M67001.AR.007033
MCB CAMP LEJEUNE
5090.3a

VALIDATED DATA PACKAGE, 50069-43, MCB CAMP LEJEUNE NC
9/16/2015
TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

5560 Corporate Exchange Court, SE
Grand Rapids, MI 49512 616.975.4500

TRANSMITTAL FORM

Date: September 16, 2015

Attention: Ms. Bianca Kleist

Project Name: 8012 CTO-WE2A Camp Lejeune SWMU 350

To: CH2M HILL
14120 Ballantyne Corporate Place
Suite 200
Charlotte, NC 28277
(704)-543-3274

SDG: 50069-43

Work Order(s): 1508466

WE ARE SENDING YOU:

By: ☐ US Mail ☒ FedEx ☐ Courier ☐ Other

ENCLOSED WITH THIS TRANSMITTAL: ☒

☐ Report(s) (Draft) ☐ Proposal

☒ Report(s) (Summary) ☐ Contract Documents

UNDER SEPARATE COVER: ☐

☐ QAPP Information

☐ Data Validation Package

QUANTITY	DESCRIPTION / DOCUMENT NAME
1	Summary Report for SDG 50069-43 for 8012 CTO-WE2A Camp Lejeune SWMU 350. This report consists of 77 pages with this transmittal form page one of the report.

THESE ARE TRANSMITTED AS CHECKED BELOW:

☒ Furnished As Requested ☒ For Review and Comment ☐ For Submittal To: _____

☐ For File ☐ As Corrected

REMARKS:

cc:

BY: Walt Roudebush
Project Chemist

TRIMATRIX LABORATORIES

DATA SUMMARY PACKAGE

Prepared for:

CH2M HILL - VA
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277

Project:

8012 CTO-WE2A Camp Lejeune SWMU 350

Sample Delivery Group (SDG):

50069-43

Prepared by:

TriMatrix Laboratories, Inc.
5560 Corporate Exchange Court SE
Grand Rapids, MI 49512-5503

Report Date:

September 10, 2015

Walter J. Roudebush, Project Chemist
roudebushw@trimatrixlabs.com

9/10/15
Approval Date

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CH2M HILL - VA
8012 CTO-WE2A Camp Lejeune SWMU 350

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A	**Field COC Records and Receiving Documentation**	**0016-0026**
B	**Internal COC Records**	**0027-0028**
C	**GC/MS Volatile Organics** • USEPA-8260B	**0029-0077** 0030-0077

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SDG CASE NARRATIVE

CH2M HILL - VA
8012 CTO-WE2A Camp Lejeune SWMU 350

SDG Executive Summary

This case narrative applies to samples received on August 27, 2015. All samples were scheduled for analysis in accordance with parameters outlined on the field chain of custody record, the TriMatrix bid form, and/or oral and written correspondence between CH2M HILL - VA and TriMatrix Laboratories, Inc.

Each sample receipt event was assigned a unique TriMatrix work order number. Sample receipt documentation is included in section A of this data package.

Project Technical Issues/Problems

Project-related data qualification designations, narrations, and reporting conventions are included in Attachment 1 - *Project Technical Narrative(s)*.

QA/QC Data Qualifications/Narrations

Quality assurance issues and/or quality control data qualifications and narrations related to the analysis and reporting of this SDG are presented in Attachment 2 - *Statement of Data Qualifications*. The absence of a statement page for a particular analyte group (*e.g.* Percent Solids) implies that no qualifying statements were generated for that analyte.

Data Review and Approval

All data was peer-reviewed by a second analyst, and then by appropriate data management staff against laboratory quality control requirements and project specifications. It was then reviewed and approved by the group supervisor/manager prior to further review by the project chemist.

Data Deliverables

This report relates only to the sample(s) as received. Estimates of analytical uncertainties for the test results contained within this report are available upon request. Test results are in compliance with the requirements of the DoD Quality Systems Manual for Environmental Laboratories Version 4.2, the National Environmental Laboratory Accreditation Conference (NELAC), and one or more of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/13-049-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003329); Kentucky DEP (AL123065/#0021); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/53116); North Carolina DNRE (#659); Virginia DCLS (#460153/7952); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-14-00305).

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

The data deliverables, both hardcopy and/or electronic (EDD), that comprise this data package are intended to comply with the documents referenced in the introductory section of this narrative. The EDD, if requested, will be issued separately from this hardcopy report. Hold time reports for each test procedure are presented following the CLP-like forms section of this report.

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SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1508466

TriMatrix Laboratories received the cooler(s) for this work order on August 27, 2015, at 08:20am. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and FedEx shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
SWMU350-GW06-15C-1	1508466-01	Ground Water	8/24/2015
SWMU350-GW48-30-15C-1	1508466-02	Ground Water	8/24/2015
SWMU350-GW49-30-15C-1	1508466-03	Ground Water	8/25/2015
SWMU350-EB-082515	1508466-04	Water	8/25/2015
SWMU350-GW47-30-15C-1	1508466-05	Ground Water	8/25/2015
SWMU350-GW48-18-15C-1	1508466-06	Ground Water	8/24/2015
SWMU350-GW49-18-15C-1	1508466-07	Ground Water	8/25/2015
SWMU350-GW47-18-15C-1	1508466-08	Ground Water	8/25/2015
SWMU350-GW47-18D-15C-1	1508466-09	Ground Water	8/25/2015
SWMU350-GW16-15C-1	1508466-10	Ground Water	8/25/2015
SWMU350-TB-082515	1508466-11	Water	8/25/2015

See the Project Correspondence section of Attachment 1 for any administrative issues that were encountered during the receipt and analysis of this work order.

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SDG CASE NARRATIVE

Attachment 1
Project Technical Narrative(s)

Sample Result Reporting Convention

Sample results are reported as LOD "U" (e.g. 0.001 U) if the target analyte was not detected at or above the detection limit (DL). The LOD is the Limit of Detection as defined in the DoD QSM and numerically determined by TriMatrix.

If a sample for an organic analyte is reanalyzed and also reported, the second analysis includes the suffix "RE*n*" where *n* = the first, second, etc. reanalysis. If a sample is reanalyzed for confirmation purposes but that confirmation was not performed simultaneously, the second set of sample results is reported on a second Form 1 since the confirmation analysis did not occur at the same time and/or date.

Percent Solids and Metals Data Reporting

Unless otherwise noted, all soil samples requiring metals analysis are dried at 50° to 60° C to a constant weight prior to acid digestion. In order to report results on a dry weight basis, correction for percent solids is not applicable.

Data Qualifier Designation

If applicable, sample results are qualified with:

a "U" flag as defined above;
a "J" flag if the analyte was detected, but the concentration is greater than the DL and less than the LOQ (the Limit of Quantitation as defined in the DoD QSM);
a "B" flag if the analyte was detected above one-half the LOQ (above the LOQ for a common laboratory contaminant) in the associated method blank, and the sample concentration was less than or equal to ten times the method blank result;
a "E" flag if the analyte exceeded the instrument calibration range;
a "N" flag for a non-target analyte identified as a tentatively identified compound using mass spectrometry;
a LIMS-generated statement of qualification that will be reported in Attachment 2 to this narrative.

Batch and Analytical Batch Designation

A Quality Control (QC) Batch is a seven-digit number that associates all samples that have been prepared together (or analyzed together if there is no preparation). Quality Control batches are limited to no more than twenty samples, excluding batch QC (method blanks, control spikes, etc.). Some batches may contain multiple sets of method blanks (BLK) and laboratory control samples (BS), where a set of method quality control analyses were prepared in concert with each set of samples on a given day.

An Analytical Batch (or Sequence) is a seven-digit number that associates all samples analyzed as a set under one analytical run.

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Walt Roudebush

From: Bianca.Kleist@CH2M.com
Sent: Wednesday, September 09, 2015 1:56 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order 1508466 - preliminary report

Thanks Walt!

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Wednesday, September 02, 2015 11:56 AM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order 1508466 - preliminary report

Bianca,

RE: CTO-WE2A SWMU 350

A PDF of the results-only (plus batch QC) report is attached.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Friday, August 28, 2015 9:19 AM
To: 'Bianca.Kleist@CH2M.com' <Bianca.Kleist@CH2M.com>
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order 1508466

Bianca,

RE: CTO-WE2A SWMU 350

A PDF of the receipt confirmation for samples received on 8/27/15 and assigned to work order 1508466 and SDG 50069-43 is attached.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 12:31 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Hi Walt, that ID (SWMU350-GW47-18D-15C-1) is correct for the FD. Thank you.

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:20 PM
To: Kleist, Bianca/CLT
Cc: Mike Movinski
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Bianca,

Would you please confirm that the full field ID for the FD should be SWMU350-GW47-18D-15C-1.

There will also be a surcharge (TBD) applied for the 7 day TAT (instead of the 14 day TAT as bid).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 12:12 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Yes please, thanks Walt

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:06 PM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Bianca,

The trip blank is not listed on either COC. Should the field ID be SWMU350-TB-082515 with a collection date of 8/15/15? We'll assign a collection time of 0800 hrs.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 11:51 AM
To: 'Bianca.Kleist@CH2M.com' <Bianca.Kleist@CH2M.com>
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD

Bianca,

Thanks.

One cooler of samples was received this morning. All sample containers were intact and the cooler temp blank was 2.9 deg C.

A sample receipt confirmation is pending.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:42 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Another ID change: The duplicate should be SWMU350-GW47-18D and not SWMU350-GW47D-18. Thank you!

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:26 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Hi Walt,

I noticed that the ID suffixes on the COC are incorrect. Please change "-15D" to "-15C-1".

Thank you!

Bianca

From: Kleist, Bianca/CLT
Sent: Thursday, August 27, 2015 11:22 AM
To: 'Walt Roudebush'
Subject: SWMU 350 samples

Hi Walt,

Attached is the COC for SWMU 350 samples that were shipped yesterday. Please note that the EB ID should be SWMU350-EB-082515.

Thanks!

Bianca

Bianca Kleist
Chemist
D 1 704 543 3274

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Tuesday, August 18, 2015 11:01 AM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Great, thank you!

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Tuesday, August 18, 2015 10:59 AM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Bianca,

Both bottle orders, each in separate coolers, are shipping today to David's attention via FedEx Ground; the tracking #s are: 649285996209 (GWs) and 649285996194 (IDW).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Monday, August 17, 2015 2:45 PM
To: Bianca.Kleist@CH2M.com
Cc: Mike Movinski <movinskim@trimatrixlabs.com>
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order*

Bianca,

PDFs of the two bottle orders are attached. I've also retained the bid sheet as an attachment (for reference) since a surcharge would apply if the TAT is reduced from 14 days to 7 days for the GWs.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Monday, August 17, 2015 2:08 PM
To: roudebushw@trimatrixlabs.com
Subject: CTO-WE2A SWMU 350 *Bottleware order*

Hi Walt,

We are gearing up to collect the last set of samples under CTO-WE2A SWMU 350. Can you please ship the bottleware to be received by this Friday, August 21st? Please let me know if you need our FedEx number for shipping. We are still in the process of completing the sampler table, I will send that on when it becomes available.

We will be collecting:

- 9 groundwater samples, 1 duplicate, 1 EB, 1 MS/MSD pair, and a TB. Please send 10% extra bottleware and sufficient DI water for blanks.
- We may be collecting 2 aqueous IDW samples. Could you please send 1 set of bottleware for full TCLP and RCI analysis? (There should be an unused set from the last event).

Shipping address:
CH2M HILL Field Trailer
ATTN: David Seed
Lot 203 Piney Green Rd.
Camp Lejeune, NC 28542
Phone number for reference – 919 875 4311

I am currently checking on whether we need a 7-day for the Form 1s or if the 14-day TAT will suffice.

Thanks,
Bianca

Bianca Kleist
Chemist
D 1 704 543 3274

CH2M
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277
USA
www.ch2m.com

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 1
Project Technical Narrative(s)

No Project Narrative is associated with this report.

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SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

All analyses have been validated and comply with our Quality Control Program.
No qualifications are required.

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SECTION - A

FIELD COC RECORDS
AND
RECEIVING DOCUMENTATION

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Chain of Custody Record

COC No. 152108

Pg. 1 of 2

Analyses Requested

For Lab Use Only
Cart: —
VOA Rack/Tray: 306G, 196G
Receipt Log No.: 3-11
Project Chemist: WDR
Work Order No.: 1508466

Client Name	CH2M Hill
Address	14120 Ballantyne Corp Pl Ste 200
City, State Zip	Charlotte, NC 28277
Phone/Fax	704-543-3274
Email	Bianca.Kleist@ch2m.com
Project Name	CDWEZA SWMU 350
Client Project No. / P.O. No.	472752
Invoice To	☒ Client ☐ Other (comments)
Contact/Report To	Bianca Kleist

Container Type (corresponds to Container Packing List): Voc *

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted	Total	Sample Comments
01	WG	01	1 *-GW06-15D	1	8/24/15	1735		X	GW	3	3	
01	WG	02	2 *GW48-30-15D		8/24/15	1555						
03	WG	03	3 *GW49-30-15D		8/25/15	1305						
			4 *GW49-30-15D-MS									
			5 *GW49-30-15D SD									
04	WG	04	6 *-EB082515		8/25/15	1615						
01	WG	05	7 *GW47-30-15D		8/25/15	0945						
01	WG	06	8 *GW48-18-15D		8/24/15	1500						
01	WG	07	9 *GW49-18-15D		8/25/15	1215						
01	WG	08	10 *GW47-18-15D		8/25/15	1050						

Sampled By (print): David Seed
Sampler's Signature: [signature]
Company:

How Shipped? Hand ____ Carrier _____
Tracking No.

Comments: *=SWMU350- TRIP BLANK INCLUDED
*Naphthalene analysis only
7-day TAT

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
[signature]	8/26/15	1700						

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
						[signature]	8/27/15	0820

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

TRIMATRIX LABORATORIES

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Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
www.trimatrixlabs.com

Chain of Custody Record

COC No. 152109

Pg. 2 of 2

Analyses Requested

For Lab Use Only
Cart
VOA Rack/Tray 306G, 196G
Receipt Log No. 3-11
Project Chemist
Work Order No. 1508466

Client Name
Address SEE PAGE 1
City, State Zip
Phone/Fax
Email

Project Name
Client Project No. / P.O. No.
Invoice To ☐ Client ☐ Other (comments)
Contact/Report To

VOC

Container Type (corresponds to Container Packing List)

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted	Total	Sample Comments
02	WG	09	1	*GW47D-18-15D	1	8/25/15	1055		X	GW	3	3	
01	WG	10	2	*GW16-15D	1	8/25/15	1505		X	GW	3	3	
05	WQ	11	3	SWMU350-TB-082515	1	8/25/15	0800			WQ	1	1	Added by Tri Matrix WC
			4										
			5										
			6										
			7										
			8										
			9										
			10										

Sampled By (print) David Seel
Sampler's Signature
Company

How Shipped? Hand ____ Carrier _____
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
	8/26/15	1700						

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							8/27/15	0820

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

Walt Roudebush

From: Bianca.Kleist@CH2M.com
Sent: Thursday, August 27, 2015 12:31 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Hi Walt, that ID (SWMU350-GW47-18D-15C-1) is correct for the FD. Thank you.

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:20 PM
To: Kleist, Bianca/CLT
Cc: Mike Movinski
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Bianca,

Would you please confirm that the full field ID for the FD should be SWMU350-GW47-18D-15C-1.

There will also be a surcharge (TBD) applied for the 7 day TAT (instead of the 14 day TAT as bid).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 12:12 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Yes please, thanks Walt

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:06 PM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Bianca,

The trip blank is not listed on either COC. Should the field ID be SWMU350-TB-082515 with a collection date of 8/15/15? We'll assign a collection time of 0800 hrs.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 11:51 AM
To: 'Bianca.Kleist@CH2M.com' <Bianca.Kleist@CH2M.com>
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD

Bianca,

Thanks.

One cooler of samples was received this morning. All sample containers were intact and the cooler temp blank was 2.9 deg C.

A sample receipt confirmation is pending.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:42 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Another ID change: The duplicate should be SWMU350-GW47-18D and not SWMU350-GW47D-18. Thank you!

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:26 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Hi Walt,

I noticed that the ID suffixes on the COC are incorrect. Please change "-15D" to "-15C-1".

Thank you!

Bianca

From: Kleist, Bianca/CLT
Sent: Thursday, August 27, 2015 11:22 AM
To: 'Walt Roudebush'
Subject: SWMU 350 samples

Hi Walt,

Attached is the COC for SWMU 350 samples that were shipped yesterday. Please note that the EB ID should be SWMU350-EB-082515.

Thanks!

Bianca

Bianca Kleist
Chemist
D 1 704 543 3274

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Tuesday, August 18, 2015 11:01 AM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Great, thank you!

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Tuesday, August 18, 2015 10:59 AM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Bianca,

Both bottle orders, each in separate coolers, are shipping today to David's attention via FedEx Ground; the tracking #s are: 649285996209 (GWs) and 649285996194 (IDW).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Monday, August 17, 2015 2:45 PM
To: Bianca.Kleist@CH2M.com
Cc: Mike Movinski <movinskim@trimatrixlabs.com>
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order*

Bianca,

From: (919) 875-4311
David Seed
CH2MHILL INC
3120 Highwoods Blvd.
Suite 214
Raleigh, NC 27604

Origin ID: RZZA

FedEx Express

J152015062603uv

Ship Date: 26AUG15
ActWgt: 25.00 LB
CAD: 105337609/WSXI2500

Dims: 12 X 12 X 12 IN

Delivery Address Bar Code

Ref # 472752.03.PT.PT
Invoice #
PO #
Dept #

SHIP TO: (616) 975-4561

BILL SENDER

Sample Recieving
Trimatrix Laboratoires
5500 Corporate Exchange Court

Grand Rapids, MI 49512

THU - 27 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7812 2043 0997

NA GRRA

49512
MI-US
GRR

539J1/FECA/31D0

CUSTODY SEAL
DATE 8/26/15
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

: 00022

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: CH2M Hill	Work Order #: 15084606 New / Add To
Receipt Record Page/Line #: 3.11	Project Chemist: WR
	Sample #s:

Recorded by (initials/date): WC 8.27.15	☑ Cooler ☐ Box ☐ Other	Qty Received: 1	Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
Tm 2837	1121						

Custody Seals: ☐ None ☑ Present / Intact ☐ Present / Not Intact

Coolant Type: ☑ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None

Coolant Location: (Dispersed) / Top / Middle / Bottom

Temp Blank Present: ☑ Yes ☐ No

If Present, Temperature Blank Location is: ☑ Representative ☐ Not Representative

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:	2.9	-	2.9
Sample 1:	3.3	-	3.3
Sample 2:	3.0	-	3.0
Sample 3:	3.9	-	3.9

3 Sample Average °C: 3.4

☐ Cooler ID on COC? ☑ VOC Trip Blank received? (2)

Cooler #2:

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None

Coolant Location: Dispersed / Top / Middle / Bottom

Temp Blank Present: ☐ Yes ☐ No

If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			

3 Sample Average °C:

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #3:

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None

Coolant Location: Dispersed / Top / Middle / Bottom

Temp Blank Present: ☐ Yes ☐ No

If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			

3 Sample Average °C:

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #4:

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None

Coolant Location: Dispersed / Top / Middle / Bottom

Temp Blank Present: ☐ Yes ☐ No

If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			

3 Sample Average °C:

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other _____

COC ID Numbers: 152108, 152109

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Temperature Blank OR average sample temperature, ≥6° C?
☑	☐	☐	If either is ≥6° C, was thermal preservation required?
☑	☐		If "Yes", Project Chemist Approval Initials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐		☑	Completed Sample Preservation Verification Form?
☐		☑	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☑	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1 L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

Trip Blank not listed on COC but received (WR)

☐ Trip Blank received ☑ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.27.15 0820	8.27.15 1130	Yes / (No)

TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client: CH2M Hill		Work Order #: 1508466
Receipt Log #: 3-11	Completed By (initials/date): WC 8.27.15	Project Chemist: WDR

COC ID # 152108	Adjusted by: ____ Date: ____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	1
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	HCl
Expected pH	>12	<2	<2		6-8	<2	<2	<2
COC Line #1								✓
COC Line #2								✓
COC Line #3								✓
COC Line #4								
COC Line #5								
COC Line #6								✓
COC Line #7								✓
COC Line #8								✓
COC Line #9								✓
COC Line #10								✓

Comments

pH Strip Reagent #	
☑	5060576
☐	

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # 152109	Adjusted by: ____ Date: ____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	1
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	HCl
Expected pH	>12	<2	<2		6-8	<2	<2	<2
COC Line #1								✓
COC Line #2								✓
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

TRIMATRIX LABORATORIES

WORK ORDER **1508466**

Printed: 8/27/2015 5:18:47PM

Client:	**CH2M HILL - VA**	Project Manager:	**Walter J. Roudebush**
Project:	**8012 CTO-WE2A Camp Lejeune SWMU 350**	Project Number:	**50069**
Work Order:	**Investigation**	SDG:	**50069-43**

Report To:
CH2M HILL - VA
Ms. Bianca Kleist
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277
Phone: (704) 543-3274
Fax: (757) 497-6885

Invoice To:
CH2M HILL, Inc.
Accounts Payable
P.O. Box 241329
Denver, CO 80224
Phone: (720) 286-2029
Fax: ---

Package Due Date:	**Sep-18-15 23:00**			
W.O. Due Date:	**Sep-02-15 15:00 (4 day TAT)**		Report Level:	**4DOD**
Date Received:	Aug-27-15 08:20	3.4°C	Received By:	William D. Cole
Date Logged In:	Aug-27-15 13:54		Logged In By:	William D. Cole
W.O. Comments:	*4DOD, QSM v4.2, client MS/MSD, 7 calendar day TAT for results, no further samples and SDG 50069-43 is CLOSED.*			
	Rack #306G & #196G			

Analysis	Lab Due Date	TAT	Expires	Analysis Comments
1508466-01 SWMU350-GW06-15C-1 [Water]				
Sampled Aug-24-15 17:35 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-07-15 17:35	
1508466-02 SWMU350-GW48-30-15C-1 [Water]				
Sampled Aug-24-15 15:55 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-07-15 15:55	
1508466-03 SWMU350-GW49-30-15C-1 [Water]				**client MS/MSD**
Sampled Aug-25-15 13:05 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 13:05	
1508466-04 SWMU350-EB-082515 [Water]				**Equipment Blank**
Sampled Aug-25-15 16:15 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 16:15	
1508466-05 SWMU350-GW47-30-15C-1 [Water]				
Sampled Aug-25-15 09:45 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 09:45	
1508466-06 SWMU350-GW48-18-15C-1 [Water]				
Sampled Aug-24-15 15:00 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-07-15 15:00	
1508466-07 SWMU350-GW49-18-15C-1 [Water]				
Sampled Aug-25-15 12:15 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 12:15	
1508466-08 SWMU350-GW47-18-15C-1 [Water]				
Sampled Aug-25-15 10:50 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 10:50	
1508466-09 SWMU350-GW47-18D-15C-1 [Water]				**Field Duplicate**

Client:	**CH2M HILL - VA**	Project Manager:	**Walter J. Roudebush**
Project:	**8012 CTO-WE2A Camp Lejeune SWMU 350**	Project Number:	**50069**
Work Order:	**Investigation**	SDG:	**50069-43**

Analysis	Lab Due Date	TAT	Expires	Analysis Comments
Sampled Aug-25-15 10:55 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 10:55	
1508466-10 SWMU350-GW16-15C-1 [Water]				
Sampled Aug-25-15 15:05 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 15:05	
1508466-11 SWMU350-TB-082515 [Water]				**Trip Blank (2nd vial is back-up)**
Sampled Aug-25-15 08:00 (GMT-05:00) Eastern Time (US & by TriMatrix				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 08:00	

Volatiles MS Analysis Detail

* indicates custom

	Analyte	CLrept?	QCrept?	MDL	RL
Water	**8260B DoD VOAs plus custom**			**ug/L**	
	Naphthalene	Y	Y	0.2	5

Reviewed By

Date

TRIMATRIX
LABORATORIES

SECTION - B

INTERNAL COC RECORDS

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ▲ Grand Rapids, MI 49512 ▲ Phone: 616.975.4500 ▲ Fax: 616.942.7463 ▲ www.trimatrixlab.com

TriMatrix Laboratories, Inc.

Internal Chain of Custody

SDGID: 50069-43 **Work Order #: 1508466**

Client: **CH2M HILL - VA**
Project: **8012 CTO-WE2A Camp Lejeune SWMU 350**

Project Manager: **Walter J. Roudebush**
Date Received: **Aug-27-15 08:20**

Department: **Volatiles MS** Analysis: 8260B

Lab Number / Sample Name	*Container*	*Removed by (Signature)*	*Date & Time Removed*	*Date & Time Returned*	*Consumed?*	*Extract Container*
1508466-01 SWMU350-GW06-15C-1	A	Diane Van Male	8-31-15 10:30	9-1-15 9:00		
1508466-02 SWMU350-GW48-30-15C-1						
1508466-03 SWMU350-GW49-30-15C-1						
1508466-04 SWMU350-EB-082515						
1508466-05 SWMU350-GW47-30-15C-1						
1508466-06 SWMU350-GW48-18-15C-1						
1508466-07 SWMU350-GW49-18-15C-1						
1508466-08 SWMU350-GW47-18-15C-1						
1508466-09 SWMU350-GW47-18D-15C-1						
1508466-10 SWMU350-GW16-15C-1						
1508466-11 SWMU350-TB-082515						

TRIMATRIX
LABORATORIES

SECTION – C

GCMS VOLATILE ORGANICS

USEPA-8260B

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Individual sample results relate only to the sample tested.

TriMatrix Laboratories, Inc.

CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

SDG: 50069-43

USEPA-8260B

SAMPLE ID SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Client Sample Id:	Lab Sample Id:
SWMU350-GW06-15C-1	1508466-01
SWMU350-GW48-30-15C-1	1508466-02
SWMU350-GW49-30-15C-1	1508466-03
SWMU350-EB-082515	1508466-04
SWMU350-GW47-30-15C-1	1508466-05
SWMU350-GW48-18-15C-1	1508466-06
SWMU350-GW49-18-15C-1	1508466-07
SWMU350-GW47-18-15C-1	1508466-08
SWMU350-GW47-18D-15C-1	1508466-09
SWMU350-GW16-15C-1	1508466-10
SWMU350-TB-082515	1508466-11

TRIMATRIX
LABORATORIES

SECTION - C

QUALITY CONTROL (QC) SUMMARY
- FORMS ONLY -

USEPA-8260B

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Individual sample results relate only to the sample tested.

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Calibration: 5H26013
Sequence: 5H31031
Instrument: 350

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (5H31031-CCV1)		**Lab File ID: CCV0831.D**		**Analyzed: 08/31/15 09:13**			
Dibromofluoromethane	4.80	4.81	0.00	+/-1.0	105	80 - 120	
1,2-Dichloroethane-d4	5.41	5.41	-0.01	+/-1.0	100	80 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	104	80 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	102	80 - 120	
LCS (1509221-BS1)		**Lab File ID: BS0831.D**		**Analyzed: 08/31/15 09:38**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	107	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	100	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	103	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	98	75 - 120	
Blank (1509221-BLK1)		**Lab File ID: BLK0831.D**		**Analyzed: 08/31/15 10:48**			
Dibromofluoromethane	4.80	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	-0.01	+/-1.0	98	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	100	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	
SWMU350-GW06-15C-1 (1508466-01)		**Lab File ID: 1508466-01.D**		**Analyzed: 08/31/15 12:27**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	100	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	
SWMU350-GW48-30-15C-1 (1508466-02)		**Lab File ID: 1508466-02.D**		**Analyzed: 08/31/15 12:52**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	96	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	98	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	97	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-GW49-30-15C-1 (1508466-03)		**Lab File ID: 1508466-03.D**		**Analyzed: 08/31/15 13:17**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	100	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-EB-082515 (1508466-04)		**Lab File ID: 1508466-04.D**		**Analyzed: 08/31/15 13:42**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	103	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Calibration: 5H26013
Sequence: 5H31031
Instrument: 350

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
SWMU350-GW48-18-15C-1 (1508466-06)		**Lab File ID: 1508466-06.D**		**Analyzed: 08/31/15 14:07**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	101	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	102	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	94	75 - 120	
SWMU350-GW49-18-15C-1 (1508466-07)		**Lab File ID: 1508466-07.D**		**Analyzed: 08/31/15 14:32**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	102	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	104	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	101	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	91	75 - 120	
SWMU350-GW47-18-15C-1 (1508466-08)		**Lab File ID: 1508466-08.D**		**Analyzed: 08/31/15 14:57**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	104	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-GW47-18D-15C-1 (1508466-09)		**Lab File ID: 1508466-09.D**		**Analyzed: 08/31/15 15:22**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	102	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	98	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	94	75 - 120	
SWMU350-GW16-15C-1 (1508466-10)		**Lab File ID: 1508466-10.D**		**Analyzed: 08/31/15 15:47**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	96	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	103	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	98	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-TB-082515 (1508466-11)		**Lab File ID: 1508466-11.D**		**Analyzed: 08/31/15 16:12**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	105	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	100	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-GW47-30-15C-1 (1508466-05)		**Lab File ID: 1508466-05.D**		**Analyzed: 08/31/15 16:37**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	95	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	99	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Calibration: 5H26013
Sequence: 5H31031
Instrument: 350

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Matrix Spike (1509221-MS1)		**Lab File ID: 1508466-03MSAnalyzed: 08/31/15 18:42**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	111	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	106	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	103	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	103	75 - 120	
Matrix Spike Dup (1509221-MSD1)		**Lab File ID: 1508466-03MSAnalyzed: 08/31/15 19:07**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	111	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	102	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	102	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	100	75 - 120	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	5H31031-TUN1	BFB0831A.D	08/31/15 08:46
Calibration Check	5H31031-CCV1	CCV0831.D	08/31/15 09:13
LCS	1509221-BS1	BS0831.D	08/31/15 09:38
Blank	1509221-BLK1	BLK0831.D	08/31/15 10:48
SWMU350-GW06-15C-1	1508466-01	1508466-01.D	08/31/15 12:27
SWMU350-GW48-30-15C-1	1508466-02	1508466-02.D	08/31/15 12:52
SWMU350-GW49-30-15C-1	1508466-03	1508466-03.D	08/31/15 13:17
SWMU350-EB-082515	1508466-04	1508466-04.D	08/31/15 13:42
SWMU350-GW48-18-15C-1	1508466-06	1508466-06.D	08/31/15 14:07
SWMU350-GW49-18-15C-1	1508466-07	1508466-07.D	08/31/15 14:32
SWMU350-GW47-18-15C-1	1508466-08	1508466-08.D	08/31/15 14:57
SWMU350-GW47-18D-15C-1	1508466-09	1508466-09.D	08/31/15 15:22
SWMU350-GW16-15C-1	1508466-10	1508466-10.D	08/31/15 15:47
SWMU350-TB-082515	1508466-11	1508466-11.D	08/31/15 16:12
SWMU350-GW47-30-15C-1	1508466-05	1508466-05.D	08/31/15 16:37
SWMU350-GW49-30-15C-1	1509221-MS1	1508466-03MS.D	08/31/15 18:42
SWMU350-GW49-30-15C-1	1509221-MSD1	1508466-03MSD.D	08/31/15 19:07

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SWMU350-GW49-30-15C-1

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-MS1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Naphthalene	40.0	ND	36.9	92	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SWMU350-GW49-30-15C-1

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-MSD1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Naphthalene	40.0	38.1	95	3	30	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-BS1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

Sequence: 5H31031

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Naphthalene	40.0	36.2	90	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

METHOD BLANK DATA SHEET
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Water Laboratory ID: 1509221-BLK1 File ID: BLK0831.D

Prepared: 08/31/15 07:00 Analyzed: 08/31/15 10:48

Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
91-20-3	Naphthalene	0.50	ug/L	0.20	0.50	5.0	U

System Monitoring Compound	Added (ug/L)	Conc. (ug/L)	% REC	QC Limits	Q
Dibromofluoromethane	40.0	39.0	97	85 - 115	
1,2-Dichloroethane-d4	40.0	39.3	98	70 - 120	
Toluene-d8	40.0	39.9	100	85 - 120	
4-Bromofluorobenzene	40.0	37.2	93	75 - 120	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	668580	6.013	754057	6.013	
Chlorobenzene-d5	557789	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	281974	13.354	329683	13.348	

QC BATCH SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

QC Batch: 1509221 QC Batch Matrix: Water

Preparation: 5030B Aqueous Purge & Trap

Sample Name	Lab Sample ID	Date Prepared	Observations
SWMU350-GW06-15C-1	1508466-01	08/31/15 07:00	
SWMU350-GW48-30-15C-1	1508466-02	08/31/15 07:00	
SWMU350-GW49-30-15C-1	1508466-03	08/31/15 07:00	
SWMU350-EB-082515	1508466-04	08/31/15 07:00	
SWMU350-GW47-30-15C-1	1508466-05	08/31/15 07:00	
SWMU350-GW48-18-15C-1	1508466-06	08/31/15 07:00	
SWMU350-GW49-18-15C-1	1508466-07	08/31/15 07:00	
SWMU350-GW47-18-15C-1	1508466-08	08/31/15 07:00	
SWMU350-GW47-18D-15C-1	1508466-09	08/31/15 07:00	
SWMU350-GW16-15C-1	1508466-10	08/31/15 07:00	
SWMU350-TB-082515	1508466-11	08/31/15 07:00	
Blank	1509221-BLK1	08/31/15 07:00	
LCS	1509221-BS1	08/31/15 07:00	
SWMU350-GW49-30-15C-1	1509221-MS1	08/31/15 07:00	
SWMU350-GW49-30-15C-1	1509221-MSD1	08/31/15 07:00	

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H26009-TUN1
Lab File ID: BFB0825A.D
Injection Date: 08/25/15
Injection Time: 10:06
Sequence: 5H26009
Calibration: 5H26013
Instrument ID: 350

m/z	Ion Abundance Criteria	% Relative Abundance	
50	15 - 40% of 95	16.3	PASS
75	30 - 60% of 95	43.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.75	PASS
173	Less than 2% of 174	0.249	PASS
174	50 - 100% of 95	96.4	PASS
175	5 - 9% of 174	7.55	PASS
176	95 - 101% of 174	96.1	PASS
177	5 - 9% of 176	6.04	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Lab Sample ID: 5H31031-TUN1

