 4968648

Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/05/2016 Sample ID: WG586462-03

Instrument ID: HP16 Run Time: 20:43 Method: RSK175

File ID: 16G50821 Analyst: JDS QC Key: DOD4

Workgroup (AAB#): WG586463 Cal ID: HP16 - 25-MAR-16

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
methane		228	223	ug/L	178000	2.04	15	
ethene		398	374	ug/L	293000	5.99	15	
ethane		427	404	ug/L	301000	5.48	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 4968648

Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/06/2016 Sample ID: WG586611-01

Instrument ID: HP16 Run Time: 14:52 Method: RSK175

File ID: 16G50822 Analyst: JDS QC Key: DOD4

Workgroup (AAB#): WG586612 Cal ID: HP16 - 25-MAR-16

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
carbon dioxide		62500	65200	ug/L	5510	4.32	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 4968648

Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/06/2016 Sample ID: WG586611-02

Instrument ID: HP16 Run Time: 17:24 Method: RSK175

File ID: 16G50833 Analyst: JDS QC Key: DOD4

Workgroup (AAB#): WG586612 Cal ID: HP16 - 25-MAR-16

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
carbon dioxide		62500	65300	ug/L	5520	4.51	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 4968648

Report generated 10/18/2016 17:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/06/2016 Sample ID: WG586611-03

Instrument ID: HP16 Run Time: 18:32 Method: RSK175

File ID: 16G50839 Analyst: JDS QC Key: DOD4

Workgroup (AAB#): WG586612 Cal ID: HP16 - 25-MAR-16

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
carbon dioxide		62500	56300	ug/L	4750	9.99	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 4968648

Report generated 10/18/2016 17:00

2.1.2.3 Sample Data

Signal #1 : C:\MSDchem\1\DATA\100516\16G50812.D\FID1A.CH Vial: 9
Signal #2 : C:\MSDchem\1\DATA\100516\16G50812.D\TCD2B.CH
Acq On : 05 Oct 2016 18:59 Operator: JDS
Sample : L16100123-01 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 19:05:21 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

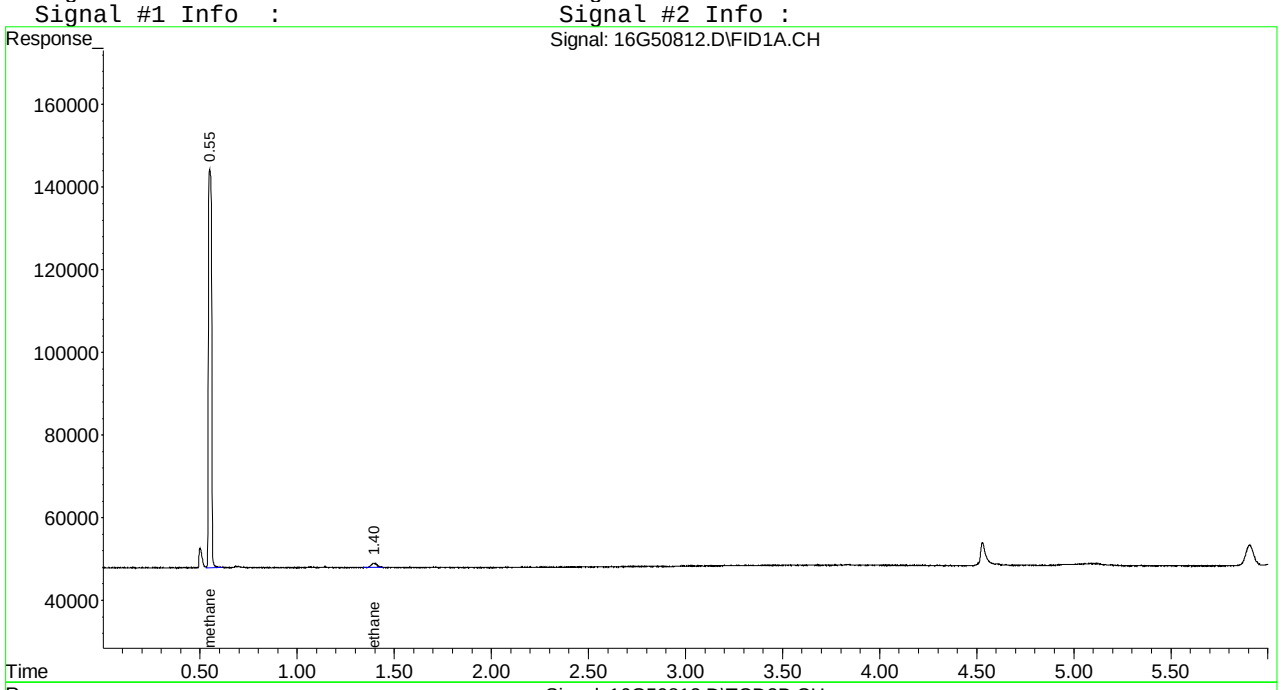
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	1082318	4.418	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.40	24552	0.077	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.19	1096204468	207672.508	umol/

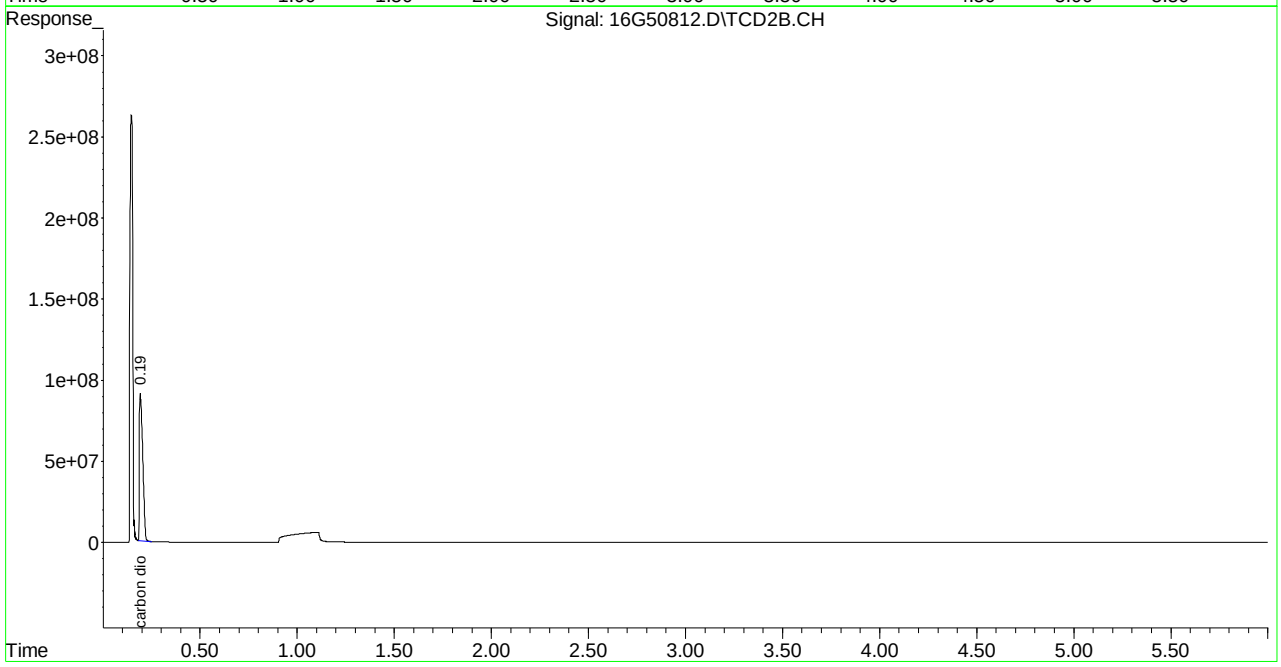
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50812.D RSKEXT1.M Wed Oct 05 19:05:21 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50812.D\FID1A.CH Vial: 9
Signal #2 : C:\MSDchem\1\DATA\100516\16G50812.D\TCD2B.CH
Acq On : 05 Oct 2016 18:59 Operator: JDS
Sample : L16100123-01 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 19:05 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100616\16G50832.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\100616\16G50832.D\TCD2B.CH
Acq On : 06 Oct 2016 17:13 Operator: JDS
Sample : L16100123-01 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 17:19:26 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

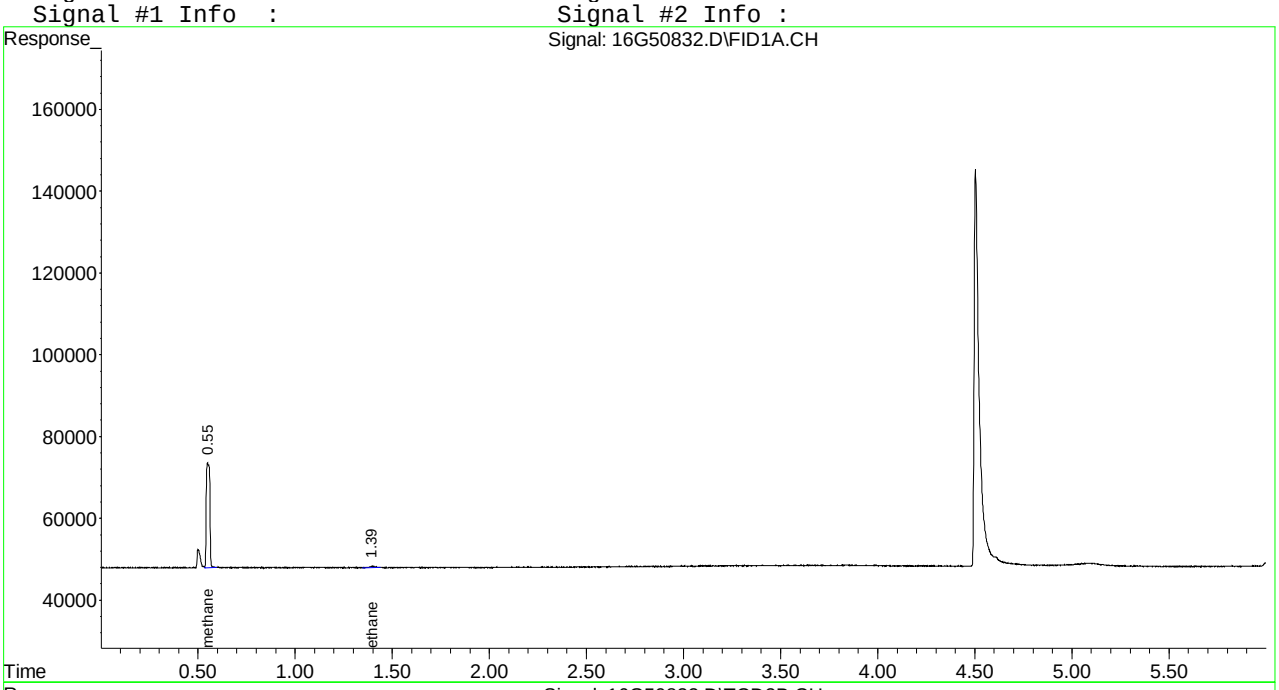
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	325978	0.195	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.39	8091	0.025	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.20	79344889	15031.641	umol/

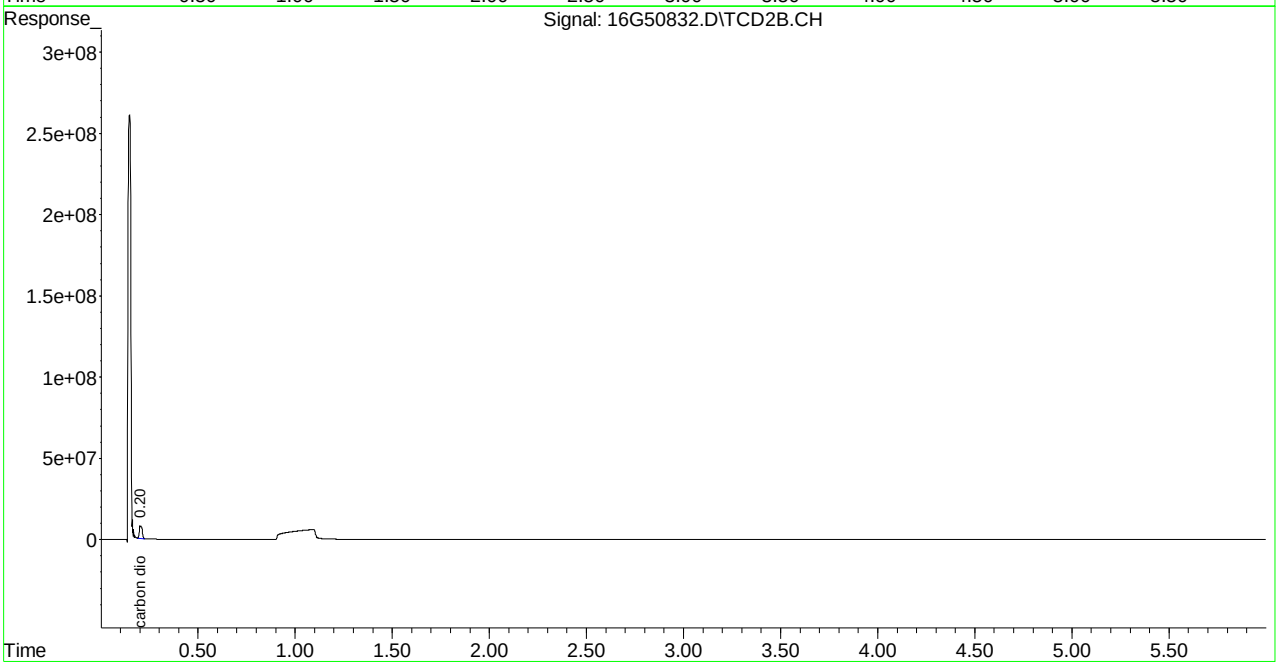
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50832.D RSKEXT1.M Thu Oct 06 17:19:26 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50832.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\100616\16G50832.D\TCD2B.CH
Acq On : 06 Oct 2016 17:13 Operator: JDS
Sample : L16100123-01 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 17:19 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100516\16G50813.D\FID1A.CH Vial: 10
Signal #2 : C:\MSDchem\1\DATA\100516\16G50813.D\TCD2B.CH
Acq On : 05 Oct 2016 19:10 Operator: JDS
Sample : L16100123-03 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 19:16:54 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

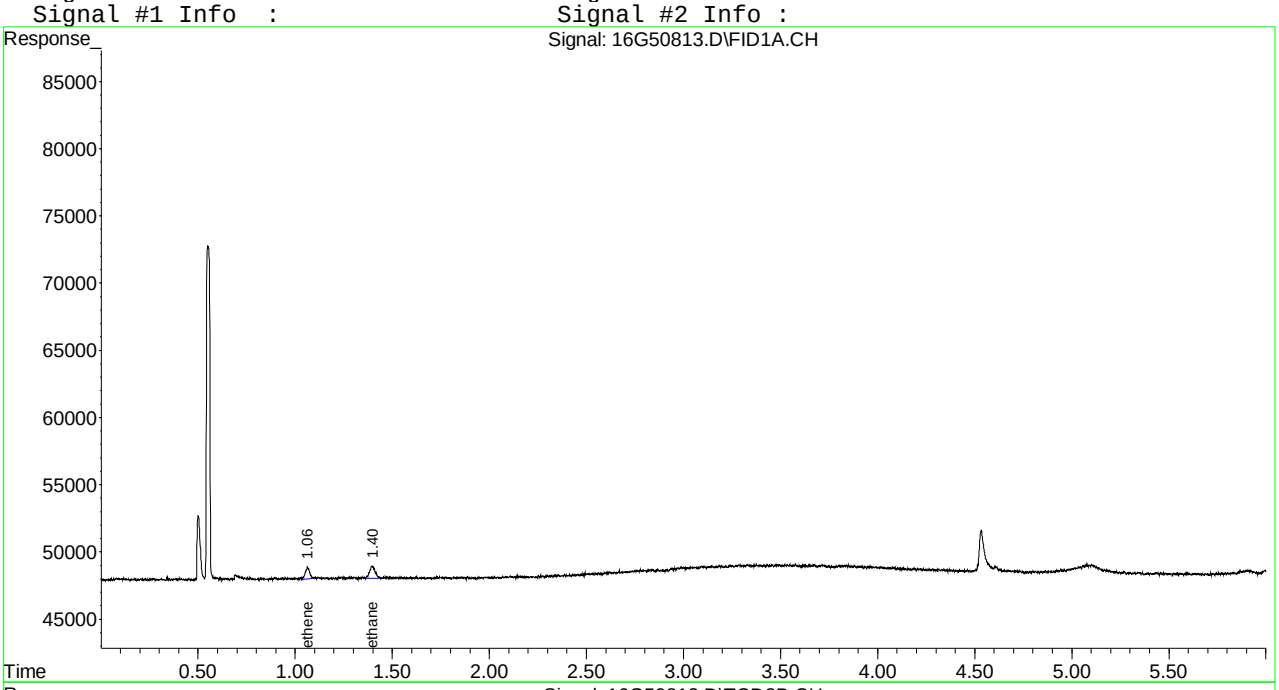
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	286763	N.D.	umol/
2) T	ethene	1.06	13971	0.045	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.40	19415	0.061	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.20	696094074	131872.845	umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50813.D RSKEXT1.M Wed Oct 05 19:16:54 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50813.D\FID1A.CH Vial: 10
Signal #2 : C:\MSDchem\1\DATA\100516\16G50813.D\TCD2B.CH
Acq On : 05 Oct 2016 19:10 Operator: JDS
Sample : L16100123-03 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 19:16 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100616\16G50834.D\FID1A.CH Vial: 13
Signal #2 : C:\MSDchem\1\DATA\100616\16G50834.D\TCD2B.CH
Acq On : 06 Oct 2016 17:35 Operator: JDS
Sample : L16100123-03 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 17:41:59 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

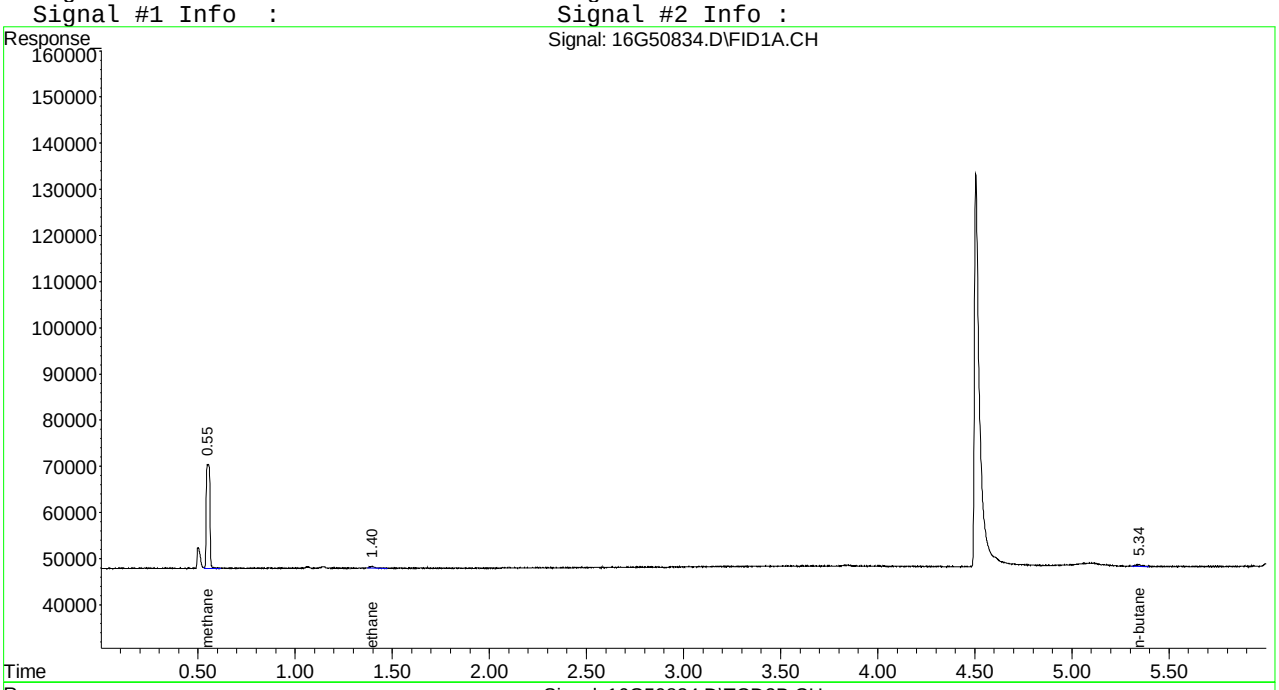
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	292702	0.009	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.40	7708	0.024	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	5.34	8440	0.014	umol/
8) T	carbon dioxide	0.20	58934598	11164.975	umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50834.D RSKEXT1.M Thu Oct 06 17:41:59 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50834.D\FID1A.CH Vial: 13
Signal #2 : C:\MSDchem\1\DATA\100616\16G50834.D\TCD2B.CH
Acq On : 06 Oct 2016 17:35 Operator: JDS
Sample : L16100123-03 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 17:41 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100516\16G50814.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\100516\16G50814.D\TCD2B.CH
Acq On : 05 Oct 2016 19:21 Operator: JDS
Sample : L16100123-05 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 19:27:56 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

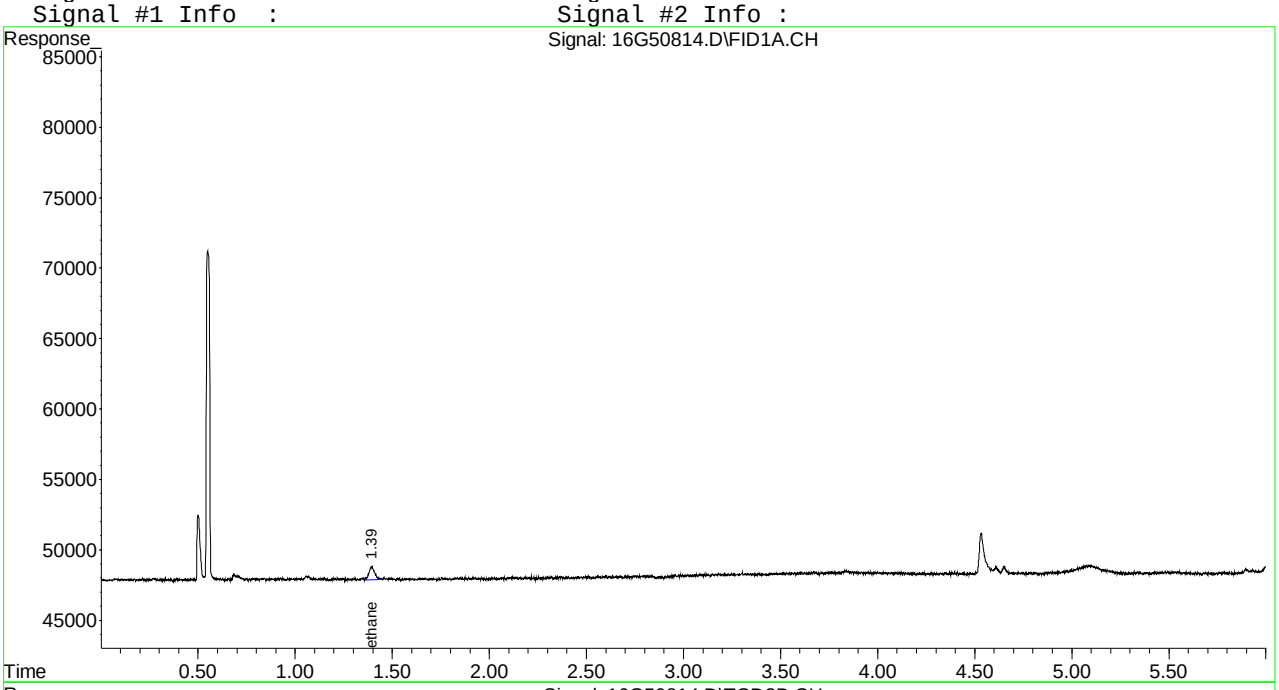
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	267468	N.D.	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.39	18916	0.059	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.19	1026210461	194412.362	umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50814.D RSKEXT1.M Wed Oct 05 19:27:56 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50814.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\100516\16G50814.D\TCD2B.CH
Acq On : 05 Oct 2016 19:21 Operator: JDS
Sample : L16100123-05 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 19:27 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50835.D\FID1A.CH Vial: 14
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50835.D\TCD2B.CH
Acq On : 06 Oct 2016 17:47 Operator: JDS
Sample : L16100123-05 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 17:53:28 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

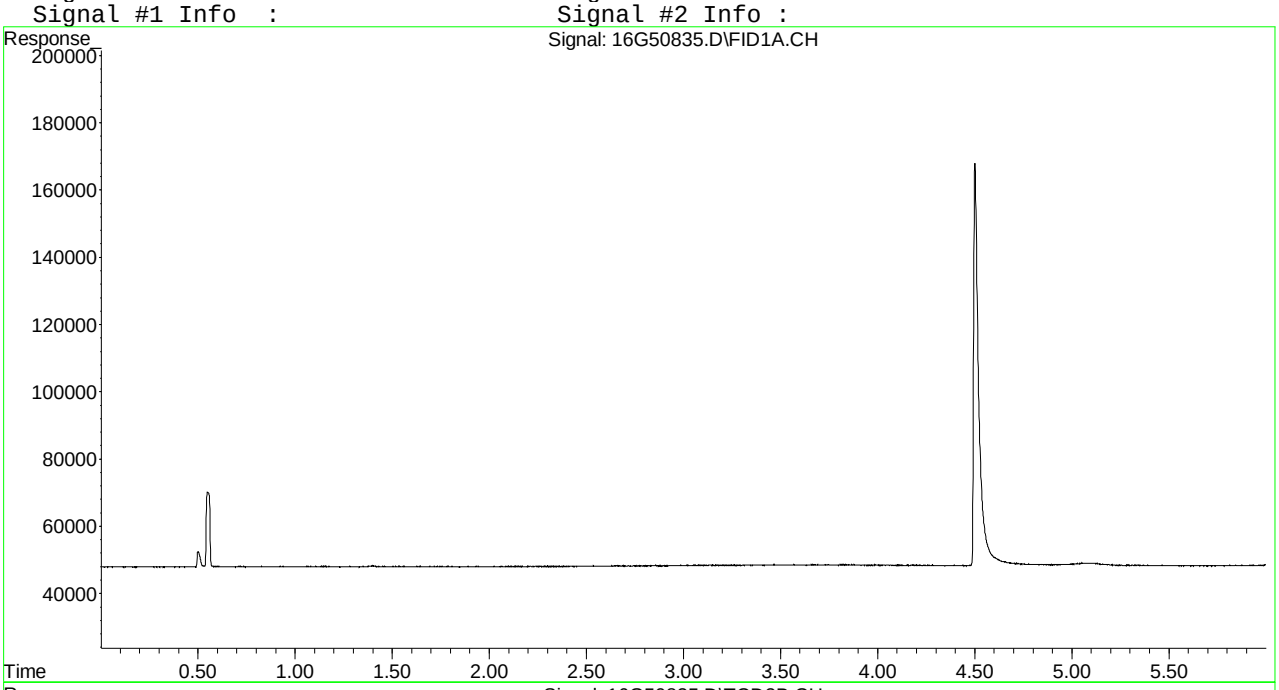
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	279470	N.D.	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	0.00	0	N.D.	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.20	96058987	18198.075	umol/

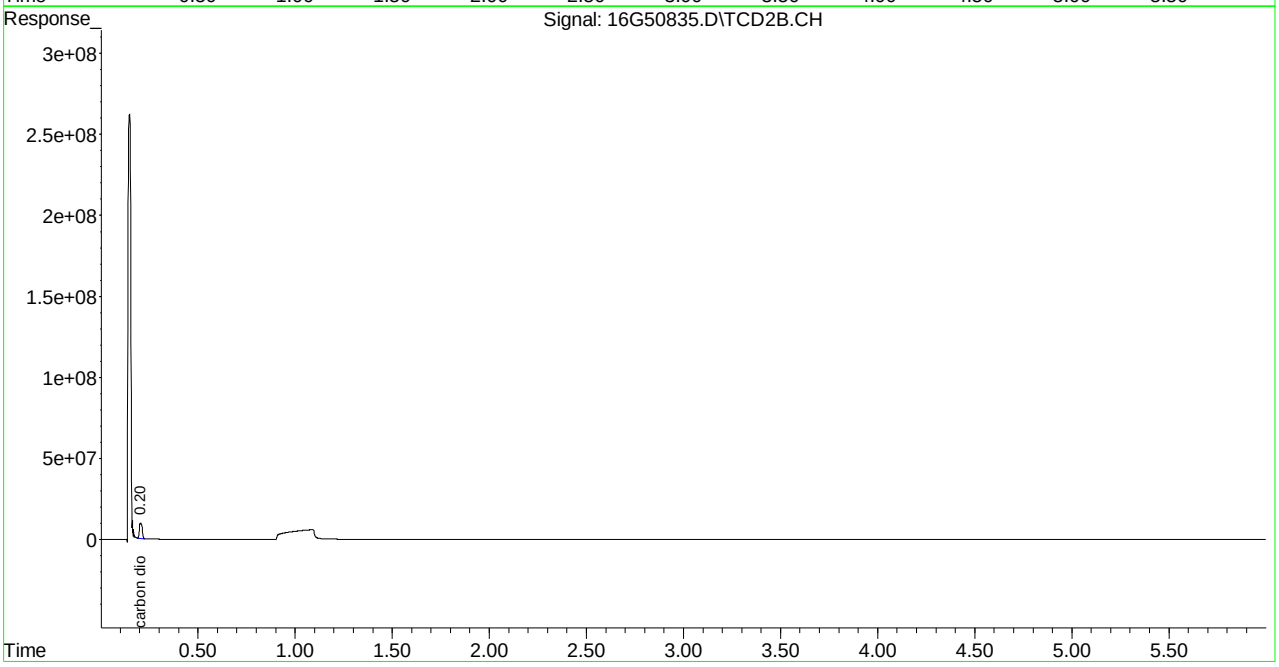
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50835.D RSKEXT1.M Fri Oct 07 09:40:41 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50835.D\FID1A.CH Vial: 14
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50835.D\TCD2B.CH
Acq On : 06 Oct 2016 17:47 Operator: JDS
Sample : L16100123-05 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 17:53 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100516\16G50816.D\FID1A.CH Vial: 13
Signal #2 : C:\MSDchem\1\DATA\100516\16G50816.D\TCD2B.CH
Acq On : 05 Oct 2016 19:45 Operator: JDS
Sample : L16100123-07 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 19:51:13 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

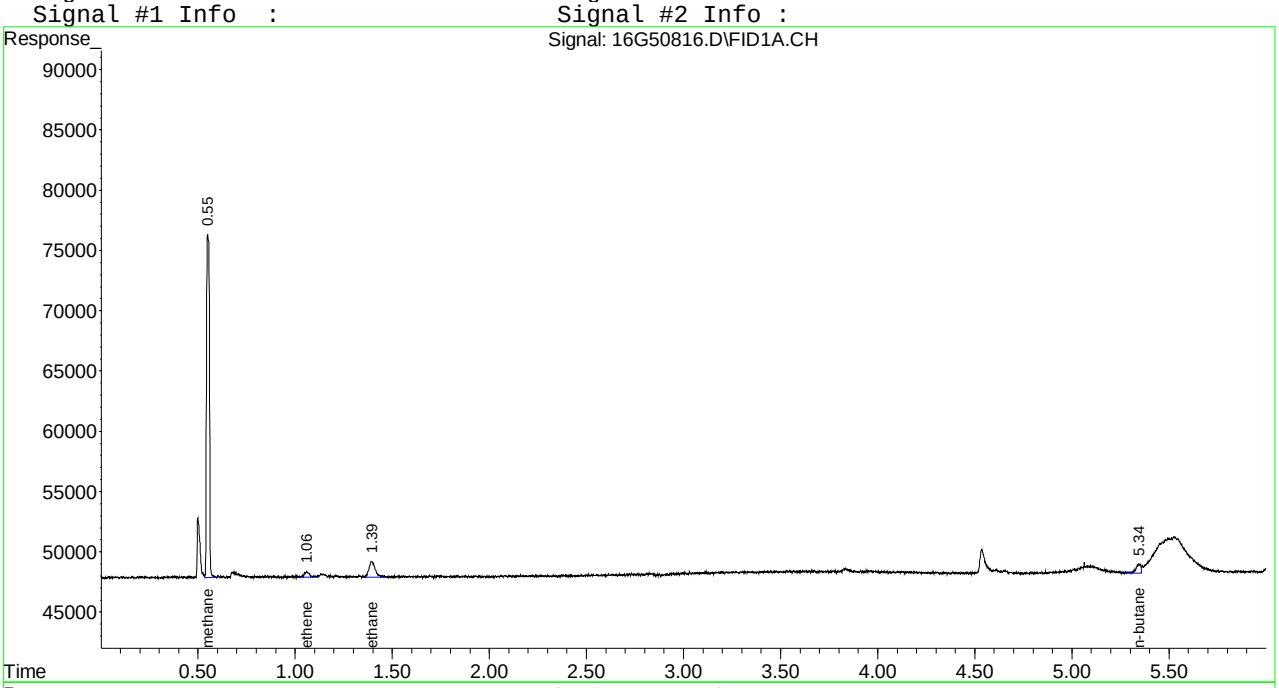
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	297609	0.036	umol/
2) T	ethene	1.06	8468	0.027	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.39	28818	0.090	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	5.34	14345	0.023	umol/
8) T	carbon dioxide	0.19	1357788561	257228.796	umol/

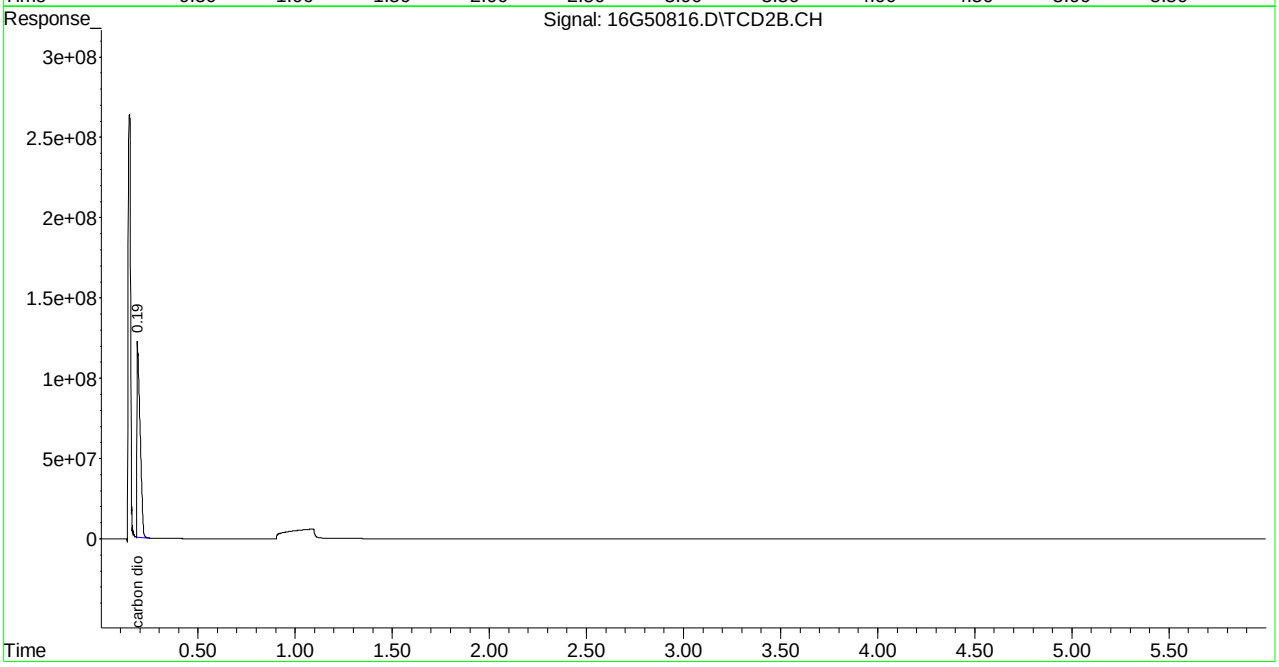
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50816.D RSKEXT1.M Wed Oct 05 19:51:14 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50816.D\FID1A.CH Vial: 13
Signal #2 : C:\MSDchem\1\DATA\100516\16G50816.D\TCD2B.CH
Acq On : 05 Oct 2016 19:45 Operator: JDS
Sample : L16100123-07 A RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 19:51 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50836.D\FID1A.CH Vial: 15
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50836.D\TCD2B.CH
Acq On : 06 Oct 2016 17:58 Operator: JDS
Sample : L16100123-07 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 18:04:36 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

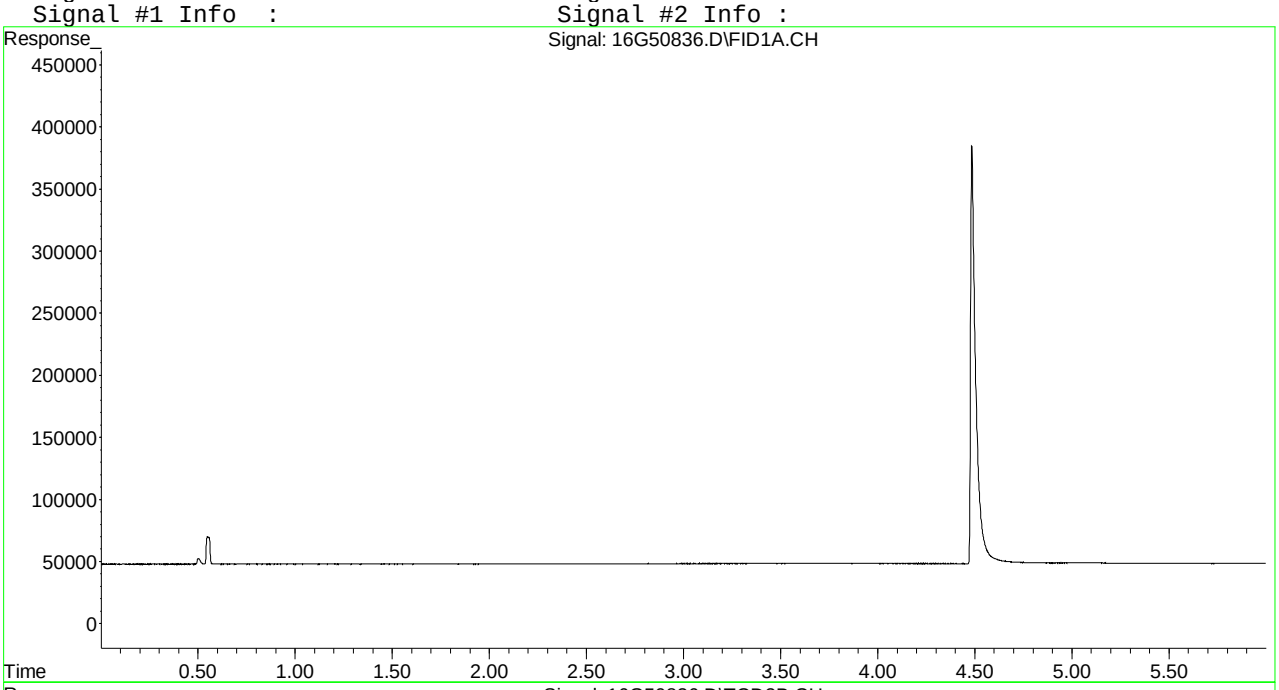
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	279721	N.D.	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	0.00	0	N.D.	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.20	111945969	21207.814	umol/

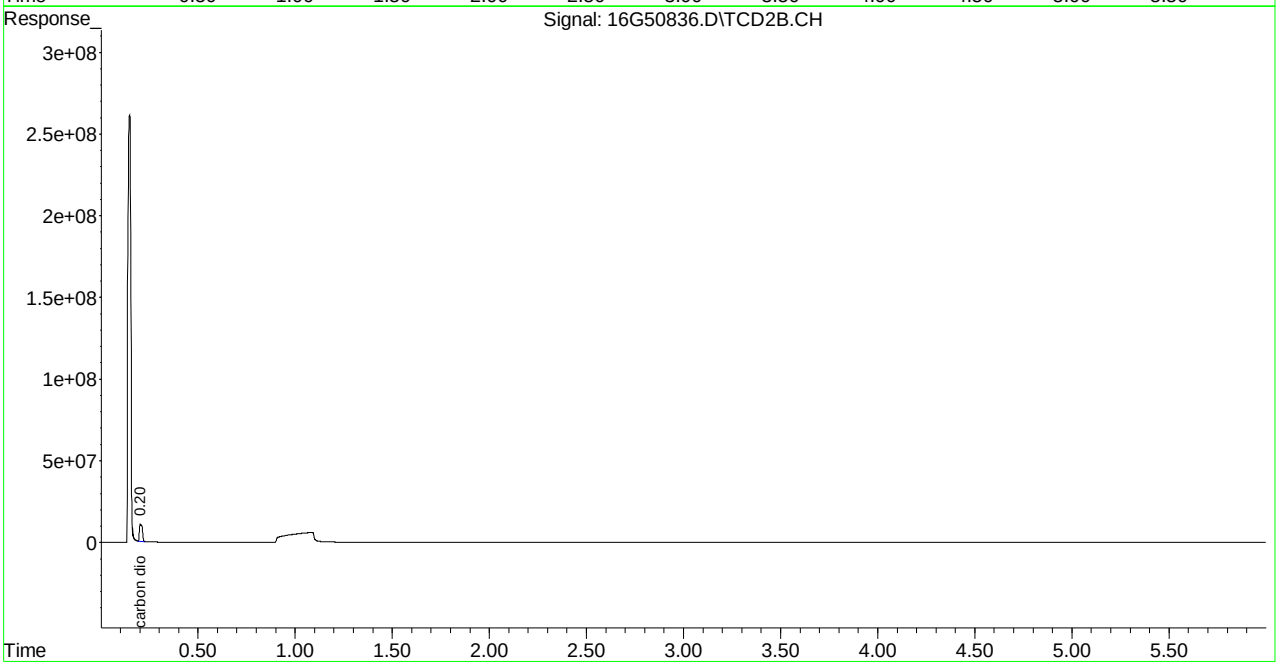
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50836.D RSKEXT1.M Fri Oct 07 09:40:47 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50836.D\FID1A.CH Vial: 15
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50836.D\TCD2B.CH
Acq On : 06 Oct 2016 17:58 Operator: JDS
Sample : L16100123-07 B D1 10X RSK175 Inst : HP16
Misc : 1,10 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 18:04 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





2.1.2.4 Standards Data

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49626.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49626.D\TCD2B.CH
Acq On : 25 Mar 2016 11:22 Operator: JDS
Sample : WG562401-01 0.67umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:32:57 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:31:58 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

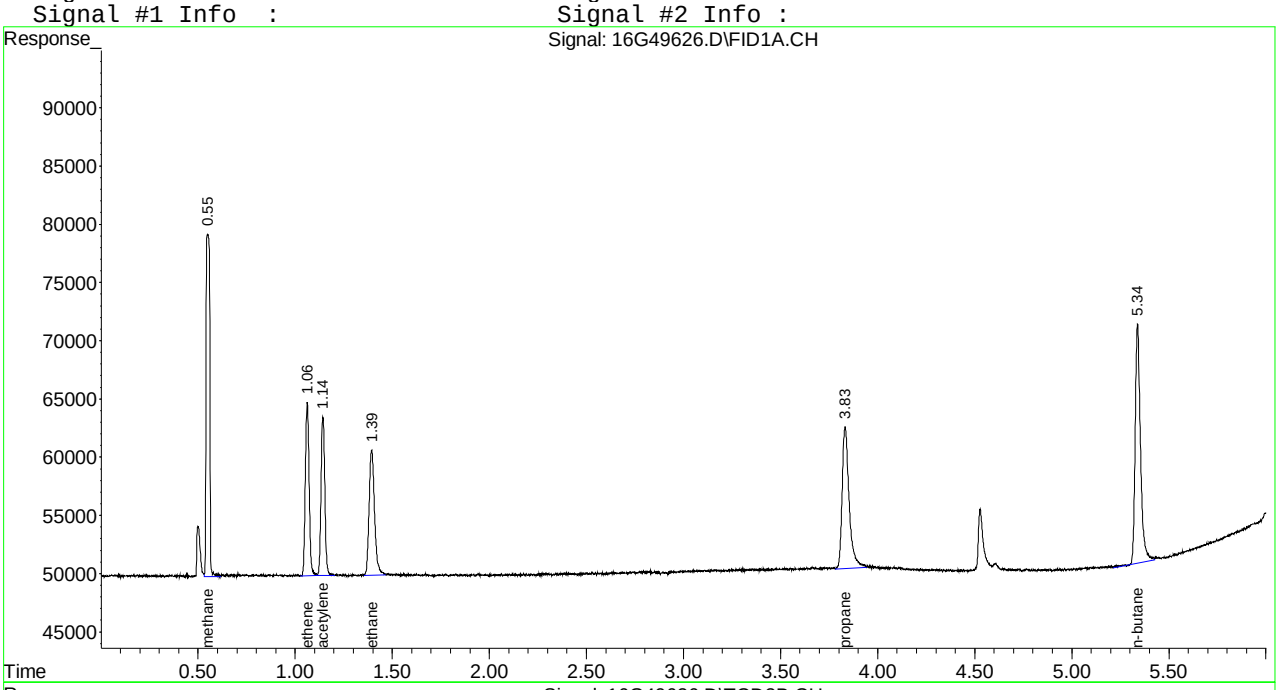
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	386491	0.533 umol/
2) T	ethene	1.06	205756	0.659 umol/
3) T	acetylene	1.14	186400	0.597 umol/
4) T	ethane	1.39	210228	0.659 umol/
5) T	propane	3.83	303892	0.644 umol/
6) T	n-butane	5.34	389462	0.637 umol/
8) T	carbon dioxide	0.00	0	N.D. umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G49626.D RSKEXT1.M Fri Mar 25 13:33:07 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49626.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49626.D\TCD2B.CH
Acq On : 25 Mar 2016 11:22 Operator: JDS
Sample : WG562401-01 0.67umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:32 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:31:58 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49627.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49627.D\TCD2B.CH
Acq On : 25 Mar 2016 11:34 Operator: JDS
Sample : WG562401-02 1.67umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:38:12 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

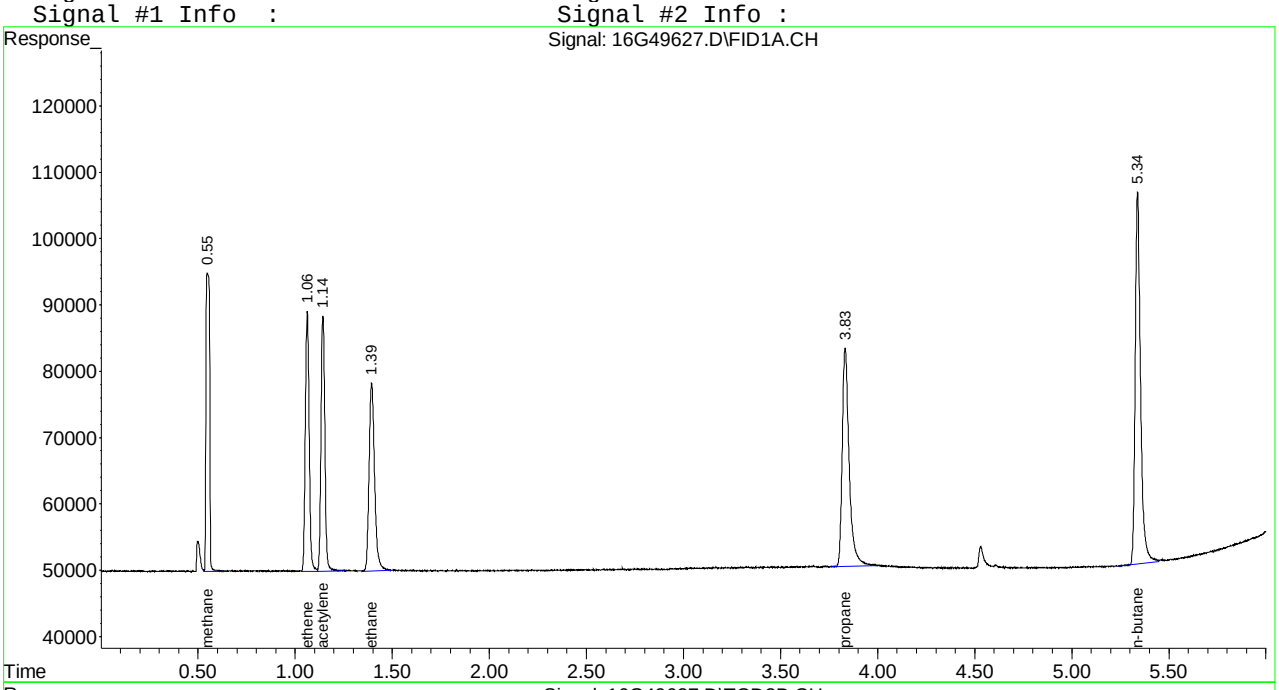
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	597323	1.710	umol/
2) T	ethene	1.06	545133	1.747	umol/
3) T	acetylene	1.14	534915	1.713	umol/
4) T	ethane	1.39	560754	1.758	umol/
5) T	propane	3.83	819659	1.737	umol/
6) T	n-butane	5.34	1076495	1.761	umol/
8) T	carbon dioxide	0.20	9635725	1825.458	umol/