Lab File ID: BFB0831A.D

Injection Date: 08/31/15

Injection Time: 08:46

Sequence: 5H31031

Instrument ID: 350

m/z	Ion Abundance Criteria	% Relative Abundance	
50	15 - 40% of 95	15.1	PASS
75	30 - 60% of 95	45.5	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.11	PASS
173	Less than 2% of 174	0	PASS
174	50 - 100% of 95	99.4	PASS
175	5 - 9% of 174	7.67	PASS
176	95 - 101% of 174	96.4	PASS
177	5 - 9% of 176	7.09	PASS

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Matrix: Water
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (5H31031-CCV1)			**Lab File ID:**	**CCV0831.D**		**Analyzed:**	**08/31/15 09:13**		
Fluorobenzene	687737	6.013	754057	6.013	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	596435	10.378	622554	10.378	96	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	333262	13.348	329683	13.348	101	50 - 200	0.0000	+/-0.50	
LCS (1509221-BS1)			**Lab File ID:**	**BS0831.D**		**Analyzed:**	**08/31/15 09:38**		
Fluorobenzene	695695	6.013	754057	6.013	92	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	608012	10.378	622554	10.378	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	336738	13.354	329683	13.348	102	50 - 200	0.0060	+/-0.50	
Blank (1509221-BLK1)			**Lab File ID:**	**BLK0831.D**		**Analyzed:**	**08/31/15 10:48**		
Fluorobenzene	668580	6.013	754057	6.013	89	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	557789	10.377	622554	10.378	90	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	281974	13.354	329683	13.348	86	50 - 200	0.0060	+/-0.50	
SWMU350-GW06-15C-1 (1508466-01)			**Lab File ID:**	**1508466-01.D**		**Analyzed:**	**08/31/15 12:27**		
Fluorobenzene	659178	6.013	754057	6.013	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	552166	10.378	622554	10.378	89	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	267870	13.354	329683	13.348	81	50 - 200	0.0060	+/-0.50	
SWMU350-GW48-30-15C-1 (1508466-02)			**Lab File ID:**	**1508466-02.D**		**Analyzed:**	**08/31/15 12:52**		
Fluorobenzene	648057	6.013	754057	6.013	86	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	532642	10.378	622554	10.378	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	260863	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-GW49-30-15C-1 (1508466-03)			**Lab File ID:**	**1508466-03.D**		**Analyzed:**	**08/31/15 13:17**		
Fluorobenzene	628976	6.013	754057	6.013	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	528105	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	259227	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-EB-082515 (1508466-04)			**Lab File ID:**	**1508466-04.D**		**Analyzed:**	**08/31/15 13:42**		
Fluorobenzene	635353	6.013	754057	6.013	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	538885	10.377	622554	10.378	87	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	261956	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-GW48-18-15C-1 (1508466-06)			**Lab File ID:**	**1508466-06.D**		**Analyzed:**	**08/31/15 14:07**		
Fluorobenzene	636019	6.013	754057	6.013	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	531998	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	262078	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-GW49-18-15C-1 (1508466-07)			**Lab File ID:**	**1508466-07.D**		**Analyzed:**	**08/31/15 14:32**		
Fluorobenzene	622840	6.013	754057	6.013	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	530639	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	255809	13.354	329683	13.348	78	50 - 200	0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Calibration: 5H26013
Sequence: 5H31031
Instrument: 350

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SWMU350-GW47-18-15C-1 (1508466-08)			**Lab File ID:**	**1508466-08.D**		**Analyzed:**	**08/31/15 14:57**		
Fluorobenzene	641688	6.013	754057	6.013	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	539980	10.377	622554	10.378	87	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	265997	13.354	329683	13.348	81	50 - 200	0.0060	+/-0.50	
SWMU350-GW47-18D-15C-1 (1508466-09)			**Lab File ID:**	**1508466-09.D**		**Analyzed:**	**08/31/15 15:22**		
Fluorobenzene	640990	6.013	754057	6.013	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	530373	10.377	622554	10.378	85	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	263340	13.354	329683	13.348	80	50 - 200	0.0060	+/-0.50	
SWMU350-GW16-15C-1 (1508466-10)			**Lab File ID:**	**1508466-10.D**		**Analyzed:**	**08/31/15 15:47**		
Fluorobenzene	638895	6.013	754057	6.013	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	533608	10.378	622554	10.378	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	262959	13.354	329683	13.348	80	50 - 200	0.0060	+/-0.50	
SWMU350-TB-082515 (1508466-11)			**Lab File ID:**	**1508466-11.D**		**Analyzed:**	**08/31/15 16:12**		
Fluorobenzene	626092	6.013	754057	6.013	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	530850	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	256648	13.354	329683	13.348	78	50 - 200	0.0060	+/-0.50	
SWMU350-GW47-30-15C-1 (1508466-05)			**Lab File ID:**	**1508466-05.D**		**Analyzed:**	**08/31/15 16:37**		
Fluorobenzene	633685	6.013	754057	6.013	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	525647	10.377	622554	10.378	84	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	257699	13.354	329683	13.348	78	50 - 200	0.0060	+/-0.50	
Matrix Spike (1509221-MS1)			**Lab File ID:**	**1508466-03MS.D**		**Analyzed:**	**08/31/15 18:42**		
Fluorobenzene	700844	6.013	754057	6.013	93	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	606942	10.378	622554	10.378	97	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	351818	13.348	329683	13.348	107	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (1509221-MSD1)			**Lab File ID:**	**1508466-03MSD.D**		**Analyzed:**	**08/31/15 19:07**		
Fluorobenzene	687691	6.013	754057	6.013	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	599382	10.378	622554	10.378	96	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	337511	13.354	329683	13.348	102	50 - 200	0.0060	+/-0.50	

HOLDING TIME SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Method: Volatile Organic Compounds by EPA Method 8260B

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SWMU350-GW06-15C-1	08/24/15	08/27/15		08/31/15	7	NA	08/31/15	7	14	
SWMU350-GW48-30-15C-1	08/24/15	08/27/15		08/31/15	7	NA	08/31/15	7	14	
SWMU350-GW49-30-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-EB-082515	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW47-30-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW48-18-15C-1	08/24/15	08/27/15		08/31/15	7	NA	08/31/15	7	14	
SWMU350-GW49-18-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW47-18-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW47-18D-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW16-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-TB-082515	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	

TRIMATRIX
LABORATORIES

SECTION - C

SAMPLE DATA
- FORMS ONLY -

USEPA-8260B

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Individual sample results relate only to the sample tested.

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW06-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-01 File ID: 1508466-01.D

Sampled: 08/24/15 17:35 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 12:27

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.8	97	85 - 115	
1,2-Dichloroethane-d4	40.0	40.1	100	70 - 120	
Toluene-d8	40.0	39.8	99	85 - 120	
4-Bromofluorobenzene	40.0	37.3	93	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	659178	6.013	754057	6.013	
Chlorobenzene-d5	552166	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	267870	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW48-30-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-02
File ID: 1508466-02.D
Sampled: 08/24/15 15:55
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 12:52
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.4	96	85 - 115	
1,2-Dichloroethane-d4	40.0	39.4	98	70 - 120	
Toluene-d8	40.0	38.8	97	85 - 120	
4-Bromofluorobenzene	40.0	37.0	92	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	648057	6.013	754057	6.013	
Chlorobenzene-d5	532642	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	260863	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW49-30-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-03 File ID: 1508466-03.D

Sampled: 08/25/15 13:05 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 13:17

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.9	97	85 - 115	
1,2-Dichloroethane-d4	40.0	40.2	100	70 - 120	
Toluene-d8	40.0	39.6	99	85 - 120	
4-Bromofluorobenzene	40.0	36.8	92	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	628976	6.013	754057	6.013	
Chlorobenzene-d5	528105	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	259227	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-EB-082515

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Water Laboratory ID: 1508466-04 File ID: 1508466-04.D

Sampled: 08/25/15 16:15 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 13:42

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.8	97	85 - 115	
1,2-Dichloroethane-d4	40.0	41.1	103	70 - 120	
Toluene-d8	40.0	39.6	99	85 - 120	
4-Bromofluorobenzene	40.0	37.0	93	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	635353	6.013	754057	6.013	
Chlorobenzene-d5	538885	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	261956	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW47-30-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-05 File ID: 1508466-05.D

Sampled: 08/25/15 09:45 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 16:37

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	2.6	0.20	0.50	5.0	J

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.2	95	85 - 115	
1,2-Dichloroethane-d4	40.0	39.8	99	70 - 120	
Toluene-d8	40.0	39.4	99	85 - 120	
4-Bromofluorobenzene	40.0	37.4	93	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	633685	6.013	754057	6.013	
Chlorobenzene-d5	525647	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	257699	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW48-18-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-06 File ID: 1508466-06.D

Sampled: 08/24/15 15:00 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 14:07

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	40.5	101	85 - 115	
1,2-Dichloroethane-d4	40.0	41.0	102	70 - 120	
Toluene-d8	40.0	39.7	99	85 - 120	
4-Bromofluorobenzene	40.0	37.8	94	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	636019	6.013	754057	6.013	
Chlorobenzene-d5	531998	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	262078	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW49-18-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-07 File ID: 1508466-07.D

Sampled: 08/25/15 12:15 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 14:32

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	40.8	102	85 - 115	
1,2-Dichloroethane-d4	40.0	41.4	104	70 - 120	
Toluene-d8	40.0	40.4	101	85 - 120	
4-Bromofluorobenzene	40.0	36.6	91	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	622840	6.013	754057	6.013	
Chlorobenzene-d5	530639	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	255809	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW47-18-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-08 File ID: 1508466-08.D

Sampled: 08/25/15 10:50 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 14:57

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.9	97	85 - 115	
1,2-Dichloroethane-d4	40.0	41.5	104	70 - 120	
Toluene-d8	40.0	39.5	99	85 - 120	
4-Bromofluorobenzene	40.0	36.8	92	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	641688	6.013	754057	6.013	
Chlorobenzene-d5	539980	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	265997	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW47-18D-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-09 File ID: 1508466-09.D

Sampled: 08/25/15 10:55 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 15:22

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.9	97	85 - 115	
1,2-Dichloroethane-d4	40.0	40.8	102	70 - 120	
Toluene-d8	40.0	39.2	98	85 - 120	
4-Bromofluorobenzene	40.0	37.5	94	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	640990	6.013	754057	6.013	
Chlorobenzene-d5	530373	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	263340	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW16-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-10
File ID: 1508466-10.D
Sampled: 08/25/15 15:05
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 15:47
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.6	96	85 - 115	
1,2-Dichloroethane-d4	40.0	41.3	103	70 - 120	
Toluene-d8	40.0	39.0	98	85 - 120	
4-Bromofluorobenzene	40.0	36.6	92	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	638895	6.013	754057	6.013	
Chlorobenzene-d5	533608	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	262959	13.354	329683	13.348	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-TB-082515

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Water Laboratory ID: 1508466-11 File ID: 1508466-11.D

Sampled: 08/25/15 08:00 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 16:12

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.8	97	85 - 115	
1,2-Dichloroethane-d4	40.0	41.9	105	70 - 120	
Toluene-d8	40.0	40.0	100	85 - 120	
4-Bromofluorobenzene	40.0	36.6	92	75 - 120	

* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	626092	6.013	754057	6.013	
Chlorobenzene-d5	530850	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	256648	13.354	329683	13.348	

* Values outside of QC limits

TRIMATRIX
LABORATORIES

SECTION - C

STANDARDS DATA
- FORMS ONLY -

USEPA-8260B

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Individual sample results relate only to the sample tested.

INITIAL CALIBRATION STANDARDS
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
5061380	8260 Tune Working Standard 06-24-15	5H26009-TUN1	BFB0825A.D	08/25/15 10:06
5080794	1.0 ug/L B	5H26009-CAL1	1P0825.D	08/25/15 11:23
5080795	5.0 ug/L B	5H26009-CAL2	5P0825.D	08/25/15 11:48
5080796	10 ug/L B	5H26009-CAL3	10P0825.D	08/25/15 12:13
5080797	20 ug/L B	5H26009-CAL4	20P0825.D	08/25/15 12:37
5080798	40 ug/L B	5H26009-CAL5	40P0825.D	08/25/15 13:02
5080799	100 ug/L B	5H26009-CAL6	100P0825.D	08/25/15 13:27
5080800	200 ug/L B	5H26009-CAL7	200P0825.D	08/25/15 14:39
5081062	40 ug/L A	5H26009-SCV1	SCV0825.D	08/25/15 16:19

INITIAL CALIBRATION DATA
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	1	~~1.245862~~	5	0.38369	10	0.2774585	20	0.2181351	40	0.2086195	100	0.1885538
Acrolein	1	0.1604537	5	9.461441E-02	10	0.1020724	20	9.800274E-02	40	9.934527E-02	100	9.915334E-02
Acrylonitrile	1	0.2534014	5	0.2213988	10	0.2196489	20	0.2214982	40	0.224483	100	0.2252788
Benzene	1	1.331008	5	1.267999	10	1.347391	20	1.331646	40	1.332277	100	1.314861
Bromobenzene	1	1.618986	5	1.40813	10	1.414805	20	1.377192	40	1.41202	100	1.363269
Bromochloromethane	1	0.2960308	5	0.2689111	10	0.2874767	20	0.2880425	40	0.2949538	100	0.289562
Bromodichloromethane	1	0.3793106	5	0.3515976	10	0.3846199	20	0.3888959	40	0.4030823	100	0.421258
Bromoform	1	0.3342239	5	0.2761942	10	0.2774557	20	0.2988821	40	0.3271909	100	0.352407
Bromomethane	1	0.2832533	5	0.2816594	10	0.2837605	20	0.264989	40	0.2724144	100	0.2607409
n-Butylbenzene	1	2.064192	5	1.962383	10	2.125165	20	2.195137	40	2.322203	100	2.314209
sec-Butylbenzene	1	3.361527	5	3.181245	10	3.2764	20	3.399472	40	3.49688	100	3.411743
tert-Butylbenzene	1	2.55566	5	2.413872	10	2.442263	20	2.412598	40	2.512489	100	2.439319
Carbon Disulfide	1	0.7602043	5	0.7079619	10	0.6904512	20	0.6929742	40	0.7849473	100	0.8589008
Carbon Tetrachloride	1	0.3590702	5	0.3303135	10	0.365918	20	0.3671069	40	0.3879945	100	0.3980172
Chlorobenzene	1	1.351795	5	1.135565	10	1.173601	20	1.169331	40	1.167454	100	1.157528
Chloroethane	1	0.2243977	5	0.2024538	10	0.202998	20	0.1995212	40	0.191467	100	0.1870774
2-Chloroethyl Vinyl Ether	1	0	5	0	10	8.446763E-03	20	8.080593E-03	40	6.11227E-03	100	4.101707E-03
Chloroform	1	0.6184646	5	0.5550268	10	0.5619523	20	0.5687348	40	0.580724	100	0.5843779
1-Chlorohexane	1	0.3408139	5	0.305659	10	0.3425612	20	0.3442992	40	0.3456825	100	0.3409062
Chloromethane	1	0.6188604	5	0.4468327	10	0.4433779	20	0.4380717	40	0.4379828	100	0.4359954
2-Chlorotoluene	1	0.9530612	5	0.8406761	10	0.9118891	20	0.8932527	40	0.9018542	100	0.8666174
4-Chlorotoluene	1	0.9530612	5	0.8291655	10	0.8346038	20	0.8514251	40	0.902473	100	0.8566046
Cyclohexane	1	0.4887109	5	0.4654785	10	0.4671854	20	0.4722419	40	0.4784718	100	0.4727022
1,2-Dibromo-3-chloropropane	1	0.3058439	5	0.2354441	10	0.251023	20	0.2615012	40	0.2904851	100	0.3054092
Dibromochloromethane	1	0.4209674	5	0.3463143	10	0.3744573	20	0.3845324	40	0.4053689	100	0.4322825
1,2-Dibromoethane	1	0.417959	5	0.3839928	10	0.4201135	20	0.4221802	40	0.4289748	100	0.4230498
Dibromomethane	1	0.240002	5	0.2171642	10	0.2235139	20	0.2333016	40	0.2326495	100	0.2380963
trans-1,4-Dichloro-2-butene	1	0.2450812	5	0.1889455	10	0.1905086	20	0.1986576	40	0.2127134	100	0.2331375
1,2-Dichlorobenzene	1	2.083335	5	1.596136	10	1.644618	20	1.65084	40	1.723486	100	1.67707
1,3-Dichlorobenzene	1	2.014451	5	1.664288	10	1.708222	20	1.720396	40	1.769797	100	1.699407
1,4-Dichlorobenzene	1	1.998644	5	1.668849	10	1.693393	20	1.700061	40	1.736689	100	1.672382

INITIAL CALIBRATION DATA
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Dichlorodifluoromethane	1	0.3867736	5	0.3343597	10	0.3741938	20	0.3602228	40	0.3614965	100	0.353507
1,1-Dichloroethane	1	0.6249664	5	0.5612014	10	0.5939971	20	0.5746569	40	0.5824772	100	0.5826859
1,2-Dichloroethane	1	0.4364701	5	0.4437288	10	0.4457487	20	0.4575769	40	0.4513386	100	0.4526915
1,1-Dichloroethene	1	0.3101086	5	0.2891199	10	0.2897317	20	0.2817988	40	0.2874915	100	0.2803107
cis-1,2-Dichloroethene	1	0.4118197	5	0.3421306	10	0.3704005	20	0.3547421	40	0.3593283	100	0.3684041
trans-1,2-Dichloroethene	1	0.3337413	5	0.3190617	10	0.3275271	20	0.321376	40	0.3243893	100	0.323059
1,2-Dichloroethene (Total)	2	0.3727805	10	0.3305961	20	0.3489638	40	0.338059	80	0.3418588	200	0.3457316
Dichlorofluoromethane	1	0.6431715	5	0.5933271	10	0.6269792	20	0.585174	40	0.5941567	100	0.5883914
1,2-Dichloropropane	1	0.3567521	5	0.3337721	10	0.3529887	20	0.3470104	40	0.3521312	100	0.3516462
1,3-Dichloropropane	1	0.7893587	5	0.6705783	10	0.7278728	20	0.6952057	40	0.7018845	100	0.6959416
2,2-Dichloropropane	1	0.3699819	5	0.3179421	10	0.3236952	20	0.3163913	40	0.3295759	100	0.344967
1,1-Dichloropropene	1	0.483679	5	0.4186202	10	0.4495255	20	0.4331116	40	0.4379178	100	0.4413144
cis-1,3-Dichloropropene	1	0.3697558	5	0.3549897	10	0.3848074	20	0.4124264	40	0.4307208	100	0.4537819
trans-1,3-Dichloropropene	1	0.3236777	5	0.2993961	10	0.3391772	20	0.3760051	40	0.3982113	100	0.4283066
Ethylbenzene	1	1.90012	5	1.851911	10	1.911097	20	1.867145	40	1.918785	100	1.887278
Ethyl Ether	1	0.2159736	5	0.1798949	10	0.194667	20	0.1933074	40	0.1914656	100	0.1884032
Hexachlorobutadiene	1	0.4349103	5	0.462329	10	0.4847075	20	0.4861019	40	0.5215374	100	0.5158156
2-Hexanone	1	~~0.3165314~~	5	0.3601509	10	0.4104433	20	0.4125274	40	0.4980098	100	0.4497135
Iodomethane	1	0.1800157	5	0.1782431	10	0.1949923	20	0.2189255	40	0.2586091	100	0.3019854
Isopropylbenzene	1	3.372404	5	3.069251	10	3.183264	20	3.179619	40	3.235332	100	3.154364
4-Isopropyltoluene	1	2.864549	5	2.715857	10	2.751316	20	2.782155	40	2.886218	100	2.845586
Methyl Acetate	1	0.4590286	5	0.3461213	10	0.3636574	20	0.3807309	40	0.379588	100	0.4093029
Methyl tert-Butyl Ether	1	0.9947788	5	0.9014586	10	0.9557744	20	0.9490568	40	0.9722276	100	0.9530051
Methylcyclohexane	1	0.4546752	5	0.4636605	10	0.4779589	20	0.4851844	40	0.4893556	100	0.4936516
Methylene Chloride	1	1.013097	5	0.528976	10	0.4922114	20	0.4595609	40	0.4290591	100	0.4039856
2-Butanone (MEK)	1	0.3175151	5	0.2415854	10	0.2383013	20	0.2342745	40	0.2606739	100	0.2548037
4-Methyl-2-pentanone (MIBK)	1	~~0.3832683~~	5	0.4169907	10	0.436293	20	0.4583018	40	0.5561038	100	0.51273
Naphthalene	1	2.109728	5	1.492192	10	1.72406	20	2.130069	40	2.789716	100	3.279225
n-Propylbenzene	1	0.9112958	5	0.8665951	10	0.905559	20	0.9094284	40	0.9500581	100	0.9312344
Styrene	1	1.02939	5	1.015969	10	1.101255	20	1.116135	40	1.17854	100	1.18536
1,1,1,2-Tetrachloroethane	1	0.3660275	5	0.3700873	10	0.366046	20	0.3816491	40	0.3974001	100	0.4011485

INITIAL CALIBRATION DATA
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1,2,2-Tetrachloroethane	1	1.837819	5	1.107432	10	1.18358	20	1.166945	40	1.202394	100	1.124539
Tetrachloroethene	1	0.5343572	5	0.494658	10	0.5324813	20	0.5139545	40	0.5171214	100	0.4917512
Tetrahydrofuran	1	0.0828841	5	0.0537534	10	6.489452E-02	20	6.521161E-02	40	6.470466E-02	100	0.0696989
Toluene	1	1.485638	5	1.371482	10	1.449381	20	1.423675	40	1.429967	100	1.430656
1,2,3-Trichlorobenzene	1	0.7013092	5	0.6841159	10	0.7982245	20	0.8704765	40	1.030453	100	1.133353
1,2,4-Trichlorobenzene	1	0.7728032	5	0.7036222	10	0.7735472	20	0.8723234	40	1.023956	100	1.112627
1,1,1-Trichloroethane	1	0.4381097	5	0.4133657	10	0.4362268	20	0.4498996	40	0.4628669	100	0.4661047
1,1,2-Trichloroethane	1	0.309204	5	0.2594552	10	0.2924389	20	0.2780923	40	0.2871282	100	0.2863022
Trichloroethene	1	0.3833813	5	0.3702544	10	0.3885732	20	0.3960227	40	0.393201	100	0.3953359
Trichlorofluoromethane	1	0.5571213	5	0.5115829	10	0.5128486	20	0.4924066	40	0.499701	100	0.4847568
1,2,3-Trichloropropane	1	0.542514	5	0.3958143	10	0.4051019	20	0.4109623	40	0.3988832	100	0.3894906
1,1,2-Trichloro-1,2,2-trifluoro	1	0.2633521	5	0.246452	10	0.2447025	20	0.2454511	40	0.243097	100	0.2394893
1,2,4-Trimethylbenzene	1	2.807267	5	2.696163	10	2.74916	20	2.776428	40	2.870718	100	2.84411
1,3,5-Trimethylbenzene	1	2.728232	5	2.715079	10	2.716286	20	2.801689	40	2.909037	100	2.812368
Vinyl Acetate	1	0.3738265	5	0.4502249	10	0.401938	20	0.3943439	40	0.4493997	100	0.3330275
Vinyl Chloride	1	0.3901659	5	0.3631043	10	0.3699153	20	0.3758825	40	0.3863143	100	0.3843674
Xylene, Meta + Para	2	0.7503922	10	0.7138865	20	0.7297341	40	0.7276978	80	0.7417365	200	0.7347889
Xylene, Ortho	1	0.6718145	5	0.666375	10	0.7100772	20	0.7163253	40	0.731053	100	0.7199673
Xylene (Total)	3	0.7241996	15	0.6980493	30	0.7231818	60	0.723907	120	0.7381753	300	0.7298483
Dichlorobenzenes (Total)	3	2.032143	15	1.643091	30	1.682078	60	1.690432	120	1.743324	300	1.682953
Dibromofluoromethane	40	0.2360161	40	0.2378469	40	0.246737	40	0.2543002	40	0.2491058	40	0.2540703
1,2-Dichloroethane-d4	40	0.147932	40	0.1510602	40	0.1544332	40	0.1527355	40	0.1508162	40	0.1532737
Toluene-d8	40	0.9893837	40	0.9978425	40	1.011405	40	1.02921	40	1.022221	40	1.03629
4-Bromofluorobenzene	40	0.4820836	40	0.4767541	40	0.4978036	40	0.5010411	40	0.4856157	40	0.4903571

INITIAL CALIBRATION DATA (Continued)

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration: 5H26013

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	200	0.1809904										
Acrolein	200	0.1010786										
Acrylonitrile	200	0.2225455										
Benzene	200	1.322138										
Bromobenzene	200	1.355566										
Bromochloromethane	200	0.2904555										
Bromodichloromethane	200	0.4441362										
Bromoform	200	0.3857999										
Bromomethane	200	0.2344492										
n-Butylbenzene	200	2.355779										
sec-Butylbenzene	200	3.39438										
tert-Butylbenzene	200	2.408773										
Carbon Disulfide	200	0.8988028										
Carbon Tetrachloride	200	0.4203685										
Chlorobenzene	200	1.180526										
Chloroethane	200	0.1873053										
2-Chloroethyl Vinyl Ether	200	3.40532E-03										
Chloroform	200	0.5829775										
1-Chlorohexane	200	0.3477417										
Chloromethane	200	0.4330299										
2-Chlorotoluene	200	0.8375244										
4-Chlorotoluene	200	0.8526636										
Cyclohexane	200	0.481634										
1,2-Dibromo-3-chloropropane	200	0.3302039										
Dibromochloromethane	200	0.4524861										
1,2-Dibromoethane	200	0.4349448										
Dibromomethane	200	0.2403156										
trans-1,4-Dichloro-2-butene	200	0.2459764										
1,2-Dichlorobenzene	200	1.66418										
1,3-Dichlorobenzene	200	1.689651										
1,4-Dichlorobenzene	200	1.660819										

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Dichlorodifluoromethane	200	0.3505625										
1,1-Dichloroethane	200	0.585526										
1,2-Dichloroethane	200	0.4552292										
1,1-Dichloroethene	200	0.2840411										
cis-1,2-Dichloroethene	200	0.3650819										
trans-1,2-Dichloroethene	200	0.3281166										
1,2-Dichloroethene (Total)	400	0.3465993										
Dichlorofluoromethane	200	0.5937685										
1,2-Dichloropropane	200	0.3545943										
1,3-Dichloropropane	200	0.7005008										
2,2-Dichloropropane	200	0.3514579										
1,1-Dichloropropene	200	0.4438233										
cis-1,3-Dichloropropene	200	0.4457232										
trans-1,3-Dichloropropene	200	0.4415692										
Ethylbenzene	200	1.907065										
Ethyl Ether	200	0.1920317										
Hexachlorobutadiene	200	0.517601										
2-Hexanone	200	0.4552629										
Iodomethane	200	0.3444225										
Isopropylbenzene	200	3.128948										
4-Isopropyltoluene	200	2.84025										
Methyl Acetate	200	0.4026										
Methyl tert-Butyl Ether	200	0.9632734										
Methylcyclohexane	200	0.5002297										
Methylene Chloride	200	0.4061365										
2-Butanone (MEK)	200	0.26162										
4-Methyl-2-pentanone (MIBK)	200	0.5206689										
Naphthalene	200	~~3.484951~~										
n-Propylbenzene	200	0.9287047										
Styrene	200	1.213096										
1,1,1,2-Tetrachloroethane	200	0.4166429										

INITIAL CALIBRATION DATA (Continued)

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration: 5H26013

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1,2,2-Tetrachloroethane	200	1.210411										
Tetrachloroethene	200	0.4856308										
Tetrahydrofuran	200	6.936729E-02										
Toluene	200	1.445574										
1,2,3-Trichlorobenzene	200	1.176802										
1,2,4-Trichlorobenzene	200	1.172379										
1,1,1-Trichloroethane	200	0.4812266										
1,1,2-Trichloroethane	200	0.2938384										
Trichloroethene	200	0.3747605										
Trichlorofluoromethane	200	0.4907177										
1,2,3-Trichloropropane	200	0.3809074										
1,1,2-Trichloro-1,2,2-trifluoro	200	0.2392706										
1,2,4-Trimethylbenzene	200	2.801091										
1,3,5-Trimethylbenzene	200	2.752061										
Vinyl Acetate	200	~~0.6399684~~										
Vinyl Chloride	200	0.3913207										
Xylene, Meta + Para	400	0.7332555										
Xylene, Ortho	200	0.7325396										
Xylene (Total)	600	0.7330169										
Dichlorobenzenes (Total)	600	1.67155										
Dibromofluoromethane	40	0.2594322										
1,2-Dichloroethane-d4	40	0.1517998										
Toluene-d8	40	1.033063										
4-Bromofluorobenzene	40	0.5073388										

INITIAL CALIBRATION DATA (Continued)

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Calibration: 5H26013

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acetone	0.2429079	31.67031	2.096	2.089372E-02	0.99983		0.99	
Acrolein	0.1078172	21.64097	1.965286	9.759003E-02	0.99989		0.99	
Acrylonitrile	0.2268935	5.220367	2.710571	0.1117632			15	
Benzene	1.321046	1.926279	5.484714	3.742875E-02			15	
Bromobenzene	1.421424	6.35869	12.06086	0.0135496			15	
Bromochloromethane	0.2879189	3.125659	4.342	5.258685E-02			15	
Bromodichloromethane	0.3961286	7.597925	7.431	7.284189E-03			15	
Bromoform	0.3217362	12.55351	11.47186	2.154357E-02			SPCC (0.1)	
Bromomethane	0.2687524	6.569924	1.400857	0.2745331			15	
n-Butylbenzene	2.191295	6.775027	13.87714	1.338348E-02			15	
sec-Butylbenzene	3.360235	3.051852	13.17171	1.909008E-02			15	
tert-Butylbenzene	2.454996	2.320519	12.895	5.484857E-03			15	
Carbon Disulfide	0.7706061	10.71667	2.201714	1.992852E-02			15	
Carbon Tetrachloride	0.3755413	7.801599	5.092429	5.995814E-02			15	
Chlorobenzene	1.190829	6.083097	10.413	1.175984E-02			SPCC (0.3)	
Chloroethane	0.1993172	6.503524	1.471286	0.1294455			15	
2-Chloroethyl Vinyl Ether	6.029331E-03	37.69319	7.8414	3.337828E-02	0.98675		0.99	*
Chloroform	0.578894	3.579157	4.519	1.586434E-02			CCC (30)	
1-Chlorohexane	0.3382377	4.312015	10.46	1.662641E-02			15	
Chloromethane	0.4648787	14.6393	1.125	0			SPCC (0.1)	
2-Chlorotoluene	0.8864107	4.662845	12.33043	1.600926E-02			15	
4-Chlorotoluene	0.868571	5.080749	12.45486	0.4423396			15	
Cyclohexane	0.4752035	1.736137	4.864429	5.580551E-02			15	
1,2-Dibromo-3-chloropropane	0.2828443	12.12289	14.81114	1.675161E-02			15	
Dibromochloromethane	0.4023441	9.075963	9.635	3.076309E-02			15	
1,2-Dibromoethane	0.418745	3.909015	9.742143	1.305129E-02			15	
Dibromomethane	0.232149	3.789789	7.136714	1.217493E-02			15	
trans-1,4-Dichloro-2-butene	0.2164315	11.52017	12.21986	1.454635E-02			15	
1,2-Dichlorobenzene	1.719952	9.57687	13.83014	1.967949E-02			15	
1,3-Dichlorobenzene	1.752316	6.850412	13.26514	0.0238396			15	
1,4-Dichlorobenzene	1.732977	6.917855	13.37914	1.849204E-02			15	
Dichlorodifluoromethane	0.3601594	4.686067	1.007714	4.953848E-02			15	

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
1,1-Dichloroethane	0.5865016	3.372787	3.189143	7.402459E-02			SPCC (0.1)	
1,2-Dichloroethane	0.4489691	1.643841	5.549143	3.854645E-02			15	
1,1-Dichloroethene	0.2889432	3.461822	2.031857	0.1097939			CCC (30)	
cis-1,2-Dichloroethene	0.3674153	5.934354	3.972857	5.703237E-02			15	
trans-1,2-Dichloroethene	0.3253244	1.507526	2.723286	0.1068277			15	
1,2-Dichloroethene (Total)	0.3463699	3.806407	3.972857	5.703237E-02			15	
Dichlorofluoromethane	0.6035669	3.689048	1.612286	0.1185072			15	
1,2-Dichloropropane	0.3498421	2.198681	6.965143	3.516807E-02			CCC (30)	
1,3-Dichloropropane	0.7116203	5.358849	9.348	1.761173E-02			15	
2,2-Dichloropropane	0.3362873	5.918491	3.957571	7.777143E-02			15	
1,1-Dichloropropene	0.4439988	4.515668	5.115571	0.0643147			15	
cis-1,3-Dichloropropene	0.4074579	9.43283	8.100286	2.196777E-02			15	
trans-1,3-Dichloropropene	0.3723347	14.46171	8.908714	3.305593E-02			15	
Ethylbenzene	1.891914	1.298697	10.59257	2.543853E-02			CCC (30)	
Ethyl Ether	0.1936776	5.67018	1.867	0.1198341			15	
Hexachlorobutadiene	0.4890004	6.605263	16.07114	1.346441E-02			15	
2-Hexanone	0.431018	10.98684	9.541166	1.518768E-02			15	
Iodomethane	0.2395991	26.92632	2.153	0.1286069	0.99583		0.99	
Isopropylbenzene	3.189026	3.003667	11.737	2.913031E-02			15	
4-Isopropyltoluene	2.812276	2.249465	13.36843	2.504681E-02			15	
Methyl Acetate	0.3915756	9.378886	2.383143	9.590736E-02			15	
Methyl tert-Butyl Ether	0.9556535	2.975417	2.743	1.333347E-02			15	
Methylcyclohexane	0.4806737	3.417773	6.888857	3.488664E-02			15	
Methylene Chloride	0.5332895	40.58807	2.454571	0.0278562	0.99988		0.99	
2-Butanone (MEK)	0.2583963	10.93673	4.046143	0.1371979			15	
4-Methyl-2-pentanone (MIBK)	0.4835147	11.24996	8.380833	0.0346276			15	
Naphthalene	2.254165	29.6627	16.1195	9.644848E-03		0.9990407	0.99	
n-Propylbenzene	0.9146965	2.877588	12.26	1.690875E-02			15	
Styrene	1.119964	6.893618	11.27286	2.065942E-02			15	
1,1,1,2-Tetrachloroethane	0.3855716	5.150589	10.54214	1.132582E-02			15	
1,1,2,2-Tetrachloroethane	1.261874	20.35264	12.148	2.208686E-03	0.99876		SPCC (0.3)	
Tetrachloroethene	0.5099935	3.861735	9.272857	3.277837E-02			15	

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Tetrahydrofuran	6.721635E-02	12.93042	4.444428	0.124144			15	
Toluene	1.433768	2.395712	8.542143	1.680785E-02			CCC (30)	
1,2,3-Trichlorobenzene	0.9135334	22.08025	16.41943	1.425131E-02	0.99933		0.99	
1,2,4-Trichlorobenzene	0.9187511	20.06009	15.83014	5.849747E-03	0.99914		0.99	
1,1,1-Trichloroethane	0.4496857	5.032231	4.789143	4.683166E-02			15	
1,1,2-Trichloroethane	0.286637	5.342456	9.136571	0.0149256			15	
Trichloroethene	0.3859327	2.649154	6.619	1.260598E-02			15	
Trichlorofluoromethane	0.5070193	4.826764	1.648	0.1349347			15	
1,2,3-Trichloropropane	0.4176677	13.38967	12.16771	2.325767E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2459735	3.316861	2.037	3.29297E-03			15	
1,2,4-Trimethylbenzene	2.792134	2.092955	12.95571	6.725208E-03			15	
1,3,5-Trimethylbenzene	2.776393	2.538859	12.501	1.207938E-02			15	
Vinyl Acetate	0.4004601	11.26074	3.291	7.308242E-02			15	
Vinyl Chloride	0.3801529	2.82989	1.190857	0.1906931			CCC (30)	
Xylene, Meta + Para	0.7330702	1.561495	10.754	1.905678E-02			15	
Xylene, Ortho	0.7068788	3.823823	11.248	1.424152E-02			15	
Xylene (Total)	0.7243397	1.773183	11.248	1.424152E-02			15	
Dichlorobenzenes (Total)	1.735082	7.744319	13.83014	1.967949E-02			15	
Dibromofluoromethane	0.2482155	3.513849	4.805429	5.513411E-02			15	
1,2-Dichloroethane-d4	0.1517215	1.382941	5.412286	3.160457E-02			15	
Toluene-d8	1.017059	1.780427	8.451572	3.606367E-02			15	
4-Bromofluorobenzene	0.4915706	2.234069	11.907	1.478591E-02			15	

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Laboratory ID: 5H26009-SCV1
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWM
Standard ID: 5081062
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
Acetone	40.0	38.3	96	80-120
Acrolein	40.0	38.8	97	80-120
Acrylonitrile	40.0	38.9	97	80-120
Benzene	40.0	39.0	98	80-120
Bromobenzene	40.0	37.4	94	80-120
Bromochloromethane	40.0	39.2	98	80-120
Bromodichloromethane	40.0	39.6	99	80-120
Bromoform	40.0	39.4	99	80-120
Bromomethane	40.0	38.0	95	80-120
n-Butylbenzene	40.0	40.7	102	80-120
sec-Butylbenzene	40.0	38.8	97	80-120
tert-Butylbenzene	40.0	38.2	96	80-120
Carbon Disulfide	40.0	44.2	111	80-120
Carbon Tetrachloride	40.0	41.6	104	80-120
Chlorobenzene	40.0	36.8	92	80-120
Chloroethane	40.0	41.3	103	80-120
2-Chloroethyl Vinyl Ether	40.0	29.2	73 *	80-120
Chloroform	40.0	38.9	97	80-120
1-Chlorohexane	40.0	40.4	101	80-120
Chloromethane	40.0	33.6	84	80-120
2-Chlorotoluene	40.0	36.5	91	80-120
4-Chlorotoluene	40.0	38.5	96	80-120
Cyclohexane	40.0	44.0	110	80-120
1,2-Dibromo-3-chloropropane	40.0	37.4	94	80-120
Dibromochloromethane	40.0	39.5	99	80-120
1,2-Dibromoethane	40.0	39.6	99	80-120
Dibromomethane	40.0	39.0	98	80-120

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWM
Laboratory ID: 5H26009-SCV1
Standard ID: 5081062
Sequence: 5H26009
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
trans-1,4-Dichloro-2-butene	40.0	36.7	92	80-120
1,2-Dichlorobenzene	40.0	37.6	94	80-120
1,3-Dichlorobenzene	40.0	37.0	93	80-120
1,4-Dichlorobenzene	40.0	37.3	93	80-120
Dichlorodifluoromethane	40.0	30.7	77 *	80-120
1,1-Dichloroethane	40.0	38.2	96	80-120
1,2-Dichloroethane	40.0	39.7	99	80-120
1,1-Dichloroethene	40.0	36.4	91	80-120
cis-1,2-Dichloroethene	40.0	40.2	101	80-120
trans-1,2-Dichloroethene	40.0	38.4	96	80-120
1,2-Dichloroethene (Total)	80.0	78.6	98	80-120
Dichlorofluoromethane	40.0	37.6	94	80-120
1,2-Dichloropropane	40.0	39.5	99	80-120
1,3-Dichloropropane	40.0	40.2	101	80-120
2,2-Dichloropropane	40.0	41.6	104	80-120
1,1-Dichloropropene	40.0	38.2	96	80-120
cis-1,3-Dichloropropene	40.0	43.3	108	80-120
trans-1,3-Dichloropropene	40.0	39.6	99	80-120
Ethylbenzene	40.0	39.1	98	80-120
Ethyl Ether	40.0	43.5	109	80-120
Hexachlorobutadiene	40.0	37.8	95	80-120
2-Hexanone	40.0	39.5	99	80-120
Iodomethane	40.0	41.6	104	80-120
Isopropylbenzene	40.0	40.6	102	80-120
4-Isopropyltoluene	40.0	39.1	98	80-120
Methyl Acetate	40.0	38.7	97	80-120
Methyl tert-Butyl Ether	40.0	40.0	100	80-120

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWM
Laboratory ID: 5H26009-SCV1
Standard ID: 5081062
Sequence: 5H26009
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
Methylcyclohexane	40.0	43.6	109	80-120
Methylene Chloride	40.0	37.9	95	80-120
2-Butanone (MEK)	40.0	39.2	98	80-120
4-Methyl-2-pentanone (MIBK)	40.0	40.7	102	80-120
Naphthalene	40.0	33.5	84	80-120
n-Propylbenzene	40.0	38.2	96	80-120
Styrene	40.0	42.4	106	80-120
1,1,1,2-Tetrachloroethane	40.0	39.2	98	80-120
1,1,2,2-Tetrachloroethane	40.0	41.0	103	80-120
Tetrachloroethene	40.0	38.8	97	80-120
Tetrahydrofuran	40.0	40.5	101	80-120
Toluene	40.0	39.5	99	80-120
1,2,3-Trichlorobenzene	40.0	34.3	86	80-120
1,2,4-Trichlorobenzene	40.0	34.4	86	80-120
1,1,1-Trichloroethane	40.0	40.8	102	80-120
1,1,2-Trichloroethane	40.0	40.4	101	80-120
Trichloroethene	40.0	38.4	96	80-120
Trichlorofluoromethane	40.0	37.1	93	80-120
1,2,3-Trichloropropane	40.0	36.5	91	80-120
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	46.5	116	80-120
1,2,4-Trimethylbenzene	40.0	39.0	98	80-120
1,3,5-Trimethylbenzene	40.0	40.4	101	80-120
Vinyl Acetate	40.0	69.8	175 *	80-120
Vinyl Chloride	40.0	37.8	95	80-120
Xylene, Meta + Para	80.0	77.7	97	80-120
Xylene, Ortho	40.0	39.1	98	80-120
Xylene (Total)	120	117	98	80-120

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWM
Laboratory ID: 5H26009-SCV1
Standard ID: 5081062
Sequence: 5H26009
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
Dichlorobenzenes (Total)	120	112	93	80-120
Dibromofluoromethane	40.0	40.5	101	80-120
1,2-Dichloroethane-d4	40.0	40.0	100	80-120
Toluene-d8	40.0	40.6	102	80-120
4-Bromofluorobenzene	40.0	40.9	102	80-120

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-CCV1
Lab File ID: CCV0831.D
Injection Date: 08/31/15
Injection Time: 09:13
Calibration Date: 08/25/15 00:00
Calibration: 5H26013
Sequence: 5H31031
Instrument ID: 350

		CONC. (ug/L)		Response Factor			% Diff. / Drift	
Analyte	Type	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	L	40.0	37.0	0.2429079	0.1897891		-7.4	20
Acrolein	L	40.0	38.6	0.1078172	9.672738E-02		-3.4	20
Acrylonitrile	A	40.0	36.6	0.2268935	0.2077931		-8.4	20
Benzene	A	40.0	42.4	1.321046	1.399977		6.0	20
Bromobenzene	A	40.0	38.5	1.421424	1.36949		-3.7	20
Bromochloromethane	A	40.0	42.0	0.2879189	0.3019759		4.9	20
Bromodichloromethane	A	40.0	45.4	0.3961286	0.4496704		13.5	20
Bromoform	A	40.0	44.9	0.3217362	0.3614476	0.1	12.3	20
Bromomethane	A	40.0	47.9	0.2687524	0.3215837		19.7	20
n-Butylbenzene	A	40.0	44.7	2.191295	2.447828		11.7	20
sec-Butylbenzene	A	40.0	42.5	3.360235	3.571484		6.3	20
tert-Butylbenzene	A	40.0	41.2	2.454996	2.527825		3.0	20
Carbon Disulfide	A	40.0	48.0	0.7706061	0.9250004		20.0	20
Carbon Tetrachloride	A	40.0	46.8	0.3755413	0.4398513		17.1	20
Chlorobenzene	A	40.0	40.6	1.190829	1.208722	0.3	1.5	20
Chloroethane	A	40.0	43.9	0.1993172	0.2188148		9.8	20
2-Chloroethyl Vinyl Ether	L	40.0	50.5	6.029331E-03	7.610467E-03		26.2	20 *
Chloroform	A	40.0	41.9	0.578894	0.6059075		4.7	20
1-Chlorohexane	A	40.0	42.4	0.3382377	0.3587918		6.1	20
Chloromethane	A	40.0	39.3	0.4648787	0.4563052	0.1	-1.8	20
2-Chlorotoluene	A	40.0	41.5	0.8864107	0.9194028		3.7	20
4-Chlorotoluene	A	40.0	41.4	0.868571	0.8998206		3.6	20
Cyclohexane	A	40.0	42.0	0.4752035	0.4985801		4.9	20
1,2-Dibromo-3-chloropropane	A	40.0	38.4	0.2828443	0.271147		-4.1	20
Dibromochloromethane	A	40.0	43.8	0.4023441	0.4401485		9.4	20
1,2-Dibromoethane	A	40.0	42.0	0.418745	0.4391174		4.9	20
Dibromomethane	A	40.0	43.1	0.232149	0.250161		7.8	20
trans-1,4-Dichloro-2-butene	A	40.0	35.7	0.2164315	0.1932294		-10.7	20
1,2-Dichlorobenzene	A	40.0	40.8	1.719952	1.756306		2.1	20

CONTINUING CALIBRATION CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-CCV1
Lab File ID: CCV0831.D
Injection Date: 08/31/15
Injection Time: 09:13
Calibration Date: 08/25/15 00:00
Calibration: 5H26013
Sequence: 5H31031
Instrument ID: 350

Analyte	Type	CONC. (ug/L)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	40.0	41.5	1.752316	1.817249		3.7	20
1,4-Dichlorobenzene	A	40.0	41.1	1.732977	1.782243		2.8	20
Dichlorodifluoromethane	A	40.0	47.2	0.3601594	0.4252236		18.1	20
1,1-Dichloroethane	A	40.0	41.3	0.5865016	0.6060892	0.1	3.3	20
1,2-Dichloroethane	A	40.0	41.8	0.4489691	0.4690049		4.5	20
1,1-Dichloroethene	A	40.0	45.0	0.2889432	0.3253089		12.6	20
cis-1,2-Dichloroethene	A	40.0	41.5	0.3674153	0.3812024		3.8	20
trans-1,2-Dichloroethene	A	40.0	42.2	0.3253244	0.3432795		5.5	20
1,2-Dichloroethene (Total)	A	80.0	83.7	0.3463699	0.3622409		4.6	20
Dichlorofluoromethane	A	40.0	42.2	0.6035669	0.6363668		5.4	20
1,2-Dichloropropane	A	40.0	42.2	0.3498421	0.3687296		5.4	20
1,3-Dichloropropane	A	40.0	39.7	0.7116203	0.705983		-0.8	20
2,2-Dichloropropane	A	40.0	48.0	0.3362873	0.4032123		19.9	20
1,1-Dichloropropene	A	40.0	41.9	0.4439988	0.4648259		4.7	20
cis-1,3-Dichloropropene	A	40.0	45.8	0.4074579	0.4669198		14.6	20
trans-1,3-Dichloropropene	A	40.0	46.9	0.3723347	0.436539		17.2	20
Ethylbenzene	A	40.0	41.6	1.891914	1.966915		4.0	20
Ethyl Ether	A	40.0	41.0	0.1936776	0.1984261		2.5	20
Hexachlorobutadiene	A	40.0	45.2	0.4890004	0.5520251		12.9	20
2-Hexanone	A	40.0	35.1	0.431018	0.3780529		-12.3	20
Iodomethane	L	40.0	36.6	0.2395991	0.2689662		-8.6	20
Isopropylbenzene	A	40.0	40.0	3.189026	3.189524		0.02	20
4-Isopropyltoluene	A	40.0	42.4	2.812276	2.979821		6.0	20
Methyl Acetate	A	40.0	35.5	0.3915756	0.3474482		-11.3	20
Methyl tert-Butyl Ether	A	40.0	40.4	0.9556535	0.9643803		0.9	20
Methylcyclohexane	A	40.0	46.5	0.4806737	0.5588154		16.3	20
Methylene Chloride	L	40.0	41.4	0.5332895	0.4352652		3.4	20
2-Butanone (MEK)	A	40.0	34.8	0.2583963	0.2247603		-13.0	20
4-Methyl-2-pentanone (MIBK)	A	40.0	38.9	0.4835147	0.4698947		-2.8	20

CONTINUING CALIBRATION CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-CCV1
Lab File ID: CCV0831.D
Injection Date: 08/31/15
Injection Time: 09:13
Calibration Date: 08/25/15 00:00
Calibration: 5H26013
Sequence: 5H31031
Instrument ID: 350

Analyte	Type	CONC. (ug/L)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Naphthalene	Q	40.0	36.4	2.254165	2.394431		-9.1	20
n-Propylbenzene	A	40.0	42.2	0.9146965	0.9640193		5.4	20
Styrene	A	40.0	43.5	1.119964	1.218808		8.8	20
1,1,1,2-Tetrachloroethane	A	40.0	44.1	0.3855716	0.4252249		10.3	20
1,1,2,2-Tetrachloroethane	L	40.0	41.6	1.261874	1.225849	0.3	3.9	20
Tetrachloroethene	A	40.0	43.5	0.5099935	0.5545298		8.7	20
Tetrahydrofuran	A	40.0	34.4	6.721635E-02	5.772992E-02		-14.1	20
Toluene	A	40.0	42.4	1.433768	1.52171		6.1	20
1,2,3-Trichlorobenzene	L	40.0	36.6	0.9135334	0.9877274		-8.6	20
1,2,4-Trichlorobenzene	L	40.0	37.0	0.9187511	0.9917212		-7.6	20
1,1,1-Trichloroethane	A	40.0	44.4	0.4496857	0.4992097		11.0	20
1,1,2-Trichloroethane	A	40.0	43.1	0.286637	0.3091167		7.8	20
Trichloroethene	A	40.0	43.1	0.3859327	0.4154103		7.6	20
Trichlorofluoromethane	A	40.0	45.0	0.5070193	0.5707952		12.6	20
1,2,3-Trichloropropane	A	40.0	36.6	0.4176677	0.3818737		-8.6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	40.0	46.8	0.2459735	0.2874689		16.9	20
1,2,4-Trimethylbenzene	A	40.0	41.4	2.792134	2.888418		3.4	20
1,3,5-Trimethylbenzene	A	40.0	41.7	2.776393	2.892481		4.2	20
Vinyl Acetate	A	40.0	69.9	0.4004601	0.6996468		74.7	20 *
Vinyl Chloride	A	40.0	44.2	0.3801529	0.4198843		10.5	20
Xylene, Meta + Para	A	80.0	84.9	0.7330702	0.7782491		6.2	20
Xylene, Ortho	A	40.0	42.9	0.7068788	0.7581782		7.3	20
Xylene (Total)	A	120	128	0.7243397	0.7715588		6.5	20
Dichlorobenzenes (Total)	A	120	123	1.735082	1.785266		2.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CH2M HILL - VA
8012 CTO-WE2A Camp Lejeune SWMU 350

END OF REPORT

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TRIMATRIX LABORATORIES

5560 Corporate Exchange Court, SE
Grand Rapids, MI 49512 616.975.4500

TRANSMITTAL FORM

Date: September 16, 2015

Attention: Ms. Bianca Kleist

To: CH2M HILL
14120 Ballantyne Corporate Place
Suite 200
Charlotte, NC 28277
(704)-543-3274

Project Name: 8012 CTO-WE2A Camp Lejeune SWMU 350

SDG: 50069-43

Work Order(s): 1508466

WE ARE SENDING YOU:

By: ☐ US Mail ☒ FedEx ☐ Courier ☐ Other

ENCLOSED WITH THIS TRANSMITTAL: ☒ **UNDER SEPARATE COVER:** ☐

☐ Report(s) (Draft) ☐ Proposal ☐ QAPP Information
☒ Report(s) (Summary) ☐ Contract Documents ☐ Data Validation Package

QUANTITY	DESCRIPTION / DOCUMENT NAME
1	Final Report (aka Data Validation Package or DVP) for SDG 50069-43 for 8012 CTO-WE2A Camp Lejeune SWMU 350. This report consists of 177 pages with this transmittal form page one of the report.
1	CD containing PDF files of the Summary and Final Reports plus EDD
1	copy of invoice 1503125

THESE ARE TRANSMITTED AS CHECKED BELOW:

☒ Furnished As Requested ☒ For Review and Comment ☐ For Submittal To: _____
☐ For File ☐ As Corrected _____

REMARKS:

cc:

BY: _____
Walt Roudebush
Project Chemist

TRIMATRIX LABORATORIES

DATA VALIDATION PACKAGE

Prepared for:

CH2M HILL - VA
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277

Project:

8012 CTO-WE2A Camp Lejeune SWMU 350

Sample Delivery Group (SDG):

50069-43

Prepared by:

TriMatrix Laboratories, Inc.
5560 Corporate Exchange Court SE
Grand Rapids, MI 49512-5503

Report Date:

September 10, 2015

Walter J. Roudebush, Project Chemist
roudebushw@trimatrixlabs.com

9/10/15
Approval Date

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TRIMATRIX LABORATORIES

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CH2M HILL - VA
8012 CTO-WE2A Camp Lejeune SWMU 350

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	Table of Contents	**0003**
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A	**Field COC Records and Receiving Documentation**	**0015-0025**
B	**Internal COC Records**	**0026-0027**
C	**GC/MS Volatile Organics** • USEPA-8260B	**0028-0170** 0029-0170

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

CH2M HILL - VA
8012 CTO-WE2A Camp Lejeune SWMU 350

SDG Executive Summary

This case narrative applies to samples received on August 27, 2015. All samples were scheduled for analysis in accordance with parameters outlined on the field chain of custody record, the TriMatrix bid form, and/or oral and written correspondence between CH2M HILL - VA and TriMatrix Laboratories, Inc.

Each sample receipt event was assigned a unique TriMatrix work order number. Sample receipt documentation is included in section A of this data package.

Project Technical Issues/Problems

Project-related data qualification designations, narrations, and reporting conventions are included in Attachment 1 - *Project Technical Narrative(s)*.

QA/QC Data Qualifications/Narrations

Quality assurance issues and/or quality control data qualifications and narrations related to the analysis and reporting of this SDG are presented in Attachment 2 - *Statement of Data Qualifications*. The absence of a statement page for a particular analyte group (*e.g.* Percent Solids) implies that no qualifying statements were generated for that analyte.

Data Review and Approval

All data was peer-reviewed by a second analyst, and then by appropriate data management staff against laboratory quality control requirements and project specifications. It was then reviewed and approved by the group supervisor/manager prior to further review by the project chemist.

Data Deliverables

This report relates only to the sample(s) as received. Estimates of analytical uncertainties for the test results contained within this report are available upon request. Test results are in compliance with the requirements of the DoD Quality Systems Manual for Environmental Laboratories Version 4.2, the National Environmental Laboratory Accreditation Conference (NELAC), and one or more of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/13-049-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003329); Kentucky DEP (AL123065/#0021); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/53116); North Carolina DNRE (#659); Virginia DCLS (#460153/7952); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-14-00305).

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

The data deliverables, both hardcopy and/or electronic (EDD), that comprise this data package are intended to comply with the documents referenced in the introductory section of this narrative. The EDD, if requested, will be issued separately from this hardcopy report. Hold time reports for each test procedure are presented following the CLP-like forms section of this report.

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SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1508466

TriMatrix Laboratories received the cooler(s) for this work order on August 27, 2015, at 08:20am. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and FedEx shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
SWMU350-GW06-15C-1	1508466-01	Ground Water	8/24/2015
SWMU350-GW48-30-15C-1	1508466-02	Ground Water	8/24/2015
SWMU350-GW49-30-15C-1	1508466-03	Ground Water	8/25/2015
SWMU350-EB-082515	1508466-04	Water	8/25/2015
SWMU350-GW47-30-15C-1	1508466-05	Ground Water	8/25/2015
SWMU350-GW48-18-15C-1	1508466-06	Ground Water	8/24/2015
SWMU350-GW49-18-15C-1	1508466-07	Ground Water	8/25/2015
SWMU350-GW47-18-15C-1	1508466-08	Ground Water	8/25/2015
SWMU350-GW47-18D-15C-1	1508466-09	Ground Water	8/25/2015
SWMU350-GW16-15C-1	1508466-10	Ground Water	8/25/2015
SWMU350-TB-082515	1508466-11	Water	8/25/2015

See the Project Correspondence section of Attachment 1 for any administrative issues that were encountered during the receipt and analysis of this work order.

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SDG CASE NARRATIVE

Attachment 1
Project Technical Narrative(s)

Sample Result Reporting Convention

Sample results are reported as LOD "U" (e.g. 0.001 U) if the target analyte was not detected at or above the detection limit (DL). The LOD is the Limit of Detection as defined in the DoD QSM and numerically determined by TriMatrix.

If a sample for an organic analyte is reanalyzed and also reported, the second analysis includes the suffix "RE*n*" where *n* = the first, second, etc. reanalysis. If a sample is reanalyzed for confirmation purposes but that confirmation was not performed simultaneously, the second set of sample results is reported on a second Form 1 since the confirmation analysis did not occur at the same time and/or date.

Percent Solids and Metals Data Reporting

Unless otherwise noted, all soil samples requiring metals analysis are dried at 50° to 60° C to a constant weight prior to acid digestion. In order to report results on a dry weight basis, correction for percent solids is not applicable.

Data Qualifier Designation

If applicable, sample results are qualified with:

a "U" flag as defined above;
a "J" flag if the analyte was detected, but the concentration is greater than the DL and less than the LOQ (the Limit of Quantitation as defined in the DoD QSM);
a "B" flag if the analyte was detected above one-half the LOQ (above the LOQ for a common laboratory contaminant) in the associated method blank, and the sample concentration was less than or equal to ten times the method blank result;
a "E" flag if the analyte exceeded the instrument calibration range;
a "N" flag for a non-target analyte identified as a tentatively identified compound using mass spectrometry;
a LIMS-generated statement of qualification that will be reported in Attachment 2 to this narrative.

Batch and Analytical Batch Designation

A Quality Control (QC) Batch is a seven-digit number that associates all samples that have been prepared together (or analyzed together if there is no preparation). Quality Control batches are limited to no more than twenty samples, excluding batch QC (method blanks, control spikes, etc.). Some batches may contain multiple sets of method blanks (BLK) and laboratory control samples (BS), where a set of method quality control analyses were prepared in concert with each set of samples on a given day.

An Analytical Batch (or Sequence) is a seven-digit number that associates all samples analyzed as a set under one analytical run.

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Walt Roudebush

From: Bianca.Kleist@CH2M.com
Sent: Wednesday, September 09, 2015 1:56 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order 1508466 - preliminary report

Thanks Walt!

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Wednesday, September 02, 2015 11:56 AM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order 1508466 - preliminary report

Bianca,

RE: CTO-WE2A SWMU 350

A PDF of the results-only (plus batch QC) report is attached.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Friday, August 28, 2015 9:19 AM
To: 'Bianca.Kleist@CH2M.com' <Bianca.Kleist@CH2M.com>
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order 1508466

Bianca,

RE: CTO-WE2A SWMU 350

A PDF of the receipt confirmation for samples received on 8/27/15 and assigned to work order 1508466 and SDG 50069-43 is attached.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 12:31 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Hi Walt, that ID (SWMU350-GW47-18D-15C-1) is correct for the FD. Thank you.

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:20 PM
To: Kleist, Bianca/CLT
Cc: Mike Movinski
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Bianca,

Would you please confirm that the full field ID for the FD should be SWMU350-GW47-18D-15C-1.

There will also be a surcharge (TBD) applied for the 7 day TAT (instead of the 14 day TAT as bid).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 12:12 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Yes please, thanks Walt

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:06 PM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Bianca,

The trip blank is not listed on either COC. Should the field ID be SWMU350-TB-082515 with a collection date of 8/15/15? We'll assign a collection time of 0800 hrs.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 11:51 AM
To: 'Bianca.Kleist@CH2M.com' <Bianca.Kleist@CH2M.com>
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD

Bianca,

Thanks.

One cooler of samples was received this morning. All sample containers were intact and the cooler temp blank was 2.9 deg C.

A sample receipt confirmation is pending.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:42 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Another ID change: The duplicate should be SWMU350-GW47-18D and not SWMU350-GW47D-18. Thank you!

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:26 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Hi Walt,

I noticed that the ID suffixes on the COC are incorrect. Please change "-15D" to "-15C-1".

Thank you!

Bianca

From: Kleist, Bianca/CLT
Sent: Thursday, August 27, 2015 11:22 AM
To: 'Walt Roudebush'
Subject: SWMU 350 samples

Hi Walt,

Attached is the COC for SWMU 350 samples that were shipped yesterday. Please note that the EB ID should be SWMU350-EB-082515.

Thanks!

Bianca

Bianca Kleist
Chemist
D 1 704 543 3274

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Tuesday, August 18, 2015 11:01 AM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Great, thank you!

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Tuesday, August 18, 2015 10:59 AM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Bianca,

Both bottle orders, each in separate coolers, are shipping today to David's attention via FedEx Ground; the tracking #s are: 649285996209 (GWs) and 649285996194 (IDW).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Monday, August 17, 2015 2:45 PM
To: Bianca.Kleist@CH2M.com
Cc: Mike Movinski <movinskim@trimatrixlabs.com>
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order*

Bianca,

PDFs of the two bottle orders are attached. I've also retained the bid sheet as an attachment (for reference) since a surcharge would apply if the TAT is reduced from 14 days to 7 days for the GWs.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Monday, August 17, 2015 2:08 PM
To: roudebushw@trimatrixlabs.com
Subject: CTO-WE2A SWMU 350 *Bottleware order*

Hi Walt,

We are gearing up to collect the last set of samples under CTO-WE2A SWMU 350. Can you please ship the bottleware to be received by this Friday, August 21st? Please let me know if you need our FedEx number for shipping. We are still in the process of completing the sampler table, I will send that on when it becomes available.

We will be collecting:

- 9 groundwater samples, 1 duplicate, 1 EB, 1 MS/MSD pair, and a TB. Please send 10% extra bottleware and sufficient DI water for blanks.
- We may be collecting 2 aqueous IDW samples. Could you please send 1 set of bottleware for full TCLP and RCI analysis? (There should be an unused set from the last event).

Shipping address:
CH2M HILL Field Trailer
ATTN: David Seed
Lot 203 Piney Green Rd.
Camp Lejeune, NC 28542
Phone number for reference – 919 875 4311

I am currently checking on whether we need a 7-day for the Form 1s or if the 14-day TAT will suffice.

Thanks,
Bianca

Bianca Kleist
Chemist
D 1 704 543 3274

CH2M
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277
USA
www.ch2m.com

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 1
Project Technical Narrative(s)

No Project Narrative is associated with this report.

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SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

All analyses have been validated and comply with our Quality Control Program.
No qualifications are required.

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TRIMATRIX
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SECTION - A

FIELD COC RECORDS
AND
RECEIVING DOCUMENTATION

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Chain of Custody Record

COC No. 152108

Pg. 1 of 2

For Lab Use Only

Cart: —

VOA Rack/Tray: 306G, 196G

Receipt Log No.: 3-11

Project Chemist: WDR

Work Order No.: 1508466

Client Name: CH2M Hill

Address: 14120 Ballantyne Corp Pl Ste 200

City, State Zip: Charlotte, NC 28277

Phone/Fax: 704-543-3274

Email: Bianca.Kleist@ch2m.com

Project Name: CDWEZA SWMU 350

Client Project No. / P.O. No.: 472752

Invoice To: ☒ Client ☐ Other (comments)

Contact/Report To: Bianca Kleist

Analyses Requested: Voc *

Container Type (corresponds to Container Packing List)

PRESERVATIVES
- A NONE pH~7
- B HNO_3 pH<2
- C H_2SO_4 pH<2
- D 1+1 HCl pH<2
- E NaOH pH>12
- F ZnAc/NaOH pH>9
- G MeOH
- H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted	Total	Sample Comments
01	WG	01	1 *GW06-15D	1	8/24/15	1735		X	GW	3	3	
01	WG	02	2 *GW48-30-15D		8/24/15	1555						
03	WG	03	3 *GW49-30-15D		8/25/15	1305						
—			4 *GW49-30-15D-MS									
—			5 *GW49-30-15D SD									
04	WG	04	6 *-EB082515		8/25/15	1615						
01	WG	05	7 *GW47-30-15D		8/25/15	0945						
01	WG	06	8 *GW48-18-15D		8/24/15	1500						
01	WG	07	9 *GW49-18-15D		8/25/15	1215						
01	WG	08	10 *GW47-18-15D		8/25/15	1050						

Sampled By (print): David Seed

Sampler's Signature: [signature]

Company:

How Shipped? Hand ____ Carrier _____

Tracking No.

Comments: *=SWMU350- TRIP BLANK INCLUDED

*Naphthalene analysis only

7-day TAT

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
[signature]	8/26/15	1700						

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
						[signature]	8.27.15	0820

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

TRIMATRIX LABORATORIES

5560 Corporate Exchange Court SE
Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
www.trimatrixlabs.com

Chain of Custody Record

COC No. 152109

Pg. 2 of 2

For Lab Use Only
Cart
VOA Rack/Tray 30oG, 19oG
Receipt Log No. 3-11
Project Chemist
Work Order No. 1508H06

Client Name
Address SEE PAGE 1
City, State Zip
Phone/Fax
Email

Project Name
Client Project No. / P.O. No.
Invoice To ☐ Client ☐ Other (comments)
Contact/Report To

Analyses Requested: VOC

⇦ PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Container Type (corresponds to Container Packing List): 1	Total	Sample Comments
										Number of Containers Submitted		
02	WG	09	1 *GW47D-18-15D	1	8/25/15	1055		X	GW	3	3	
01	WG	10	2 *GW16-15D	1	8/25/15	1505		X	GW	3	3	
05	WQ	11	3 SWMW350-TB-082515	1	8/25/15	0800			WQ	1	1	Added by Tri Matrix (WC)
			4									
			5									
			6									
			7									
			8									
			9									
			10									

Sampled By (print): David Seel
Sampler's Signature
Company

How Shipped? Hand ____ Carrier _____
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
	8/26/15	1700						

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							8.27.15	0820

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

Walt Roudebush

From: Bianca.Kleist@CH2M.com
Sent: Thursday, August 27, 2015 12:31 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Hi Walt, that ID (SWMU350-GW47-18D-15C-1) is correct for the FD. Thank you.

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:20 PM
To: Kleist, Bianca/CLT
Cc: Mike Movinski
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - FD ID and TAT surcharge

Bianca,

Would you please confirm that the full field ID for the FD should be SWMU350-GW47-18D-15C-1.

There will also be a surcharge (TBD) applied for the 7 day TAT (instead of the 14 day TAT as bid).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 12:12 PM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Yes please, thanks Walt

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 12:06 PM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD - TB not on COC

Bianca,

The trip blank is not listed on either COC. Should the field ID be SWMU350-TB-082515 with a collection date of 8/15/15? We'll assign a collection time of 0800 hrs.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Thursday, August 27, 2015 11:51 AM
To: 'Bianca.Kleist@CH2M.com' <Bianca.Kleist@CH2M.com>
Subject: RE: CTO-WE2A SWMU 350, 8/27/15 Sample Receipt, SDG 50069-43, work order TBD

Bianca,

Thanks.

One cooler of samples was received this morning. All sample containers were intact and the cooler temp blank was 2.9 deg C.

A sample receipt confirmation is pending.

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:42 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Another ID change: The duplicate should be SWMU350-GW47-18D and not SWMU350-GW47D-18. Thank you!