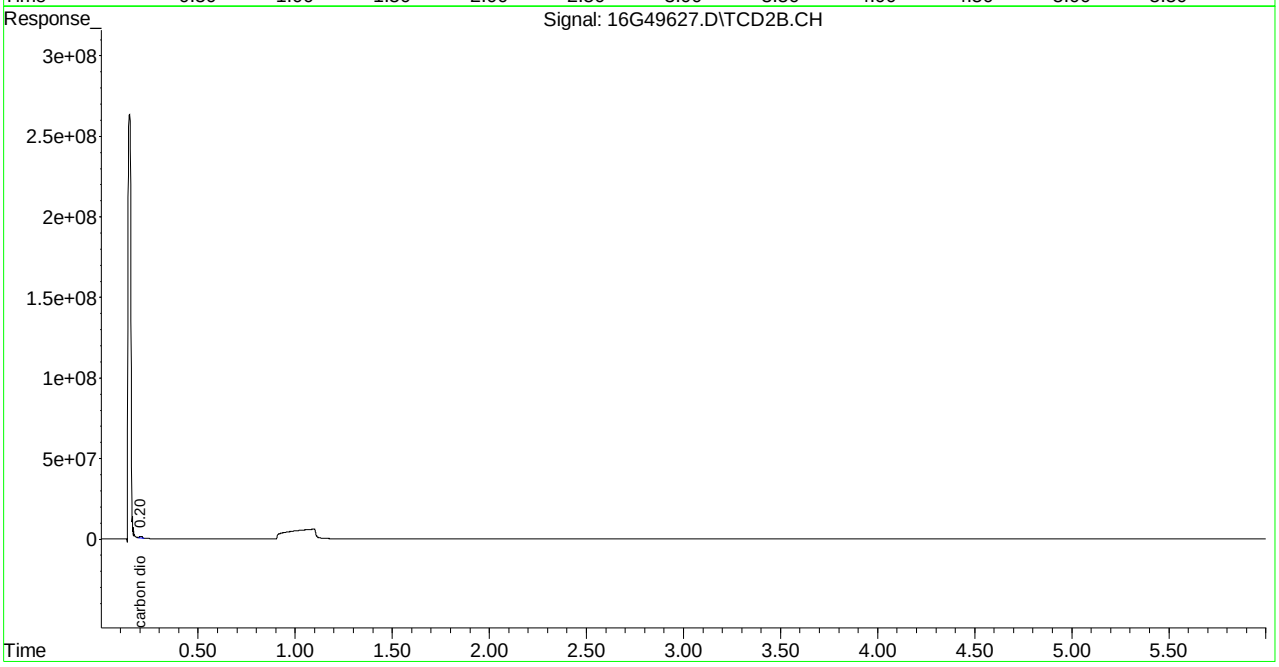
(f)=RT Delta > 1/2 Window (m)=manual int.
16G49627.D RSKEXT1.M Fri Mar 25 13:38:12 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49627.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49627.D\TCD2B.CH
Acq On : 25 Mar 2016 11:34 Operator: JDS
Sample : WG562401-02 1.67umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:38 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49627.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49627.D\TCD2B.CH
Acq On : 25 Mar 2016 11:34 Operator: JDS
Sample : WG562401-02 1.67umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	1.670	1.710	-2.4	100	0.00
2	T	ethene	1.670	1.747	-4.6	100	0.00
3	T	acetylene	1.670	1.713	-2.6	100	0.00
4	T	ethane	1.670	1.758	-5.3	100	0.00
5	T	propane	1.670	1.737	-4.0	100	0.00
6	T	n-butane	1.670	1.761	-5.4	100	0.00
		Signal #2					
8	T	carbon dioxide	2000.000	1825.458	8.7	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G49627.D RSKEXT1.M Fri Mar 25 13:38:22 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49627.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49627.D\TCD2B.CH
Acq On : 25 Mar 2016 11:34 Operator: JDS
Sample : WG562401-02 1.67umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G49627.D RSKEXT1.M Fri Mar 25 13:38:22 2016 Page 2

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49628.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49628.D\TCD2B.CH
Acq On : 25 Mar 2016 11:46 Operator: JDS
Sample : WG562401-03 33.3umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33:25 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

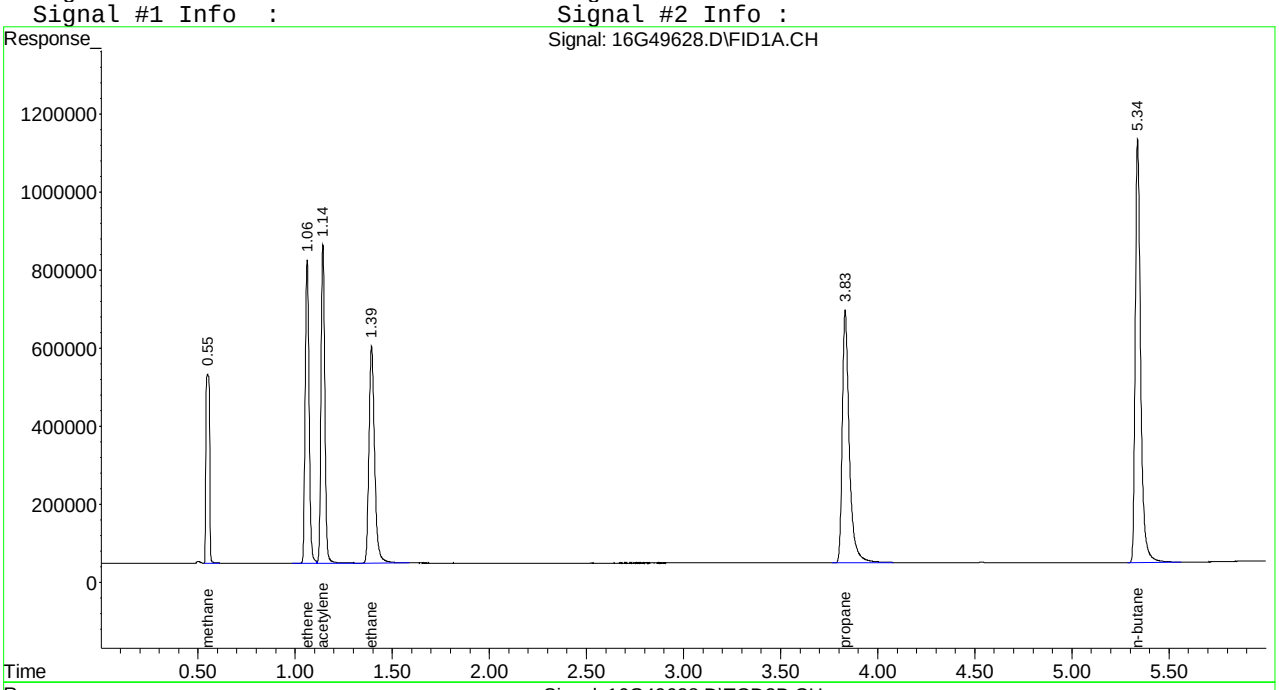
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	6385721	34.033 umol/
2) T	ethene	1.06	10782198	34.551 umol/
3) T	acetylene	1.14	11300799	36.189 umol/
4) T	ethane	1.39	11066771	34.700 umol/
5) T	propane	3.83	16320395	34.595 umol/
6) T	n-butane	5.34	21122896	34.548 umol/
8) T	carbon dioxide	0.20	17730539	3358.995 umol/

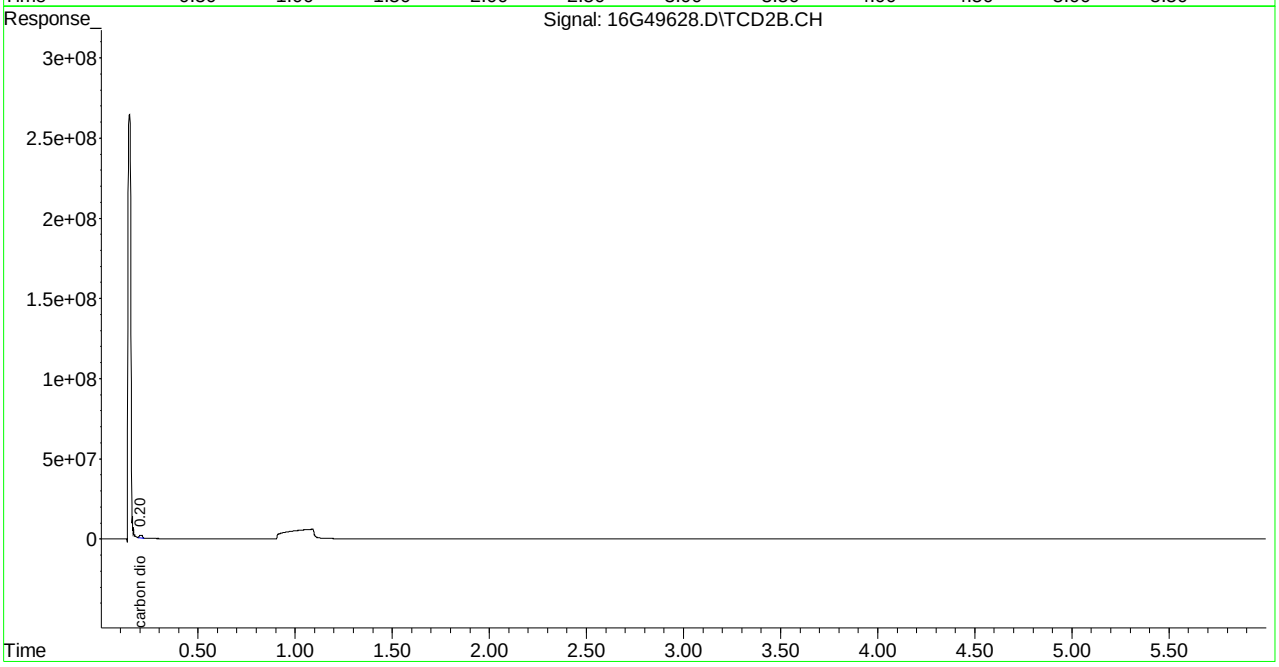
(f)=RT Delta > 1/2 Window (m)=manual int.
16G49628.D RSKEXT1.M Fri Mar 25 13:33:26 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49628.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49628.D\TCD2B.CH
Acq On : 25 Mar 2016 11:46 Operator: JDS
Sample : WG562401-03 33.3umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49629.D\FID1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49629.D\TCD2B.CH
Acq On : 25 Mar 2016 11:58 Operator: JDS
Sample : WG562401-04 66.7umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33:26 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

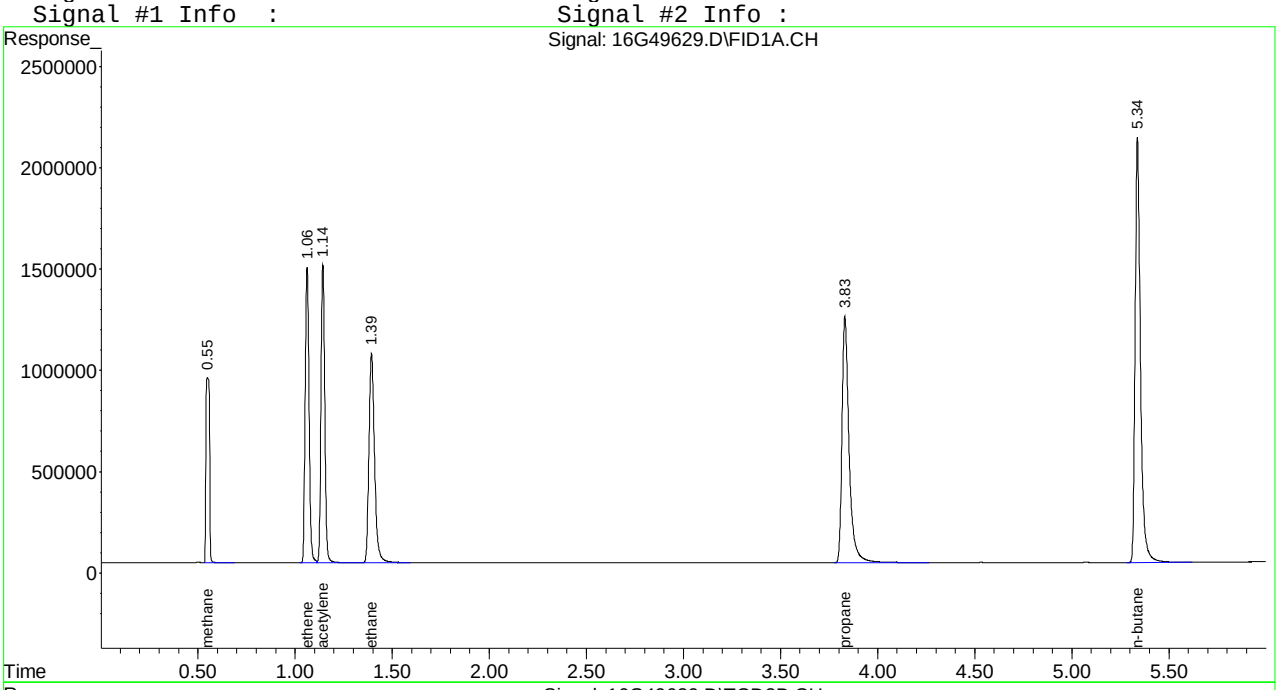
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	11901999	64.837 umol/
2) T	ethene	1.06	20215300	64.780 umol/
3) T	acetylene	1.14	20353735	65.180 umol/
4) T	ethane	1.39	20615639	64.640 umol/
5) T	propane	3.83	30980672	65.670 umol/
6) T	n-butane	5.34	40329758	65.963 umol/
8) T	carbon dioxide	0.20	35613763	6746.916 umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G49629.D RSKEXT1.M Fri Mar 25 13:33:27 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49629.D\FID1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49629.D\TCD2B.CH
Acq On : 25 Mar 2016 11:58 Operator: JDS
Sample : WG562401-04 66.7umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD67276 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49630.D\FID1A.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49630.D\TCD2B.CH
Acq On : 25 Mar 2016 12:10 Operator: JDS
Sample : WG562401-05 133umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33:27 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

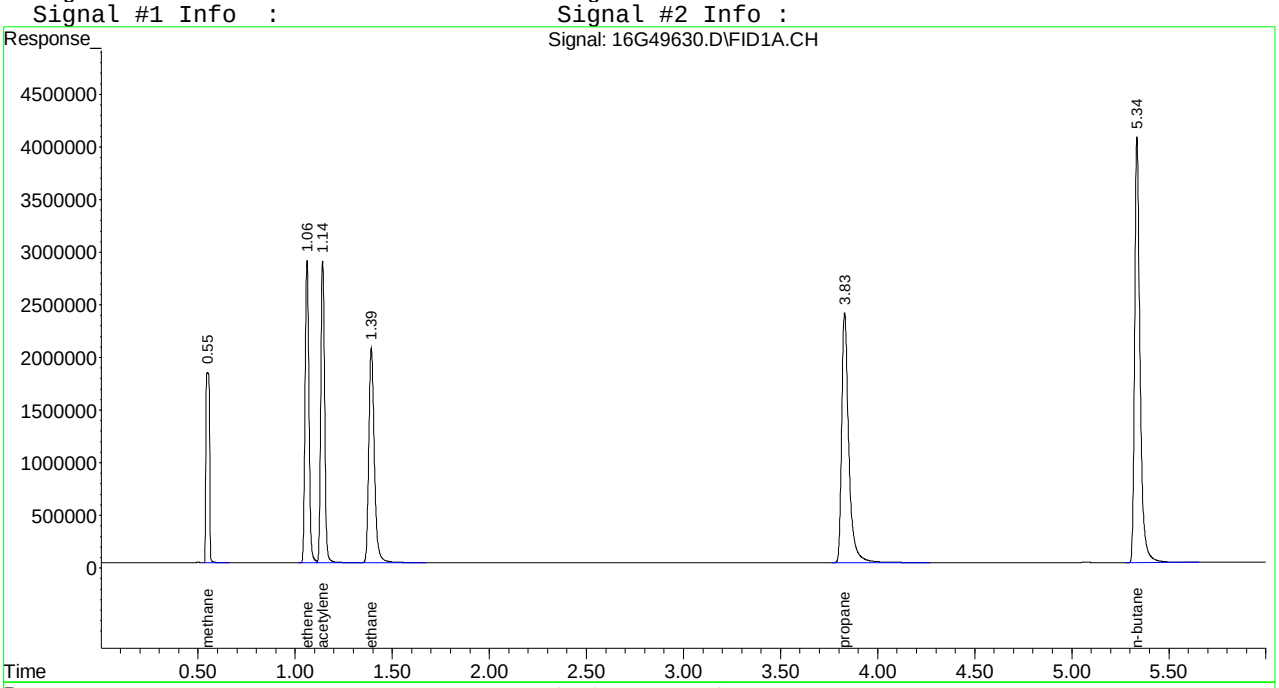
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	23452315	129.335 umol/
2) T	ethene	1.06	40022999	128.253 umol/
3) T	acetylene	1.14	39927283	127.862 umol/
4) T	ethane	1.39	40795450	127.914 umol/
5) T	propane	3.83	60871012	129.029 umol/
6) T	n-butane	5.34	78531804	128.445 umol/
8) T	carbon dioxide	0.20	71244989	13497.140 umol/

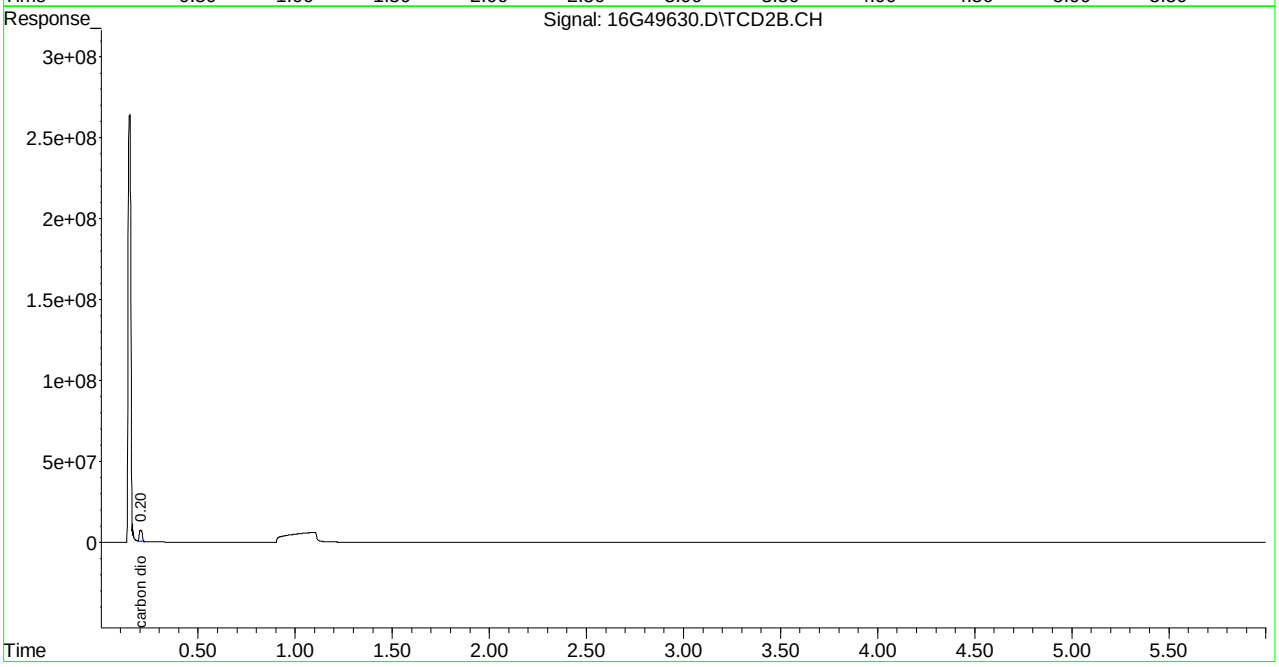
(f)=RT Delta > 1/2 Window (m)=manual int.
16G49630.D RSKEXT1.M Fri Mar 25 13:33:27 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49630.D\FID1A.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49630.D\TCD2B.CH
Acq On : 25 Mar 2016 12:10 Operator: JDS
Sample : WG562401-05 133umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49631.D\FID1A.CH Vial: 7
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49631.D\TCD2B.CH
Acq On : 25 Mar 2016 12:22 Operator: JDS
Sample : WG562401-06 333umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33:28 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

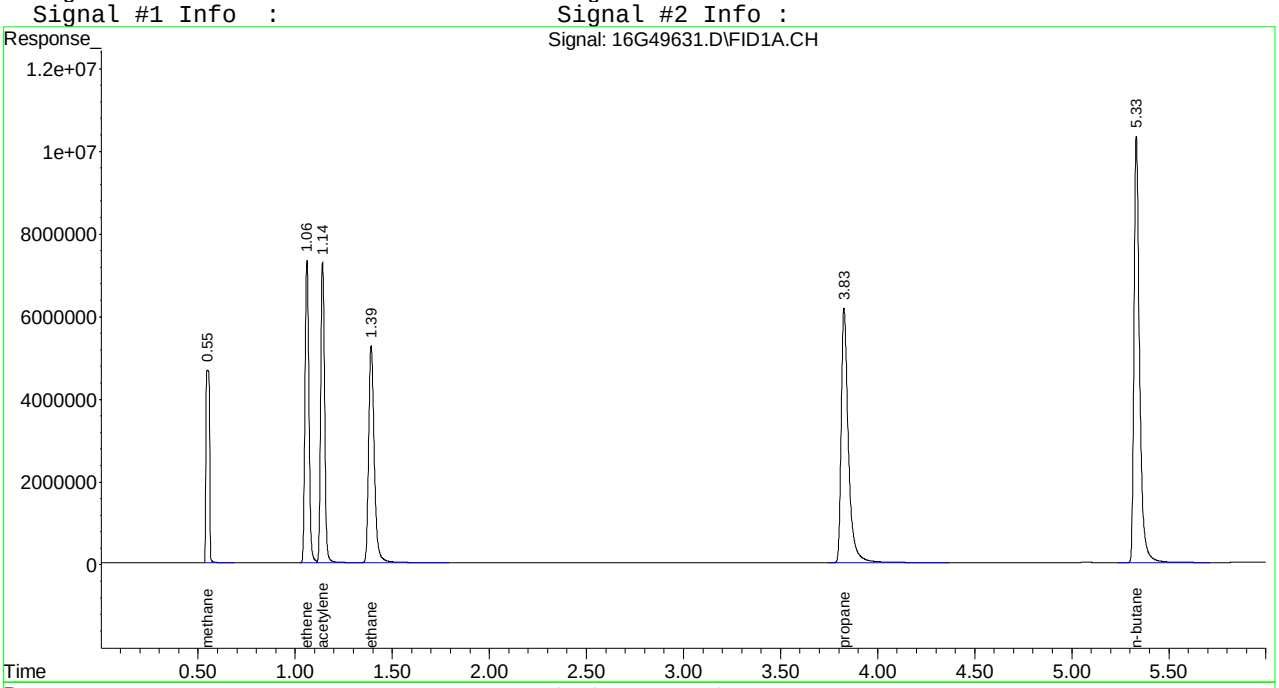
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	60036501	333.627 umol/
2) T	ethene	1.06	103680653	332.243 umol/
3) T	acetylene	1.14	103042347	329.980 umol/
4) T	ethane	1.39	106118124	332.733 umol/
5) T	propane	3.83	159210076	337.481 umol/
6) T	n-butane	5.33	207154261	338.817 umol/
8) T	carbon dioxide	0.20	184690679	34989.072 umol/