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Thursday, August 27, 2015 11:26 AM
To: roudebushw@trimatrixlabs.com
Subject: FW: SWMU 350 samples - sample IDs

Hi Walt,

I noticed that the ID suffixes on the COC are incorrect. Please change "-15D" to "-15C-1".

Thank you!

Bianca

From: Kleist, Bianca/CLT
Sent: Thursday, August 27, 2015 11:22 AM
To: 'Walt Roudebush'
Subject: SWMU 350 samples

Hi Walt,

Attached is the COC for SWMU 350 samples that were shipped yesterday. Please note that the EB ID should be SWMU350-EB-082515.

Thanks!

Bianca

Bianca Kleist
Chemist
D 1 704 543 3274

From: Bianca.Kleist@CH2M.com [mailto:Bianca.Kleist@CH2M.com]
Sent: Tuesday, August 18, 2015 11:01 AM
To: roudebushw@trimatrixlabs.com
Subject: RE: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Great, thank you!

From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Tuesday, August 18, 2015 10:59 AM
To: Kleist, Bianca/CLT
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order* - to ship

Bianca,

Both bottle orders, each in separate coolers, are shipping today to David's attention via FedEx Ground; the tracking #s are: 649285996209 (GWs) and 649285996194 (IDW).

Walt Roudebush
Project Chemist
Direct: 616.975.4561

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From: Walt Roudebush [mailto:roudebushw@trimatrixlabs.com]
Sent: Monday, August 17, 2015 2:45 PM
To: Bianca.Kleist@CH2M.com
Cc: Mike Movinski <movinskim@trimatrixlabs.com>
Subject: FW: CTO-WE2A SWMU 350 *Bottleware order*

Bianca,

From: (919) 875-4311
David Seed
CH2MHILL INC
3120 Highwoods Blvd.
Suite 214
Raleigh, NC 27604

Origin ID: RZZA

FedEx Express

J152015062603uv

Ship Date: 26AUG15
ActWgt: 25.00 LB
CAD: 105337609/WSXI2500

Dims: 12 X 12 X 12 IN

Delivery Address Bar Code

Ref # 472752.03.PT.PT
Invoice #
PO #
Dept #

SHIP TO: (616) 975-4561

BILL SENDER

Sample Recieving
Trimatrix Laboratoires
5500 Corporate Exchange Court

Grand Rapids, MI 49512

THU - 27 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7812 2043 0997

NA GRRA

49512
MI-US
GRR

539J1/FECA/31D0

CUSTODY SEAL
DATE 8/26/15
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: CH2M Hill	Work Order #: 15084166 (New / Add To)
Receipt Record Page/Line #: 3.11	Project Chemist: WR; Sample #s:

Recorded by (initials/date)		Qty Received	Thermometer Used	
WC 8.27.15	☑ Cooler ☐ Box ☐ Other	1	☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)	☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is
Tm 2837	1121	☐ None ☑ Present / Intact ☐ Present / Not Intact	☑ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	(Dispersed) / Top / Middle / Bottom	☑ Yes ☐ No	☑ Representative ☐ Not Representative
Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is
		☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative
Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is
		☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative
Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is
		☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:	2.9	-	2.9
Sample 1:	3.3	-	3.3
Sample 2:	3.0	-	3.0
Sample 3:	3.9	-	3.9
3 Sample Average °C:	3.4		

☐ Cooler ID on COC? ☑ VOC Trip Blank received? (2)

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			
3 Sample Average °C:			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			
3 Sample Average °C:			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			
3 Sample Average °C:			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other_____

COC ID Numbers: 152108, 152109

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☑	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Temperature Blank OR average sample temperature, ≥6° C?
☑	☐	☐	If either is ≥6° C, was thermal preservation required?
☑	☐		If "Yes", Project Chemist Approval Initials:_____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☐	☐		If "No", added orange tag?
	☐		Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1 L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

Trip Blank not listed on COC but received (WR)

☐ Trip Blank received ☑ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.27.15 0820	8.27.15 1130	Yes / (No)

TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client: CH2M Hill		Work Order #: 1508466
Receipt Log #: 3-11	Completed By (initials/date): WC 8.27.15	Project Chemist: WJR

COC ID # 152108	Adjusted by: ____ Date: ____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	1
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	HCl
Expected pH	>12	<2	<2		6-8	<2	<2	<2
COC Line #1								✓
COC Line #2								✓
COC Line #3								✓
COC Line #4								
COC Line #5								
COC Line #6								✓
COC Line #7								✓
COC Line #8								✓
COC Line #9								✓
COC Line #10								✓

Comments

pH Strip Reagent #	
☑	5060576
☐	

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # 152109	Adjusted by: ____ Date: ____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	1
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	HCl
Expected pH	>12	<2	<2		6-8	<2	<2	<2
COC Line #1								✓
COC Line #2								✓
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

TRIMATRIX LABORATORIES

WORK ORDER **1508466**

Printed: 8/27/2015 5:18:47PM

Client:	**CH2M HILL - VA**	Project Manager:	**Walter J. Roudebush**
Project:	**8012 CTO-WE2A Camp Lejeune SWMU 350**	Project Number:	**50069**
Work Order:	**Investigation**	SDG:	**50069-43**

Report To:
CH2M HILL - VA
Ms. Bianca Kleist
14120 Ballantyne Corporate Place, Suite 200
Charlotte, NC 28277
Phone: (704) 543-3274
Fax: (757) 497-6885

Invoice To:
CH2M HILL, Inc.
Accounts Payable
P.O. Box 241329
Denver, CO 80224
Phone: (720) 286-2029
Fax: ---

Package Due Date:	**Sep-18-15 23:00**			
W.O. Due Date:	**Sep-02-15 15:00 (4 day TAT)**		Report Level:	**4DOD**
Date Received:	Aug-27-15 08:20	3.4°C	Received By:	William D. Cole
Date Logged In:	Aug-27-15 13:54		Logged In By:	William D. Cole
W.O. Comments:	*4DOD, QSM v4.2, client MS/MSD, 7 calendar day TAT for results, no further samples and SDG 50069-43 is CLOSED.*			
	Rack #306G & #196G			

Analysis	Lab Due Date	TAT	Expires	Analysis Comments
1508466-01 SWMU350-GW06-15C-1 [Water]				
Sampled Aug-24-15 17:35 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-07-15 17:35	
1508466-02 SWMU350-GW48-30-15C-1 [Water]				
Sampled Aug-24-15 15:55 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-07-15 15:55	
1508466-03 SWMU350-GW49-30-15C-1 [Water]				**client MS/MSD**
Sampled Aug-25-15 13:05 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 13:05	
1508466-04 SWMU350-EB-082515 [Water]				**Equipment Blank**
Sampled Aug-25-15 16:15 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 16:15	
1508466-05 SWMU350-GW47-30-15C-1 [Water]				
Sampled Aug-25-15 09:45 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 09:45	
1508466-06 SWMU350-GW48-18-15C-1 [Water]				
Sampled Aug-24-15 15:00 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-07-15 15:00	
1508466-07 SWMU350-GW49-18-15C-1 [Water]				
Sampled Aug-25-15 12:15 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 12:15	
1508466-08 SWMU350-GW47-18-15C-1 [Water]				
Sampled Aug-25-15 10:50 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 10:50	
1508466-09 SWMU350-GW47-18D-15C-1 [Water]				**Field Duplicate**

Client:	**CH2M HILL - VA**	Project Manager:	**Walter J. Roudebush**
Project:	**8012 CTO-WE2A Camp Lejeune SWMU 350**	Project Number:	**50069**
Work Order:	**Investigation**	SDG:	**50069-43**

Analysis	Lab Due Date	TAT	Expires	Analysis Comments
Sampled Aug-25-15 10:55 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 10:55	
1508466-10 SWMU350-GW16-15C-1 [Water]				
Sampled Aug-25-15 15:05 (GMT-05:00) Eastern Time (US & by CH2M HILL				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 15:05	
1508466-11 SWMU350-TB-082515 [Water]				**Trip Blank (2nd vial is back-up)**
Sampled Aug-25-15 08:00 (GMT-05:00) Eastern Time (US & by TriMatrix				
8260B DoD VOAs plus custom	Sep-02-15 12:00	4	Sep-08-15 08:00	

Volatiles MS Analysis Detail

* indicates custom

	Analyte	CLrept?	QCrept?	MDL	RL
Water	**8260B DoD VOAs plus custom**			**ug/L**	
	Naphthalene	Y	Y	0.2	5

Reviewed By

Date

TRIMATRIX
LABORATORIES

SECTION - B

INTERNAL COC RECORDS

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ Phone: 616.975.4500 ♦ Fax: 616.942.7463 ♦ www.trimatrixlabs.com

TriMatrix Laboratories, Inc.

Internal Chain of Custody

SDGID: 50069-43 **Work Order #: 1508466**

Client: **CH2M HILL - VA**
Project: **8012 CTO-WE2A Camp Lejeune SWMU 350**

Project Manager: **Walter J. Roudebush**
Date Received: **Aug-27-15 08:20**

Department: **Volatiles MS** Analysis: 8260B

Lab Number / Sample Name	*Container*	*Removed by (Signature)*	*Date & Time Removed*	*Date & Time Returned*	*Consumed?*	*Extract Container*
1508466-01 SWMU350-GW06-15C-1	A	Diane Van Male	8-31-15 10:30	9-1-15 9:00		
1508466-02 SWMU350-GW48-30-15C-1						
1508466-03 SWMU350-GW49-30-15C-1						
1508466-04 SWMU350-EB-082515						
1508466-05 SWMU350-GW47-30-15C-1						
1508466-06 SWMU350-GW48-18-15C-1						
1508466-07 SWMU350-GW49-18-15C-1						
1508466-08 SWMU350-GW47-18-15C-1						
1508466-09 SWMU350-GW47-18D-15C-1						
1508466-10 SWMU350-GW16-15C-1						
1508466-11 SWMU350-TB-082515						

TRIMATRIX LABORATORIES

SECTION - C

GCMS VOLATILE ORGANICS

USEPA-8260B

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Individual sample results relate only to the sample tested.

TriMatrix Laboratories, Inc.

CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

SDG: 50069-43

USEPA-8260B

SAMPLE ID SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Client Sample Id:	Lab Sample Id:
SWMU350-GW06-15C-1	1508466-01
SWMU350-GW48-30-15C-1	1508466-02
SWMU350-GW49-30-15C-1	1508466-03
SWMU350-EB-082515	1508466-04
SWMU350-GW47-30-15C-1	1508466-05
SWMU350-GW48-18-15C-1	1508466-06
SWMU350-GW49-18-15C-1	1508466-07
SWMU350-GW47-18-15C-1	1508466-08
SWMU350-GW47-18D-15C-1	1508466-09
SWMU350-GW16-15C-1	1508466-10
SWMU350-TB-082515	1508466-11

TRIMATRIX LABORATORIES

SECTION - C

QUALITY CONTROL (QC) SUMMARY

USEPA-8260B

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

SURROGATE STANDARD RECOVERY AND RT SUMMARY

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Matrix: Water
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (5H31031-CCV1)		**Lab File ID: CCV0831.D**		**Analyzed: 08/31/15 09:13**			
Dibromofluoromethane	4.80	4.81	0.00	+/-1.0	105	80 - 120	
1,2-Dichloroethane-d4	5.41	5.41	-0.01	+/-1.0	100	80 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	104	80 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	102	80 - 120	
LCS (1509221-BS1)		**Lab File ID: BS0831.D**		**Analyzed: 08/31/15 09:38**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	107	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	100	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	103	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	98	75 - 120	
Blank (1509221-BLK1)		**Lab File ID: BLK0831.D**		**Analyzed: 08/31/15 10:48**			
Dibromofluoromethane	4.80	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	-0.01	+/-1.0	98	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	100	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	
SWMU350-GW06-15C-1 (1508466-01)		**Lab File ID: 1508466-01.D**		**Analyzed: 08/31/15 12:27**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	100	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	
SWMU350-GW48-30-15C-1 (1508466-02)		**Lab File ID: 1508466-02.D**		**Analyzed: 08/31/15 12:52**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	96	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	98	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	97	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-GW49-30-15C-1 (1508466-03)		**Lab File ID: 1508466-03.D**		**Analyzed: 08/31/15 13:17**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	100	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-EB-082515 (1508466-04)		**Lab File ID: 1508466-04.D**		**Analyzed: 08/31/15 13:42**			
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	103	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Matrix: Water
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
SWMU350-GW48-18-15C-1 (1508466-06)		**Lab File ID: 1508466-06.D Analyzed: 08/31/15 14:07**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	101	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	102	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	94	75 - 120	
SWMU350-GW49-18-15C-1 (1508466-07)		**Lab File ID: 1508466-07.D Analyzed: 08/31/15 14:32**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	102	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	104	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	101	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	91	75 - 120	
SWMU350-GW47-18-15C-1 (1508466-08)		**Lab File ID: 1508466-08.D Analyzed: 08/31/15 14:57**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	104	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-GW47-18D-15C-1 (1508466-09)		**Lab File ID: 1508466-09.D Analyzed: 08/31/15 15:22**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	102	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	98	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	94	75 - 120	
SWMU350-GW16-15C-1 (1508466-10)		**Lab File ID: 1508466-10.D Analyzed: 08/31/15 15:47**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	96	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	103	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	98	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-TB-082515 (1508466-11)		**Lab File ID: 1508466-11.D Analyzed: 08/31/15 16:12**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	97	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	105	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	100	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	92	75 - 120	
SWMU350-GW47-30-15C-1 (1508466-05)		**Lab File ID: 1508466-05.D Analyzed: 08/31/15 16:37**					
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	95	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	99	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	99	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	93	75 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Matrix: Water
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Matrix Spike (1509221-MS1)	**Lab File ID: 1508466-03MSAnalyzed: 08/31/15 18:42**						
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	111	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	106	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	103	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	103	75 - 120	
Matrix Spike Dup (1509221-MSD1)	**Lab File ID: 1508466-03MSAnalyzed: 08/31/15 19:07**						
Dibromofluoromethane	4.81	4.81	0.00	+/-1.0	111	85 - 115	
1,2-Dichloroethane-d4	5.41	5.41	0.00	+/-1.0	102	70 - 120	
Toluene-d8	8.45	8.45	0.00	+/-1.0	102	85 - 120	
4-Bromofluorobenzene	11.91	11.91	0.00	+/-1.0	100	75 - 120	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	5H31031-TUN1	BFB0831A.D	08/31/15 08:46
Calibration Check	5H31031-CCV1	CCV0831.D	08/31/15 09:13
LCS	1509221-BS1	BS0831.D	08/31/15 09:38
Blank	1509221-BLK1	BLK0831.D	08/31/15 10:48
SWMU350-GW06-15C-1	1508466-01	1508466-01.D	08/31/15 12:27
SWMU350-GW48-30-15C-1	1508466-02	1508466-02.D	08/31/15 12:52
SWMU350-GW49-30-15C-1	1508466-03	1508466-03.D	08/31/15 13:17
SWMU350-EB-082515	1508466-04	1508466-04.D	08/31/15 13:42
SWMU350-GW48-18-15C-1	1508466-06	1508466-06.D	08/31/15 14:07
SWMU350-GW49-18-15C-1	1508466-07	1508466-07.D	08/31/15 14:32
SWMU350-GW47-18-15C-1	1508466-08	1508466-08.D	08/31/15 14:57
SWMU350-GW47-18D-15C-1	1508466-09	1508466-09.D	08/31/15 15:22
SWMU350-GW16-15C-1	1508466-10	1508466-10.D	08/31/15 15:47
SWMU350-TB-082515	1508466-11	1508466-11.D	08/31/15 16:12
SWMU350-GW47-30-15C-1	1508466-05	1508466-05.D	08/31/15 16:37
SWMU350-GW49-30-15C-1	1509221-MS1	1508466-03MS.D	08/31/15 18:42
SWMU350-GW49-30-15C-1	1509221-MSD1	1508466-03MSD.D	08/31/15 19:07

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SWMU350-GW49-30-15C-1

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-MS1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Naphthalene	40.0	ND	36.9	92	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SWMU350-GW49-30-15C-1

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-MSD1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Naphthalene	40.0	38.1	95	3	30	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-BS1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

Sequence: 5H31031

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Naphthalene	40.0	36.2	90	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

METHOD BLANK DATA SHEET
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Water Laboratory ID: 1509221-BLK1 File ID: BLK0831.D

Prepared: 08/31/15 07:00 Analyzed: 08/31/15 10:48

Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
91-20-3	Naphthalene	0.50	ug/L	0.20	0.50	5.0	U

System Monitoring Compound	Added (ug/L)	Conc. (ug/L)	% REC	QC Limits	Q
Dibromofluoromethane	40.0	39.0	97	85 - 115	
1,2-Dichloroethane-d4	40.0	39.3	98	70 - 120	
Toluene-d8	40.0	39.9	100	85 - 120	
4-Bromofluorobenzene	40.0	37.2	93	75 - 120	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	668580	6.013	754057	6.013	
Chlorobenzene-d5	557789	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	281974	13.354	329683	13.348	

QC BATCH SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

QC Batch: 1509221 QC Batch Matrix: Water

Preparation: 5030B Aqueous Purge & Trap

Sample Name	Lab Sample ID	Date Prepared	Observations
SWMU350-GW06-15C-1	1508466-01	08/31/15 07:00	
SWMU350-GW48-30-15C-1	1508466-02	08/31/15 07:00	
SWMU350-GW49-30-15C-1	1508466-03	08/31/15 07:00	
SWMU350-EB-082515	1508466-04	08/31/15 07:00	
SWMU350-GW47-30-15C-1	1508466-05	08/31/15 07:00	
SWMU350-GW48-18-15C-1	1508466-06	08/31/15 07:00	
SWMU350-GW49-18-15C-1	1508466-07	08/31/15 07:00	
SWMU350-GW47-18-15C-1	1508466-08	08/31/15 07:00	
SWMU350-GW47-18D-15C-1	1508466-09	08/31/15 07:00	
SWMU350-GW16-15C-1	1508466-10	08/31/15 07:00	
SWMU350-TB-082515	1508466-11	08/31/15 07:00	
Blank	1509221-BLK1	08/31/15 07:00	
LCS	1509221-BS1	08/31/15 07:00	
SWMU350-GW49-30-15C-1	1509221-MS1	08/31/15 07:00	
SWMU350-GW49-30-15C-1	1509221-MSD1	08/31/15 07:00	

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Lab Sample ID: 5H26009-TUN1
Injection Date: 08/25/15
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab File ID: BFB0825A.D
Injection Time: 10:06
Calibration: 5H26013
Instrument ID: 350

m/z	Ion Abundance Criteria	% Relative Abundance	
50	15 - 40% of 95	16.3	PASS
75	30 - 60% of 95	43.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.75	PASS
173	Less than 2% of 174	0.249	PASS
174	50 - 100% of 95	96.4	PASS
175	5 - 9% of 174	7.55	PASS
176	95 - 101% of 174	96.1	PASS
177	5 - 9% of 176	6.04	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-TUN1
Lab File ID: BFB0831A.D
Injection Date: 08/31/15
Injection Time: 08:46
Sequence: 5H31031
Instrument ID: 350

m/z	Ion Abundance Criteria	% Relative Abundance	
50	15 - 40% of 95	15.1	PASS
75	30 - 60% of 95	45.5	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.11	PASS
173	Less than 2% of 174	0	PASS
174	50 - 100% of 95	99.4	PASS
175	5 - 9% of 174	7.67	PASS
176	95 - 101% of 174	96.4	PASS
177	5 - 9% of 176	7.09	PASS

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Calibration: 5H26013
Sequence: 5H31031
Instrument: 350

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (5H31031-CCV1)			**Lab File ID:**	**CCV0831.D**		**Analyzed:**	**08/31/15 09:13**		
Fluorobenzene	687737	6.013	754057	6.013	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	596435	10.378	622554	10.378	96	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	333262	13.348	329683	13.348	101	50 - 200	0.0000	+/-0.50	
LCS (1509221-BS1)			**Lab File ID:**	**BS0831.D**		**Analyzed:**	**08/31/15 09:38**		
Fluorobenzene	695695	6.013	754057	6.013	92	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	608012	10.378	622554	10.378	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	336738	13.354	329683	13.348	102	50 - 200	0.0060	+/-0.50	
Blank (1509221-BLK1)			**Lab File ID:**	**BLK0831.D**		**Analyzed:**	**08/31/15 10:48**		
Fluorobenzene	668580	6.013	754057	6.013	89	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	557789	10.377	622554	10.378	90	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	281974	13.354	329683	13.348	86	50 - 200	0.0060	+/-0.50	
SWMU350-GW06-15C-1 (1508466-01)			**Lab File ID:**	**1508466-01.D**		**Analyzed:**	**08/31/15 12:27**		
Fluorobenzene	659178	6.013	754057	6.013	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	552166	10.378	622554	10.378	89	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	267870	13.354	329683	13.348	81	50 - 200	0.0060	+/-0.50	
SWMU350-GW48-30-15C-1 (1508466-02)			**Lab File ID:**	**1508466-02.D**		**Analyzed:**	**08/31/15 12:52**		
Fluorobenzene	648057	6.013	754057	6.013	86	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	532642	10.378	622554	10.378	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	260863	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-GW49-30-15C-1 (1508466-03)			**Lab File ID:**	**1508466-03.D**		**Analyzed:**	**08/31/15 13:17**		
Fluorobenzene	628976	6.013	754057	6.013	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	528105	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	259227	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-EB-082515 (1508466-04)			**Lab File ID:**	**1508466-04.D**		**Analyzed:**	**08/31/15 13:42**		
Fluorobenzene	635353	6.013	754057	6.013	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	538885	10.377	622554	10.378	87	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	261956	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-GW48-18-15C-1 (1508466-06)			**Lab File ID:**	**1508466-06.D**		**Analyzed:**	**08/31/15 14:07**		
Fluorobenzene	636019	6.013	754057	6.013	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	531998	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	262078	13.354	329683	13.348	79	50 - 200	0.0060	+/-0.50	
SWMU350-GW49-18-15C-1 (1508466-07)			**Lab File ID:**	**1508466-07.D**		**Analyzed:**	**08/31/15 14:32**		
Fluorobenzene	622840	6.013	754057	6.013	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	530639	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	255809	13.354	329683	13.348	78	50 - 200	0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Matrix: Water
Sequence: 5H31031

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SWMU350-GW47-18-15C-1 (1508466-08)			**Lab File ID: 1508466-08.D**			**Analyzed: 08/31/15 14:57**			
Fluorobenzene	641688	6.013	754057	6.013	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	539980	10.377	622554	10.378	87	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	265997	13.354	329683	13.348	81	50 - 200	0.0060	+/-0.50	
SWMU350-GW47-18D-15C-1 (1508466-09)			**Lab File ID: 1508466-09.D**			**Analyzed: 08/31/15 15:22**			
Fluorobenzene	640990	6.013	754057	6.013	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	530373	10.377	622554	10.378	85	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	263340	13.354	329683	13.348	80	50 - 200	0.0060	+/-0.50	
SWMU350-GW16-15C-1 (1508466-10)			**Lab File ID: 1508466-10.D**			**Analyzed: 08/31/15 15:47**			
Fluorobenzene	638895	6.013	754057	6.013	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	533608	10.378	622554	10.378	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	262959	13.354	329683	13.348	80	50 - 200	0.0060	+/-0.50	
SWMU350-TB-082515 (1508466-11)			**Lab File ID: 1508466-11.D**			**Analyzed: 08/31/15 16:12**			
Fluorobenzene	626092	6.013	754057	6.013	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	530850	10.378	622554	10.378	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	256648	13.354	329683	13.348	78	50 - 200	0.0060	+/-0.50	
SWMU350-GW47-30-15C-1 (1508466-05)			**Lab File ID: 1508466-05.D**			**Analyzed: 08/31/15 16:37**			
Fluorobenzene	633685	6.013	754057	6.013	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	525647	10.377	622554	10.378	84	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	257699	13.354	329683	13.348	78	50 - 200	0.0060	+/-0.50	
Matrix Spike (1509221-MS1)			**Lab File ID: 1508466-03MS.D**			**Analyzed: 08/31/15 18:42**			
Fluorobenzene	700844	6.013	754057	6.013	93	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	606942	10.378	622554	10.378	97	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	351818	13.348	329683	13.348	107	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (1509221-MSD1)			**Lab File ID: 1508466-03MSD.D**			**Analyzed: 08/31/15 19:07**			
Fluorobenzene	687691	6.013	754057	6.013	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	599382	10.378	622554	10.378	96	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	337511	13.354	329683	13.348	102	50 - 200	0.0060	+/-0.50	

HOLDING TIME SUMMARY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

SDG: 50069-43

Client: CH2M HILL - VA

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Method: Volatile Organic Compounds by EPA Method 8260B

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SWMU350-GW06-15C-1	08/24/15	08/27/15		08/31/15	7	NA	08/31/15	7	14	
SWMU350-GW48-30-15C-1	08/24/15	08/27/15		08/31/15	7	NA	08/31/15	7	14	
SWMU350-GW49-30-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-EB-082515	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW47-30-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW48-18-15C-1	08/24/15	08/27/15		08/31/15	7	NA	08/31/15	7	14	
SWMU350-GW49-18-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW47-18-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW47-18D-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-GW16-15C-1	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	
SWMU350-TB-082515	08/25/15	08/27/15		08/31/15	6	NA	08/31/15	6	14	

TRIMATRIX
LABORATORIES

SECTION - C

SAMPLE DATA

USEPA-8260B

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ Phone: 616.975.4500 ♦ Fax: 616.942.7462 ♦ www.trimatrixlabs.com

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW06-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-01
File ID: 1508466-01.D
Sampled: 08/24/15 17:35
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 12:27
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.8	97	85 - 115	
1,2-Dichloroethane-d4	40.0	40.1	100	70 - 120	
Toluene-d8	40.0	39.8	99	85 - 120	
4-Bromofluorobenzene	40.0	37.3	93	75 - 120	

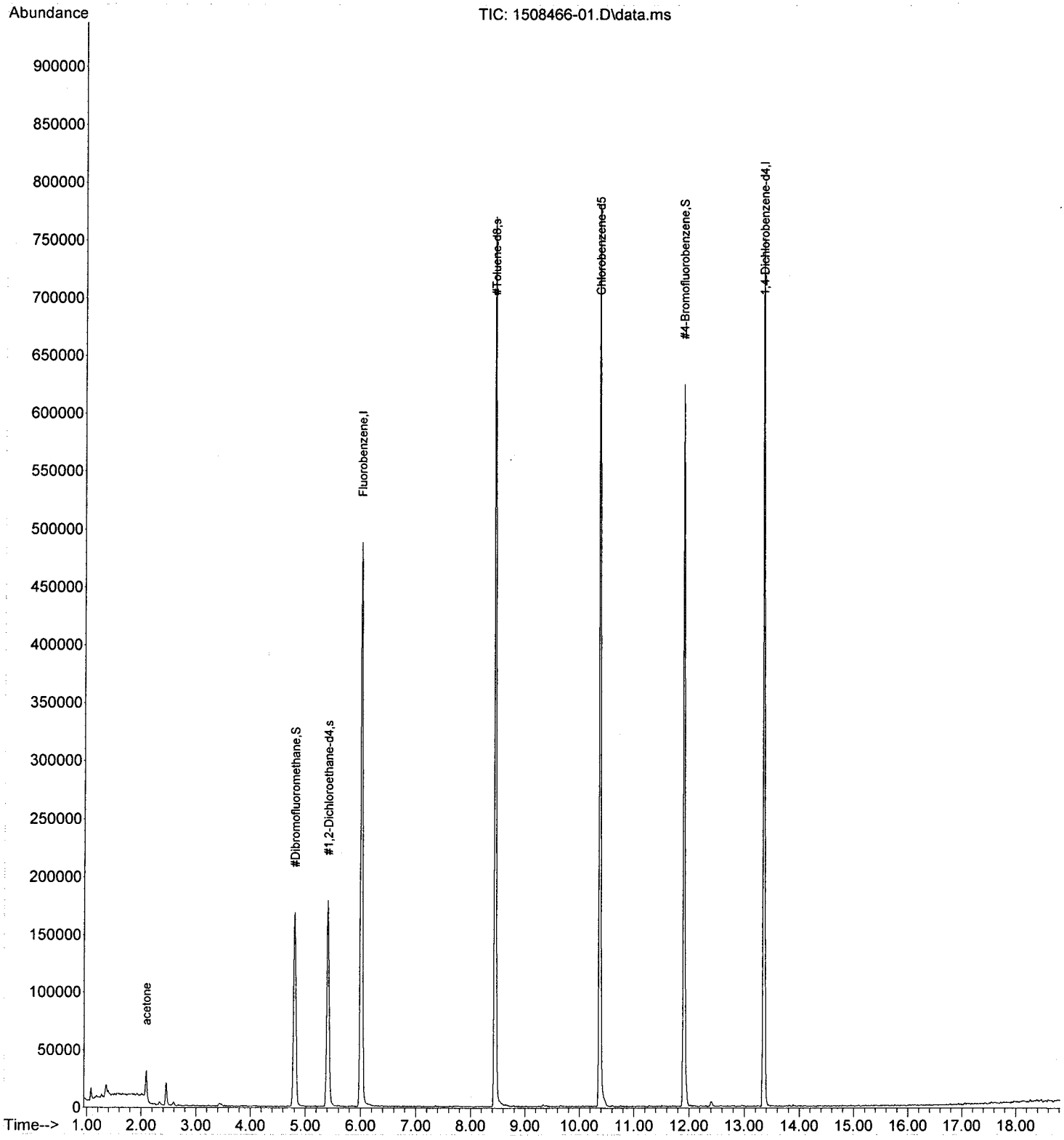
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	659178	6.013	754057	6.013	
Chlorobenzene-d5	552166	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	267870	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-01.D
Acq On : 31 Aug 2015 12:27
Operator : DLV
Sample : 1508466-01
Misc : CH2M HILL
ALS Vial : 10 Sample Multiplier: 1
Quant Time: Aug 31 12:50:08 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-01.D
Acq On : 31 Aug 2015 12:27
Operator : DLV
Sample : 1508466-01
Misc : CH2M HILL
ALS Vial : 10 Sample Multiplier: 1
Quant Time: Aug 31 12:50:08 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	659178	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	552166	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	267870	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	158768	38.81 ug/L	0.00
Spiked Amount 40.000			Recovery	= 97.03%	
37) #1,2-Dichloroethane-d4	5.413	67	100230	40.09 ug/L	0.00
Spiked Amount 40.000			Recovery	= 100.23%	
46) #Toluene-d8	8.454	98	666709	39.78 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.45%	
64) #4-Bromofluorobenzene	11.907	95	253410	37.34 ug/L	0.00
Spiked Amount 40.000			Recovery	= 93.35%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.125	50	1323	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	0.000		0	N.D.	
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	23398	2.03 ug/L	95
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.455	49	11412	Below Cal	97
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	0.000		0	N.D.	
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	20237	No Calib #	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-01.D
Acq On : 31 Aug 2015 12:27
Operator : DLV
Sample : 1508466-01
Misc : CH2M HILL
ALS Vial : 10 Sample Multiplier: 1
Quant Time: Aug 31 12:50:08 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	0.000		0	N.D.	
40)	1,2-dichloropropane	0.000		0	N.D.	
41)	dibromomethane	0.000		0	N.D.	
42)	bromodichloromethane	0.000		0	N.D.	
43)	2-chloroethyl vinyl ether	0.000		0	N.D.	
44)	cis-1,3-dichloropropene	0.000		0	N.D.	
45)	4-methyl-2-pentanone (...	0.000		0	N.D.	
47)	toluene	0.000		0	N.D.	
48)	trans-1,3-dichloropropene	0.000		0	N.D.	
49)	1,1,2-trichloroethane	0.000		0	N.D.	
51)	tetrachloroethene	0.000		0	N.D.	
52)	1,3-dichloropropane	0.000		0	N.D.	
53)	2-hexanone (MBK)	0.000		0	N.D.	
54)	dibromochloromethane	0.000		0	N.D.	
55)	1,2-dibromoethane	0.000		0	N.D.	
56)	chlorobenzene	0.000		0	N.D.	
57)	1-chlorohexane	0.000		0	N.D.	
58)	1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59)	ethylbenzene	0.000		0	N.D.	
60)	m+p-xylene	0.000		0	N.D.	
61)	o-xylene	0.000		0	N.D.	
62)	styrene	0.000		0	N.D.	
63)	bromoform	0.000		0	N.D.	
66)	isopropylbenzene	0.000		0	N.D.	
67)	bromobenzene	0.000		0	N.D.	
68)	1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69)	1,2,3-trichloropropane	0.000		0	N.D.	
70)	1,4-dichloro-2-butene	0.000		0	N.D.	
71)	n-propylbenzene	0.000		0	N.D.	
72)	2-chlorotoluene	0.000		0	N.D.	
73)	1,3,5-trimethylbenzene	0.000		0	N.D.	
74)	4-chlorotoluene	0.000		0	N.D.	
75)	tert-butylbenzene	0.000		0	N.D.	
76)	1,2,4-trimethylbenzene	0.000		0	N.D.	
77)	sec-butylbenzene	0.000		0	N.D.	
78)	1,3-dichlorobenzene	0.000		0	N.D.	
79)	4-isopropyltoluene	0.000		0	N.D.	
80)	1,4-dichlorobenzene	0.000		0	N.D.	
81)	1,2-dichlorobenzene	0.000		0	N.D.	
82)	n-butylbenzene	0.000		0	N.D.	
83)	hexachloroethane	0.000		0	N.D.	
84)	1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85)	1,2,4-trichlorobenzene	0.000		0	N.D.	
86)	hexachlorobutadiene	0.000		0	N.D.	
87)	naphthalene	0.000		0	N.D.	
88)	1,2,3-trichlorobenzene	0.000		0	N.D.	
89)	2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW48-30-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-02
File ID: 1508466-02.D
Sampled: 08/24/15 15:55
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 12:52
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.4	96	85 - 115	
1,2-Dichloroethane-d4	40.0	39.4	98	70 - 120	
Toluene-d8	40.0	38.8	97	85 - 120	
4-Bromofluorobenzene	40.0	37.0	92	75 - 120	