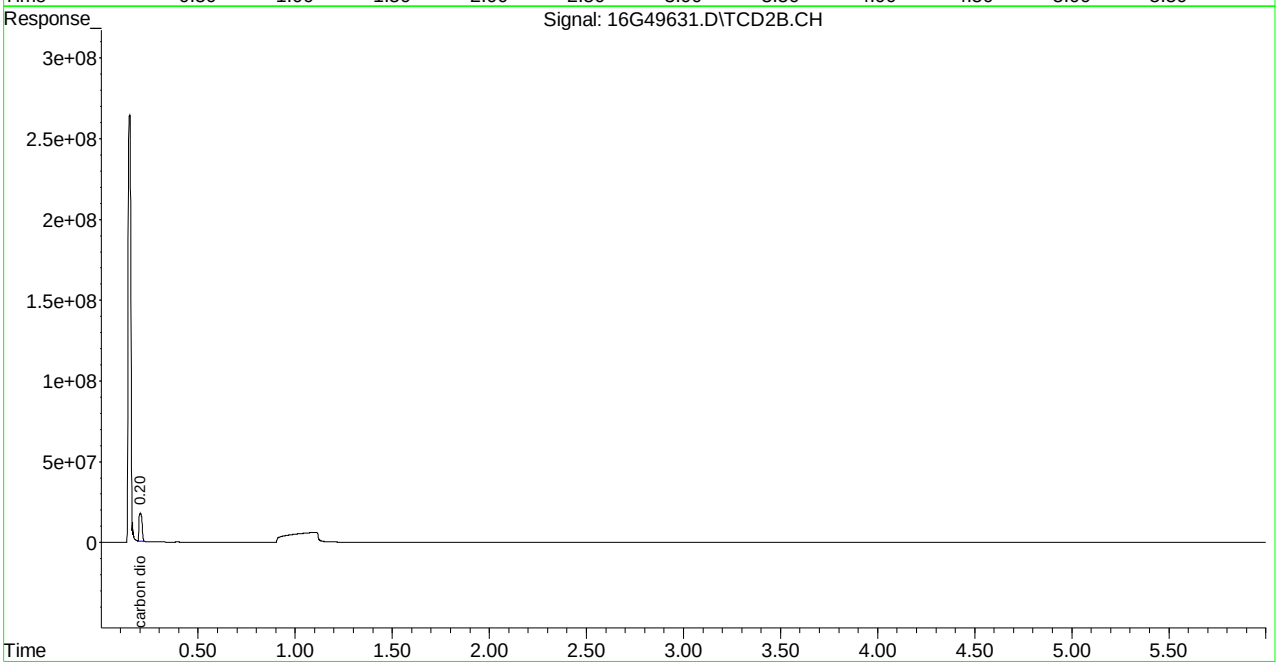
(f)=RT Delta > 1/2 Window (m)=manual int.
16G49631.D RSKEXT1.M Fri Mar 25 13:33:28 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49631.D\FID1A.CH Vial: 7
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49631.D\TCD2B.CH
Acq On : 25 Mar 2016 12:22 Operator: JDS
Sample : WG562401-06 333umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49632.D\FID1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49632.D\TCD2B.CH
Acq On : 25 Mar 2016 12:34 Operator: JDS
Sample : WG562401-07 533umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33:29 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

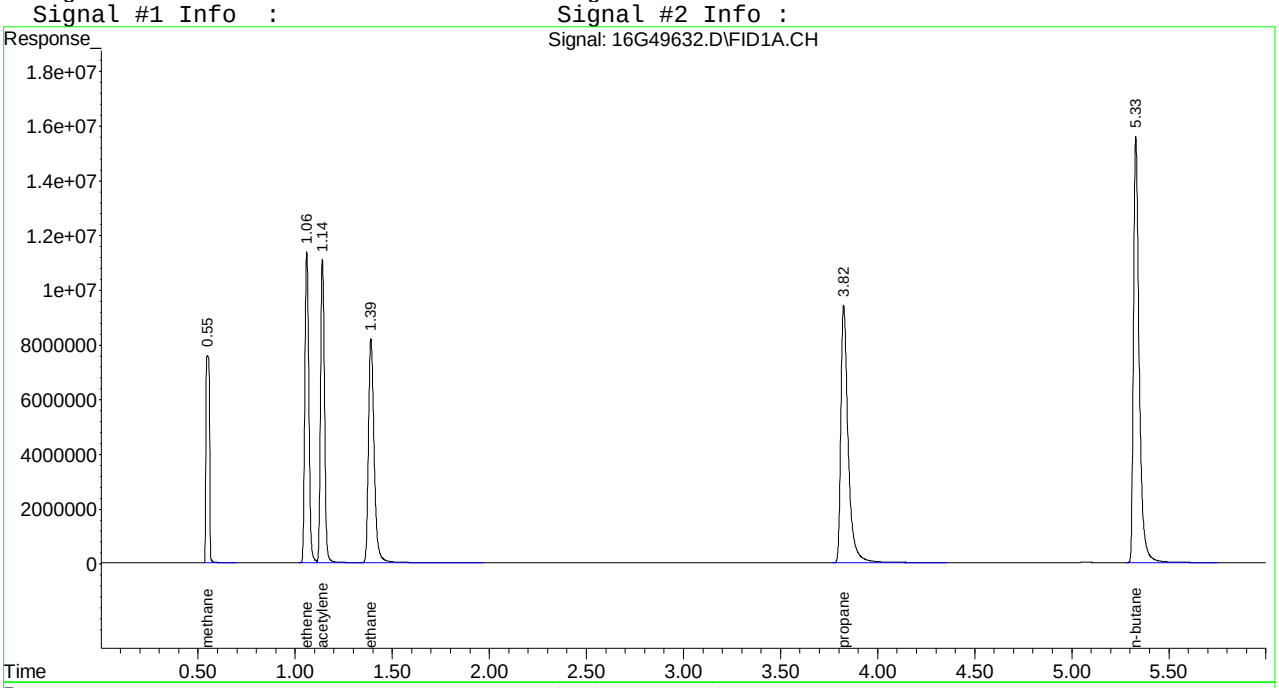
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	96479096	537.128 umol/
2) T	ethene	1.06	163526008	524.017 umol/
3) T	acetylene	1.14	159442689	510.596 umol/
4) T	ethane	1.39	167744947	525.963 umol/
5) T	propane	3.83	248130764	525.967 umol/
6) T	n-butane	5.33	319696896	522.890 umol/
8) T	carbon dioxide	0.20	281763639	53379.240 umol/

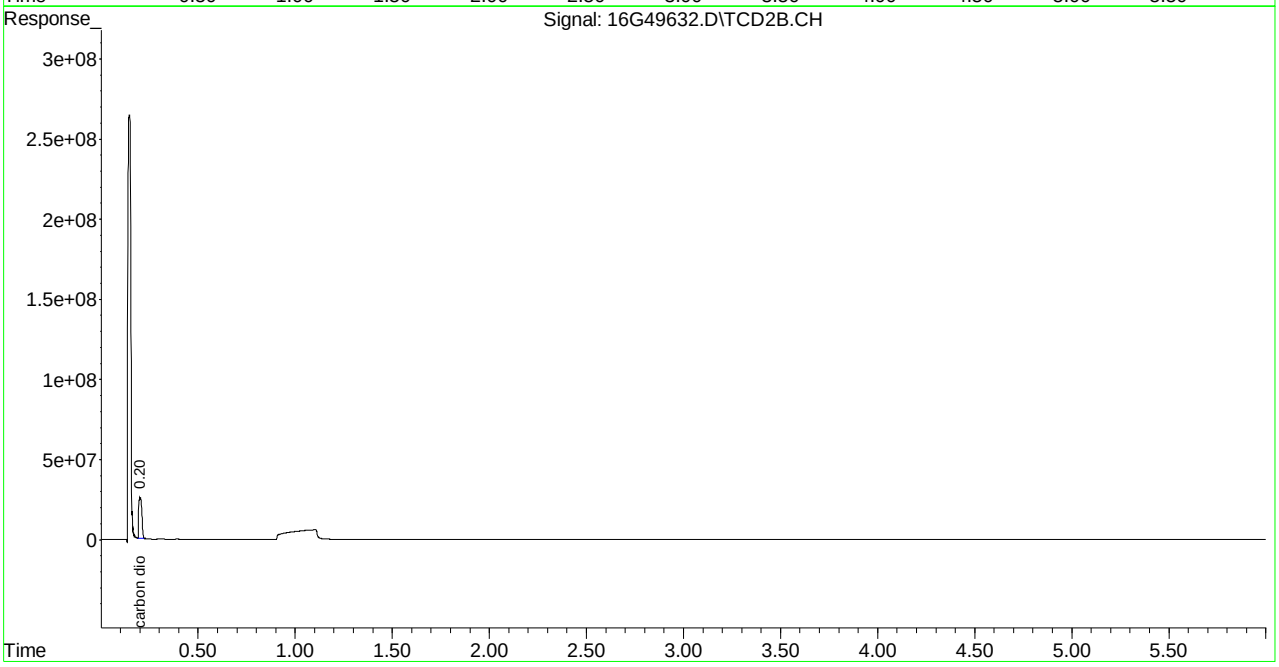
(f)=RT Delta > 1/2 Window (m)=manual int.
16G49632.D RSKEXT1.M Fri Mar 25 13:33:29 2016 Page 1

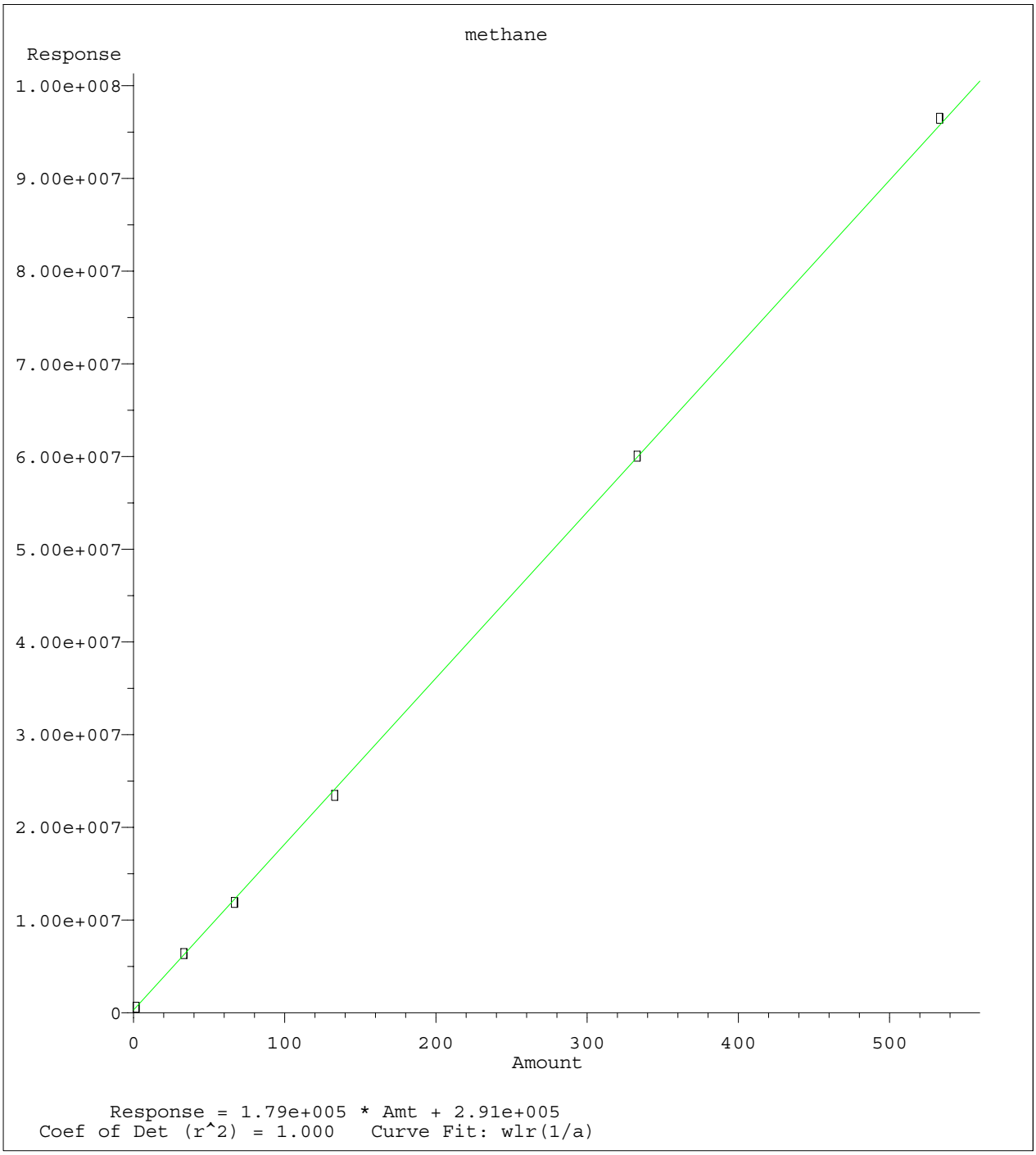
Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49632.D\FID1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49632.D\TCD2B.CH
Acq On : 25 Mar 2016 12:34 Operator: JDS
Sample : WG562401-07 533umol/moL STD RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 13:33 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:32:42 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :







Method Name: C:\MSDCHEM\1\METHODS\RSKEXT1.M
Calibration Table Last Updated: Fri Mar 25 13:38:01 2016

Signal #1 : C:\MSDchem\1\DATA\032516\16G49635.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\032516\16G49635.D\TCD2B.CH
Acq On : 25 Mar 2016 18:26 Operator: JDS
Sample : WG562401-08 133umol/moL ALT SRC STD RSK1 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 18:32:35 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

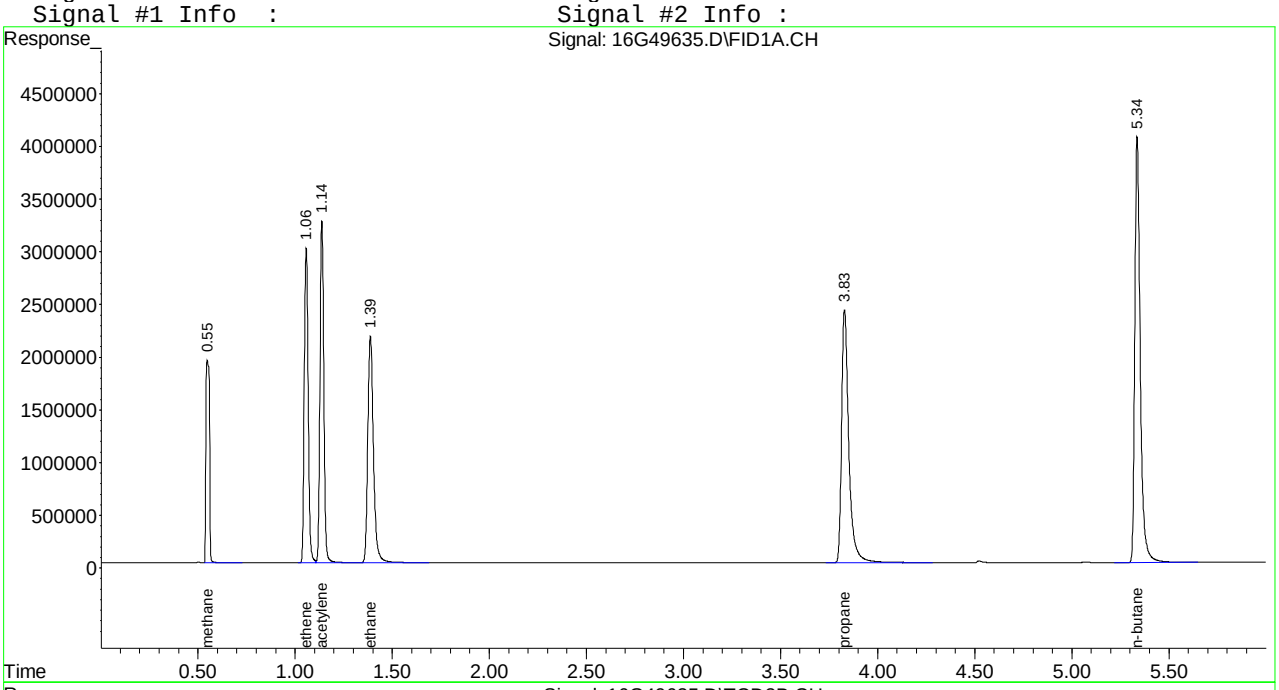
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	24881813	137.318 umol/
2) T	ethene	1.06	41706426	133.648 umol/
3) T	acetylene	1.14	45236671	144.865 umol/
4) T	ethane	1.39	43137584	135.258 umol/
5) T	propane	3.83	62226584	131.903 umol/
6) T	n-butane	5.34	79421956	129.901 umol/
8) T	carbon dioxide	0.20	77169864	14619.589 umol/

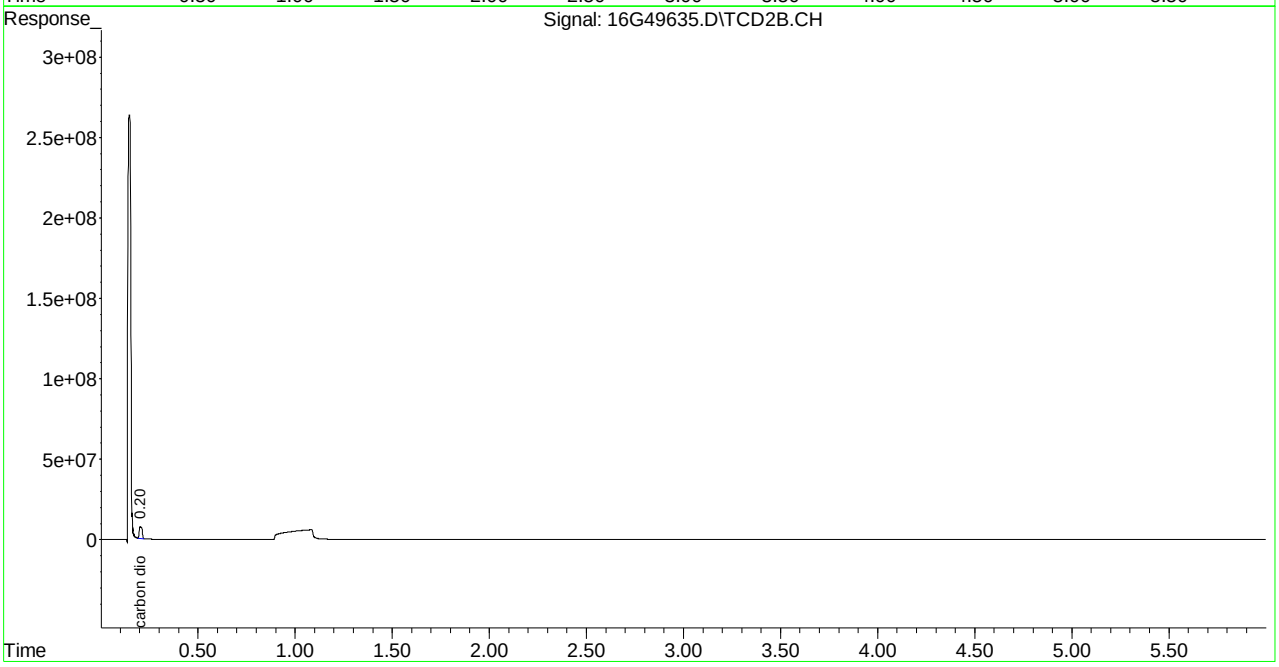
(f)=RT Delta > 1/2 Window (m)=manual int.
16G49635.D RSKEXT1.M Fri Mar 25 18:32:35 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\032516\16G49635.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDchem\1\DATA\032516\16G49635.D\TCD2B.CH
Acq On : 25 Mar 2016 18:26 Operator: JDS
Sample : WG562401-08 133umol/moL ALT SRC STD RSK1 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Mar 25 18:32 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49635.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49635.D\TCD2B.CH
Acq On : 25 Mar 2016 18:26 Operator: JDS
Sample : WG562401-08 133umol/moL ALT SRC STD RSK1 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	137.318	-3.2	106	0.00
2	T	ethene	133.000	133.648	-0.5	104	0.00
3	T	acetylene	133.000	144.865	-8.9	113	0.00
4	T	ethane	133.000	135.258	-1.7	106	0.00
5	T	propane	133.000	131.903	0.8	102	0.00
6	T	n-butane	133.000	129.901	2.3	101	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	14619.589	-9.9	108	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G49635.D RSKEXT1.M Mon Mar 28 09:35:32 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\032516\16G49635.D\FID1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\032516\16G49635.D\TCD2B.CH
Acq On : 25 Mar 2016 18:26 Operator: JDS
Sample : WG562401-08 133umol/moL ALT SRC STD RSK1 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area% Dev(min)

Signal #2

Signal #1 : C:\MSDchem\1\DATA\100516\16G50804.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\100516\16G50804.D\TCD2B.CH
Acq On : 05 Oct 2016 16:56 Operator: JDS
Sample : WG586462-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 17:02:18 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

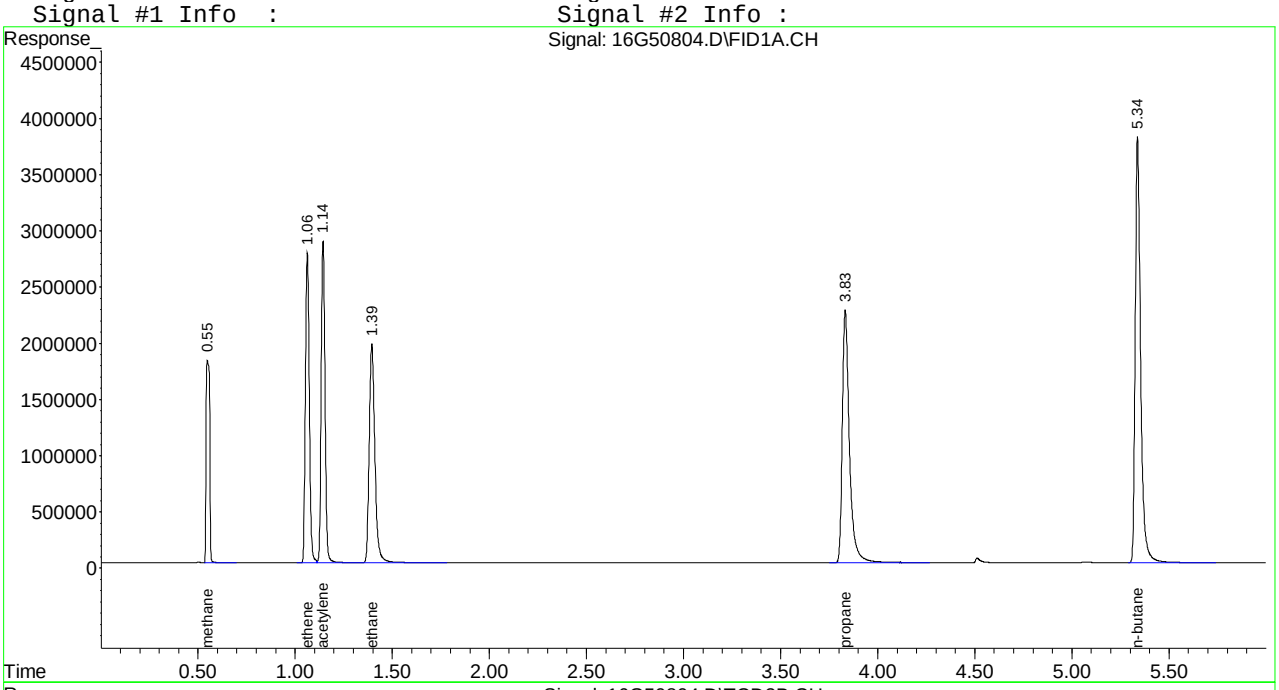
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	23265757	128.294 umol/
2) T	ethene	1.06	38540213	123.502 umol/
3) T	acetylene	1.14	39929019	127.868 umol/
4) T	ethane	1.39	39242836	123.046 umol/
5) T	propane	3.83	57421559	121.718 umol/
6) T	n-butane	5.34	73526920	120.259 umol/
8) T	carbon dioxide	0.20	65768186	12459.577 umol/

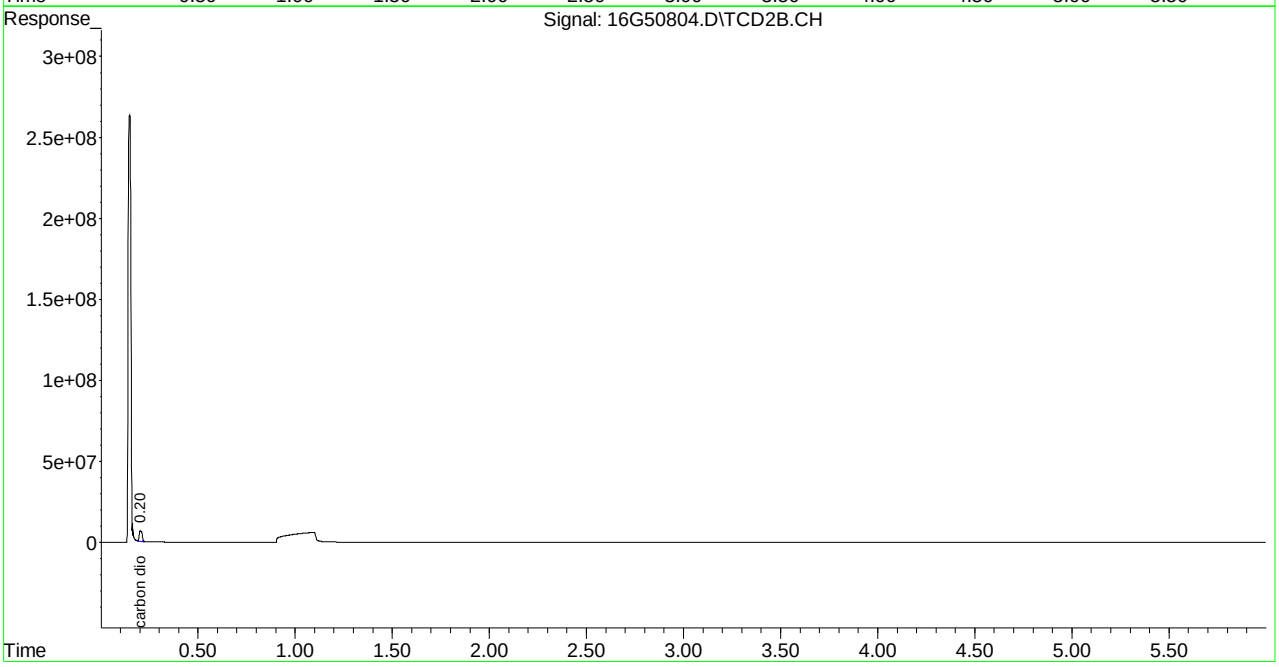
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50804.D RSKEXT1.M Wed Oct 05 17:02:18 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50804.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\100516\16G50804.D\TCD2B.CH
Acq On : 05 Oct 2016 16:56 Operator: JDS
Sample : WG586462-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 17:02 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50804.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50804.D\TCD2B.CH
Acq On : 05 Oct 2016 16:56 Operator: JDS
Sample : WG586462-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	128.294	3.5	99	0.00
2	T	ethene	133.000	123.502	7.1	96	0.00
3	T	acetylene	133.000	127.868	3.9	100	0.00
4	T	ethane	133.000	123.046	7.5	96	0.00
5	T	propane	133.000	121.718	8.5	94	0.00
6	T	n-butane	133.000	120.259	9.6	94	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	12459.577	6.3	92	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50804.D RSKEXT1.M Thu Oct 06 09:00:00 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50804.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50804.D\TCD2B.CH
Acq On : 05 Oct 2016 16:56 Operator: JDS
Sample : WG586462-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

Signal #1 : C:\MSDchem\1\DATA\100516\16G50815.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\100516\16G50815.D\TCD2B.CH
Acq On : 05 Oct 2016 19:34 Operator: JDS
Sample : WG586462-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 19:40:12 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

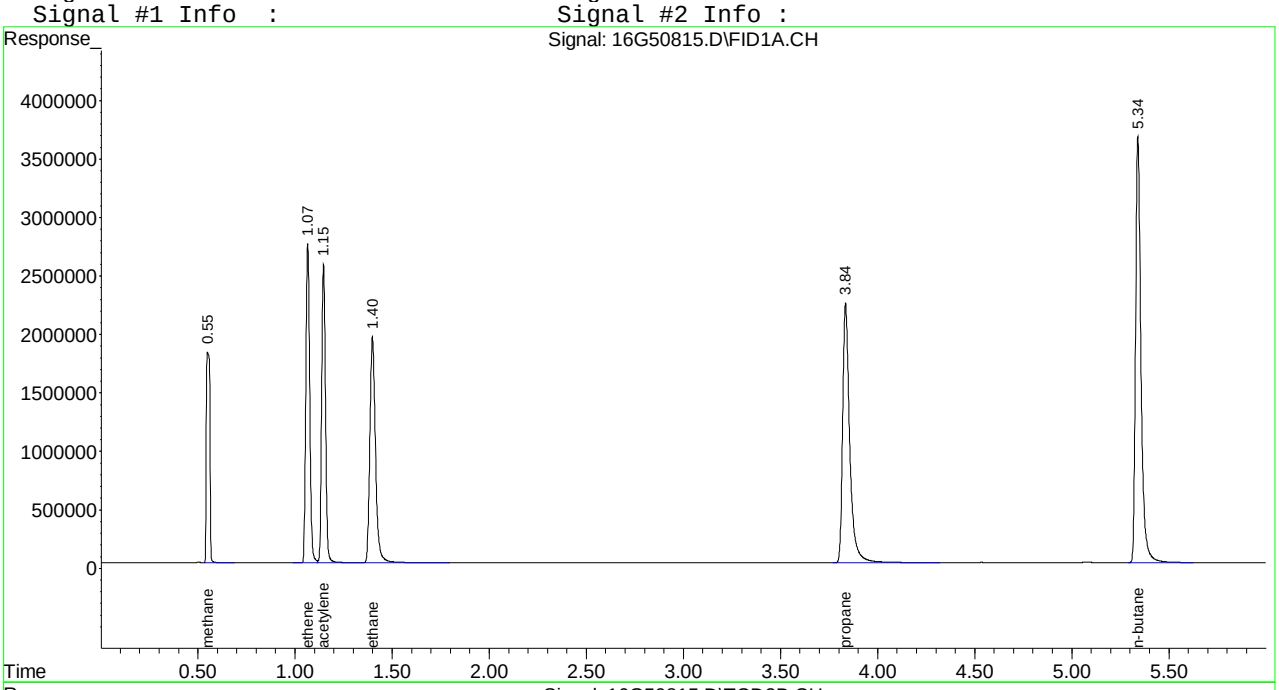
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	23163211	127.721 umol/
2) T	ethene	1.07	37846944	121.280 umol/
3) T	acetylene	1.15	35421516	113.433 umol/
4) T	ethane	1.40	38778986	121.591 umol/
5) T	propane	3.84	56352221	119.451 umol/
6) T	n-butane	5.34	70969223	116.076 umol/
8) T	carbon dioxide	0.20	62885219	11913.408 umol/

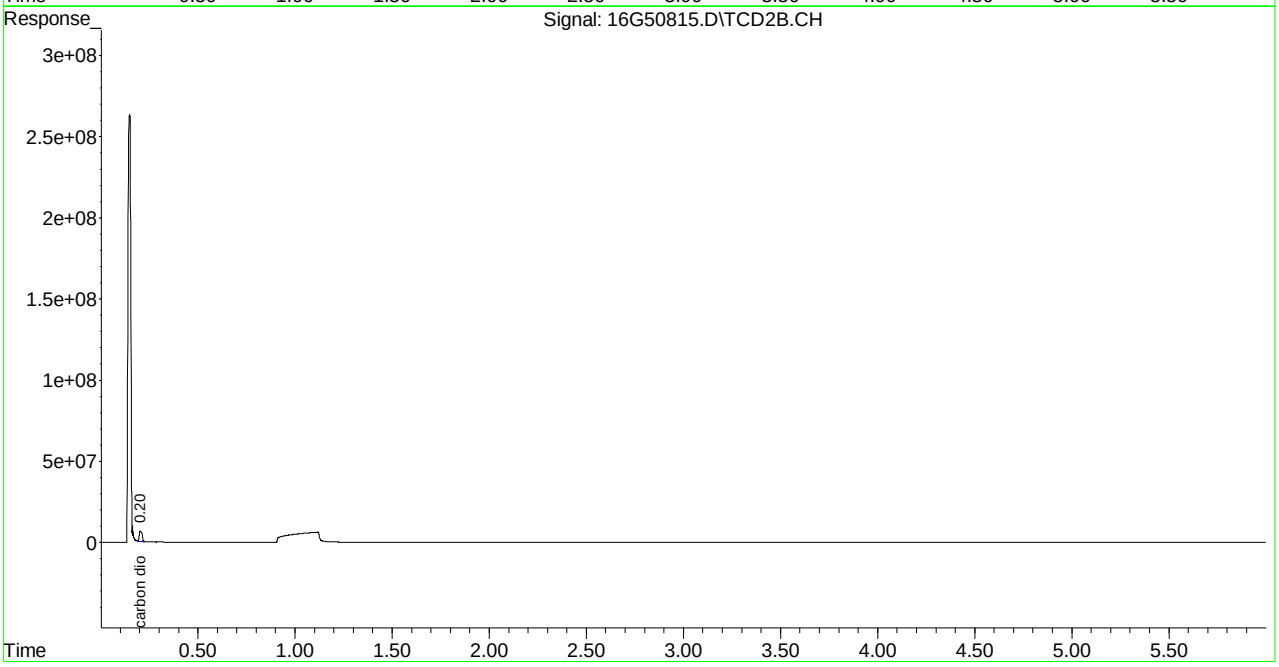
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50815.D RSKEXT1.M Wed Oct 05 19:40:12 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50815.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\100516\16G50815.D\TCD2B.CH
Acq On : 05 Oct 2016 19:34 Operator: JDS
Sample : WG586462-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 19:40 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50815.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50815.D\TCD2B.CH
Acq On : 05 Oct 2016 19:34 Operator: JDS
Sample : WG586462-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	127.721	4.0	99	0.00
2	T	ethene	133.000	121.280	8.8	95	0.00
3	T	acetylene	133.000	113.433	14.7	89	0.00
4	T	ethane	133.000	121.591	8.6	95	0.00
5	T	propane	133.000	119.451	10.2	93	0.00
6	T	n-butane	133.000	116.076	12.7	90	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	11913.408	10.4	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50815.D RSKEXT1.M Thu Oct 06 09:00:06 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50815.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50815.D\TCD2B.CH
Acq On : 05 Oct 2016 19:34 Operator: JDS
Sample : WG586462-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50815.D RSKEXT1.M Thu Oct 06 09:00:06 2016 Page 2

Signal #1 : C:\MSDchem\1\DATA\100516\16G50821.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDchem\1\DATA\100516\16G50821.D\TCD2B.CH
Acq On : 05 Oct 2016 20:43 Operator: JDS
Sample : WG586462-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 20:49:05 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

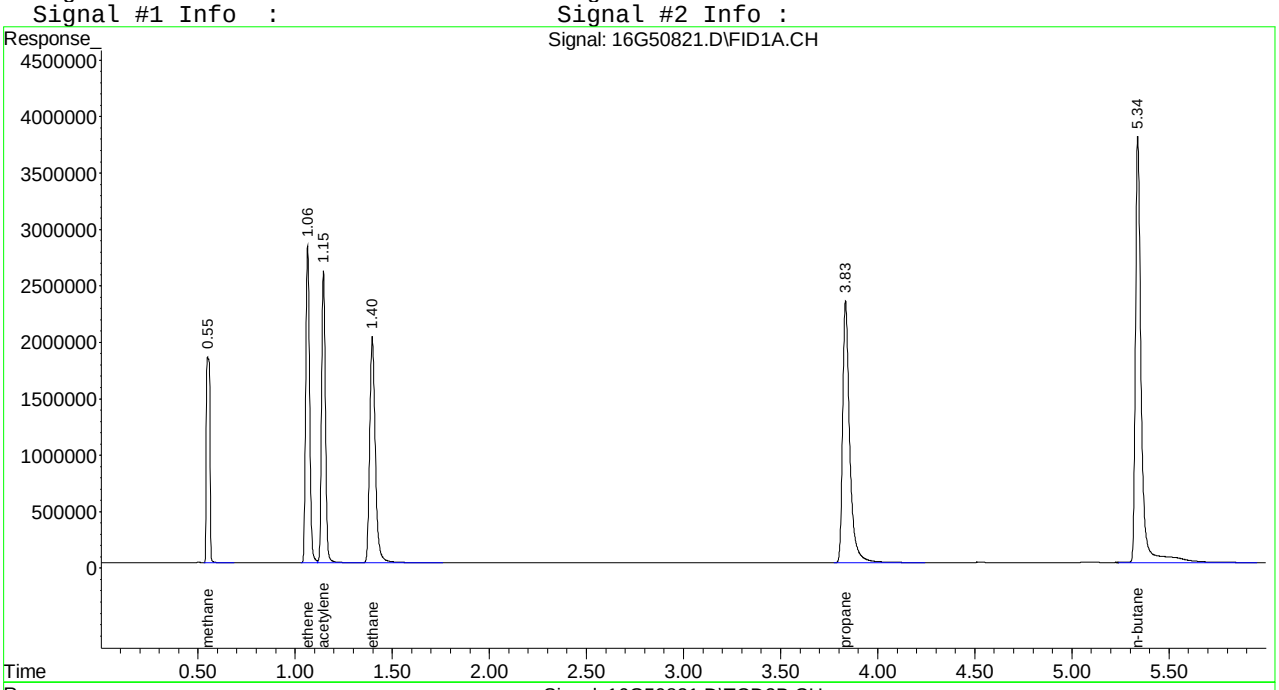
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	23622058	130.283 umol/
2) T	ethene	1.06	39018198	125.033 umol/
3) T	acetylene	1.15	35844730	114.788 umol/
4) T	ethane	1.40	40095214	125.718 umol/
5) T	propane	3.83	58828709	124.700 umol/
6) T	n-butane	5.34	79403210	129.870 umol/
8) T	carbon dioxide	0.20	62322023	11806.712 umol/

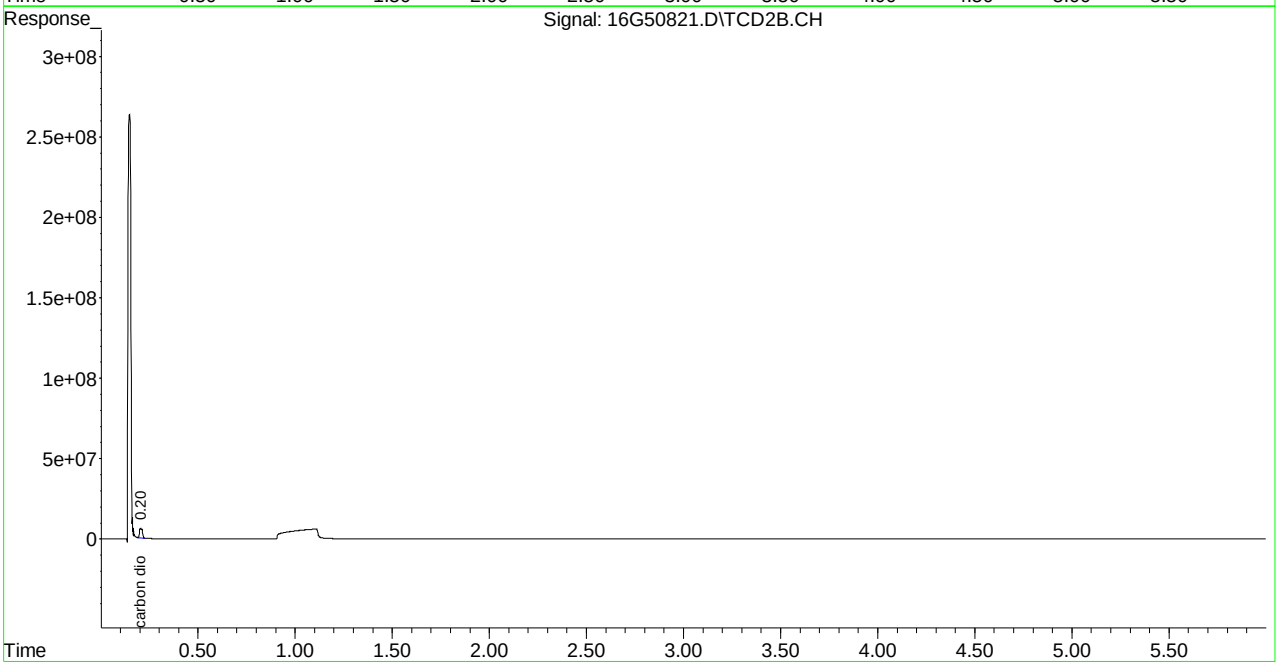
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50821.D RSKEXT1.M Wed Oct 05 20:49:05 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50821.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDchem\1\DATA\100516\16G50821.D\TCD2B.CH
Acq On : 05 Oct 2016 20:43 Operator: JDS
Sample : WG586462-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 20:49 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50821.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50821.D\TCD2B.CH
Acq On : 05 Oct 2016 20:43 Operator: JDS
Sample : WG586462-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	130.283	2.0	101	0.00
2	T	ethene	133.000	125.033	6.0	97	0.00
3	T	acetylene	133.000	114.788	13.7	90	0.00
4	T	ethane	133.000	125.718	5.5	98	0.00
5	T	propane	133.000	124.700	6.2	97	0.00
6	T	n-butane	133.000	129.870	2.4	101	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	11806.712	11.2	87	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50821.D RSKEXT1.M Thu Oct 06 09:00:13 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50821.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50821.D\TCD2B.CH
Acq On : 05 Oct 2016 20:43 Operator: JDS
Sample : WG586462-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

Signal #1 : C:\MSDchem\1\DATA\100616\16G50822.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\100616\16G50822.D\TCD2B.CH
Acq On : 06 Oct 2016 14:52 Operator: JDS
Sample : WG586611-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 14:58:27 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

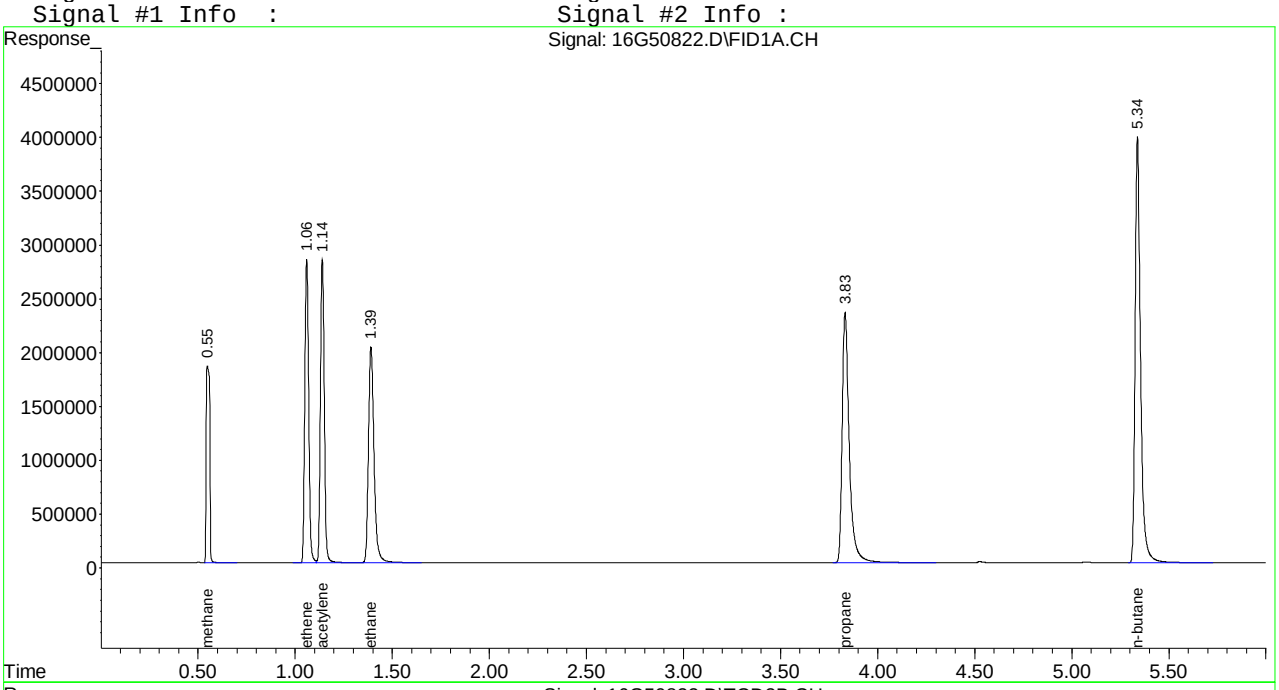
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	23463932	129.400 umol/
2) T	ethene	1.06	39361138	126.132 umol/
3) T	acetylene	1.14	39345153	125.998 umol/
4) T	ethane	1.39	40081488	125.675 umol/
5) T	propane	3.83	59437703	125.991 umol/
6) T	n-butane	5.34	76966020	125.884 umol/
8) T	carbon dioxide	0.20	73235494	13874.235 umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50822.D RSKEXT1.M Thu Oct 06 14:58:27 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50822.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDchem\1\DATA\100616\16G50822.D\TCD2B.CH
Acq On : 06 Oct 2016 14:52 Operator: JDS
Sample : WG586611-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 14:58 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50822.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50822.D\TCD2B.CH
Acq On : 06 Oct 2016 14:52 Operator: JDS
Sample : WG586611-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	129.400	2.7	100	0.00
2	T	ethene	133.000	126.132	5.2	98	0.00
3	T	acetylene	133.000	125.998	5.3	99	0.00
4	T	ethane	133.000	125.675	5.5	98	0.00
5	T	propane	133.000	125.991	5.3	98	0.00
6	T	n-butane	133.000	125.884	5.4	98	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	13874.235	-4.3	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50822.D RSKEXT1.M Fri Oct 07 08:46:05 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50822.D\FID1A.CH Vial: 1
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50822.D\TCD2B.CH
Acq On : 06 Oct 2016 14:52 Operator: JDS
Sample : WG586611-01 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50822.D RSKEXT1.M Fri Oct 07 08:46:05 2016 Page 2

Signal #1 : C:\MSDchem\1\DATA\100616\16G50833.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\100616\16G50833.D\TCD2B.CH
Acq On : 06 Oct 2016 17:24 Operator: JDS
Sample : WG586611-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 17:30:45 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