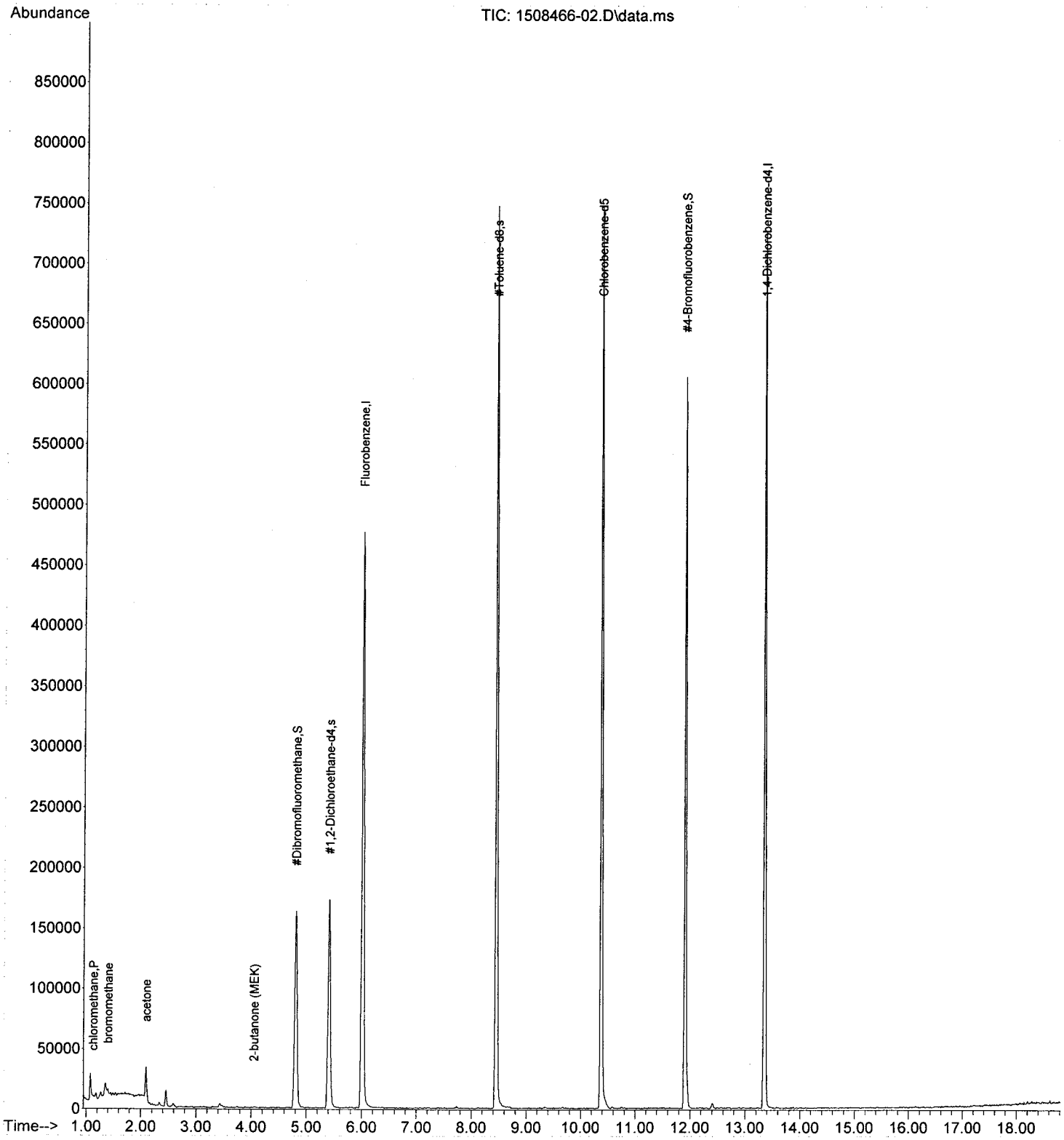
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	648057	6.013	754057	6.013	
Chlorobenzene-d5	532642	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	260863	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-02.D
Acq On : 31 Aug 2015 12:52
Operator : DLV
Sample : 1508466-02
Misc : CH2M HILL
ALS Vial : 11 Sample Multiplier: 1
Quant Time: Aug 31 13:13:29 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-02.D
Acq On : 31 Aug 2015 12:52
Operator : DLV
Sample : 1508466-02
Misc : CH2M HILL
ALS Vial : 11 Sample Multiplier: 1
Quant Time: Aug 31 13:13:29 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	648057	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	532642	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	260863	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.808	111	154410	38.40 ug/L	0.00
Spiked Amount 40.000			Recovery	= 96.00%	
37) #1,2-Dichloroethane-d4	5.413	67	96804	39.38 ug/L	0.00
Spiked Amount 40.000			Recovery	= 98.45%	
46) #Toluene-d8	8.454	98	639381	38.80 ug/L	0.00
Spiked Amount 40.000			Recovery	= 97.00%	
64) #4-Bromofluorobenzene	11.907	95	242102	36.99 ug/L	0.00
Spiked Amount 40.000			Recovery	= 92.48%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.125	50	1650	0.22 ug/L #	42
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.402	94	2027	0.47 ug/L	83
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	23916	2.35 ug/L	93
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.455	49	6665	Below Cal	83
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	4.055	43	1281	0.31 ug/L #	46
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	21280	No Calib #	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-02.D
Acq On : 31 Aug 2015 12:52
Operator : DLV
Sample : 1508466-02
Misc : CH2M HILL
ALS Vial : 11 Sample Multiplier: 1
Quant Time: Aug 31 13:13:29 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	0.000		0	N.D.	
40)	1,2-dichloropropane	0.000		0	N.D.	
41)	dibromomethane	0.000		0	N.D.	
42)	bromodichloromethane	0.000		0	N.D.	
43)	2-chloroethyl vinyl ether	0.000		0	N.D.	
44)	cis-1,3-dichloropropene	0.000		0	N.D.	
45)	4-methyl-2-pentanone (...	8.448	43	1593	N.D.	
47)	toluene	0.000		0	N.D.	
48)	trans-1,3-dichloropropene	0.000		0	N.D.	
49)	1,1,2-trichloroethane	0.000		0	N.D.	
51)	tetrachloroethene	0.000		0	N.D.	
52)	1,3-dichloropropane	0.000		0	N.D.	
53)	2-hexanone (MBK)	0.000		0	N.D.	
54)	dibromochloromethane	0.000		0	N.D.	
55)	1,2-dibromoethane	0.000		0	N.D.	
56)	chlorobenzene	0.000		0	N.D.	
57)	1-chlorohexane	0.000		0	N.D.	
58)	1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59)	ethylbenzene	0.000		0	N.D.	
60)	m+p-xylene	0.000		0	N.D.	
61)	o-xylene	0.000		0	N.D.	
62)	styrene	0.000		0	N.D.	
63)	bromoform	0.000		0	N.D.	
66)	isopropylbenzene	0.000		0	N.D.	
67)	bromobenzene	0.000		0	N.D.	
68)	1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69)	1,2,3-trichloropropane	0.000		0	N.D.	
70)	1,4-dichloro-2-butene	0.000		0	N.D.	
71)	n-propylbenzene	0.000		0	N.D.	
72)	2-chlorotoluene	0.000		0	N.D.	
73)	1,3,5-trimethylbenzene	0.000		0	N.D.	
74)	4-chlorotoluene	0.000		0	N.D.	
75)	tert-butylbenzene	0.000		0	N.D.	
76)	1,2,4-trimethylbenzene	0.000		0	N.D.	
77)	sec-butylbenzene	0.000		0	N.D.	
78)	1,3-dichlorobenzene	0.000		0	N.D.	
79)	4-isopropyltoluene	0.000		0	N.D.	
80)	1,4-dichlorobenzene	0.000		0	N.D.	
81)	1,2-dichlorobenzene	0.000		0	N.D.	
82)	n-butylbenzene	0.000		0	N.D.	
83)	hexachloroethane	0.000		0	N.D.	
84)	1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85)	1,2,4-trichlorobenzene	0.000		0	N.D.	
86)	hexachlorobutadiene	0.000		0	N.D.	
87)	naphthalene	0.000		0	N.D.	
88)	1,2,3-trichlorobenzene	0.000		0	N.D.	
89)	2-methylnaphthalene	0.000		0	N.D.	

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

: 000054

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW49-30-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-03
File ID: 1508466-03.D
Sampled: 08/25/15 13:05
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 13:17
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.9	97	85 - 115	
1,2-Dichloroethane-d4	40.0	40.2	100	70 - 120	
Toluene-d8	40.0	39.6	99	85 - 120	
4-Bromofluorobenzene	40.0	36.8	92	75 - 120	

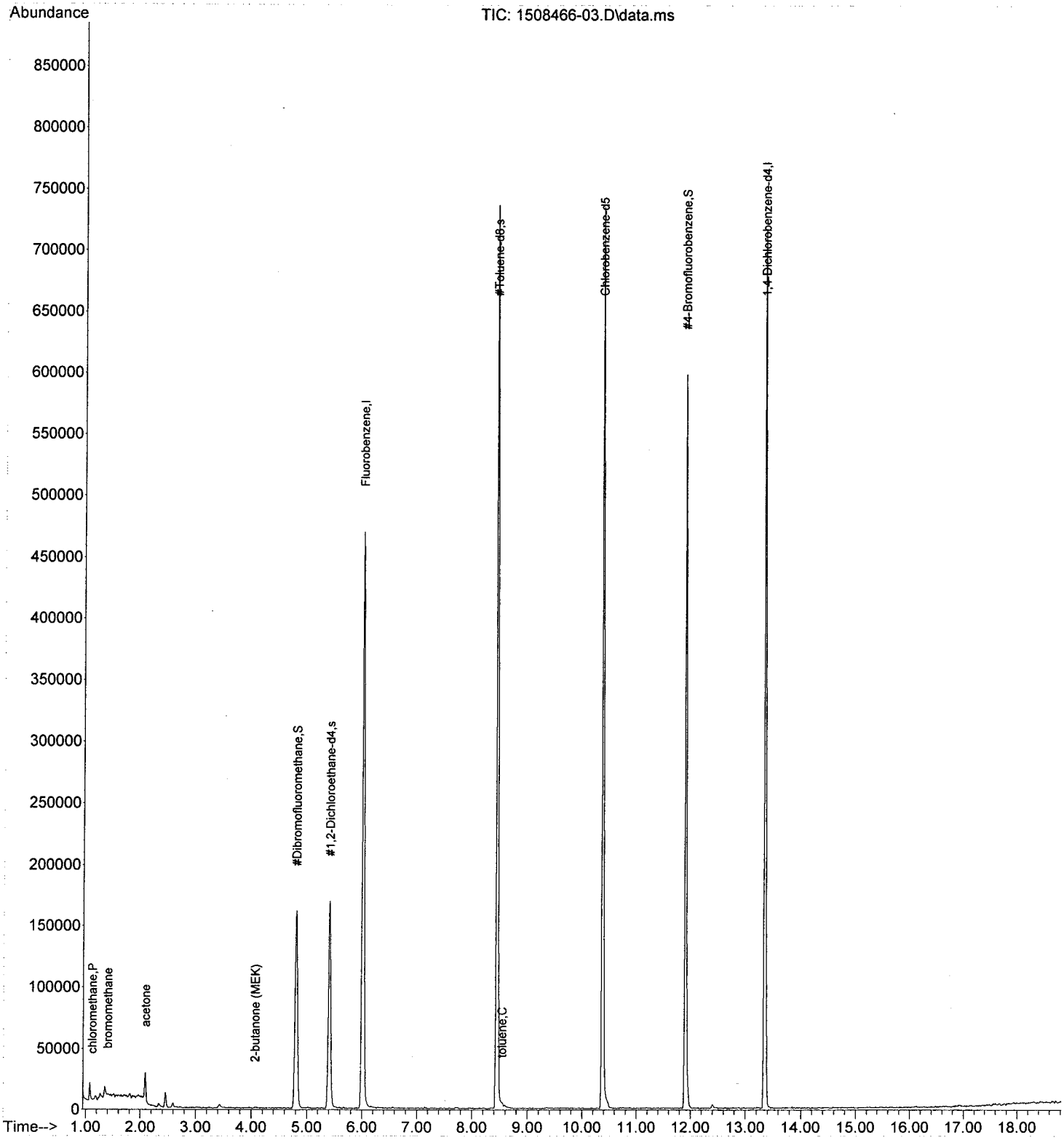
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	628976	6.013	754057	6.013	
Chlorobenzene-d5	528105	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	259227	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03.D
Acq On : 31 Aug 2015 13:17
Operator : DLV
Sample : 1508466-03
Misc : CH2M HILL
ALS Vial : 12 Sample Multiplier: 1
Quant Time: Aug 31 13:58:44 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03.D
Acq On : 31 Aug 2015 13:17
Operator : DLV
Sample : 1508466-03
Misc : CH2M HILL
ALS Vial : 12 Sample Multiplier: 1
Quant Time: Aug 31 13:58:44 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	628976	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	528105	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	259227	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	151808	38.89 ug/L	0.00
Spiked Amount 40.000			Recovery = 97.23%		
37) #1,2-Dichloroethane-d4	5.413	67	95906	40.20 ug/L	0.00
Spiked Amount 40.000			Recovery = 100.50%		
46) #Toluene-d8	8.454	98	633242	39.60 ug/L	0.00
Spiked Amount 40.000			Recovery = 99.00%		
64) #4-Bromofluorobenzene	11.907	95	239015	36.83 ug/L	0.00
Spiked Amount 40.000			Recovery = 92.07%		
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.119	50	1366	0.19 ug/L #	42
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.402	94	1248	0.30 ug/L #	3
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	22606	2.13 ug/L	97
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.455	49	5961	Below Cal	87
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	4.066	43	1452	0.36 ug/L #	46
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	19086	No Calib #	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03.D
Acq On : 31 Aug 2015 13:17
Operator : DLV
Sample : 1508466-03
Misc : CH2M HILL
ALS Vial : 12 Sample Multiplier: 1
Quant Time: Aug 31 13:58:44 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1602	N.D.	
47) toluene	8.542	91	1672	0.07 ug/L #	21
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-EB-082515

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Laboratory ID: 1508466-04
File ID: 1508466-04.D
Sampled: 08/25/15 16:15
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 13:42
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.8	97	85 - 115	
1,2-Dichloroethane-d4	40.0	41.1	103	70 - 120	
Toluene-d8	40.0	39.6	99	85 - 120	
4-Bromofluorobenzene	40.0	37.0	93	75 - 120	

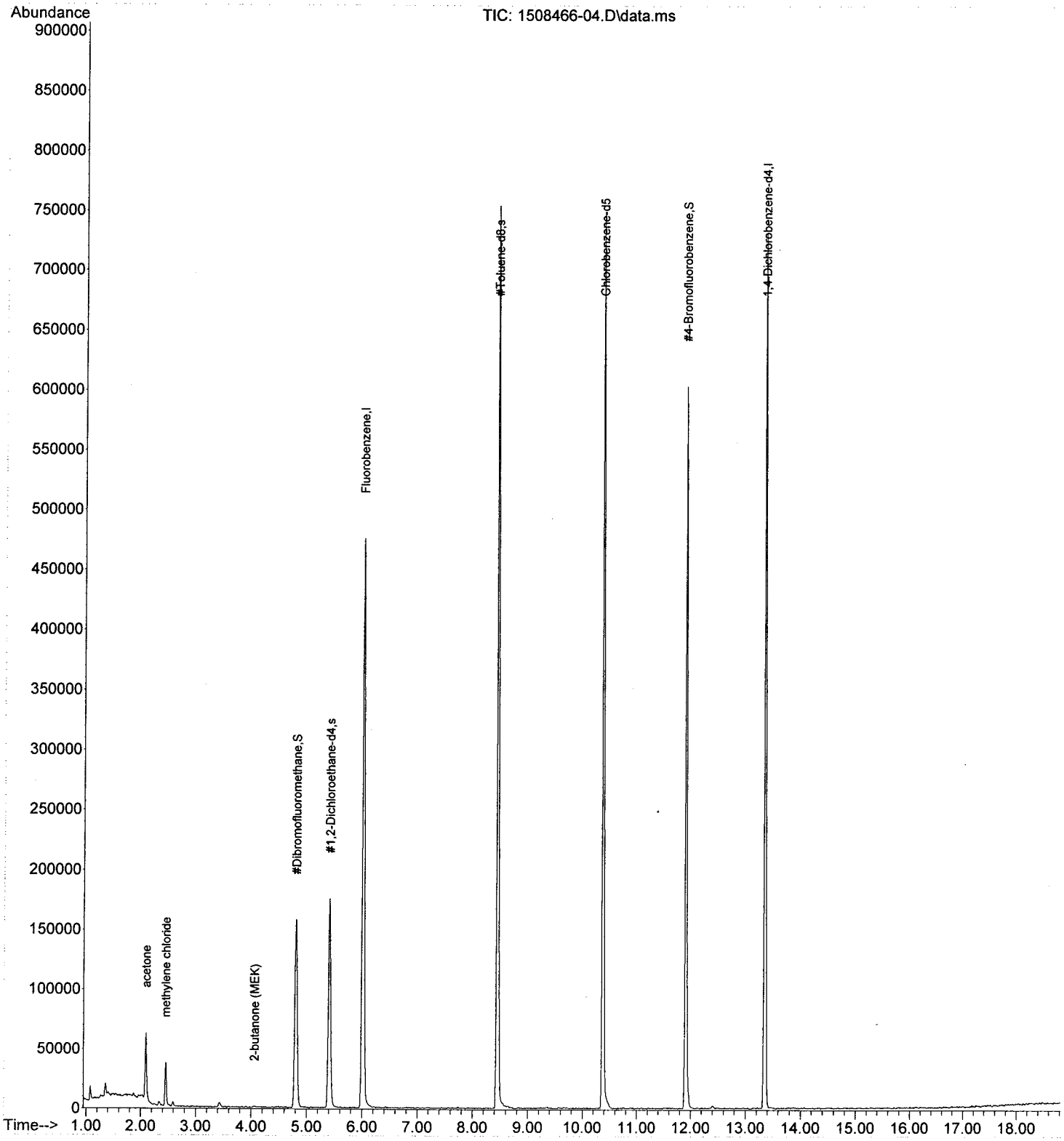
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	635353	6.013	754057	6.013	
Chlorobenzene-d5	538885	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	261956	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-04.D
Acq On : 31 Aug 2015 13:42
Operator : DLV
Sample : 1508466-04
Misc : CH2M HILL
ALS Vial : 13 Sample Multiplier: 1
Quant Time: Aug 31 14:08:59 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-04.D
Acq On : 31 Aug 2015 13:42
Operator : DLV
Sample : 1508466-04
Misc : CH2M HILL
ALS Vial : 13 Sample Multiplier: 1
Quant Time: Aug 31 14:08:59 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	635353	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.377	117	538885	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	261956	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	152796	38.76 ug/L	0.00
Spiked Amount 40.000			Recovery	= 96.90%	
37) #1,2-Dichloroethane-d4	5.413	67	99114	41.13 ug/L	0.00
Spiked Amount 40.000			Recovery	= 102.83%	
46) #Toluene-d8	8.454	98	640087	39.62 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.05%	
64) #4-Bromofluorobenzene	11.907	95	245380	37.05 ug/L	0.00
Spiked Amount 40.000			Recovery	= 92.62%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	0.000		0	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	0.000		0	N.D.	
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	58754	14.96 ug/L	98
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	20632	1.20 ug/L	95
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	4.060	43	1472	0.36 ug/L #	46
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	18500	No Calib #	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-04.D
Acq On : 31 Aug 2015 13:42
Operator : DLV
Sample : 1508466-04
Misc : CH2M HILL
ALS Vial : 13 Sample Multiplier: 1
Quant Time: Aug 31 14:08:59 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	0.000		0	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW47-30-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-05
File ID: 1508466-05.D
Sampled: 08/25/15 09:45
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 16:37
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	2.6	0.20	0.50	5.0	J

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.2	95	85 - 115	
1,2-Dichloroethane-d4	40.0	39.8	99	70 - 120	
Toluene-d8	40.0	39.4	99	85 - 120	
4-Bromofluorobenzene	40.0	37.4	93	75 - 120	

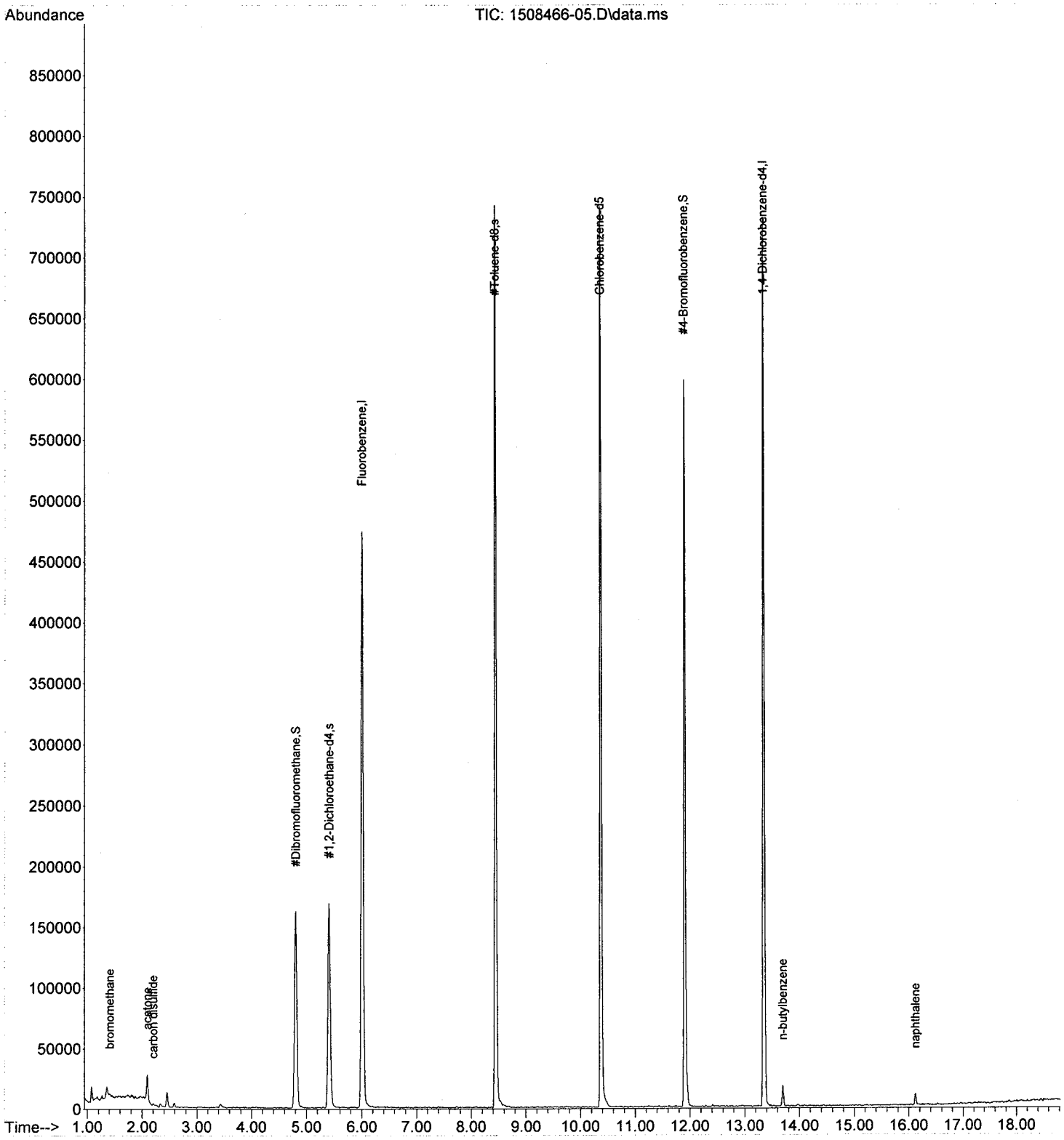
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	633685	6.013	754057	6.013	
Chlorobenzene-d5	525647	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	257699	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-05.D
Acq On : 31 Aug 2015 16:37
Operator : DLV
Sample : 1508466-05
Misc : CH2M HILL
ALS Vial : 20 Sample Multiplier: 1
Quant Time: Sep 01 06:54:13 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-05.D
Acq On : 31 Aug 2015 16:37
Operator : DLV
Sample : 1508466-05
Misc : CH2M HILL
ALS Vial : 20 Sample Multiplier: 1
Quant Time: Sep 01 06:54:13 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	633685	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.377	117	525647	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	257699	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	150048	38.16 ug/L	0.00
Spiked Amount 40.000			Recovery	= 95.40%	
37) #1,2-Dichloroethane-d4	5.413	67	95642	39.79 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.48%	
46) #Toluene-d8	8.454	98	635704	39.45 ug/L	0.00
Spiked Amount 40.000			Recovery	= 98.63%	
64) #4-Bromofluorobenzene	11.907	95	241509	37.39 ug/L	0.00
Spiked Amount 40.000			Recovery	= 93.47%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.149	50	1309	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.407	94	1544	0.36 ug/L #	3
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	21138	1.54 ug/L	98
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	2.201	76	1660	0.14 ug/L #	73
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.460	49	6576	Below Cal	91
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	0.000		0	N.D.	
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.007	57	19714	No Calib	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-05.D
Acq On : 31 Aug 2015 16:37
Operator : DLV
Sample : 1508466-05
Misc : CH2M HILL
ALS Vial : 20 Sample Multiplier: 1
Quant Time: Sep 01 06:54:13 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

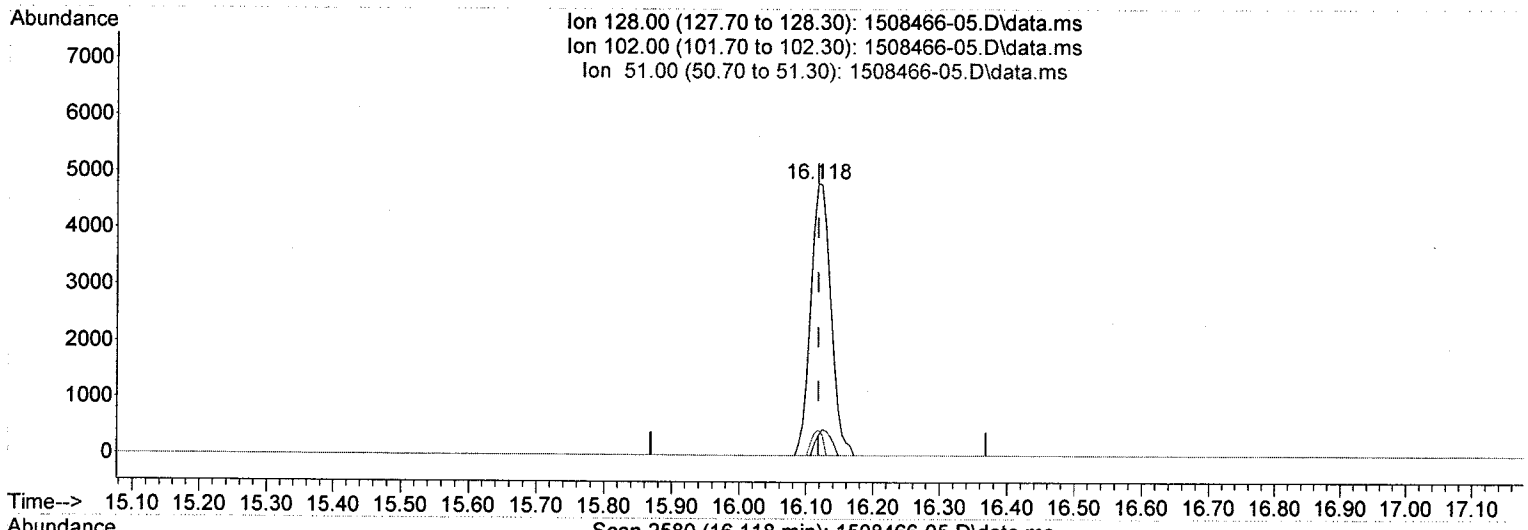
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	0.000		0	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	13.695	91	1743	0.12 ug/L #	32
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	16.118	128	10060	2.57 ug/L #	79
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

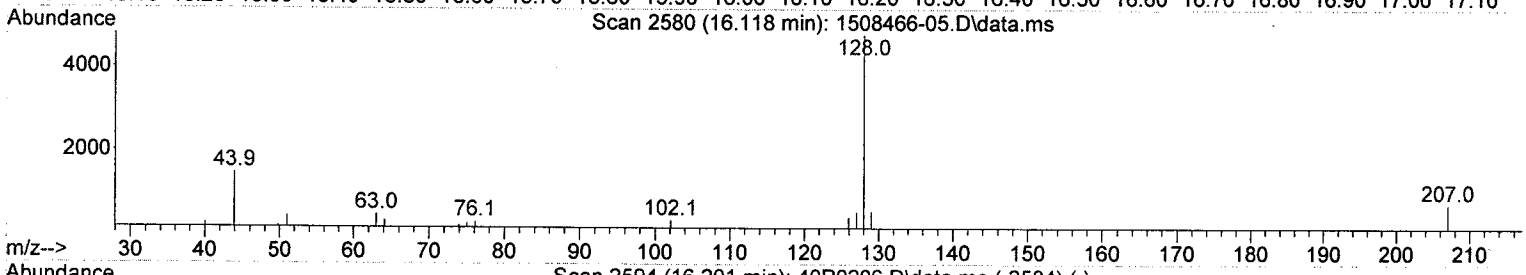
(#) = qualifier out of range (m) = manual integration (+) = signals summed

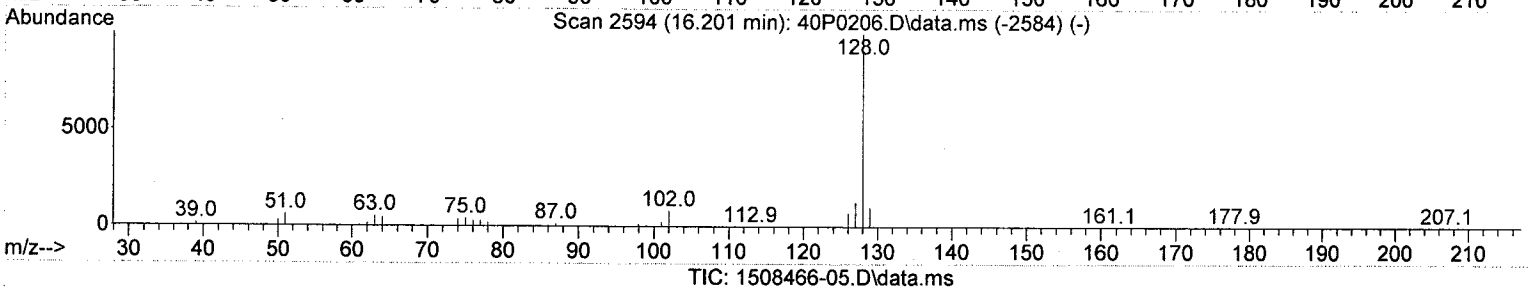
00066

Quantitation Report (Qedit)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-05.D
Acq On : 31 Aug 2015 16:37
Operator : DLV
Sample : 1508466-05
Misc : CH2M HILL
ALS Vial : 20 Sample Multiplier: 1
Quant Time: Sep 01 06:54:13 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration







(87) naphthalene

16.118min (-0.001) 2.57 ug/L

response 10060

Ion	Exp%	Act%
128.00	100.00	100.00
102.00	7.80	0.00
51.00	6.70	0.00
0.00	0.00	0.00

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW48-18-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-06
File ID: 1508466-06.D
Sampled: 08/24/15 15:00
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 14:07
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	40.5	101	85 - 115	
1,2-Dichloroethane-d4	40.0	41.0	102	70 - 120	
Toluene-d8	40.0	39.7	99	85 - 120	
4-Bromofluorobenzene	40.0	37.8	94	75 - 120	