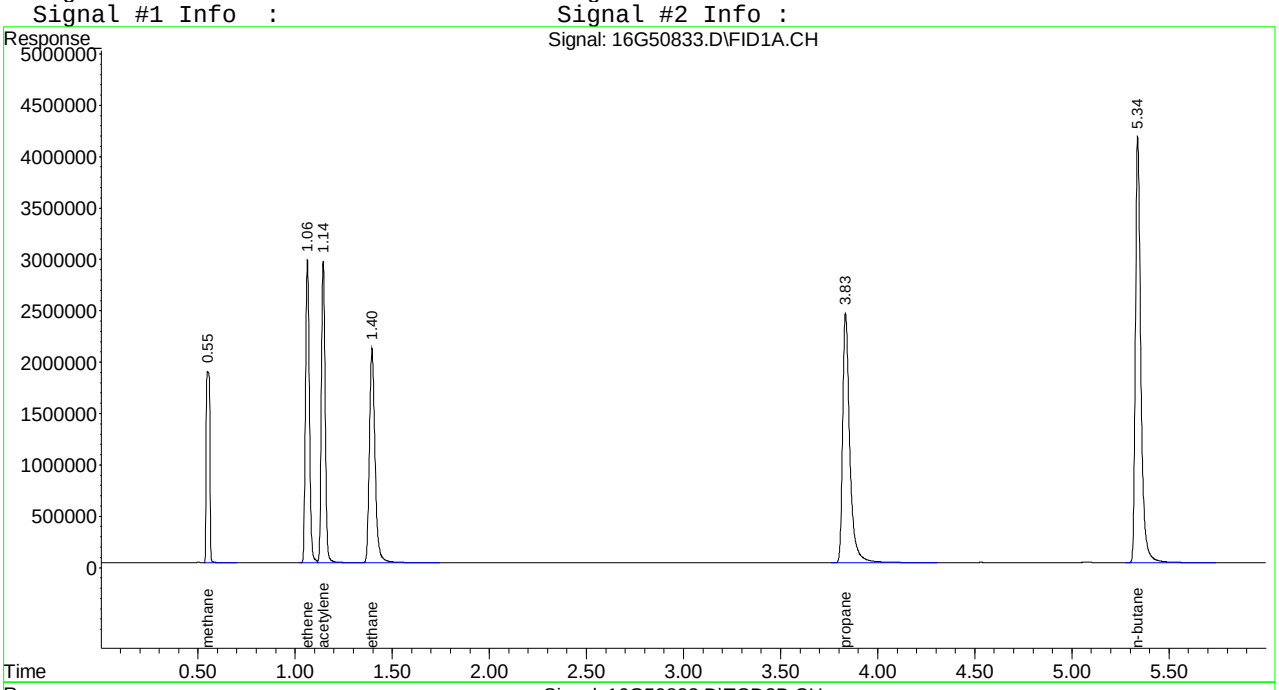
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	24081059	132.846 umol/
2) T	ethene	1.06	40871288	130.971 umol/
3) T	acetylene	1.14	40707704	130.361 umol/
4) T	ethane	1.40	41719342	130.811 umol/
5) T	propane	3.83	62216417	131.881 umol/
6) T	n-butane	5.34	80876507	132.280 umol/
8) T	carbon dioxide	0.21	73370717	13899.853 umol/

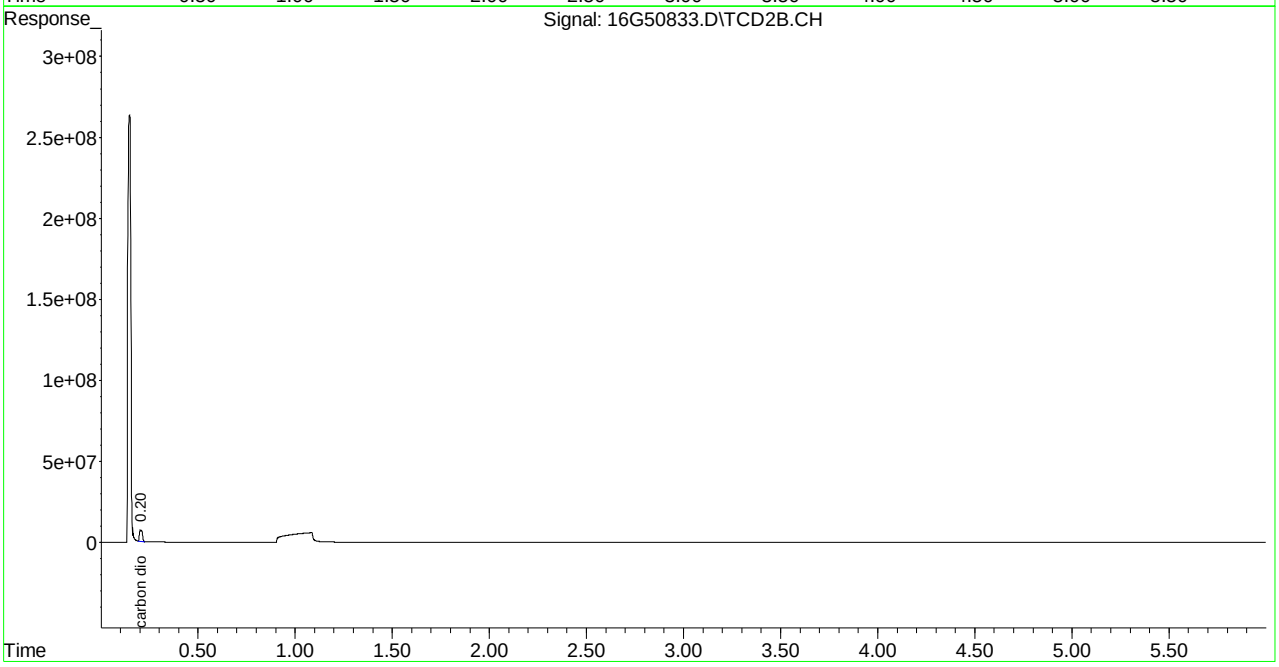
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50833.D RSKEXT1.M Thu Oct 06 17:30:45 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50833.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDchem\1\DATA\100616\16G50833.D\TCD2B.CH
Acq On : 06 Oct 2016 17:24 Operator: JDS
Sample : WG586611-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 17:30 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50833.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50833.D\TCD2B.CH
Acq On : 06 Oct 2016 17:24 Operator: JDS
Sample : WG586611-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	132.846	0.1	103	0.00
2	T	ethene	133.000	130.971	1.5	102	0.00
3	T	acetylene	133.000	130.361	2.0	102	0.00
4	T	ethane	133.000	130.811	1.6	102	0.00
5	T	propane	133.000	131.881	0.8	102	0.00
6	T	n-butane	133.000	132.280	0.5	103	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	13899.853	-4.5	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50833.D RSKEXT1.M Fri Oct 07 08:46:14 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50833.D\FID1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50833.D\TCD2B.CH
Acq On : 06 Oct 2016 17:24 Operator: JDS
Sample : WG586611-02 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50833.D RSKEXT1.M Fri Oct 07 08:46:14 2016 Page 2

Signal #1 : C:\MSDchem\1\DATA\100616\16G50839.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDchem\1\DATA\100616\16G50839.D\TCD2B.CH
Acq On : 06 Oct 2016 18:32 Operator: JDS
Sample : WG586611-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 18:38:26 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

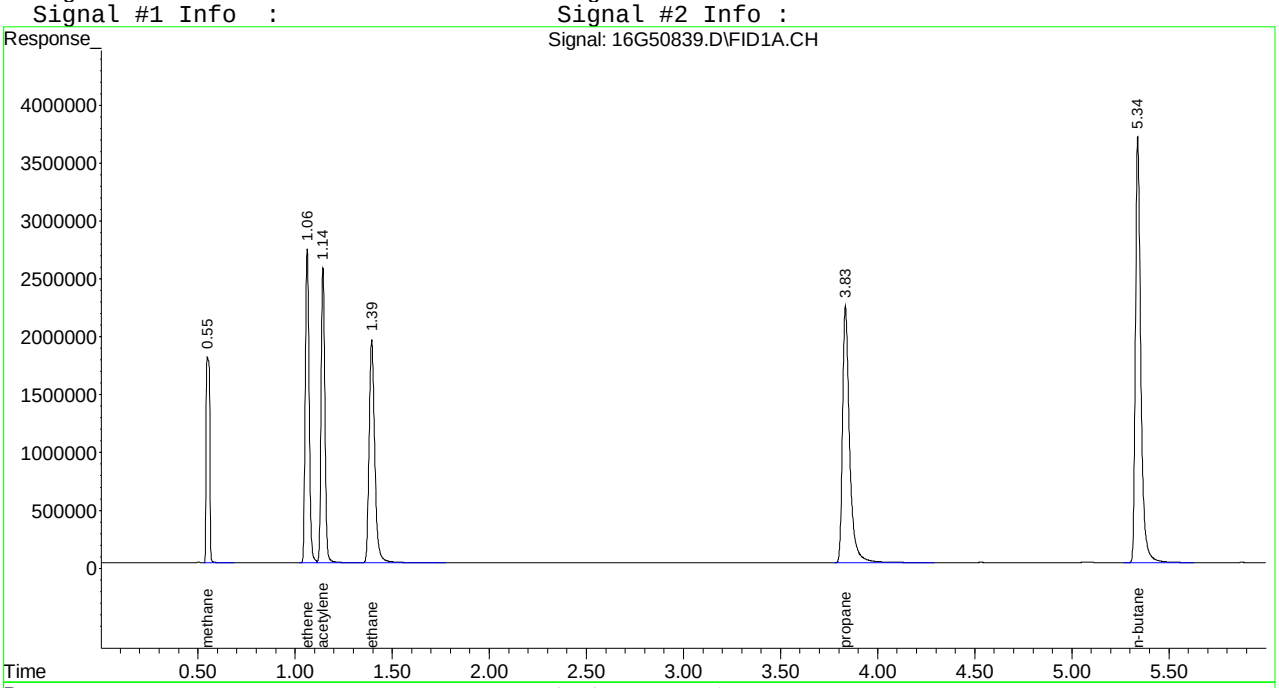
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	22748432	125.405 umol/
2) T	ethene	1.06	37481902	120.110 umol/
3) T	acetylene	1.14	35121755	112.473 umol/
4) T	ethane	1.39	38453047	120.569 umol/
5) T	propane	3.83	56373578	119.496 umol/
6) T	n-butane	5.34	71263883	116.558 umol/
8) T	carbon dioxide	0.20	63192609	11971.642 umol/

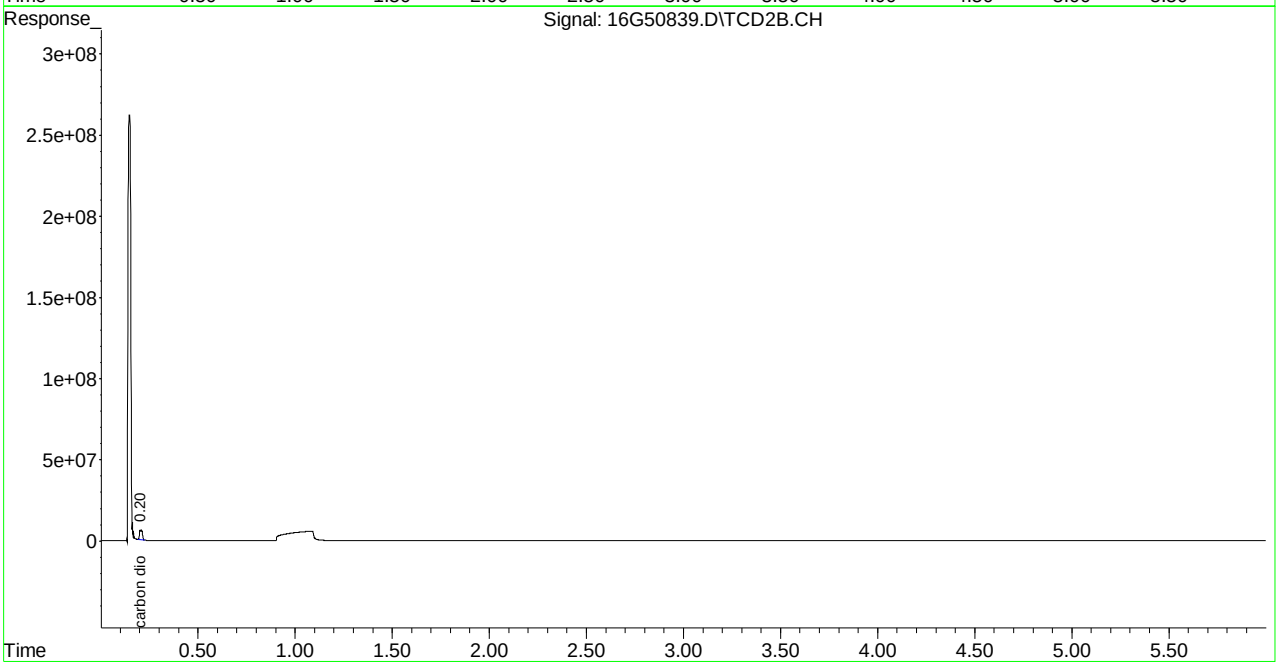
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50839.D RSKEXT1.M Thu Oct 06 18:38:26 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50839.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDchem\1\DATA\100616\16G50839.D\TCD2B.CH
Acq On : 06 Oct 2016 18:32 Operator: JDS
Sample : WG586611-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 18:38 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50839.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50839.D\TCD2B.CH
Acq On : 06 Oct 2016 18:32 Operator: JDS
Sample : WG586611-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	T	methane	133.000	125.405	5.7	97	0.00
2	T	ethene	133.000	120.110	9.7	94	0.00
3	T	acetylene	133.000	112.473	15.4#	88	0.00
4	T	ethane	133.000	120.569	9.3	94	0.00
5	T	propane	133.000	119.496	10.2	93	0.00
6	T	n-butane	133.000	116.558	12.4	91	0.00
		Signal #2					
8	T	carbon dioxide	13300.000	11971.642	10.0	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
16G50839.D RSKEXT1.M Fri Oct 07 08:46:21 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50839.D\FID1A.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50839.D\TCD2B.CH
Acq On : 06 Oct 2016 18:32 Operator: JDS
Sample : WG586611-03 133umol/mol CCV RSK175 Inst : HP16
Misc : 1,1 STD75351 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)

Signal #2

2.1.2.5 Raw QC Data

Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50805.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50805.D\TCD2B.CH
Acq On : 05 Oct 2016 17:40 Operator: JDS
Sample : WG586463-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 17:46:22 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

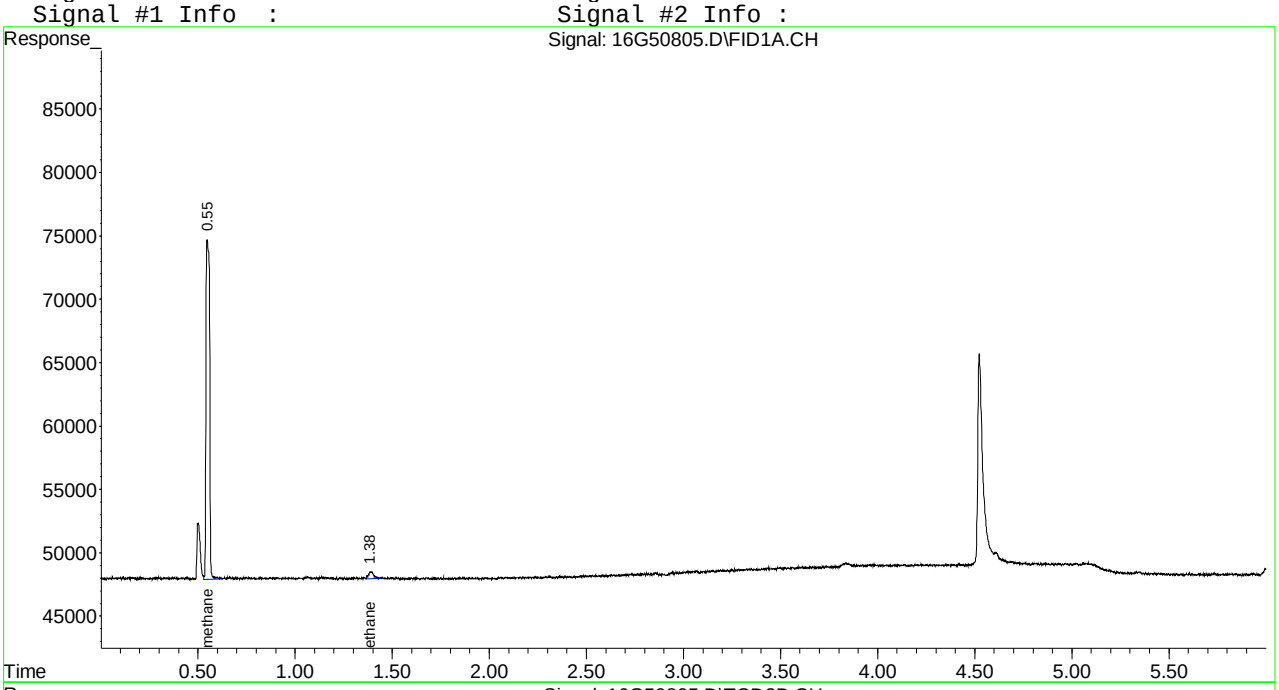
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	348247	0.319	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.39	10608	0.033	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.00	0	N.D.	umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50805.D RSKEXT1.M Thu Oct 06 08:57:22 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100516\16G50805.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\100516\16G50805.D\TCD2B.CH
Acq On : 05 Oct 2016 17:40 Operator: JDS
Sample : WG586463-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 17:46 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50823.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50823.D\TCD2B.CH
Acq On : 06 Oct 2016 15:17 Operator: JDS
Sample : WG586612-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 15:23:45 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

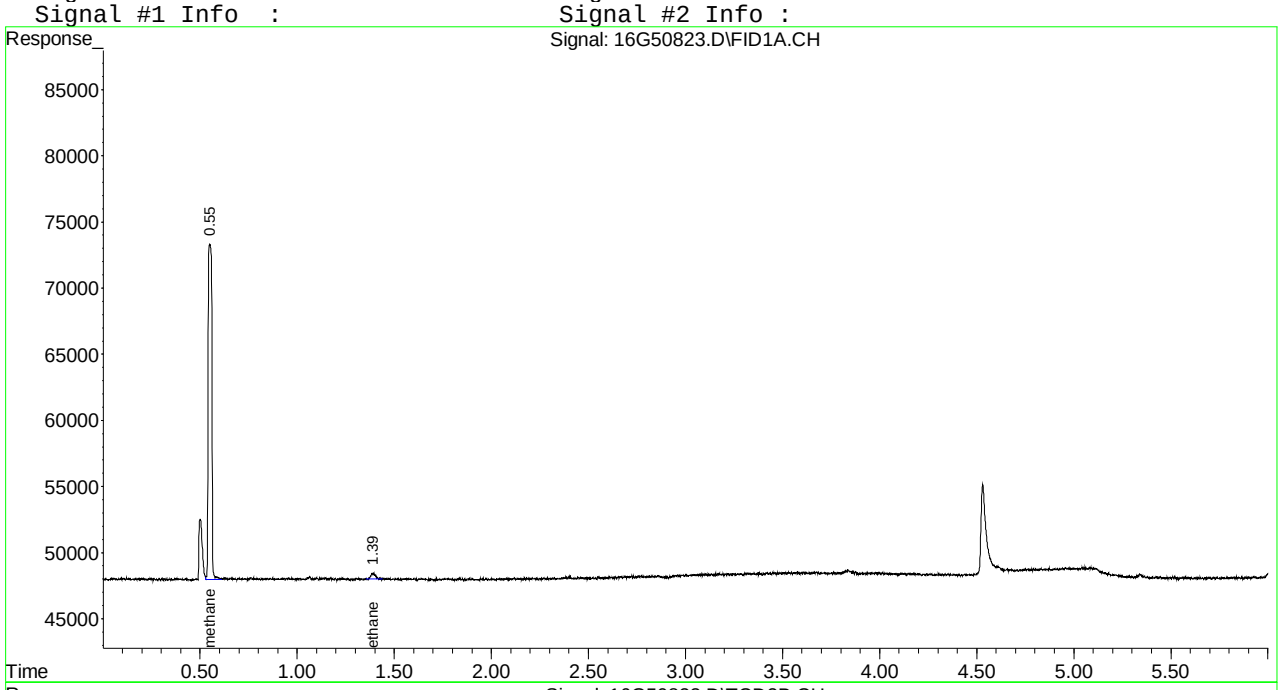
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1) T	methane	0.55	333141	0.235	umol/
2) T	ethene	0.00	0	N.D.	umol/
3) T	acetylene	0.00	0	N.D.	umol/
4) T	ethane	1.39	7210	0.023	umol/
5) T	propane	0.00	0	N.D.	umol/
6) T	n-butane	0.00	0	N.D.	umol/
8) T	carbon dioxide	0.00	0	N.D.	umol/

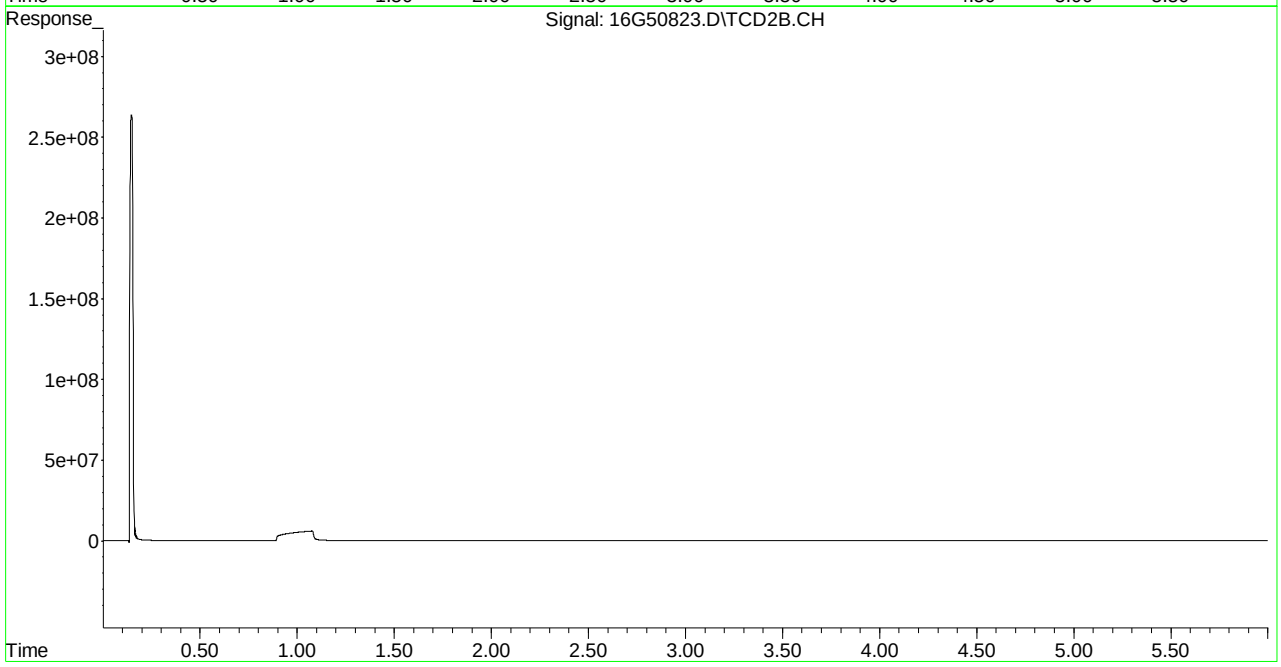
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50823.D RSKEXT1.M Thu Oct 06 15:47:31 2016 Page 1

Signal #1 : C:\MSDCHEM\1\DATA\100616\16G50823.D\FID1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\100616\16G50823.D\TCD2B.CH
Acq On : 06 Oct 2016 15:17 Operator: JDS
Sample : WG586612-01 BLANK RSK175 Inst : HP16
Misc : 1,1 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 15:23 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100516\16G50806.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\100516\16G50806.D\TCD2B.CH
Acq On : 05 Oct 2016 17:51 Operator: JDS
Sample : WG586463-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 17:57:25 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

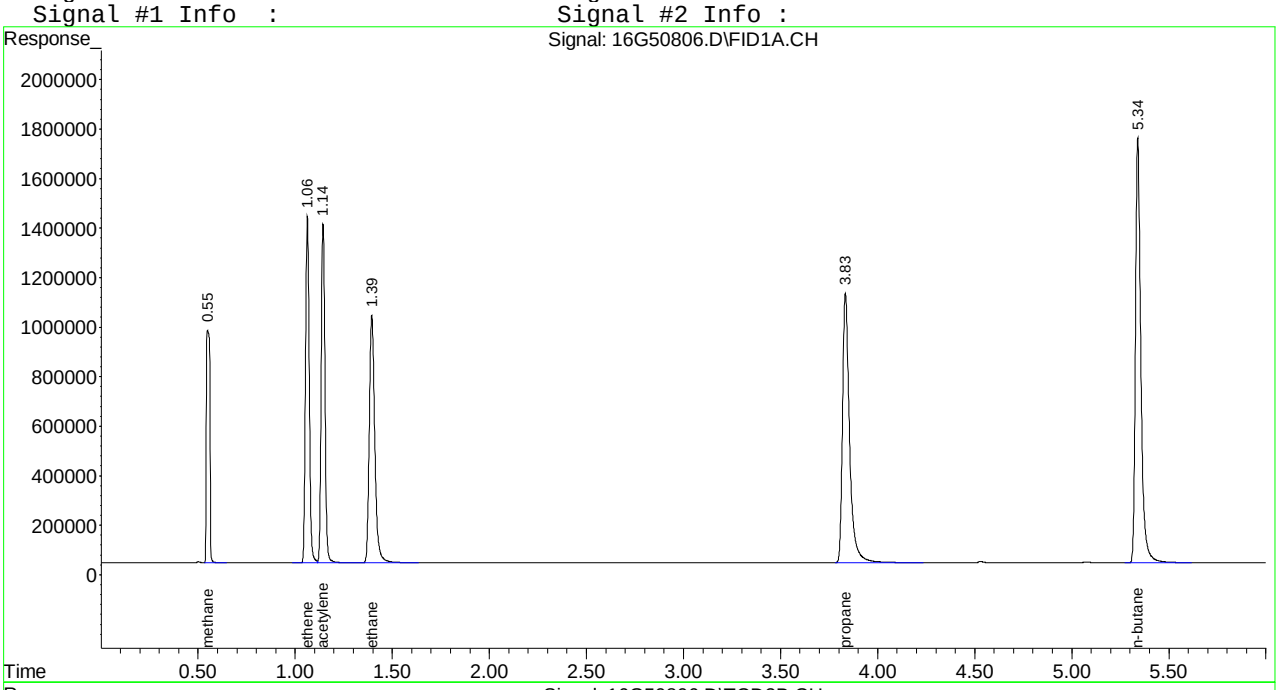
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	11987652	65.315 umol/
2) T	ethene	1.06	19071985	61.116 umol/
3) T	acetylene	1.14	18629238	59.658 umol/
4) T	ethane	1.39	19784328	62.034 umol/
5) T	propane	3.83	27646140	58.602 umol/
6) T	n-butane	5.34	33425477	54.670 umol/
8) T	carbon dioxide	0.21	27476834	5205.400 umol/

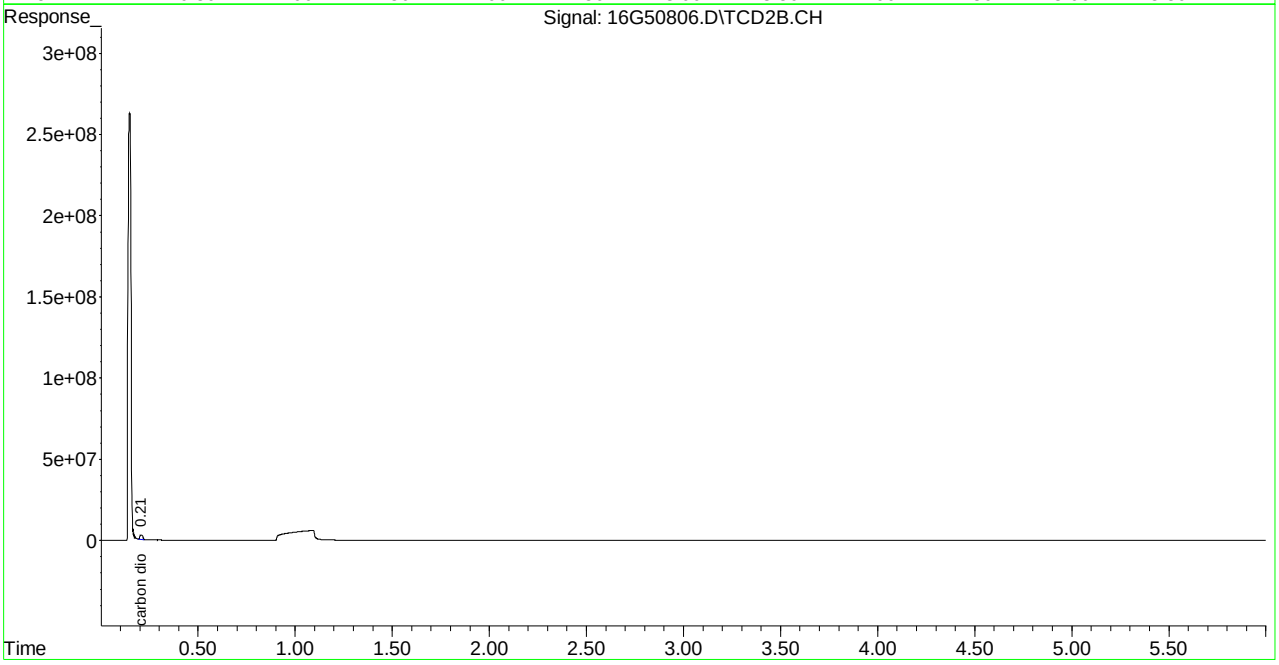
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50806.D RSKEXT1.M Wed Oct 05 17:57:25 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50806.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\100516\16G50806.D\TCD2B.CH
Acq On : 05 Oct 2016 17:51 Operator: JDS
Sample : WG586463-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 17:57 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100616\16G50824.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\100616\16G50824.D\TCD2B.CH
Acq On : 06 Oct 2016 15:29 Operator: JDS
Sample : WG586612-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 15:35:03 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

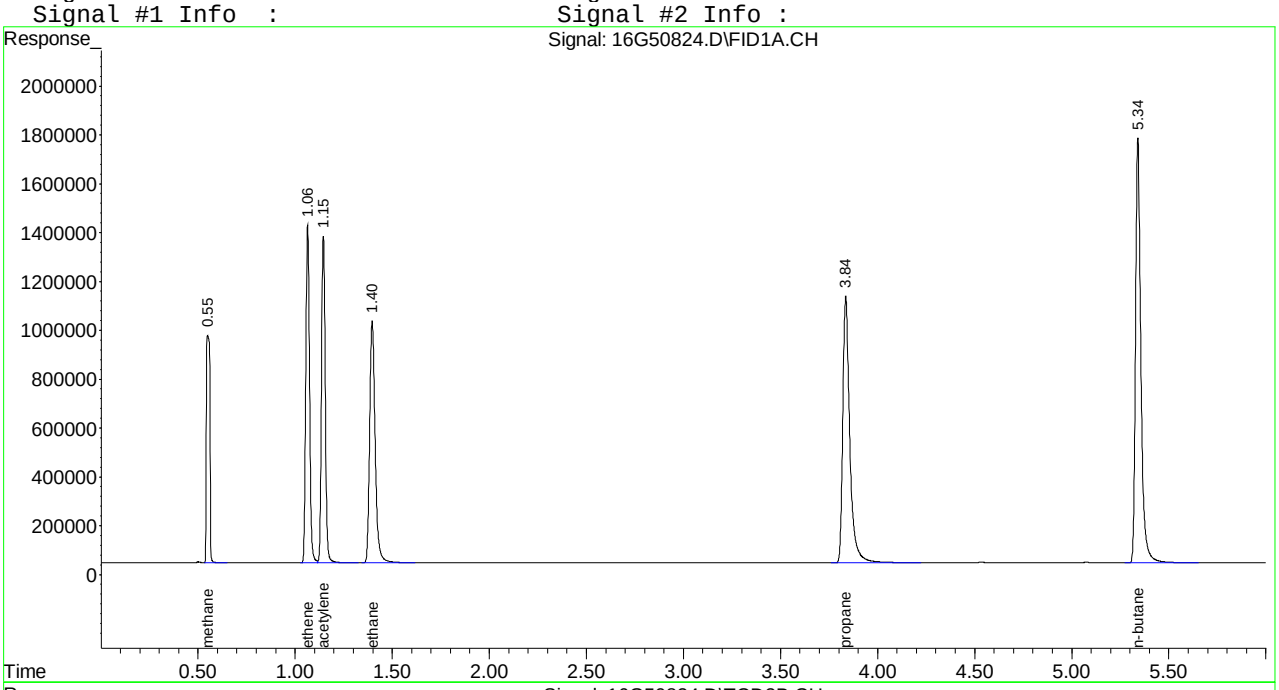
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	11834045	64.457 umol/
2) T	ethene	1.06	18878242	60.495 umol/
3) T	acetylene	1.15	18248363	58.438 umol/
4) T	ethane	1.40	19604479	61.470 umol/
5) T	propane	3.84	27567092	58.434 umol/
6) T	n-butane	5.34	33692266	55.106 umol/
8) T	carbon dioxide	0.20	27273812	5166.938 umol/

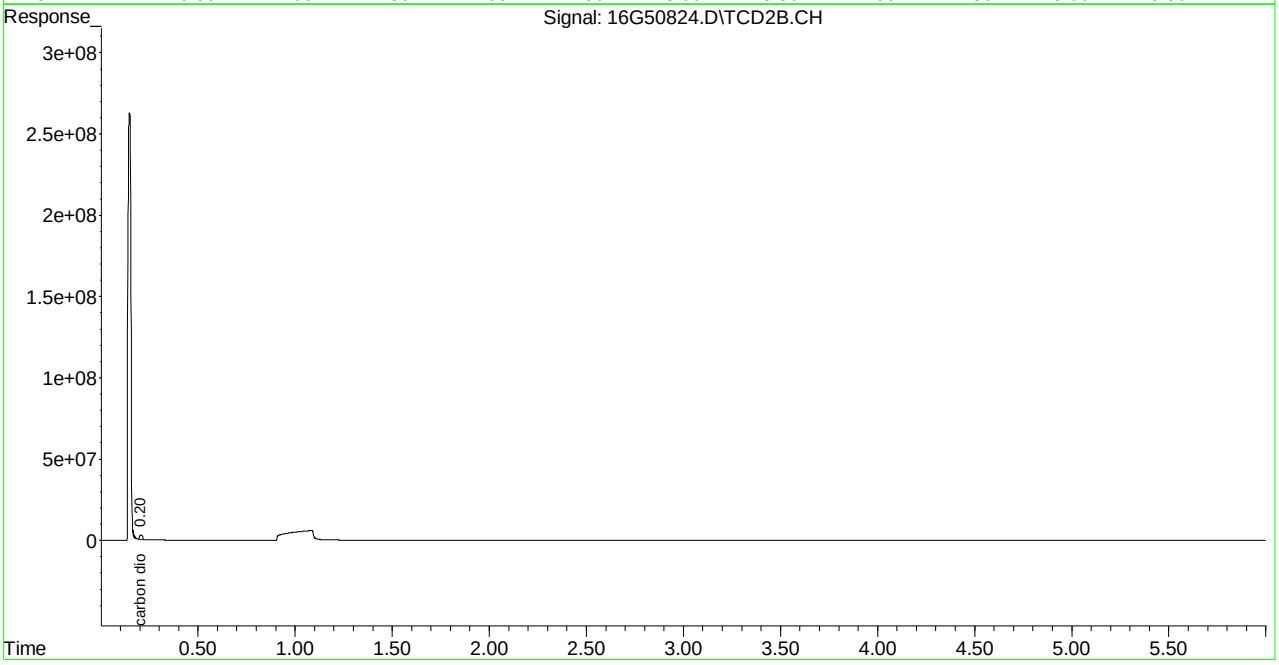
(f)=RT Delta > 1/2 Window (m)=manual int.
16G50824.D RSKEXT1.M Thu Oct 06 15:35:03 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50824.D\FID1A.CH Vial: 3
Signal #2 : C:\MSDchem\1\DATA\100616\16G50824.D\TCD2B.CH
Acq On : 06 Oct 2016 15:29 Operator: JDS
Sample : WG586612-02 67umol/mol LCS RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 15:35 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100516\16G50807.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\100516\16G50807.D\TCD2B.CH
Acq On : 05 Oct 2016 18:02 Operator: JDS
Sample : WG586463-03 67umol/mol LCS2 RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 05 18:09:04 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

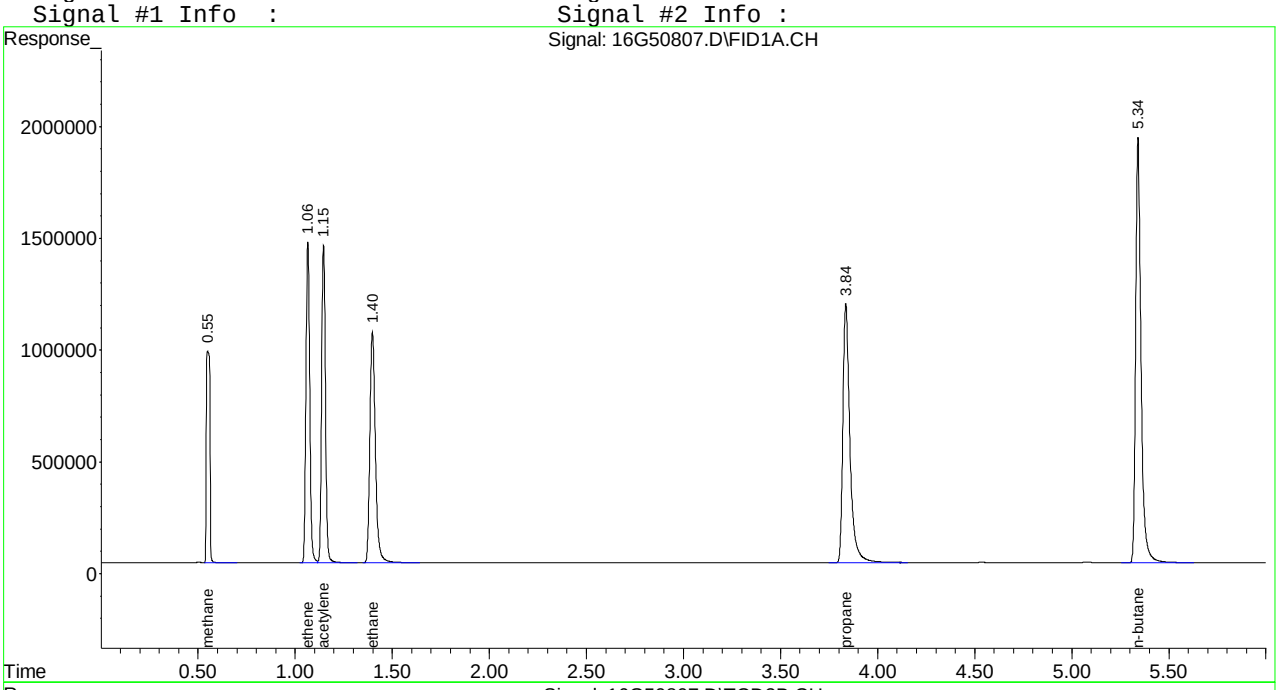
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	12282673	66.963 umol/
2) T	ethene	1.07	19836812	63.567 umol/
3) T	acetylene	1.15	19620509	62.832 umol/
4) T	ethane	1.40	20624380	64.668 umol/
5) T	propane	3.84	29430619	62.385 umol/
6) T	n-butane	5.34	36807478	60.202 umol/
8) T	carbon dioxide	0.20	27789282	5264.592 umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50807.D RSKEXT1.M Wed Oct 05 18:09:04 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100516\16G50807.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\100516\16G50807.D\TCD2B.CH
Acq On : 05 Oct 2016 18:02 Operator: JDS
Sample : WG586463-03 67umol/mol LCS2 RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 5 18:09 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Signal #1 : C:\MSDchem\1\DATA\100616\16G50825.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\100616\16G50825.D\TCD2B.CH
Acq On : 06 Oct 2016 15:40 Operator: JDS
Sample : WG586612-03 67umol/mol LCS2 RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 06 15:46:11 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Initial Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

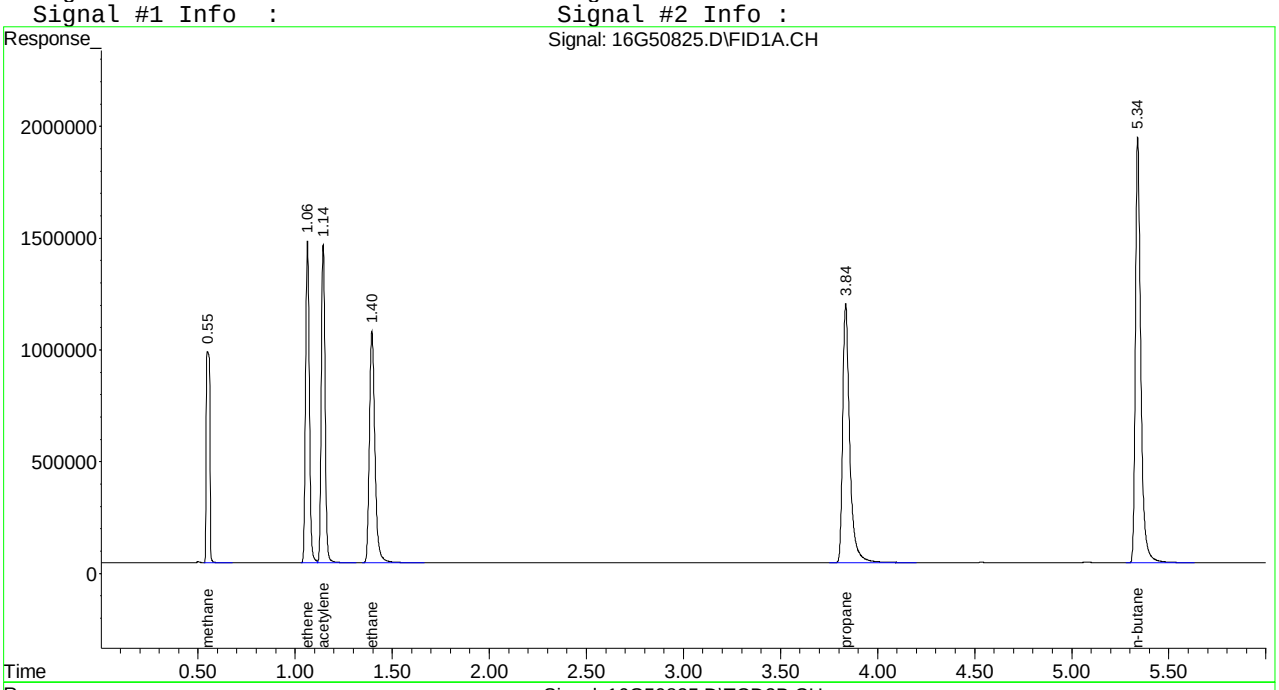
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1) T	methane	0.55	12295392	67.034 umol/
2) T	ethene	1.06	19779607	63.383 umol/
3) T	acetylene	1.14	19513246	62.489 umol/
4) T	ethane	1.40	20582999	64.538 umol/
5) T	propane	3.84	29415018	62.352 umol/
6) T	n-butane	5.34	37123390	60.718 umol/
8) T	carbon dioxide	0.20	33973929	6436.255 umol/

(f)=RT Delta > 1/2 Window (m)=manual int.
16G50825.D RSKEXT1.M Thu Oct 06 15:46:11 2016 Page 1

Signal #1 : C:\MSDchem\1\DATA\100616\16G50825.D\FID1A.CH Vial: 4
Signal #2 : C:\MSDchem\1\DATA\100616\16G50825.D\TCD2B.CH
Acq On : 06 Oct 2016 15:40 Operator: JDS
Sample : WG586612-03 67umol/mol LCS2 RSK175 Inst : HP16
Misc : 1,1 STD68250 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E
Quant Time: Oct 6 15:46 2016 Quant Results File: RSKEXT1.RES

Quant Method : C:\MSDCHEM\1\METHODS\RSKEXT1.M (Chemstation Integrator)
Title : RSK175 HP16 (SOP: OVL RSK01) 032516
Last Update : Fri Mar 25 13:38:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : RSKEXT1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





2.2 Semivolatiles Data

2.2.1 Metabolic Acids HPLC Data (830-MBA)

2.2.1.1 Summary Data

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC4
Client ID:	35AWW09-100316	**Prep Method:**	830-MBA	**Prep Date:**	10/14/2016 15:00
Matrix:	Water	**Analytical Method:**	830-MBA	**Cal Date:**	06/22/2016 20:08
Workgroup #:	WG587720	**Analyst:**	JWR	**Run Date:**	10/15/2016 00:47
Collect Date:	10/03/2016 08:25	**Dilution:**	1	**File ID:**	4L028480.F
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Pyruvic Acid	127-17-3	0.100	U	0.200	0.100	0.0500
Lactic Acid	50-21-5	1.00	U	2.00	1.00	0.500
Acetic Acid	64-19-7	1.00	U	2.00	1.00	0.500
Propionic Acid	79-09-4	10.0	U	20.0	10.0	5.00
Butyric Acid	107-92-6	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

Certificate of Analysis

Sample #:	L16100123-13	**PrePrep Method:**	N/A	**Instrument:**	HPLC4
Client ID:	35AWW10FF-100316	**Prep Method:**	830-MBA	**Prep Date:**	10/14/2016 15:00
Matrix:	Water	**Analytical Method:**	830-MBA	**Cal Date:**	06/22/2016 20:08
Workgroup #:	WG587720	**Analyst:**	JWR	**Run Date:**	10/15/2016 02:09
Collect Date:	10/03/2016 09:40	**Dilution:**	1	**File ID:**	4L028481.F
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Pyruvic Acid	127-17-3	0.100	U	0.200	0.100	0.0500
Lactic Acid	50-21-5	1.00	U	2.00	1.00	0.500
Acetic Acid	64-19-7	1.00	U	2.00	1.00	0.500
Propionic Acid	79-09-4	10.0	U	20.0	10.0	5.00
Butyric Acid	107-92-6	1.00	U	2.00	1.00	0.500

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

Microbac

Lab Report #: L16100123
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Adriane Steed

2.2.1.2 QC Summary Data

Example 830-MBA Calculations

1.0 Calculating the Calibration Factor (CF) from the initial calibration (ICAL) data:

$$CF = \frac{C_s}{A_s}$$

where:	Example:
A_s = Area of the compound being measured in the standard	10000
C_s = Concentration of the compound being measured (ng/mL)	100
	CF = 0.01

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:*

$$C = \frac{(A_x)(V_f)(D)(CF)(1000)}{V_i}$$

where:	Example:
A_x = Area of the compound being measured	10000
V_f = Final volume of sample extract (mL). (prep log)	1
D = Dilution factor for sample as a multiplier (10X = 10)	1
CF = Calibration factor from ICAL calculated above	0.01
V_i = Initial volume of sample (mL). (prep log)	1000
	C ($\mu g/l$) = 0.1

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:*

$$C = \frac{(A_x)(V_f)(D)(CF)}{V_i}$$

where:	Example:
A_x = Area of the compound being measured	10000
V_f = Final volume of sample extract (mL). (prep log)	1
D = Dilution factor for sample as a multiplier (10X = 10)	1
CF = Calibration factor from ICAL calculated above	0.01
W_i = Initial weight of sample (g). (prep log)	30
	C ($\mu g/l$) = 3.333333

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

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC4 Dataset: 062216
Analyst1: JWR Analyst2: NA
Method: 830-MBA SOP: HPLC03 Rev: 9

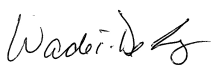
Maintenance Log ID: Syringe Filter Lot#: 00198584
Eluent ID#: RGT37008
Column 1 ID: REZEX ROA Column 2 ID: NA
Workgroups: Analytical WG572899
Internal STD: NA Surrogate STD: NA Calibration STD STD74825 (06/22/2016)
CCV STD: STD74825 LCS STD: STD74828 MS/MSD STD: STD74828

Comments: System backpressure = 34bar
ICAL WG573731 : Alternate Source STD74828
Analytical Column : Rezex ROA-Organic Acid H+ (8%) (250x4.6mm)
Phenomenex S/N H16-146938
Metabolic Acids Resolved : Pyruvic, Lactic, Acetic, Propionic and Butyric