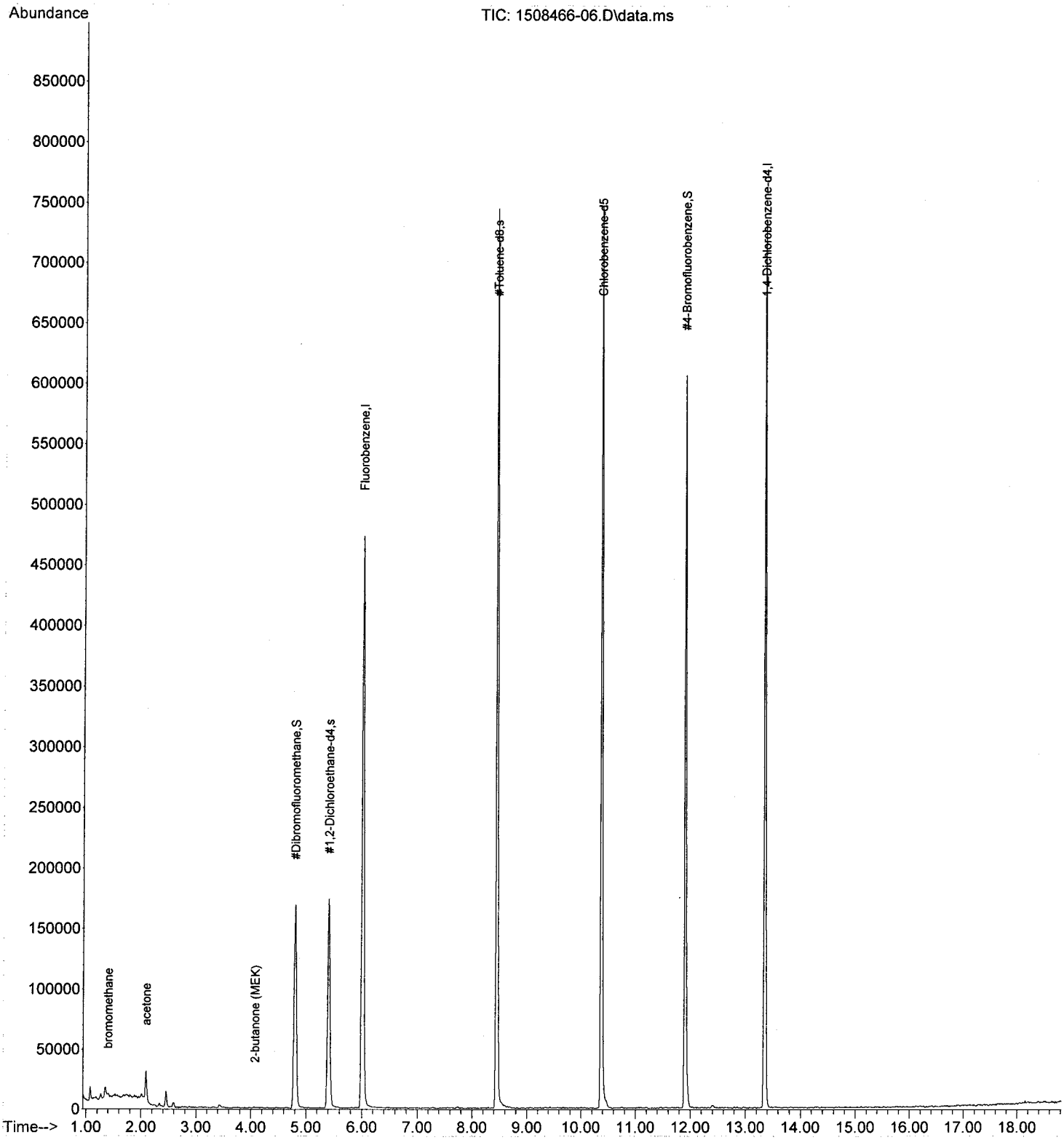
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	636019	6.013	754057	6.013	
Chlorobenzene-d5	531998	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	262078	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-06.D
Acq On : 31 Aug 2015 14:07
Operator : DLV
Sample : 1508466-06
Misc : CH2M HILL
ALS Vial : 14 Sample Multiplier: 1
Quant Time: Aug 31 14:32:10 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-06.D
Acq On : 31 Aug 2015 14:07
Operator : DLV
Sample : 1508466-06
Misc : CH2M HILL
ALS Vial : 14 Sample Multiplier: 1
Quant Time: Aug 31 14:32:10 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	636019	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	531998	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	262078	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	159952	40.53 ug/L	0.00
Spiked Amount 40.000			Recovery	= 101.33%	
37) #1,2-Dichloroethane-d4	5.413	67	98922	41.00 ug/L	0.00
Spiked Amount 40.000			Recovery	= 102.50%	
46) #Toluene-d8	8.454	98	641947	39.70 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.25%	
64) #4-Bromofluorobenzene	11.907	95	246856	37.76 ug/L	0.00
Spiked Amount 40.000			Recovery	= 94.40%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.125	50	1234	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.402	94	1507	0.35 ug/L #	3
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	22653	2.06 ug/L	91
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	6770	Below Cal	97
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	4.078	43	1301	0.32 ug/L #	46
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	18915	No Calib	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-06.D
Acq On : 31 Aug 2015 14:07
Operator : DLV
Sample : 1508466-06
Misc : CH2M HILL
ALS Vial : 14 Sample Multiplier: 1
Quant Time: Aug 31 14:32:10 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1257	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW49-18-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-07 File ID: 1508466-07.D

Sampled: 08/25/15 12:15 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 14:32

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	40.8	102	85 - 115	
1,2-Dichloroethane-d4	40.0	41.4	104	70 - 120	
Toluene-d8	40.0	40.4	101	85 - 120	
4-Bromofluorobenzene	40.0	36.6	91	75 - 120	

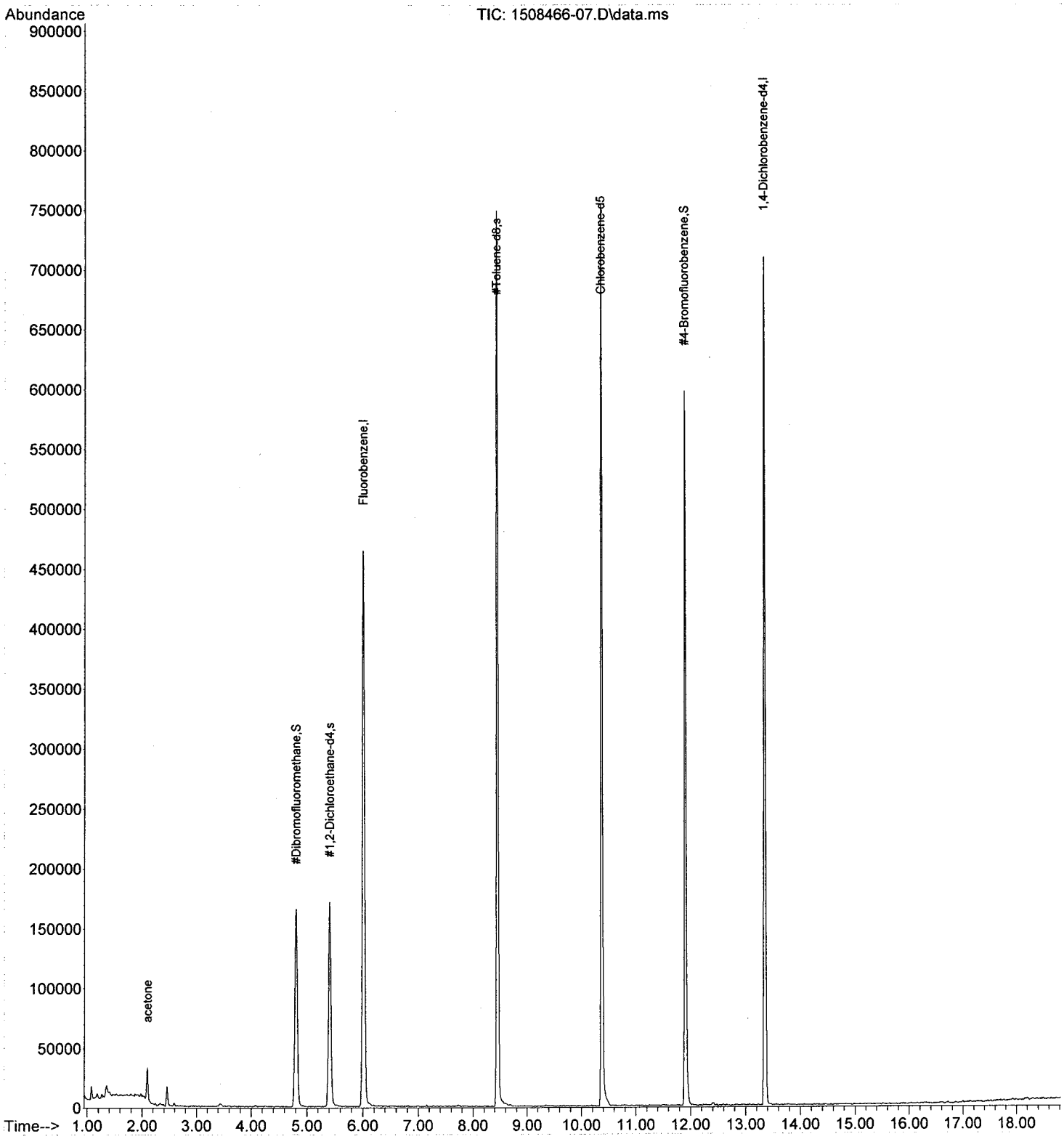
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	622840	6.013	754057	6.013	
Chlorobenzene-d5	530639	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	255809	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-07.D
Acq On : 31 Aug 2015 14:32
Operator : DLV
Sample : 1508466-07
Misc : CH2M HILL
ALS Vial : 15 Sample Multiplier: 1
Quant Time: Aug 31 14:56:27 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-07.D
Acq On : 31 Aug 2015 14:32
Operator : DLV
Sample : 1508466-07
Misc : CH2M HILL
ALS Vial : 15 Sample Multiplier: 1
Quant Time: Aug 31 14:56:27 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	622840	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	530639	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	255809	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	157890	40.85 ug/L	0.00
Spiked Amount 40.000			Recovery	= 102.13%	
37) #1,2-Dichloroethane-d4	5.413	67	97921	41.45 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.63%	
46) #Toluene-d8	8.454	98	639878	40.40 ug/L	0.00
Spiked Amount 40.000			Recovery	= 101.00%	
64) #4-Bromofluorobenzene	11.907	95	238328	36.55 ug/L	0.00
Spiked Amount 40.000			Recovery	= 91.38%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	0.000		0	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	0.000		0	N.D.	
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	24953	3.07 ug/L	99
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	8612	Below Cal	95
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	0.000		0	N.D.	
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	19404	No Calib	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-07.D
Acq On : 31 Aug 2015 14:32
Operator : DLV
Sample : 1508466-07
Misc : CH2M HILL
ALS Vial : 15 Sample Multiplier: 1
Quant Time: Aug 31 14:56:27 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1743	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW47-18-15C-1

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Ground Water Laboratory ID: 1508466-08 File ID: 1508466-08.D

Sampled: 08/25/15 10:50 Prepared: 08/31/15 07:00 Analyzed: 08/31/15 14:57

Solids: NA Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.9	97	85 - 115	
1,2-Dichloroethane-d4	40.0	41.5	104	70 - 120	
Toluene-d8	40.0	39.5	99	85 - 120	
4-Bromofluorobenzene	40.0	36.8	92	75 - 120	

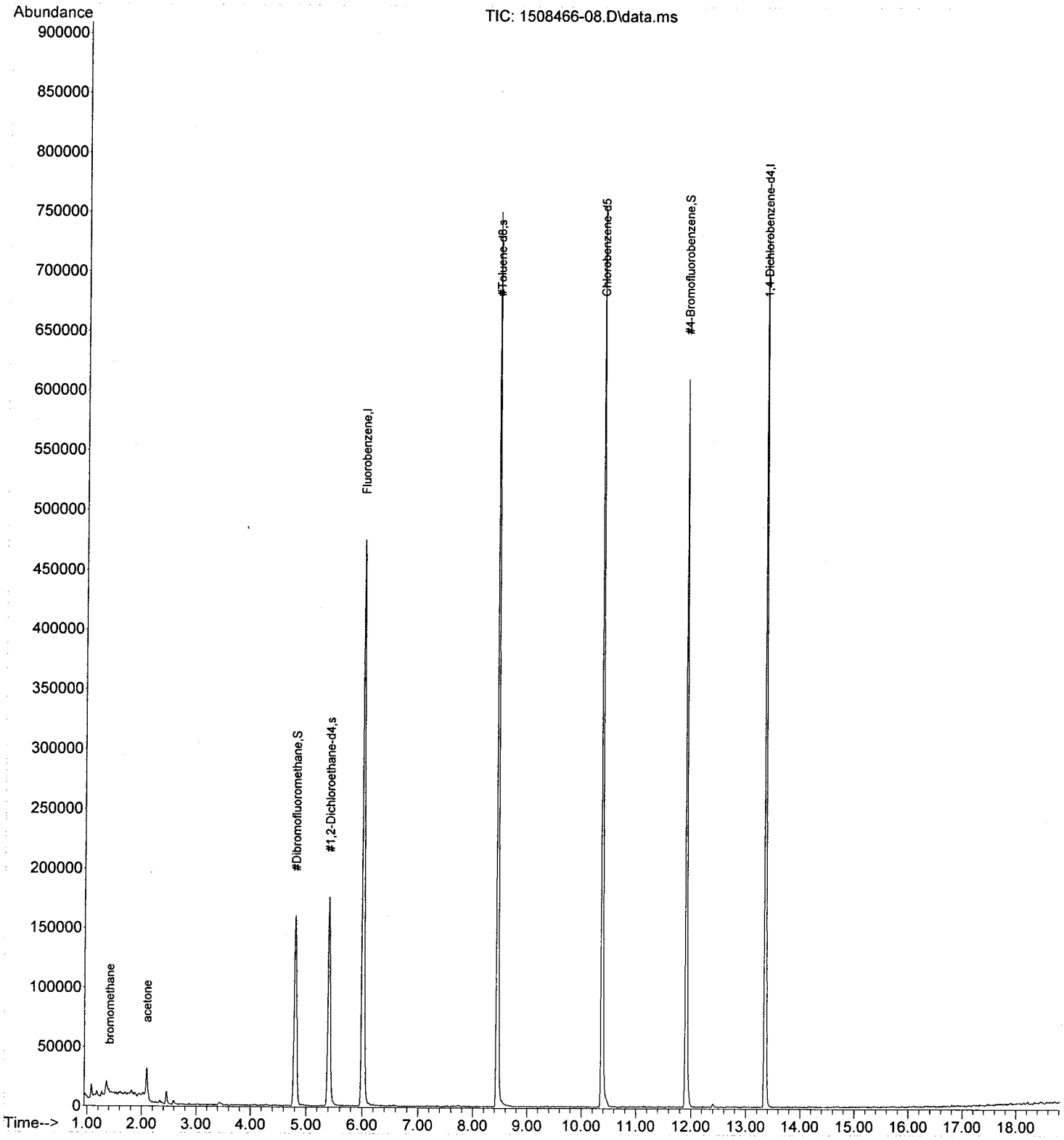
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	641688	6.013	754057	6.013	
Chlorobenzene-d5	539980	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	265997	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-08.D
Acq On : 31 Aug 2015 14:57
Operator : DLV
Sample : 1508466-08
Misc : CH2M HILL
ALS Vial : 16 Sample Multiplier: 1
Quant Time: Aug 31 15:17:38 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-08.D
Acq On : 31 Aug 2015 14:57
Operator : DLV
Sample : 1508466-08
Misc : CH2M HILL
ALS Vial : 16 Sample Multiplier: 1
Quant Time: Aug 31 15:17:38 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	641688	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.377	117	539980	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	265997	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	154927	38.91 ug/L	0.00
Spiked Amount 40.000			Recovery	= 97.27%	
37) #1,2-Dichloroethane-d4	5.413	67	101113	41.54 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.85%	
46) #Toluene-d8	8.454	98	644301	39.49 ug/L	0.00
Spiked Amount 40.000			Recovery	= 98.73%	
64) #4-Bromofluorobenzene	11.907	95	243982	36.77 ug/L	0.00
Spiked Amount 40.000			Recovery	= 91.93%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.125	50	1209	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.407	94	1368	0.32 ug/L #	3
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	24642	2.69 ug/L	100
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	5992	Below Cal	96
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	0.000		0	N.D.	
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	18882	No Calib #	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-08.D
Acq On : 31 Aug 2015 14:57
Operator : DLV
Sample : 1508466-08
Misc : CH2M HILL
ALS Vial : 16 Sample Multiplier: 1
Quant Time: Aug 31 15:17:38 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1340	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW47-18D-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-09
File ID: 1508466-09.D
Sampled: 08/25/15 10:55
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 15:22
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.9	97	85 - 115	
1,2-Dichloroethane-d4	40.0	40.8	102	70 - 120	
Toluene-d8	40.0	39.2	98	85 - 120	
4-Bromofluorobenzene	40.0	37.5	94	75 - 120	

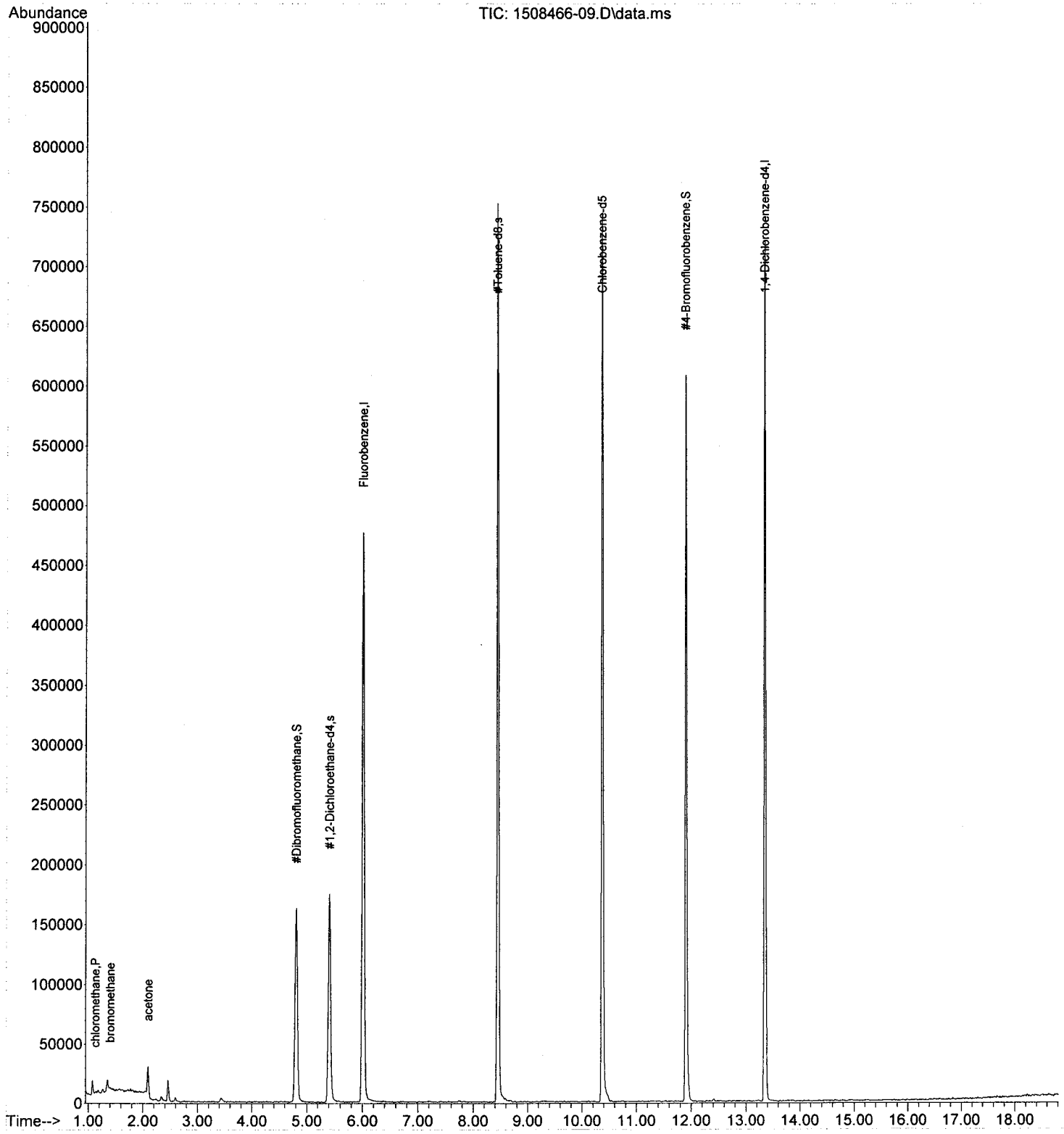
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	640990	6.013	754057	6.013	
Chlorobenzene-d5	530373	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	263340	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-09.D
Acq On : 31 Aug 2015 15:22
Operator : DLV
Sample : 1508466-09
Misc : CH2M HILL
ALS Vial : 17 Sample Multiplier: 1
Quant Time: Sep 01 06:53:42 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-09.D
Acq On : 31 Aug 2015 15:22
Operator : DLV
Sample : 1508466-09
Misc : CH2M HILL
ALS Vial : 17 Sample Multiplier: 1
Quant Time: Sep 01 06:53:42 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	640990	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.377	117	530373	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	263340	40.00	ug/L	# 0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.807	111	154589	38.86	ug/L	0.00
Spiked Amount 40.000			Recovery	=	97.15%	
37) #1,2-Dichloroethane-d4	5.413	67	99279	40.83	ug/L	0.00
Spiked Amount 40.000			Recovery	=	102.08%	
46) #Toluene-d8	8.454	98	638142	39.15	ug/L	0.00
Spiked Amount 40.000			Recovery	=	97.88%	
64) #4-Bromofluorobenzene	11.907	95	244573	37.52	ug/L	0.00
Spiked Amount 40.000			Recovery	=	93.80%	
Target Compounds						Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.		
3) chloromethane	1.125	50	1414	0.19	ug/L #	42
4) vinyl chloride	0.000		0	N.D.		
5) bromomethane	1.401	94	1737	0.40	ug/L #	3
6) chloroethane	0.000		0	N.D.		
7) dichlorofluoromethane	0.000		0	N.D.		
8) trichlorofluoromethane	0.000		0	N.D.		
9) ethyl ether	0.000		0	N.D.		
10) acrolein	0.000		0	N.D.		
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.		
12) 1,1-dichloroethene	0.000		0	N.D.		
13) acetone	2.096	43	23335	2.24	ug/L	99
14) iodomethane	0.000		0	N.D.		
15) carbon disulfide	0.000		0	N.D.		
16) methyl acetate	0.000		0	N.D.		
17) methylene chloride	2.454	49	8659	Below Cal		88
18) acrylonitrile	0.000		0	N.D.		
19) trans-1,2-dichloroethene	0.000		0	N.D.		
20) methyl (tert) butyl ether	0.000		0	N.D.		
21) 1,1-dichloroethane	0.000		0	N.D.		
22) vinyl acetate	0.000		0	N.D.		
23) 2,2-dichloropropane	0.000		0	N.D.		
24) cis-1,2-dichloroethene	0.000		0	N.D.		
25) 2-butanone (MEK)	0.000		0	N.D.		
26) bromochloromethane	0.000		0	N.D.		
27) tetrahydrofuran	0.000		0	N.D.		
28) chloroform	0.000		0	N.D.		
30) 1,1,1-trichloroethane	0.000		0	N.D.		
31) cyclohexane	0.000		0	N.D.		
32) carbon tetrachloride	0.000		0	N.D.		
33) 1,1-dichloropropene	0.000		0	N.D.		
34) benzene	0.000		0	N.D.		
35) 1,2-dichloroethane	0.000		0	N.D.		
36) heptane	6.019	57	20209	No Calib		
38) trichloroethene	0.000		0	N.D.		

00082

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-09.D
Acq On : 31 Aug 2015 15:22
Operator : DLV
Sample : 1508466-09
Misc : CH2M HILL
ALS Vial : 17 Sample Multiplier: 1
Quant Time: Sep 01 06:53:42 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1668	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-GW16-15C-1

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Ground Water
Laboratory ID: 1508466-10
File ID: 1508466-10.D
Sampled: 08/25/15 15:05
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 15:47
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.6	96	85 - 115	
1,2-Dichloroethane-d4	40.0	41.3	103	70 - 120	
Toluene-d8	40.0	39.0	98	85 - 120	
4-Bromofluorobenzene	40.0	36.6	92	75 - 120	

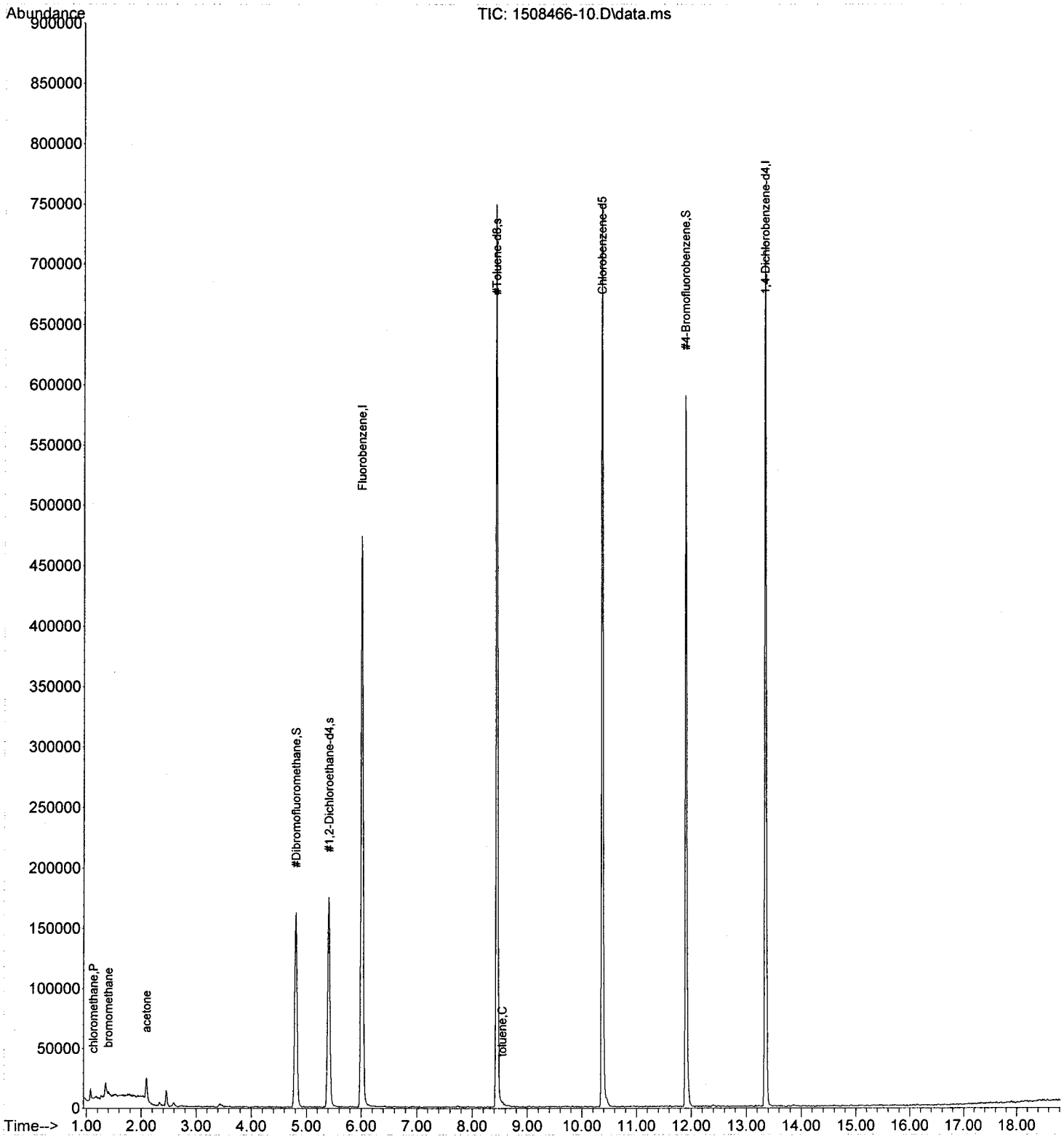
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	638895	6.013	754057	6.013	
Chlorobenzene-d5	533608	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	262959	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-10.D
Acq On : 31 Aug 2015 15:47
Operator : DLV
Sample : 1508466-10
Misc : CH2M HILL
ALS Vial : 18 Sample Multiplier: 1
Quant Time: Sep 01 06:53:52 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-10.D
Acq On : 31 Aug 2015 15:47
Operator : DLV
Sample : 1508466-10
Misc : CH2M HILL
ALS Vial : 18 Sample Multiplier: 1
Quant Time: Sep 01 06:53:52 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	638895	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	533608	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	262959	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	152969	38.58 ug/L	0.00
Spiked Amount 40.000			Recovery	= 96.45%	
37) #1,2-Dichloroethane-d4	5.413	67	100018	41.27 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.18%	
46) #Toluene-d8	8.454	98	633613	39.00 ug/L	0.00
Spiked Amount 40.000			Recovery	= 97.50%	
64) #4-Bromofluorobenzene	11.907	95	240141	36.62 ug/L	0.00
Spiked Amount 40.000			Recovery	= 91.55%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.125	50	1426	0.19 ug/L #	42
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.402	94	1507	0.35 ug/L #	3
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	19021	0.73 ug/L	100
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	7076	Below Cal	93
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	0.000		0	N.D.	
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	19491	No Calib #	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-10.D
Acq On : 31 Aug 2015 15:47
Operator : DLV
Sample : 1508466-10
Misc : CH2M HILL
ALS Vial : 18 Sample Multiplier: 1
Quant Time: Sep 01 06:53:52 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1757	N.D.	
47) toluene	8.548	91	1256	0.05 ug/L #	21
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

ORGANIC ANALYSIS DATA SHEET
USEPA-8260B

SWMU350-TB-082515

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Matrix: Water
Laboratory ID: 1508466-11
File ID: 1508466-11.D
Sampled: 08/25/15 08:00
Prepared: 08/31/15 07:00
Analyzed: 08/31/15 16:12
Solids: NA
Preparation: 5030B Aqueous Purge &
Initial/Final: 5 mL / 5 mL
QC Batch: 1509221
Sequence: 5H31031
Calibration: 5H26013
Instrument: 350

CAS No.	Analyte	Dilution	CONC. (ug/L)	DL	LOD	LOQ	Q
91-20-3	Naphthalene	1	0.50	0.20	0.50	5.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	38.8	97	85 - 115	
1,2-Dichloroethane-d4	40.0	41.9	105	70 - 120	
Toluene-d8	40.0	40.0	100	85 - 120	
4-Bromofluorobenzene	40.0	36.6	92	75 - 120	

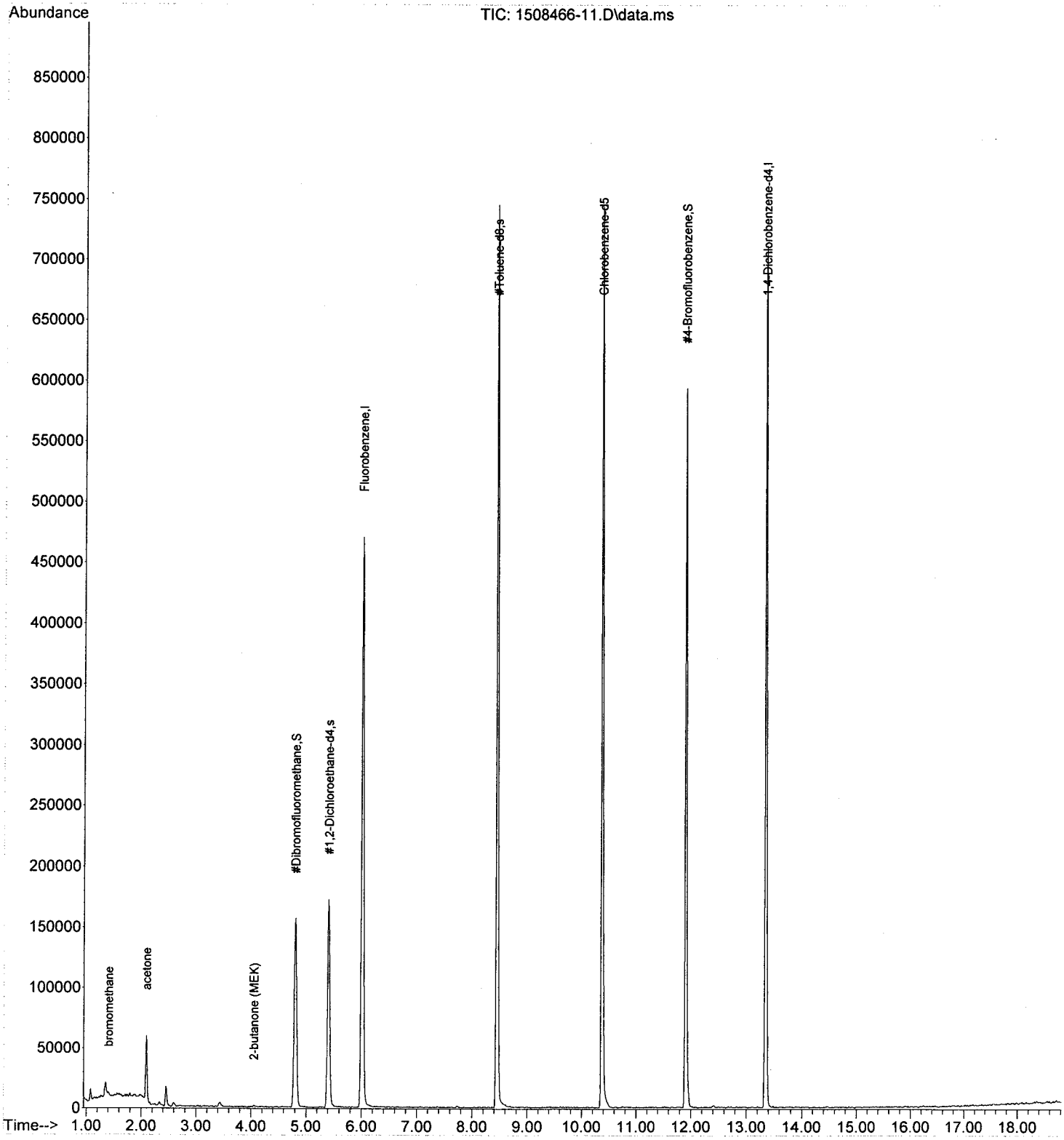
* Values outside of QC limits

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	626092	6.013	754057	6.013	
Chlorobenzene-d5	530850	10.378	622554	10.378	
1,4-Dichlorobenzene-d4	256648	13.354	329683	13.348	

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-11.D
Acq On : 31 Aug 2015 16:12
Operator : DLV
Sample : 1508466-11
Misc : CH2M HILL
ALS Vial : 19 Sample Multiplier: 1
Quant Time: Sep 01 06:54:02 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-11.D
Acq On : 31 Aug 2015 16:12
Operator : DLV
Sample : 1508466-11
Misc : CH2M HILL
ALS Vial : 19 Sample Multiplier: 1
Quant Time: Sep 01 06:54:02 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	626092	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	530850	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	256648	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	150584	38.76 ug/L	0.00
Spiked Amount 40.000			Recovery = 96.90%		
37) #1,2-Dichloroethane-d4	5.413	67	99444	41.87 ug/L	0.00
Spiked Amount 40.000			Recovery = 104.67%		
46) #Toluene-d8	8.454	98	636765	40.00 ug/L	0.00
Spiked Amount 40.000			Recovery = 100.00%		
64) #4-Bromofluorobenzene	11.907	95	239126	36.65 ug/L	0.00
Spiked Amount 40.000			Recovery = 91.63%		
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	0.000		0	N.D.	
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.407	94	2110	0.50 ug/L #	3
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	52646	13.06 ug/L	96
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	0.000		0	N.D.	
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	8961	Below Cal	96
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	4.054	43	1752	0.43 ug/L #	46
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	6.013	57	19242	No Calib	
38) trichloroethene	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-11.D
Acq On : 31 Aug 2015 16:12
Operator : DLV
Sample : 1508466-11
Misc : CH2M HILL
ALS Vial : 19 Sample Multiplier: 1
Quant Time: Sep 01 06:54:02 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1667	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	0.000		0	N.D.	
77) sec-butylbenzene	0.000		0	N.D.	
78) 1,3-dichlorobenzene	0.000		0	N.D.	
79) 4-isopropyltoluene	0.000		0	N.D.	
80) 1,4-dichlorobenzene	0.000		0	N.D.	
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	0.000		0	N.D.	
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	0.000		0	N.D.	
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

TRIMATRIX
LABORATORIES

SECTION - C

STANDARDS DATA

USEPA-8260B

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Individual sample results relate only to the sample tested.

INITIAL CALIBRATION STANDARDS
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration: 5H26013
Instrument: 350

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
5061380	8260 Tune Working Standard 06-24-15	5H26009-TUN1	BFB0825A.D	08/25/15 10:06
5080794	1.0 ug/L B	5H26009-CAL1	1P0825.D	08/25/15 11:23
5080795	5.0 ug/L B	5H26009-CAL2	5P0825.D	08/25/15 11:48
5080796	10 ug/L B	5H26009-CAL3	10P0825.D	08/25/15 12:13
5080797	20 ug/L B	5H26009-CAL4	20P0825.D	08/25/15 12:37
5080798	40 ug/L B	5H26009-CAL5	40P0825.D	08/25/15 13:02
5080799	100 ug/L B	5H26009-CAL6	100P0825.D	08/25/15 13:27
5080800	200 ug/L B	5H26009-CAL7	200P0825.D	08/25/15 14:39
5081062	40 ug/L A	5H26009-SCV1	SCV0825.D	08/25/15 16:19

INITIAL CALIBRATION DATA
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	1	~~1.245862~~	5	0.38369	10	0.2774585	20	0.2181351	40	0.2086195	100	0.1885538
Acrolein	1	0.1604537	5	9.461441E-02	10	0.1020724	20	9.800274E-02	40	9.934527E-02	100	9.915334E-02
Acrylonitrile	1	0.2534014	5	0.2213988	10	0.2196489	20	0.2214982	40	0.224483	100	0.2252788
Benzene	1	1.331008	5	1.267999	10	1.347391	20	1.331646	40	1.332277	100	1.314861
Bromobenzene	1	1.618986	5	1.40813	10	1.414805	20	1.377192	40	1.41202	100	1.363269
Bromochloromethane	1	0.2960308	5	0.2689111	10	0.2874767	20	0.2880425	40	0.2949538	100	0.289562
Bromodichloromethane	1	0.3793106	5	0.3515976	10	0.3846199	20	0.3888959	40	0.4030823	100	0.421258
Bromoform	1	0.3342239	5	0.2761942	10	0.2774557	20	0.2988821	40	0.3271909	100	0.352407
Bromomethane	1	0.2832533	5	0.2816594	10	0.2837605	20	0.264989	40	0.2724144	100	0.2607409
n-Butylbenzene	1	2.064192	5	1.962383	10	2.125165	20	2.195137	40	2.322203	100	2.314209
sec-Butylbenzene	1	3.361527	5	3.181245	10	3.2764	20	3.399472	40	3.49688	100	3.411743
tert-Butylbenzene	1	2.55566	5	2.413872	10	2.442263	20	2.412598	40	2.512489	100	2.439319
Carbon Disulfide	1	0.7602043	5	0.7079619	10	0.6904512	20	0.6929742	40	0.7849473	100	0.8589008
Carbon Tetrachloride	1	0.3590702	5	0.3303135	10	0.365918	20	0.3671069	40	0.3879945	100	0.3980172
Chlorobenzene	1	1.351795	5	1.135565	10	1.173601	20	1.169331	40	1.167454	100	1.157528
Chloroethane	1	0.2243977	5	0.2024538	10	0.202998	20	0.1995212	40	0.191467	100	0.1870774
2-Chloroethyl Vinyl Ether	1	0	5	0	10	8.446763E-03	20	8.080593E-03	40	6.11227E-03	100	4.101707E-03
Chloroform	1	0.6184646	5	0.5550268	10	0.5619523	20	0.5687348	40	0.580724	100	0.5843779
1-Chlorohexane	1	0.3408139	5	0.305659	10	0.3425612	20	0.3442992	40	0.3456825	100	0.3409062
Chloromethane	1	0.6188604	5	0.4468327	10	0.4433779	20	0.4380717	40	0.4379828	100	0.4359954
2-Chlorotoluene	1	0.9530612	5	0.8406761	10	0.9118891	20	0.8932527	40	0.9018542	100	0.8666174
4-Chlorotoluene	1	0.9530612	5	0.8291655	10	0.8346038	20	0.8514251	40	0.902473	100	0.8566046
Cyclohexane	1	0.4887109	5	0.4654785	10	0.4671854	20	0.4722419	40	0.4784718	100	0.4727022
1,2-Dibromo-3-chloropropane	1	0.3058439	5	0.2354441	10	0.251023	20	0.2615012	40	0.2904851	100	0.3054092
Dibromochloromethane	1	0.4209674	5	0.3463143	10	0.3744573	20	0.3845324	40	0.4053689	100	0.4322825
1,2-Dibromoethane	1	0.417959	5	0.3839928	10	0.4201135	20	0.4221802	40	0.4289748	100	0.4230498
Dibromomethane	1	0.240002	5	0.2171642	10	0.2235139	20	0.2333016	40	0.2326495	100	0.2380963
trans-1,4-Dichloro-2-butene	1	0.2450812	5	0.1889455	10	0.1905086	20	0.1986576	40	0.2127134	100	0.2331375
1,2-Dichlorobenzene	1	2.083335	5	1.596136	10	1.644618	20	1.65084	40	1.723486	100	1.67707
1,3-Dichlorobenzene	1	2.014451	5	1.664288	10	1.708222	20	1.720396	40	1.769797	100	1.699407
1,4-Dichlorobenzene	1	1.998644	5	1.668849	10	1.693393	20	1.700061	40	1.736689	100	1.672382

INITIAL CALIBRATION DATA
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Dichlorodifluoromethane	1	0.3867736	5	0.3343597	10	0.3741938	20	0.3602228	40	0.3614965	100	0.353507
1,1-Dichloroethane	1	0.6249664	5	0.5612014	10	0.5939971	20	0.5746569	40	0.5824772	100	0.5826859
1,2-Dichloroethane	1	0.4364701	5	0.4437288	10	0.4457487	20	0.4575769	40	0.4513386	100	0.4526915
1,1-Dichloroethene	1	0.3101086	5	0.2891199	10	0.2897317	20	0.2817988	40	0.2874915	100	0.2803107
cis-1,2-Dichloroethene	1	0.4118197	5	0.3421306	10	0.3704005	20	0.3547421	40	0.3593283	100	0.3684041
trans-1,2-Dichloroethene	1	0.3337413	5	0.3190617	10	0.3275271	20	0.321376	40	0.3243893	100	0.323059
1,2-Dichloroethene (Total)	2	0.3727805	10	0.3305961	20	0.3489638	40	0.338059	80	0.3418588	200	0.3457316
Dichlorofluoromethane	1	0.6431715	5	0.5933271	10	0.6269792	20	0.585174	40	0.5941567	100	0.5883914
1,2-Dichloropropane	1	0.3567521	5	0.3337721	10	0.3529887	20	0.3470104	40	0.3521312	100	0.3516462
1,3-Dichloropropane	1	0.7893587	5	0.6705783	10	0.7278728	20	0.6952057	40	0.7018845	100	0.6959416
2,2-Dichloropropane	1	0.3699819	5	0.3179421	10	0.3236952	20	0.3163913	40	0.3295759	100	0.344967
1,1-Dichloropropene	1	0.483679	5	0.4186202	10	0.4495255	20	0.4331116	40	0.4379178	100	0.4413144
cis-1,3-Dichloropropene	1	0.3697558	5	0.3549897	10	0.3848074	20	0.4124264	40	0.4307208	100	0.4537819
trans-1,3-Dichloropropene	1	0.3236777	5	0.2993961	10	0.3391772	20	0.3760051	40	0.3982113	100	0.4283066
Ethylbenzene	1	1.90012	5	1.851911	10	1.911097	20	1.867145	40	1.918785	100	1.887278
Ethyl Ether	1	0.2159736	5	0.1798949	10	0.194667	20	0.1933074	40	0.1914656	100	0.1884032
Hexachlorobutadiene	1	0.4349103	5	0.462329	10	0.4847075	20	0.4861019	40	0.5215374	100	0.5158156
2-Hexanone	1	~~0.3165314~~	5	0.3601509	10	0.4104433	20	0.4125274	40	0.4980098	100	0.4497135
Iodomethane	1	0.1800157	5	0.1782431	10	0.1949923	20	0.2189255	40	0.2586091	100	0.3019854
Isopropylbenzene	1	3.372404	5	3.069251	10	3.183264	20	3.179619	40	3.235332	100	3.154364
4-Isopropyltoluene	1	2.864549	5	2.715857	10	2.751316	20	2.782155	40	2.886218	100	2.845586
Methyl Acetate	1	0.4590286	5	0.3461213	10	0.3636574	20	0.3807309	40	0.379588	100	0.4093029
Methyl tert-Butyl Ether	1	0.9947788	5	0.9014586	10	0.9557744	20	0.9490568	40	0.9722276	100	0.9530051
Methylcyclohexane	1	0.4546752	5	0.4636605	10	0.4779589	20	0.4851844	40	0.4893556	100	0.4936516
Methylene Chloride	1	1.013097	5	0.528976	10	0.4922114	20	0.4595609	40	0.4290591	100	0.4039856
2-Butanone (MEK)	1	0.3175151	5	0.2415854	10	0.2383013	20	0.2342745	40	0.2606739	100	0.2548037
4-Methyl-2-pentanone (MIBK)	1	~~0.3832683~~	5	0.4169907	10	0.436293	20	0.4583018	40	0.5561038	100	0.51273
Naphthalene	1	2.109728	5	1.492192	10	1.72406	20	2.130069	40	2.789716	100	3.279225
n-Propylbenzene	1	0.9112958	5	0.8665951	10	0.905559	20	0.9094284	40	0.9500581	100	0.9312344
Styrene	1	1.02939	5	1.015969	10	1.101255	20	1.116135	40	1.17854	100	1.18536
1,1,1,2-Tetrachloroethane	1	0.3660275	5	0.3700873	10	0.366046	20	0.3816491	40	0.3974001	100	0.4011485

INITIAL CALIBRATION DATA
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1,2,2-Tetrachloroethane	1	1.837819	5	1.107432	10	1.18358	20	1.166945	40	1.202394	100	1.124539
Tetrachloroethene	1	0.5343572	5	0.494658	10	0.5324813	20	0.5139545	40	0.5171214	100	0.4917512
Tetrahydrofuran	1	0.0828841	5	0.0537534	10	6.489452E-02	20	6.521161E-02	40	6.470466E-02	100	0.0696989
Toluene	1	1.485638	5	1.371482	10	1.449381	20	1.423675	40	1.429967	100	1.430656
1,2,3-Trichlorobenzene	1	0.7013092	5	0.6841159	10	0.7982245	20	0.8704765	40	1.030453	100	1.133353
1,2,4-Trichlorobenzene	1	0.7728032	5	0.7036222	10	0.7735472	20	0.8723234	40	1.023956	100	1.112627
1,1,1-Trichloroethane	1	0.4381097	5	0.4133657	10	0.4362268	20	0.4498996	40	0.4628669	100	0.4661047
1,1,2-Trichloroethane	1	0.309204	5	0.2594552	10	0.2924389	20	0.2780923	40	0.2871282	100	0.2863022
Trichloroethene	1	0.3833813	5	0.3702544	10	0.3885732	20	0.3960227	40	0.393201	100	0.3953359
Trichlorofluoromethane	1	0.5571213	5	0.5115829	10	0.5128486	20	0.4924066	40	0.499701	100	0.4847568
1,2,3-Trichloropropane	1	0.542514	5	0.3958143	10	0.4051019	20	0.4109623	40	0.3988832	100	0.3894906
1,1,2-Trichloro-1,2,2-trifluoroe	1	0.2633521	5	0.246452	10	0.2447025	20	0.2454511	40	0.243097	100	0.2394893
1,2,4-Trimethylbenzene	1	2.807267	5	2.696163	10	2.74916	20	2.776428	40	2.870718	100	2.84411
1,3,5-Trimethylbenzene	1	2.728232	5	2.715079	10	2.716286	20	2.801689	40	2.909037	100	2.812368
Vinyl Acetate	1	0.3738265	5	0.4502249	10	0.401938	20	0.3943439	40	0.4493997	100	0.3330275
Vinyl Chloride	1	0.3901659	5	0.3631043	10	0.3699153	20	0.3758825	40	0.3863143	100	0.3843674
Xylene, Meta + Para	2	0.7503922	10	0.7138865	20	0.7297341	40	0.7276978	80	0.7417365	200	0.7347889
Xylene, Ortho	1	0.6718145	5	0.666375	10	0.7100772	20	0.7163253	40	0.731053	100	0.7199673
Xylene (Total)	3	0.7241996	15	0.6980493	30	0.7231818	60	0.723907	120	0.7381753	300	0.7298483
Dichlorobenzenes (Total)	3	2.032143	15	1.643091	30	1.682078	60	1.690432	120	1.743324	300	1.682953
Dibromofluoromethane	40	0.2360161	40	0.2378469	40	0.246737	40	0.2543002	40	0.2491058	40	0.2540703
1,2-Dichloroethane-d4	40	0.147932	40	0.1510602	40	0.1544332	40	0.1527355	40	0.1508162	40	0.1532737
Toluene-d8	40	0.9893837	40	0.9978425	40	1.011405	40	1.02921	40	1.022221	40	1.03629
4-Bromofluorobenzene	40	0.4820836	40	0.4767541	40	0.4978036	40	0.5010411	40	0.4856157	40	0.4903571

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	200	0.1809904										
Acrolein	200	0.1010786										
Acrylonitrile	200	0.2225455										
Benzene	200	1.322138										
Bromobenzene	200	1.355566										
Bromochloromethane	200	0.2904555										
Bromodichloromethane	200	0.4441362										
Bromoform	200	0.3857999										
Bromomethane	200	0.2344492										
n-Butylbenzene	200	2.355779										
sec-Butylbenzene	200	3.39438										
tert-Butylbenzene	200	2.408773										
Carbon Disulfide	200	0.8988028										
Carbon Tetrachloride	200	0.4203685										
Chlorobenzene	200	1.180526										
Chloroethane	200	0.1873053										
2-Chloroethyl Vinyl Ether	200	3.40532E-03										
Chloroform	200	0.5829775										
1-Chlorohexane	200	0.3477417										
Chloromethane	200	0.4330299										
2-Chlorotoluene	200	0.8375244										
4-Chlorotoluene	200	0.8526636										
Cyclohexane	200	0.481634										
1,2-Dibromo-3-chloropropane	200	0.3302039										
Dibromochloromethane	200	0.4524861										
1,2-Dibromoethane	200	0.4349448										
Dibromomethane	200	0.2403156										
trans-1,4-Dichloro-2-butene	200	0.2459764										
1,2-Dichlorobenzene	200	1.66418										
1,3-Dichlorobenzene	200	1.689651										
1,4-Dichlorobenzene	200	1.660819										

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Dichlorodifluoromethane	200	0.3505625										
1,1-Dichloroethane	200	0.585526										
1,2-Dichloroethane	200	0.4552292										
1,1-Dichloroethene	200	0.2840411										
cis-1,2-Dichloroethene	200	0.3650819										
trans-1,2-Dichloroethene	200	0.3281166										
1,2-Dichloroethene (Total)	400	0.3465993										
Dichlorofluoromethane	200	0.5937685										
1,2-Dichloropropane	200	0.3545943										
1,3-Dichloropropane	200	0.7005008										
2,2-Dichloropropane	200	0.3514579										
1,1-Dichloropropene	200	0.4438233										
cis-1,3-Dichloropropene	200	0.4457232										
trans-1,3-Dichloropropene	200	0.4415692										
Ethylbenzene	200	1.907065										
Ethyl Ether	200	0.1920317										
Hexachlorobutadiene	200	0.517601										
2-Hexanone	200	0.4552629										
Iodomethane	200	0.3444225										
Isopropylbenzene	200	3.128948										
4-Isopropyltoluene	200	2.84025										
Methyl Acetate	200	0.4026										
Methyl tert-Butyl Ether	200	0.9632734										
Methylcyclohexane	200	0.5002297										
Methylene Chloride	200	0.4061365										
2-Butanone (MEK)	200	0.26162										
4-Methyl-2-pentanone (MIBK)	200	0.5206689										
Naphthalene	200	~~3.484951~~										
n-Propylbenzene	200	0.9287047										
Styrene	200	1.213096										
1,1,1,2-Tetrachloroethane	200	0.4166429										

INITIAL CALIBRATION DATA (Continued)

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Calibration: 5H26013

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU

Calibration Date: 08/25/15 00:00

Instrument: 350

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1,2,2-Tetrachloroethane	200	1.210411										
Tetrachloroethene	200	0.4856308										
Tetrahydrofuran	200	6.936729E-02										
Toluene	200	1.445574										
1,2,3-Trichlorobenzene	200	1.176802										
1,2,4-Trichlorobenzene	200	1.172379										
1,1,1-Trichloroethane	200	0.4812266										
1,1,2-Trichloroethane	200	0.2938384										
Trichloroethene	200	0.3747605										
Trichlorofluoromethane	200	0.4907177										
1,2,3-Trichloropropane	200	0.3809074										
1,1,2-Trichloro-1,2,2-trifluoroe	200	0.2392706										
1,2,4-Trimethylbenzene	200	2.801091										
1,3,5-Trimethylbenzene	200	2.752061										
Vinyl Acetate	200	~~0.6399684~~										
Vinyl Chloride	200	0.3913207										
Xylene, Meta + Para	400	0.7332555										
Xylene, Ortho	200	0.7325396										
Xylene (Total)	600	0.7330169										
Dichlorobenzenes (Total)	600	1.67155										
Dibromofluoromethane	40	0.2594322										
1,2-Dichloroethane-d4	40	0.1517998										
Toluene-d8	40	1.033063										
4-Bromofluorobenzene	40	0.5073388										

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acetone	0.2429079	31.67031	2.096	2.089372E-02	0.99983		0.99	
Acrolein	0.1078172	21.64097	1.965286	9.759003E-02	0.99989		0.99	
Acrylonitrile	0.2268935	5.220367	2.710571	0.1117632			15	
Benzene	1.321046	1.926279	5.484714	3.742875E-02			15	
Bromobenzene	1.421424	6.35869	12.06086	0.0135496			15	
Bromochloromethane	0.2879189	3.125659	4.342	5.258685E-02			15	
Bromodichloromethane	0.3961286	7.597925	7.431	7.284189E-03			15	
Bromoform	0.3217362	12.55351	11.47186	2.154357E-02			SPCC (0.1)	
Bromomethane	0.2687524	6.569924	1.400857	0.2745331			15	
n-Butylbenzene	2.191295	6.775027	13.87714	1.338348E-02			15	
sec-Butylbenzene	3.360235	3.051852	13.17171	1.909008E-02			15	
tert-Butylbenzene	2.454996	2.320519	12.895	5.484857E-03			15	
Carbon Disulfide	0.7706061	10.71667	2.201714	1.992852E-02			15	
Carbon Tetrachloride	0.3755413	7.801599	5.092429	5.995814E-02			15	
Chlorobenzene	1.190829	6.083097	10.413	1.175984E-02			SPCC (0.3)	
Chloroethane	0.1993172	6.503524	1.471286	0.1294455			15	
2-Chloroethyl Vinyl Ether	6.029331E-03	37.69319	7.8414	3.337828E-02	0.98675		0.99	*
Chloroform	0.578894	3.579157	4.519	1.586434E-02			CCC (30)	
1-Chlorohexane	0.3382377	4.312015	10.46	1.662641E-02			15	
Chloromethane	0.4648787	14.6393	1.125	0			SPCC (0.1)	
2-Chlorotoluene	0.8864107	4.662845	12.33043	1.600926E-02			15	
4-Chlorotoluene	0.868571	5.080749	12.45486	0.4423396			15	
Cyclohexane	0.4752035	1.736137	4.864429	5.580551E-02			15	
1,2-Dibromo-3-chloropropane	0.2828443	12.12289	14.81114	1.675161E-02			15	
Dibromochloromethane	0.4023441	9.075963	9.635	3.076309E-02			15	
1,2-Dibromoethane	0.418745	3.909015	9.742143	1.305129E-02			15	
Dibromomethane	0.232149	3.789789	7.136714	1.217493E-02			15	
trans-1,4-Dichloro-2-butene	0.2164315	11.52017	12.21986	1.454635E-02			15	
1,2-Dichlorobenzene	1.719952	9.57687	13.83014	1.967949E-02			15	
1,3-Dichlorobenzene	1.752316	6.850412	13.26514	0.0238396			15	
1,4-Dichlorobenzene	1.732977	6.917855	13.37914	1.849204E-02			15	
Dichlorodifluoromethane	0.3601594	4.686067	1.007714	4.953848E-02			15	

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
1,1-Dichloroethane	0.5865016	3.372787	3.189143	7.402459E-02			SPCC (0.1)	
1,2-Dichloroethane	0.4489691	1.643841	5.549143	3.854645E-02			15	
1,1-Dichloroethene	0.2889432	3.461822	2.031857	0.1097939			CCC (30)	
cis-1,2-Dichloroethene	0.3674153	5.934354	3.972857	5.703237E-02			15	
trans-1,2-Dichloroethene	0.3253244	1.507526	2.723286	0.1068277			15	
1,2-Dichloroethene (Total)	0.3463699	3.806407	3.972857	5.703237E-02			15	
Dichlorofluoromethane	0.6035669	3.689048	1.612286	0.1185072			15	
1,2-Dichloropropane	0.3498421	2.198681	6.965143	3.516807E-02			CCC (30)	
1,3-Dichloropropane	0.7116203	5.358849	9.348	1.761173E-02			15	
2,2-Dichloropropane	0.3362873	5.918491	3.957571	7.777143E-02			15	
1,1-Dichloropropene	0.4439988	4.515668	5.115571	0.0643147			15	
cis-1,3-Dichloropropene	0.4074579	9.43283	8.100286	2.196777E-02			15	
trans-1,3-Dichloropropene	0.3723347	14.46171	8.908714	3.305593E-02			15	
Ethylbenzene	1.891914	1.298697	10.59257	2.543853E-02			CCC (30)	
Ethyl Ether	0.1936776	5.67018	1.867	0.1198341			15	
Hexachlorobutadiene	0.4890004	6.605263	16.07114	1.346441E-02			15	
2-Hexanone	0.431018	10.98684	9.541166	1.518768E-02			15	
Iodomethane	0.2395991	26.92632	2.153	0.1286069	0.99583		0.99	
Isopropylbenzene	3.189026	3.003667	11.737	2.913031E-02			15	
4-Isopropyltoluene	2.812276	2.249465	13.36843	2.504681E-02			15	
Methyl Acetate	0.3915756	9.378886	2.383143	9.590736E-02			15	
Methyl tert-Butyl Ether	0.9556535	2.975417	2.743	1.333347E-02			15	
Methylcyclohexane	0.4806737	3.417773	6.888857	3.488664E-02			15	
Methylene Chloride	0.5332895	40.58807	2.454571	0.0278562	0.99988		0.99	
2-Butanone (MEK)	0.2583963	10.93673	4.046143	0.1371979			15	
4-Methyl-2-pentanone (MIBK)	0.4835147	11.24996	8.380833	0.0346276			15	
Naphthalene	2.254165	29.6627	16.1195	9.644848E-03		0.9990407	0.99	
n-Propylbenzene	0.9146965	2.877588	12.26	1.690875E-02			15	
Styrene	1.119964	6.893618	11.27286	2.065942E-02			15	
1,1,1,2-Tetrachloroethane	0.3855716	5.150589	10.54214	1.132582E-02			15	
1,1,2,2-Tetrachloroethane	1.261874	20.35264	12.148	2.208686E-03	0.99876		SPCC (0.3)	
Tetrachloroethene	0.5099935	3.861735	9.272857	3.277837E-02			15	

INITIAL CALIBRATION DATA (Continued)
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Calibration: 5H26013

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Calibration Date: 08/25/15 00:00
Instrument: 350

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Tetrahydrofuran	6.721635E-02	12.93042	4.444428	0.124144			15	
Toluene	1.433768	2.395712	8.542143	1.680785E-02			CCC (30)	
1,2,3-Trichlorobenzene	0.9135334	22.08025	16.41943	1.425131E-02	0.99933		0.99	
1,2,4-Trichlorobenzene	0.9187511	20.06009	15.83014	5.849747E-03	0.99914		0.99	
1,1,1-Trichloroethane	0.4496857	5.032231	4.789143	4.683166E-02			15	
1,1,2-Trichloroethane	0.286637	5.342456	9.136571	0.0149256			15	
Trichloroethene	0.3859327	2.649154	6.619	1.260598E-02			15	
Trichlorofluoromethane	0.5070193	4.826764	1.648	0.1349347			15	
1,2,3-Trichloropropane	0.4176677	13.38967	12.16771	2.325767E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2459735	3.316861	2.037	3.29297E-03			15	
1,2,4-Trimethylbenzene	2.792134	2.092955	12.95571	6.725208E-03			15	
1,3,5-Trimethylbenzene	2.776393	2.538859	12.501	1.207938E-02			15	
Vinyl Acetate	0.4004601	11.26074	3.291	7.308242E-02			15	
Vinyl Chloride	0.3801529	2.82989	1.190857	0.1906931			CCC (30)	
Xylene, Meta + Para	0.7330702	1.561495	10.754	1.905678E-02			15	
Xylene, Ortho	0.7068788	3.823823	11.248	1.424152E-02			15	
Xylene (Total)	0.7243397	1.773183	11.248	1.424152E-02			15	
Dichlorobenzenes (Total)	1.735082	7.744319	13.83014	1.967949E-02			15	
Dibromofluoromethane	0.2482155	3.513849	4.805429	5.513411E-02			15	
1,2-Dichloroethane-d4	0.1517215	1.382941	5.412286	3.160457E-02			15	
Toluene-d8	1.017059	1.780427	8.451572	3.606367E-02			15	
4-Bromofluorobenzene	0.4915706	2.234069	11.907	1.478591E-02			15	

Response Factor Report 350

5H26013 (5H26009)

Method Path : C:\gcms\1\methods\
Method File : 8260B-W52.M
Title : 8260B : 5030
Last Update : Wed Aug 26 08:11:00 2015
Response Via : Initial Calibration

Calibration Files
1 =1P0825.D 2 =5P0825.D 3 =10P0825.D 4 =20P0825.D 5 =40P0825.D 6 =100P0825.D 7 =200P0825.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
1)	I	Fluorobenzene	----------	----------	----------	ISTD	----------	----------	----------		
2)		dichlorodifluo...	0.387	0.334	0.374	0.360	0.361	0.354	0.351	0.360	4.69
3)	P	chloromethane	0.619	0.447	0.443	0.438	0.438	0.436	0.433	0.465	14.64
4)	C	vinyl chloride	0.390	0.363	0.370	0.376	0.386	0.384	0.391	0.380	2.83#
5)		bromomethane	0.283	0.282	0.284	0.265	0.272	0.261	0.234	0.269	6.57
6)		chloroethane	0.224	0.202	0.203	0.200	0.191	0.187	0.187	0.199	6.50
7)		dichlorofluoro...	0.643	0.593	0.627	0.585	0.594	0.588	0.594	0.604	3.69
8)		trichlorofluor...	0.557	0.512	0.513	0.492	0.500	0.485	0.491	0.507	4.83
9)		ethyl ether	0.216	0.180	0.195	0.193	0.191	0.188	0.192	0.194	5.67
10)		acrolein	0.160	0.095	0.102	0.098	0.099	0.099	0.101	0.108	21.64
11)		1,1,2-trichlor...	0.263	0.246	0.245	0.245	0.243	0.239	0.239	0.246	3.32
12)	C	1,1-dichloroet...	0.310	0.289	0.290	0.282	0.287	0.280	0.284	0.289	3.46#
13)		acetone		0.384	0.277	0.218	0.209	0.189	0.181	0.243	31.67
14)		iodomethane	0.180	0.178	0.195	0.219	0.259	0.302	0.344	0.240	26.93
15)		carbon disulfide	0.760	0.708	0.690	0.693	0.785	0.859	0.899	0.771	10.72
16)		methyl acetate	0.459	0.346	0.364	0.381	0.380	0.409	0.403	0.392	9.38
17)		methylene chlo...	1.013	0.529	0.492	0.460	0.429	0.404	0.406	0.533	40.59
18)		acrylonitrile	0.253	0.221	0.220	0.221	0.224	0.225	0.223	0.227	5.22
19)		trans-1,2-dich...	0.334	0.319	0.328	0.321	0.324	0.323	0.328	0.325	1.51
20)		methyl (tert) ...	0.995	0.901	0.956	0.949	0.972	0.953	0.963	0.956	2.98
21)	P	1,1-dichloroet...	0.625	0.561	0.594	0.575	0.582	0.583	0.586	0.587	3.37
22)		vinyl acetate	0.374	0.450	0.402	0.394	0.449	0.333		0.400	11.26
23)		2,2-dichloropr...	0.370	0.318	0.324	0.316	0.330	0.345	0.351	0.336	5.92
24)		cis-1,2-dichlo...	0.412	0.342	0.370	0.355	0.359	0.368	0.365	0.367	5.93
25)		2-butanone (MEK)	0.318	0.242	0.238	0.234	0.261	0.255	0.262	0.258	10.94
26)		bromochloromet...	0.296	0.269	0.287	0.288	0.295	0.290	0.290	0.288	3.13
27)		tetrahydrofuran	0.083	0.054	0.065	0.065	0.065	0.070	0.069	0.067	12.93
28)	C	chloroform	0.618	0.555	0.562	0.569	0.581	0.584	0.583	0.579	3.58#
29)	S	#Dibromofluoro...	0.236	0.238	0.247	0.254	0.249	0.254	0.259	0.248	3.51
30)		1,1,1-trichlor...	0.438	0.413	0.436	0.450	0.463	0.466	0.481	0.450	5.03
31)		cyclohexane	0.489	0.465	0.467	0.472	0.478	0.473	0.482	0.475	1.74
32)		carbon tetrach...	0.359	0.330	0.366	0.367	0.388	0.398	0.420	0.376	7.80
33)		1,1-dichloropr...	0.484	0.419	0.450	0.433	0.438	0.441	0.444	0.444	4.52
34)		benzene	1.331	1.268	1.347	1.332	1.332	1.315	1.322	1.321	1.93
35)		1,2-dichloroet...	0.436	0.444	0.446	0.458	0.451	0.453	0.455	0.449	1.64
36)		heptane								0.000	-1.00
37)	s	#1,2-Dichloroe...	0.148	0.151	0.154	0.153	0.151	0.153	0.152	0.152	1.38
38)		trichloroethene	0.383	0.370	0.389	0.396	0.393	0.395	0.375	0.386	2.65

FEW 8-28-15

Method Path : C:\gcms\1\methods\
Method File : 8260B-W52.M

39)		methylcyclohexane	0.455	0.464	0.478	0.485	0.489	0.494	0.500	0.481	3.42
40)	C	1,2-dichloropr...	0.357	0.334	0.353	0.347	0.352	0.352	0.355	0.350	2.20#
41)		dibromomethane	0.240	0.217	0.224	0.233	0.233	0.238	0.240	0.232	3.79
42)		bromodichlorom...	0.379	0.352	0.385	0.389	0.403	0.421	0.444	0.396	7.60
43)		2-chloroethyl ...			0.008	0.008	0.006	0.004	0.003	0.006	37.69
44)		cis-1,3-dichlo...	0.370	0.355	0.385	0.412	0.431	0.454	0.446	0.407	9.43
45)		4-methyl-2-pen...		0.417	0.436	0.458	0.556	0.513	0.521	0.484	11.25
46)	s	#Toluene-d8	0.989	0.998	1.011	1.029	1.022	1.036	1.033	1.017	1.78
47)	C	toluene	1.486	1.371	1.449	1.424	1.430	1.431	1.446	1.434	2.40#
48)		trans-1,3-dich...	0.324	0.299	0.339	0.376	0.398	0.428	0.442	0.372	14.46
49)		1,1,2-trichlor...	0.309	0.259	0.292	0.278	0.287	0.286	0.294	0.287	5.34
50)		Chlorobenzene-d5	----------ISTD----------								
51)		tetrachloroethene	0.534	0.495	0.532	0.514	0.517	0.492	0.486	0.510	3.86
52)		1,3-dichloropr...	0.789	0.671	0.728	0.695	0.702	0.696	0.701	0.712	5.36
53)		2-hexanone (MBK)		0.360	0.410	0.413	0.498	0.450	0.455	0.431	10.99
54)		dibromochlorom...	0.421	0.346	0.374	0.385	0.405	0.432	0.452	0.402	9.08
55)		1,2-dibromoethane	0.418	0.384	0.420	0.422	0.429	0.423	0.435	0.419	3.91
56)	P	chlorobenzene	1.352	1.136	1.174	1.169	1.167	1.158	1.181	1.191	6.08
57)		1-chlorohexane	0.341	0.306	0.343	0.344	0.346	0.341	0.348	0.338	4.31
58)		1,1,1,2-tetrac...	0.366	0.370	0.366	0.382	0.397	0.401	0.417	0.386	5.15
59)	C	ethylbenzene	1.900	1.852	1.911	1.867	1.919	1.887	1.907	1.892	1.30#
60)		m+p-xylene	0.750	0.714	0.730	0.728	0.742	0.735	0.733	0.733	1.56
61)		o-xylene	0.672	0.666	0.710	0.716	0.731	0.720	0.733	0.707	3.82
62)		styrene	1.029	1.016	1.101	1.116	1.179	1.185	1.213	1.120	6.89
63)	P	bromoform	0.334	0.276	0.277	0.299	0.327	0.352	0.386	0.322	12.55
64)	S	#4-Bromofluoro...	0.482	0.477	0.498	0.501	0.486	0.490	0.507	0.492	2.23
65)	I	1,4-Dichlorobenzen...	----------ISTD----------								
66)		isopropylbenzene	3.372	3.069	3.183	3.180	3.235	3.154	3.129	3.189	3.00
67)		bromobenzene	1.619	1.408	1.415	1.377	1.412	1.363	1.356	1.421	6.36
68)	P	1,1,2,2-tetrac...	1.838	1.107	1.184	1.167	1.202	1.125	1.210	1.262	20.35
69)		1,2,3-trichlor...	0.543	0.396	0.405	0.411	0.399	0.389	0.381	0.418	13.39
70)		1,4-dichloro-2...	0.245	0.189	0.191	0.199	0.213	0.233	0.246	0.216	11.52
71)		n-propylbenzene	0.911	0.867	0.906	0.909	0.950	0.931	0.929	0.915	2.88
72)		2-chlorotoluene	0.953	0.841	0.912	0.893	0.902	0.867	0.838	0.886	4.66
73)		1,3,5-trimethy...	2.728	2.715	2.716	2.802	2.909	2.812	2.752	2.776	2.54
74)		4-chlorotoluene	0.953	0.829	0.835	0.851	0.902	0.857	0.853	0.869	5.08
75)		tert-butylbenzene	2.556	2.414	2.442	2.413	2.512	2.439	2.409	2.455	2.32
76)		1,2,4-trimethy...	2.807	2.696	2.749	2.776	2.871	2.844	2.801	2.792	2.09
77)		sec-butylbenzene	3.362	3.181	3.276	3.399	3.497	3.412	3.394	3.360	3.05
78)		1,3-dichlorobe...	2.014	1.664	1.708	1.720	1.770	1.699	1.690	1.752	6.85
79)		4-isopropyltol...	2.865	2.716	2.751	2.782	2.886	2.846	2.840	2.812	2.25
80)		1,4-dichlorobe...	1.999	1.669	1.693	1.700	1.737	1.672	1.661	1.733	6.92
81)		1,2-dichlorobe...	2.083	1.596	1.645	1.651	1.723	1.677	1.664	1.720	9.58
82)		n-butylbenzene	2.064	1.962	2.125	2.195	2.322	2.314	2.356	2.191	6.78
83)		hexachloroethane	0.381	0.331	0.328	0.347	0.402	0.421	0.454	0.381	12.56
84)		1,2-dibromo-3-...	0.306	0.235	0.251	0.262	0.290	0.305	0.330	0.283	12.12