Samples L16060492-01 and L16060564(-01,-03,-05,-07) are brines. Due to an unknown component within their sample matrices, all "brine" samples were analyzed at a 100x dilution in order to prevent irreversible damage to the analytical column.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4L027942.F	WG573731-01 STD	1	1	STD74825	06/22/16 13:19
2	4L027943.F	WG573731-02 STD	1	1	STD74825	06/22/16 14:40
3	4L027944.F	WG573731-03 STD-CCV	1	1	STD74825	06/22/16 16:02
4	4L027945.F	WG573731-04 STD	1	1	STD74825	06/22/16 17:24
5	4L027946.F	WG573731-05 STD	1	1	STD74825	06/22/16 18:46
6	4L027947.F	WG573731-06 STD	1	1	STD74825	06/22/16 20:08
7	4L027948.F	WG573731-07 SSCV	1	1	STD74828	06/22/16 21:30
8	4L027949.F	WG572899-01 BLK	1	1		06/22/16 22:52
9	4L027950.F	WG572899-02 LCS	1	1	STD74828	06/23/16 00:14
10	4L027951.F	L16060274-21	1	1		06/23/16 01:35
11	4L027952.F	L16060274-21 (5x)	1	5		06/23/16 02:57
12	4L027953.F	L16060274-22	1	1		06/23/16 04:19
13	4L027954.F	L16060274-22 (5x)	1	5		06/23/16 05:41
14	4L027955.F	L16060274-23	1	1		06/23/16 07:03
15	4L027956.F	L16060274-23 (5x)	1	5		06/23/16 08:25
16	4L027957.F	L16060274-24	1	1		06/23/16 09:47
17	4L027958.F	L16060274-24 (5x)	1	5		06/23/16 11:08
18	4L027959.F	WG573278-01 CCV	1	1	STD74825	06/23/16 12:30
19	4L027960.F	L16060274-25	1	1		06/23/16 13:52
20	4L027961.F	L16060274-26	1	1		06/23/16 15:14
21	4L027962.F	L16060596-01	1	1		06/23/16 16:36
22	4L027963.F	L16060596-12	1	1		06/23/16 17:58
23	4L027964.F	L16060596-13	1	1		06/23/16 19:20
24	4L027965.F	L16060655-01	1	1		06/23/16 20:42
25	4L027966.F	L16060655-02	1	1		06/23/16 22:04
26	4L027967.F	L16060655-03	1	1		06/23/16 23:25
27	4L027968.F	L16060814-01	1	1		06/24/16 00:47
28	4L027969.F	L16060814-02	1	1		06/24/16 02:09
29	4L027970.F	WG573278-02 CCV	1	1	STD74825	06/24/16 03:31

Page: 1 Approved: 28-JUN-16



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC4 Dataset: 062216
Analyst1: JWR Analyst2: NA
Method: 830-MBA SOP: HPLC03 Rev: 9

Maintenance Log ID: Syringe Filter Lot#: 00198584
Eluent ID#: RGT37008
Column 1 ID: REZEX ROA Column 2 ID: NA
Workgroups: Analytical WG572899
Internal STD: NA Surrogate STD: NA STD74825 (06/22/2016)
CCV STD: STD74825 LCS STD: STD74828 STD74828

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
30	4L027971.F	L16060814-03	1	1		06/24/16 04:53
31	4L027972.F	L16060492-01 (100x)	1	100		06/24/16 06:15
32	4L027973.F	L16060564-01 RS (100x)	1	100		06/24/16 07:37
33	4L027974.F	L16060564-03 (100x)	1	100		06/24/16 08:59
34	4L027975.F	L16060564-05 MS (100x)	1	100	STD74828	06/24/16 10:20
35	4L027976.F	L16060564-07 MSD (100x)	1	100	STD74828	06/24/16 11:42
36	4L027977.F	WG573278-03 CCV	1	1	STD74825	06/24/16 13:04

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10	X	5	Over Calibration Range	acetic
	L16060274-21			
12	X	5	Over Calibration Range	acetic
	L16060274-22			
14	X	5	Over Calibration Range	acetic
	L16060274-23			
16	X	5	Over Calibration Range	acetic
	L16060274-24			
34				
	L16060564-05 MS (100x) : The MS %Rec for all analytes is zero. Due to the matrix of this sample (brine) and the dilution required to safely inject it across the HPLC's analytical column, the spiked amount added to this MS has been diluted below the method detection limit.			
35				
	L16060564-07 MSD (100x) : The MSD %Rec for all analytes is zero. Due to the matrix of this sample (brine) and the dilution required to safely inject it across the HPLC's analytical column, the spiked amount added to this MSD has been diluted below the method detection limit.			

Page: 2 Approved: 28-JUN-16

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC4 Dataset: 101416
Analyst1: JWR Analyst2: NA
Method: 830-MBA SOP: HPLC03 Rev: 9

Maintenance Log ID: Syringe Filter Lot#: 00218000
Eluent ID#: RGT38080
Column 1 ID: REZEX ROA Column 2 ID: NA
Workgroups: Analytical WG587720
Internal STD: NA Surrogate STD: NA Calibration STD STD74825 (06/22/2016)
CCV STD: STD74825 LCS STD: STD74828 MS/MSD STD: NA

Comments: System backpressure = 32bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4L028473.F	WG587724-01 CCV	1	1	STD74825	10/14/16 15:36
2	4L028474.F	WG587720-01 BLK	1	1		10/14/16 16:36
3	4L028475.F	WG587720-02 LCS	1	1	STD74828	10/14/16 17:57
4	4L028476.F	WG587720-03 LCS2	1	1	STD74828	10/14/16 19:19
5	4L028477.F	L16100004-01 LOQ	1	1	STD76554	10/14/16 20:41
6	4L028478.F	L16100004-08 LOQ	1	1	STD76554	10/14/16 22:03
7	4L028479.F	L16100002-01 LOD	1	1	STD76554	10/14/16 23:25
8	4L028480.F	L16100123-11	1	1		10/15/16 00:47
9	4L028481.F	L16100123-13	1	1		10/15/16 02:09
10	4L028482.F	WG587724-02 CCV	1	1	STD74825	10/15/16 03:31
11	4L028483.F	L16100194-14	1	1		10/15/16 04:52
12	4L028484.F	L16100194-14 10x (NR)	1	10		10/15/16 06:14
13	4L028485.F	L16100194-12	1	1		10/15/16 07:36
14	4L028486.F	L16100194-12 10x	1	10		10/15/16 08:58
15	4L028487.F	L16100194-12 100x (NR)	1	100		10/15/16 10:20
16	4L028488.F	L16100194-12 1000x (NR)	1	1000		10/15/16 11:42
17	4L028489.F	WG587724-03 CCV	1	1	STD74825	10/15/16 13:04

Comments

Seq.	Rerun	Dil.	Reason	Analytes
12				
	L16100194-14 10x (NR) : Not needed or reported.			
13	X	10	Over Calibration Range	Acetic Acid
	L16100194-12			
15				
	L16100194-12 100x (NR) : The results from this sample dilution are not needed.			
16				
	L16100194-12 1000x (NR) : The results from this sample dilution are not needed.			

Page: 1 Approved: 17-OCT-16

Microbac Laboratories Inc.

Data Checklist

Date: 22-JUN-2016
Analyst: JWR
Analyst: NA
Method: 830-MBA
Instrument: HPLC4
Curve Workgroup: WG573731
Runlog ID: 75956
Analytical Workgroups: L16060274(21-26), 0492, 0564, 0596, 0655, 0814

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	34 BAR
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 (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	ND
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	DL@100X
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
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	WTD

Primary Reviewer:
27-JUN-2016
John Richards

Secondary Reviewer:
28-JUN-2016
Wadei D

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-28-2016 11:59:02

Microbac

Microbac Laboratories Inc.

Data Checklist

Date: 14-OCT-2016
Analyst: JWR
Analyst: NA
Method: 830-MBA
Instrument: HPLC4
Curve Workgroup: NA
Runlog ID: 78118
Analytical Workgroups: L16100002, L16100004, L16100123, L16100194

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	32 BAR
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 (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	ND
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
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	ECL

Primary Reviewer:
17-OCT-2016



Secondary Reviewer:
17-OCT-2016



CHECKLIST1 - Modified 03/05/2008
Generated: OCT-17-2016 15:53:42

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 830-MBA AAB#: WG587720

Login Number: L16100123

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
35AWW09-100316	11	10/03/16					10/14/2016	11.3	28		10/15/16	11.7	28	
35AWW10FF-100316	13	10/03/16					10/14/2016	11.2	28		10/15/16	11.7	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4979726
Report generated 10/17/2016 15:59

METHOD BLANK SUMMARY

Login Number: L16100123
Blank File ID: 4L028474.F
Prep Date: 10/14/16 15:00
Analyzed Date: 10/14/16 16:36
Analyst: JWR

Work Group: WG587720
Blank Sample ID: WG587720-01
Instrument ID: HPLC4
Method: 830-MBA

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG587720-02	4L028475.F	10/14/16 17:57	01
LCS2	WG587720-03	4L028476.F	10/14/16 19:19	01
35AWW09-100316	L16100123-11	4L028480.F	10/15/16 00:47	01
35AWW10FF-100316	L16100123-13	4L028481.F	10/15/16 02:09	01

Report Name: BLANK_SUMMARY
PDF File ID: 4979727
Report generated 10/17/2016 15:59

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L16100123 Prep Date:10/14/16 15:00 Sample ID:WG587720-01
Instrument ID:HPLC4 Run Date:10/14/16 16:36 Prep Method:830-MBA
File ID:4L028474.F Analyst:JWR Method:830-MBA
Workgroup (AAB#):WG587720 Matrix:Water Units:mg/L
Contract #: Cal ID: HPLC4-22-JUN-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Pyruvic Acid	0.0500	0.200	0.0500	1	U
Lactic Acid	0.500	2.00	0.500	1	U
Acetic Acid	0.500	2.00	0.500	1	U
Propionic Acid	5.00	20.0	5.00	1	U
Butyric Acid	0.500	2.00	0.500	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: 4979728
17-OCT-2016 15:59

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16100123 Analyst: JWR Prep Method: 830-MBA
Instrument ID: HPLC4 Matrix: Water Method: 830-MBA
Workgroup (AAB#): WG587720 Units: mg/L
QC Key: DOD4 Lot #: STD74828

Sample ID: WG587720-02 LCS File ID: 4L028475.F Run Date: 10/14/2016 17:57
Sample ID: WG587720-03 LCS2 File ID: 4L028476.F Run Date: 10/14/2016 19:19

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Pyruvic Acid	2.00	2.00	100	2.00	1.98	99.2	0.997	90 - 110	30	
Lactic Acid	20.0	20.1	100	20.0	20.1	100	0.0504	90 - 110	30	
Acetic Acid	20.0	19.9	99.6	20.0	19.9	99.4	0.240	90 - 110	30	
Propionic Acid	20.0	19.6	97.9	20.0	19.4	97.2	0.700	80 - 115	30	
Butyric Acid	20.0	19.8	99.2	20.0	19.7	98.7	0.484	90 - 110	30	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 4979729
Report generated: 10/17/2016 15:59

Microbac Laboratories Inc.
INITIAL CALIBRATION SUMMARY

Login Number: L16100123
Analytical Method: 830-MBA
ICAL Workgroup: WG573731

Instrument ID: HPLC4
Initial Calibration Date: 22-JUN-16 20:08
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Acetic Acid		0.08878	2.35	1.00000	
Butyric Acid		0.09831	7.19	1.00000	
Lactic Acid		0.07294	3.83	1.00000	
Propionic Acid		0.06437	42.2	1.00000	
Pyruvic Acid		0.006222	0.755	1.00000	

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

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 4979812
Report generated 10/17/2016 15:59

Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L16100123
Analytical Method: 830-MBA
Instrument ID: HPLC4
Initial Calibration Date: 22-JUN-16 20:08
Column ID: F

Analyte	WG573731-01			WG573731-02			WG573731-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Acetic Acid	100	1145.84753	0.08727	50.0	572.967407	0.08726	20.0	225.484558	0.08870
Butyric Acid	100	984.851563	0.1015	50.0	496.632324	0.1007	20.0	196.234146	0.1019
Lactic Acid	100	1401.77185	0.07134	50.0	704.694458	0.07095	20.0	279.492798	0.07156
Propionic Acid	100	1129.17480	0.08856	50.0	614.135986	0.08142	20.0	298.063751	0.06710
Pyruvic Acid	10.0	1618.64111	0.006178	5.00	811.448669	0.006162	2.00	319.983124	0.006250

INT_CAL - Modified 03/06/2008
PDF File ID: 4979812
Report generated 10/17/2016 15:59

Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L16100123
Analytical Method: 830-MBA
Instrument ID: HPLC4
Initial Calibration Date: 22-JUN-16 20:08
Column ID: F

Analyte	WG573731-04			WG573731-05			WG573731-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Acetic Acid	10.0	113.201271	0.08834	5.00	56.7593842	0.08809	1.00	10.7492218	0.09303
Butyric Acid	10.0	99.4759064	0.1005	5.00	50.1386337	0.09972	1.00	11.7016792	0.08546
Lactic Acid	10.0	135.031937	0.07406	5.00	70.1268311	0.07130	1.00	12.7445965	0.07846
Propionic Acid	10.0	197.190826	0.05071	5.00	146.799454	0.03406		117.224258	
Pyruvic Acid	1.00	159.047607	0.006287	0.500	80.4337311	0.006216	0.100	16.0237904	0.006241

INT_CAL - Modified 03/06/2008
PDF File ID: 4979812
Report generated 10/17/2016 15:59

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L16100123 Run Date: 06/22/2016 Sample ID: WG573731-07
Instrument ID: HPLC4 Run Time: 21:30 Method: 830-MBA
File ID: 4L027948.F Analyst: JWR QC Key: DOD4
ICal Workgroup: WG573731 Cal ID: HPLC4 - 22-JUN-16

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Pyruvic Acid		2.00	1.98	mg/L	0.00628	1.20	20	
Lactic Acid		20.0	19.8	mg/L	0.0722	0.900	20	
Acetic Acid		20.0	19.7	mg/L	0.0890	1.50	20	
Propionic Acid		20.0	20.3	mg/L	0.0657	1.60	20	
Butyric Acid		20.0	19.6	mg/L	0.103	2.00	20	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 4979813
Report generated 10/17/2016 15:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/14/2016 Sample ID: WG587724-01
Instrument ID: HPLC4 Run Time: 15:36 Method: 830-MBA
File ID: 4L028473.F Analyst: JWR QC Key: DOD4
Workgroup (AAB#): WG587720 Cal ID: HPLC4 - 22-JUN-16
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Pyruvic Acid		2.00	2.00	mg/L	0.00620	0.0551	20	
Lactic Acid		20.0	20.0	mg/L	0.0715	0.136	20	
Acetic Acid		20.0	19.9	mg/L	0.0881	0.422	20	
Propionic Acid		20.0	19.4	mg/L	0.0679	3.13	20	
Butyric Acid		20.0	19.8	mg/L	0.102	0.990	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 4979730
Report generated 10/17/2016 15:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16100123 Run Date: 10/15/2016 Sample ID: WG587724-02
Instrument ID: HPLC4 Run Time: 03:31 Method: 830-MBA
File ID: 4L028482.F Analyst: JWR QC Key: DOD4
Workgroup (AAB#): WG587720 Cal ID: HPLC4 - 22-JUN-16
Matrix: WATER

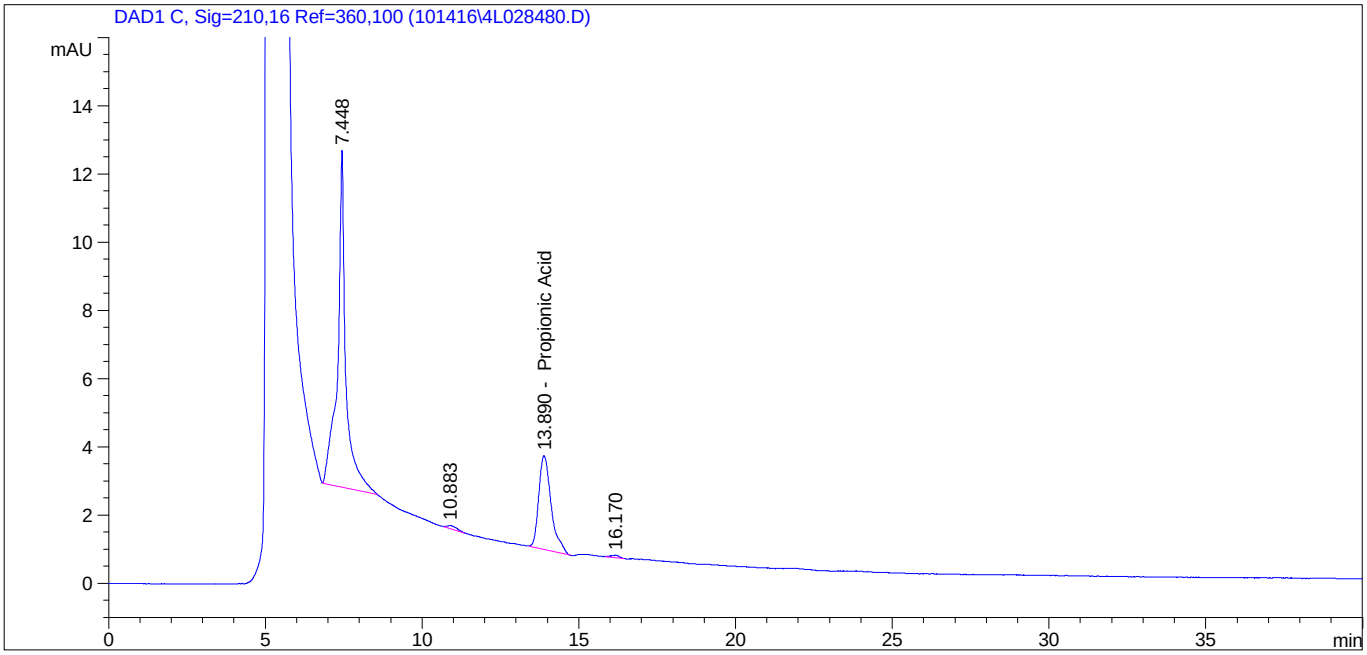
Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Pyruvic Acid		2.00	1.94	mg/L	0.00640	3.18	20	
Lactic Acid		20.0	20.1	mg/L	0.0712	0.577	20	
Acetic Acid		20.0	19.8	mg/L	0.0886	1.00	20	
Propionic Acid		20.0	19.1	mg/L	0.0686	4.62	20	
Butyric Acid		20.0	19.8	mg/L	0.102	0.938	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 4979730
Report generated 10/17/2016 15:59

2.2.1.3 Sample Data

```
==========================================================================
Injection Date  : 10/15/2016 12:47:15 AM        Seq. Line :   8
Sample Name     : L16100123-11                   Location : Vial 8
Acq. Operator   : JWR                                Inj :   1
Acq. Instrument : HPLC4                       Inj Volume : 80 µl
Acq. Method     : C:\HPCHEM\1\METHODS\830-MBA.M
Last changed    : 10/14/2016 4:32:03 PM by JWR
Analysis Method : C:\HPCHEM\1\METHODS\830-MBDA.M
Last changed    : 10/17/2016 1:17:05 PM by JWR
OVD-SOP#HPLC03: 830-MBA Calibration 06/22/2016
==========================================================================
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      10/14/2016 4:27:39 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [mg/L]
-------|------|---------|----------|----------|--|------------------
  7.662            -          -          -         Pyruvic Acid
 10.178            -          -          -         Lactic Acid
 11.894            -          -          -         Acetic Acid
 13.890 BBA      75.30685    0.00000    0.00000    Propionic Acid
 17.155            -          -          -         Butyric Acid

Totals :                                 0.00000

 Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (Propionic Acid)
```

1,1

==========

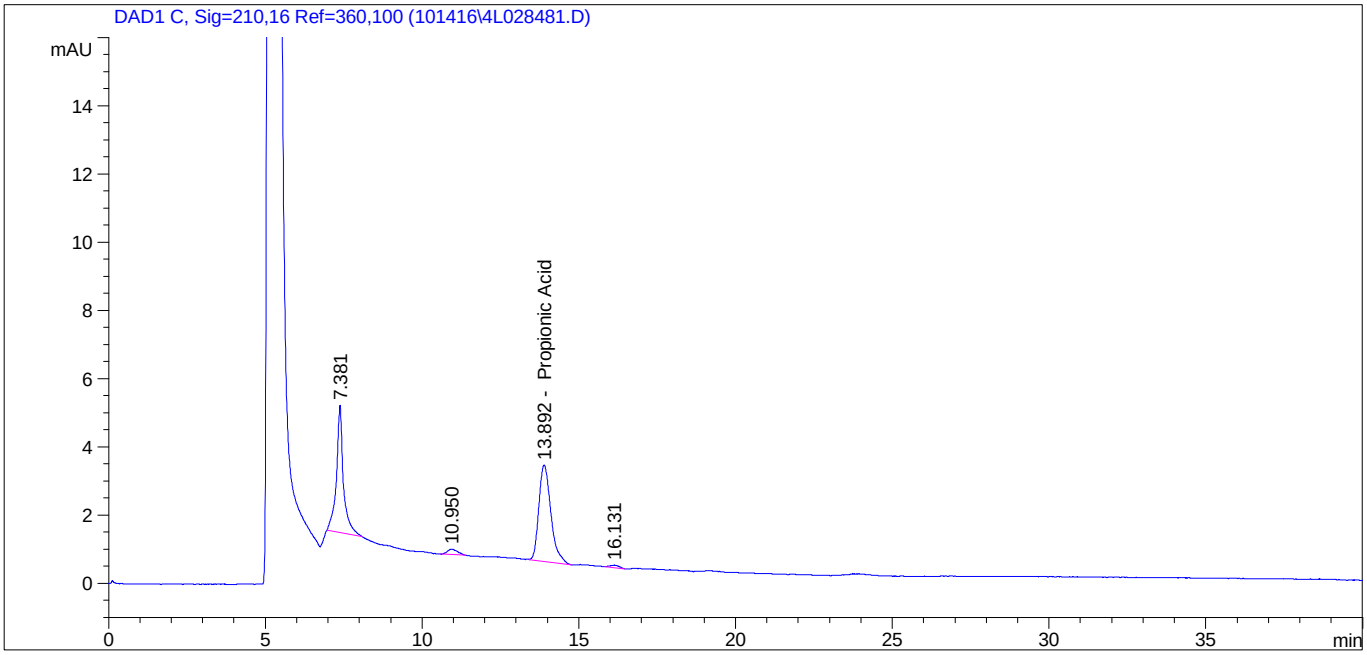
Injection Date : 10/15/2016 12:47:15 AM Seq. Line : 8
Sample Name : L16100123-11 Location : Vial 8
Acq. Operator : JWR Inj : 1
Acq. Instrument : HPLC4 Inj Volume : 80 µl
Acq. Method : C:\HPCHEM\1\METHODS\830-MBA.M
Last changed : 10/14/2016 4:32:03 PM by JWR
Analysis Method : C:\HPCHEM\1\METHODS\830-MBDA.M
Last changed : 10/17/2016 1:17:05 PM by JWR
OVD-SOP#HPLC03: 830-MBA Calibration 06/22/2016

==========

*** End of Report ***

1,1

```
==========================================================================
Injection Date  : 10/15/2016 2:09:06 AM          Seq. Line :   9
Sample Name     : L16100123-13                    Location : Vial 9
Acq. Operator   : JWR                                 Inj :   1
Acq. Instrument : HPLC4                         Inj Volume : 80 µl
Acq. Method     : C:\HPCHEM\1\METHODS\830-MBA.M
Last changed    : 10/14/2016 4:32:03 PM by JWR
Analysis Method : C:\HPCHEM\1\METHODS\830-MBDA.M
Last changed    : 10/17/2016 1:21:20 PM by JWR
OVD-SOP#HPLC03: 830-MBA Calibration 06/22/2016
==========================================================================
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      10/14/2016 4:27:39 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [mg/L]
-------|------|---------|----------|----------|--|------------------
  7.662            -          -          -         Pyruvic Acid
 10.178            -          -          -         Lactic Acid
 11.894            -          -          -         Acetic Acid
 13.892 BBA      75.38437    0.00000    0.00000    Propionic Acid
 17.155            -          -          -         Butyric Acid

Totals :                                 0.00000

 Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (Propionic Acid)
```

```
=====================================================================
Injection Date  : 10/15/2016 2:09:06 AM          Seq. Line :   9
Sample Name     : L16100123-13                    Location : Vial 9
Acq. Operator   : JWR                                  Inj :   1
Acq. Instrument : HPLC4                         Inj Volume : 80 µl
Acq. Method     : C:\HPCHEM\1\METHODS\830-MBA.M
Last changed    : 10/14/2016 4:32:03 PM by JWR
Analysis Method : C:\HPCHEM\1\METHODS\830-MBDA.M
Last changed    : 10/17/2016 1:21:20 PM by JWR
OVD-SOP#HPLC03: 830-MBA Calibration 06/22/2016
=====================================================================

=====================================================================
                          *** End of Report ***
```