Response Factor Report 350

Method Path : C:\gcms\1\methods\
Method File : 8260B-W52.M

85)	1,2,4-trichlor...	0.773	0.704	0.774	0.872	1.024	1.113	1.172	0.919	20.06
86)	hexachlorobuta...	0.435	0.462	0.485	0.486	0.522	0.516	0.518	0.489	6.61
87)	naphthalene	2.255	1.492	1.724	2.130	2.790	3.279		2.278	29.19
88)	1,2,3-trichlor...	0.701	0.684	0.798	0.870	1.030	1.133	1.177	0.914	22.08
89)	2-methylnaphth...	0.351	0.343	0.367	0.463	0.595	0.801	1.099	0.574	49.56

(#) = Out of Range

```
InstName  : 350
Data Path : C:\gcms\1\data\082515\
Data File : 1P0825.D
Acq On    : 25 Aug 2015  11:23
Operator  : DLV
Sample    : STD1
Misc      :
ALS Vial  : 4   Sample Multiplier: 1
Quant Time: Aug 25 13:11:19 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration
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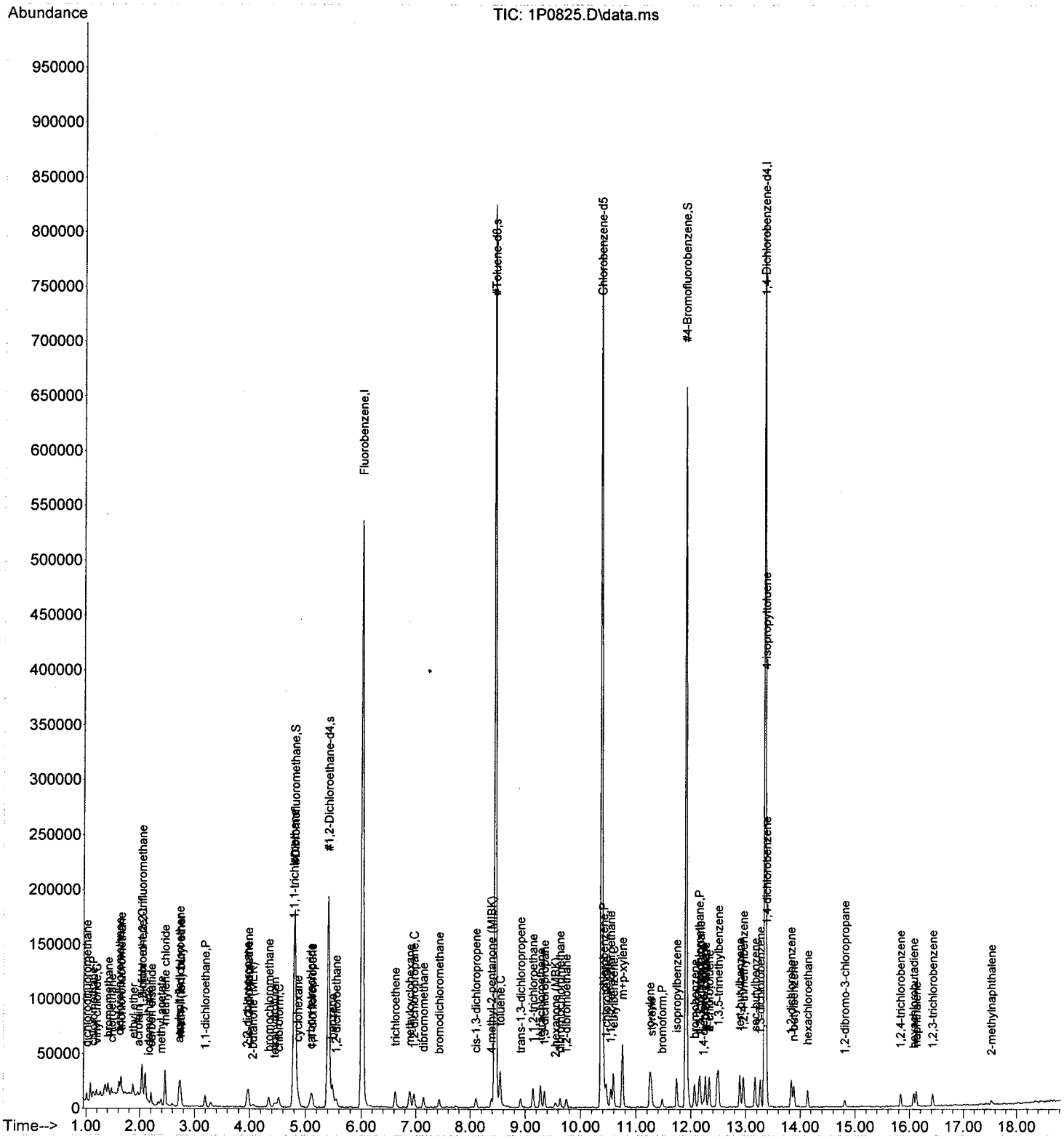

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 1P0825.D
Acq On : 25 Aug 2015 11:23
Operator : DLV
Sample : STD1
Misc :
ALS Vial : 4 Sample Multiplier: 1
Quant Time: Aug 25 13:11:19 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	707494	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.378	117	558428	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	275827	40.00	ug/L	# 0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.807	111	166980	39.76	ug/L	0.00
Spiked Amount 40.000			Recovery	=	99.40%	
37) #1,2-Dichloroethane-d4	5.413	67	104661	35.48	ug/L	0.00
Spiked Amount 40.000			Recovery	=	88.70%	
46) #Toluene-d8	8.454	98	699983	39.63	ug/L	0.00
Spiked Amount 40.000			Recovery	=	99.08%	
64) #4-Bromofluorobenzene	11.907	95	269209	39.24	ug/L	0.00
Spiked Amount 40.000			Recovery	=	98.10%	
Target Compounds						Qvalue
2) dichlorodifluoromethane	1.008	85	6841	0.93	ug/L	96
3) chloromethane	1.125	50	10946	0.38	ug/L	92
4) vinyl chloride	1.190	62	6901	0.96	ug/L	70
5) bromomethane	1.407	94	5010	1.57	ug/L #	77
6) chloroethane	1.472	64	3969	1.26	ug/L	90
7) dichlorofluoromethane	1.613	67	11376	1.12	ug/L	99
8) trichlorofluoromethane	1.649	101	9854	1.07	ug/L	96
9) ethyl ether	1.872	74	3820	0.81	ug/L #	86
10) acrolein	1.966	56	2838	0.73	ug/L #	84
11) 1,1,2-trichloro-1,2,2-...	2.037	101	4658	1.02	ug/L	95
12) 1,1-dichloroethene	2.037	96	5485	1.14	ug/L	99
13) acetone	2.096	43	22036	Below Cal		91
14) iodomethane	2.155	142	3184	1.89	ug/L #	80
15) carbon disulfide	2.202	76	13446	4.36	ug/L	97
16) methyl acetate	2.384	43	8119	1.13	ug/L #	92
17) methylene chloride	2.454	49	17919	0.51	ug/L	91
18) acrylonitrile	2.713	53	4482	1.06	ug/L #	88
19) trans-1,2-dichloroethene	2.725	96	5903	1.05	ug/L	91
20) methyl (tert) butyl ether	2.743	73	17595	1.00	ug/L	99
21) 1,1-dichloroethane	3.190	63	11054	1.04	ug/L	100
22) vinyl acetate	3.296	43	6612	Below Cal	#	73
23) 2,2-dichloropropane	3.954	77	6544	0.93	ug/L	96
24) cis-1,2-dichloroethene	3.978	96	7284	1.17	ug/L #	85
25) 2-butanone (MEK)	4.054	43	5616	1.39	ug/L	95
26) bromochloromethane	4.343	49	5236	0.95	ug/L	90
27) tetrahydrofuran	4.448	71	1466	1.15	ug/L #	86
28) chloroform	4.519	83	10939	1.05	ug/L	97
30) 1,1,1-trichloroethane	4.790	97	7749	0.90	ug/L	90
31) cyclohexane	4.860	56	8644	0.96	ug/L	97
32) carbon tetrachloride	5.096	117	6351	0.86	ug/L	87
33) 1,1-dichloropropene	5.119	75	8555	1.11	ug/L	90
34) benzene	5.484	78	23542	1.00	ug/L #	83
35) 1,2-dichloroethane	5.548	62	7720	0.88	ug/L #	89
36) heptane	6.013	57	21891	No Calib	#	
38) trichloroethene	6.619	130	6781	1.01	ug/L	91

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 1P0825.D
Acq On : 25 Aug 2015 11:23
Operator : DLV
Sample : STD1
Misc :
ALS Vial : 4 Sample Multiplier: 1
Quant Time: Aug 25 13:11:19 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
39)	methylcyclohexane	6.890	83	8042	0.90 ug/L	#	87
40)	1,2-dichloropropane	6.966	63	6310	0.99 ug/L	#	87
41)	dibromomethane	7.137	93	4245	1.00 ug/L		97
42)	bromodichloromethane	7.431	83	6709	0.91 ug/L	#	95
43)	2-chloroethyl vinyl ether	0.000		0	N.D.		
44)	cis-1,3-dichloropropene	8.101	75	6540	0.86 ug/L		98
45)	4-methyl-2-pentanone (...	8.384	43	6779	0.82 ug/L	#	89
47)	toluene	8.542	91	26277	1.06 ug/L		94
48)	trans-1,3-dichloropropene	8.913	75	5725	0.82 ug/L		96
49)	1,1,2-trichloroethane	9.136	83	5469	1.06 ug/L		95
51)	tetrachloroethene	9.278	166	7460	0.97 ug/L		93
52)	1,3-dichloropropane	9.348	76	11020	1.06 ug/L		96
53)	2-hexanone (MBK)	9.548	43	4419	0.75 ug/L	#	84
54)	dibromochloromethane	9.631	129	5877	1.00 ug/L		96
55)	1,2-dibromoethane	9.742	109	5835	0.95 ug/L	#	100
56)	chlorobenzene	10.413	112	18872	1.12 ug/L	#	82
57)	1-chlorohexane	10.460	55	4758	0.88 ug/L		98
58)	1,1,1,2-tetrachloroethane	10.542	131	5110	0.90 ug/L		95
59)	ethylbenzene	10.595	91	26527	0.97 ug/L		92
60)	m+p-xylene	10.754	106	20952	2.01 ug/L		98
61)	o-xylene	11.248	106	9379	0.90 ug/L		96
62)	styrene	11.278	104	14371	0.91 ug/L		92
63)	bromoform	11.472	173	4666	1.00 ug/L	#	89
66)	isopropylbenzene	11.736	105	23255	0.99 ug/L		95
67)	bromobenzene	12.066	77	11164	1.05 ug/L		98
68)	1,1,2,2-tetrachloroethane	12.148	83	12673	1.44 ug/L	#	99
69)	1,2,3-trichloropropane	12.172	110	3741	1.26 ug/L		95
70)	1,4-dichloro-2-butene	12.225	53	1690	0.98 ug/L	#	10
71)	n-propylbenzene	12.260	120	6284	0.92 ug/L		94
72)	2-chlorotoluene	12.330	126	6572	1.00 ug/L	#	84
73)	1,3,5-trimethylbenzene	12.501	105	18813	0.90 ug/L		100
74)	4-chlorotoluene	12.330	126	6572	1.02 ug/L		95
75)	tert-butylbenzene	12.895	119	17623	0.95 ug/L		97
76)	1,2,4-trimethylbenzene	12.960	105	19358	0.94 ug/L		99
77)	sec-butylbenzene	13.172	105	23180	0.91 ug/L		99
78)	1,3-dichlorobenzene	13.266	146	13891	1.13 ug/L		96
79)	4-isopropyltoluene	13.372	119	19753	0.94 ug/L		99
80)	1,4-dichlorobenzene	13.383	146	13782	1.12 ug/L	#	75
81)	1,2-dichlorobenzene	13.830	146	14366	1.16 ug/L		97
82)	n-butylbenzene	13.877	91	14234	0.86 ug/L		99
83)	hexachloroethane	14.136	201	2625	0.84 ug/L	#	79
84)	1,2-dibromo-3-chloropr...	14.813	157	2109	0.98 ug/L		94
85)	1,2,4-trichlorobenzene	15.830	180	5329	4.54 ug/L		94
86)	hexachlorobutadiene	16.071	225	2999	0.67 ug/L		92
87)	naphthalene	16.124	128	14548	4.13 ug/L	#	77
88)	1,2,3-trichlorobenzene	16.424	180	4836	4.13 ug/L	#	75
89)	2-methylnaphthalene	17.524	142	2419	2.65 ug/L	#	70

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

00108

```
InstName   : 350
Data Path  : C:\gcms\1\data\082515\
Data File  : 5P0825.D
Acq On     : 25 Aug 2015  11:48
Operator   : DLV
Sample     : STD2
Misc       :
ALS Vial   : 5   Sample Multiplier: 1
Quant Time: Aug 25 13:11:30 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration
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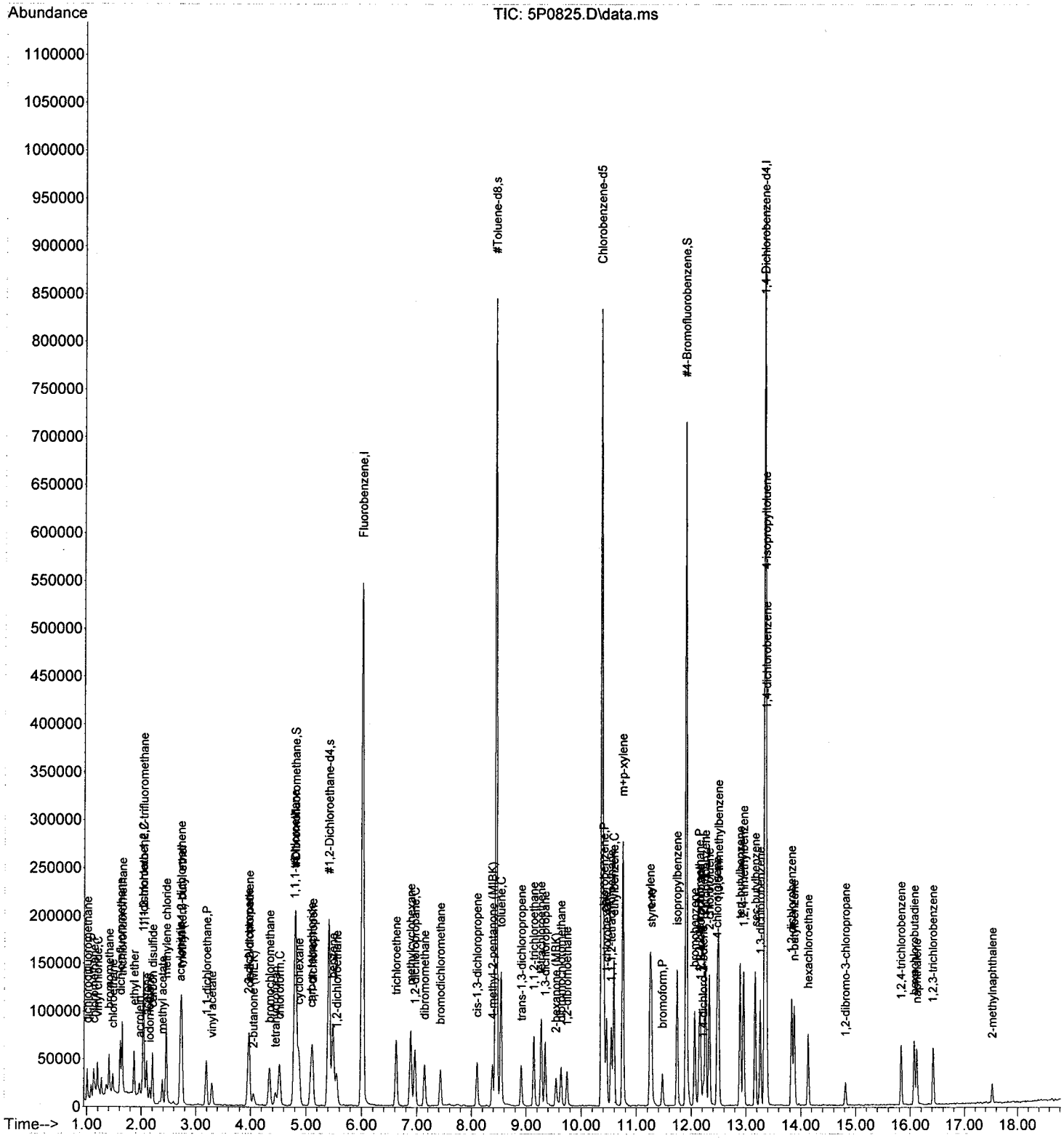

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 5P0825.D
Acq On : 25 Aug 2015 11:48
Operator : DLV
Sample : STD2
Misc :
ALS Vial : 5 Sample Multiplier: 1
Quant Time: Aug 25 13:11:30 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	721666	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	580490	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	298160	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	171646	40.06 ug/L	0.00
Spiked Amount 40.000			Recovery	= 100.15%	
37) #1,2-Dichloroethane-d4	5.413	67	109015	36.23 ug/L	0.00
Spiked Amount 40.000			Recovery	= 90.57%	
46) #Toluene-d8	8.454	98	720109	39.97 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.92%	
64) #4-Bromofluorobenzene	11.907	95	276751	38.81 ug/L	0.00
Spiked Amount 40.000			Recovery	= 97.03%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	1.008	85	30162	4.02 ug/L	94
3) chloromethane	1.125	50	40308	4.06 ug/L	97
4) vinyl chloride	1.190	62	32755	4.47 ug/L	97
5) bromomethane	1.402	94	25408	5.88 ug/L	98
6) chloroethane	1.472	64	18263	5.67 ug/L	91
7) dichlorofluoromethane	1.613	67	53523	5.19 ug/L	97
8) trichlorofluoromethane	1.649	101	46149	4.91 ug/L	99
9) ethyl ether	1.866	74	16228	4.65 ug/L	97
10) acrolein	1.966	56	8535	4.52 ug/L #	83
11) 1,1,2-trichloro-1,2,2-...	2.037	101	22232	4.77 ug/L	99
12) 1,1-dichloroethene	2.031	96	26081	5.32 ug/L	92
13) acetone	2.096	43	34612	4.36 ug/L #	89
14) iodomethane	2.149	142	16079	5.71 ug/L	95
15) carbon disulfide	2.202	76	63864	9.60 ug/L	98
16) methyl acetate	2.384	43	31223	4.26 ug/L	98
17) methylene chloride	2.455	49	47718	4.47 ug/L	94
18) acrylonitrile	2.713	53	19972	4.62 ug/L	98
19) trans-1,2-dichloroethene	2.725	96	28782	5.01 ug/L	95
20) methyl (tert) butyl ether	2.743	73	81319	4.51 ug/L	97
21) 1,1-dichloroethane	3.190	63	50625	4.69 ug/L	100
22) vinyl acetate	3.290	43	40614	2.47 ug/L	99
23) 2,2-dichloropropane	3.960	77	28681	3.98 ug/L	99
24) cis-1,2-dichloroethene	3.972	96	30863	4.87 ug/L	95
25) 2-butanone (MEK)	4.049	43	21793	5.30 ug/L	93
26) bromochloromethane	4.343	49	24258	4.32 ug/L	88
27) tetrahydrofuran	4.449	71	4849	3.73 ug/L	91
28) chloroform	4.519	83	50068	4.73 ug/L	99
30) 1,1,1-trichloroethane	4.790	97	37289	4.23 ug/L	97
31) cyclohexane	4.866	56	41990	4.58 ug/L	98
32) carbon tetrachloride	5.096	117	29797	3.96 ug/L	99
33) 1,1-dichloropropene	5.119	75	37763	4.80 ug/L	93
34) benzene	5.484	78	114384	4.75 ug/L	97
35) 1,2-dichloroethane	5.554	62	40028	4.47 ug/L	99
36) heptane	6.013	57	22591	No Calib	
38) trichloroethene	6.619	130	33400	4.90 ug/L	98

00110

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 5P0825.D
Acq On : 25 Aug 2015 11:48
Operator : DLV
Sample : STD2
Misc :
ALS Vial : 5 Sample Multiplier: 1
Quant Time: Aug 25 13:11:30 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	6.890	83	41826	4.61 ug/L	96
40) 1,2-dichloropropane	6.966	63	30109	4.62 ug/L	98
41) dibromomethane	7.137	93	19590	4.51 ug/L	98
42) bromodichloromethane	7.431	83	31717	4.22 ug/L	97
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	8.101	75	32023	4.14 ug/L	91
45) 4-methyl-2-pentanone (...	8.384	43	37616	4.44 ug/L	99
47) toluene	8.542	91	123719	4.89 ug/L	99
48) trans-1,3-dichloropropene	8.913	75	27008	3.77 ug/L	98
49) 1,1,2-trichloroethane	9.137	83	23405	4.44 ug/L	95
51) tetrachloroethene	9.272	166	35893	4.51 ug/L	97
52) 1,3-dichloropropane	9.348	76	48658	4.51 ug/L	99
53) 2-hexanone (MBK)	9.542	43	26133	4.28 ug/L	90
54) dibromochloromethane	9.637	129	25129	4.10 ug/L	99
55) 1,2-dibromoethane	9.742	109	27863	4.38 ug/L #	100
56) chlorobenzene	10.413	112	82398	4.69 ug/L	95
57) 1-chlorohexane	10.460	55	22179	3.93 ug/L	90
58) 1,1,1,2-tetrachloroethane	10.542	131	26854	4.57 ug/L	95
59) ethylbenzene	10.595	91	134377	4.74 ug/L	100
60) m+p-xylene	10.754	106	103601	9.54 ug/L	95
61) o-xylene	11.248	106	48353	4.44 ug/L	97
62) styrene	11.272	104	73720	4.48 ug/L	96
63) bromoform	11.472	173	20041	4.12 ug/L	94
66) isopropylbenzene	11.736	105	114391	4.50 ug/L	100
67) bromobenzene	12.060	77	52481	4.56 ug/L	98
68) 1,1,2,2-tetrachloroethane	12.148	83	41274	4.33 ug/L #	99
69) 1,2,3-trichloropropane	12.172	110	14752	4.59 ug/L	96
70) 1,4-dichloro-2-butene	12.219	53	7042	3.79 ug/L	86
71) n-propylbenzene	12.260	120	32298	4.36 ug/L	94
72) 2-chlorotoluene	12.331	126	31332	4.40 ug/L	94
73) 1,3,5-trimethylbenzene	12.501	105	101191	4.48 ug/L	99
74) 4-chlorotoluene	12.472	126	30903	4.45 ug/L	93
75) tert-butylbenzene	12.895	119	89965	4.51 ug/L	99
76) 1,2,4-trimethylbenzene	12.960	105	100486	4.49 ug/L	98
77) sec-butylbenzene	13.172	105	118565	4.33 ug/L	98
78) 1,3-dichlorobenzene	13.266	146	62028	4.65 ug/L	99
79) 4-isopropyltoluene	13.372	119	101220	4.46 ug/L	99
80) 1,4-dichlorobenzene	13.378	146	62198	4.69 ug/L	94
81) 1,2-dichlorobenzene	13.830	146	59488	4.43 ug/L	98
82) n-butylbenzene	13.877	91	73138	4.11 ug/L	99
83) hexachloroethane	14.136	201	12337	3.65 ug/L #	85
84) 1,2-dibromo-3-chloropr...	14.813	157	8775	3.78 ug/L	94
85) 1,2,4-trichlorobenzene	15.830	180	26224	6.72 ug/L	95
86) hexachlorobutadiene	16.071	225	17231	3.54 ug/L	98
87) naphthalene	16.119	128	55614	5.91 ug/L	99
88) 1,2,3-trichlorobenzene	16.419	180	25497	6.27 ug/L	94
89) 2-methylnaphthalene	17.524	142	12780	5.16 ug/L	97

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

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InstName   : 350
Data Path  : C:\gcms\1\data\082515\
Data File  : 10P0825.D
Acq On     : 25 Aug 2015  12:13
Operator   : DLV
Sample     : STD3
Misc       :
ALS Vial   : 6   Sample Multiplier: 1
Quant Time: Aug 25 13:11:40 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration
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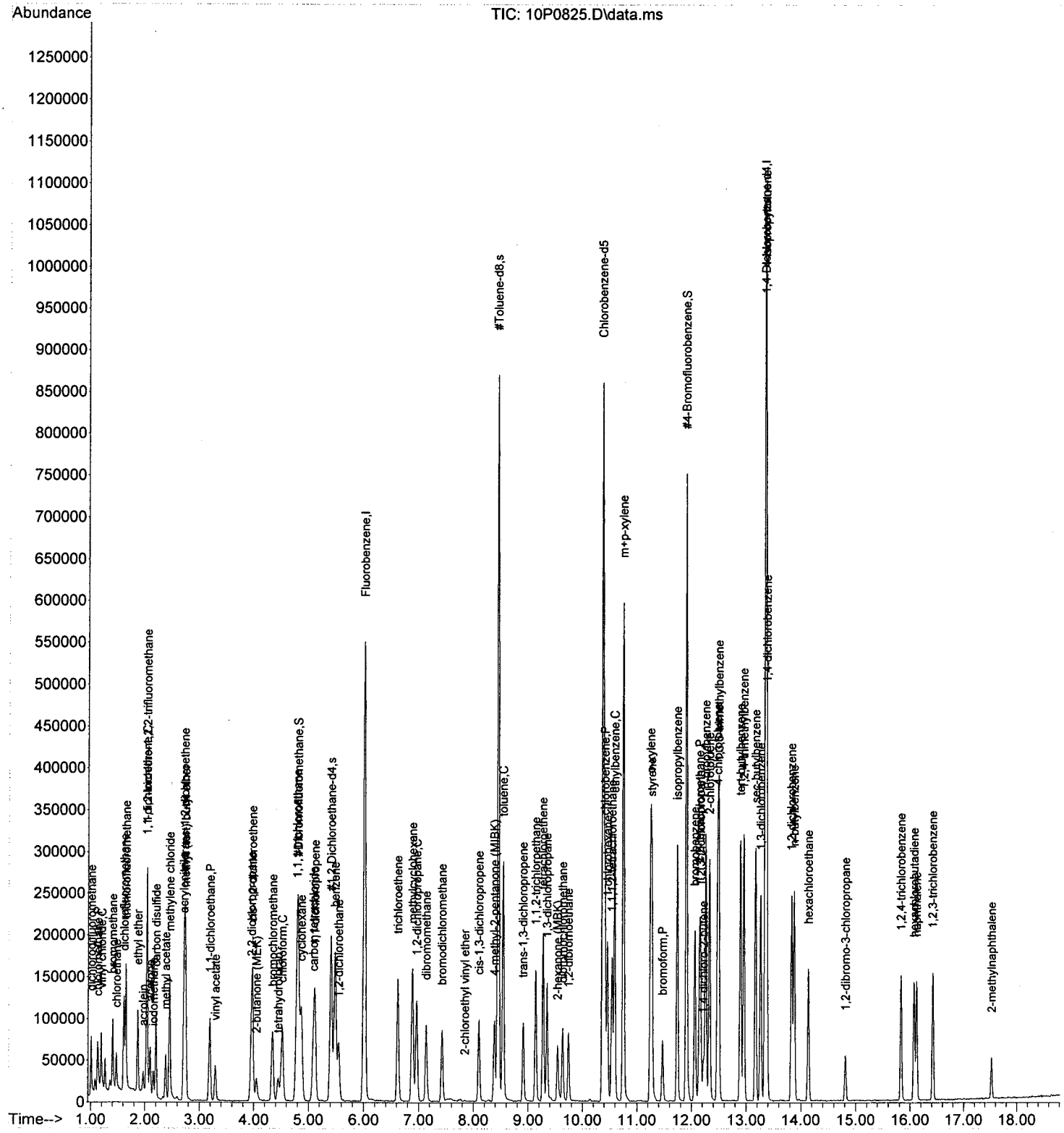


InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 10P0825.D
Acq On : 25 Aug 2015 12:13
Operator : DLV
Sample : STD3
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Aug 25 13:11:40 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

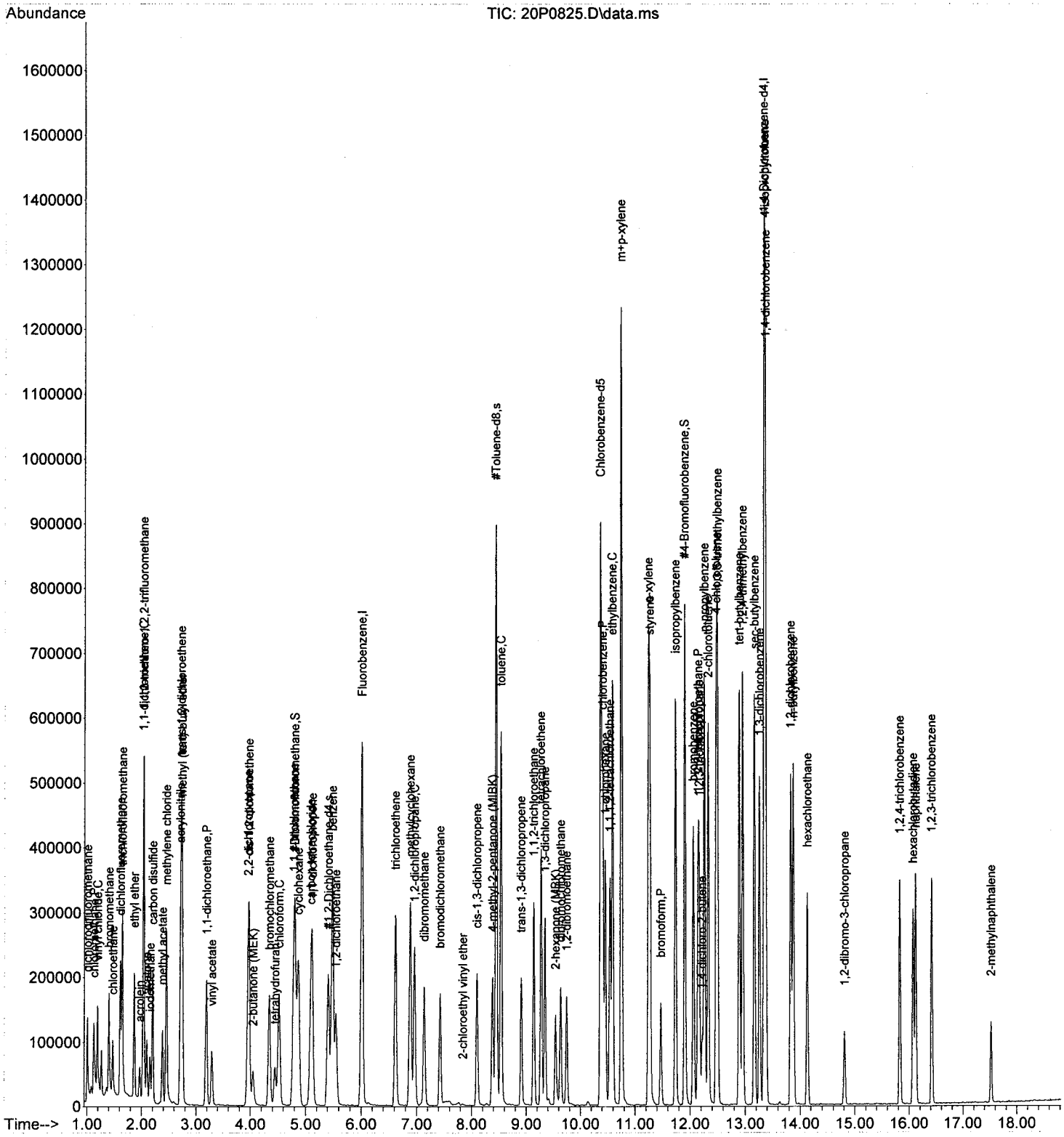
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	725485	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.378	117	587784	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	317214	40.00	ug/L	0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.807	111	179004	41.56	ug/L	0.00
Spiked Amount 40.000			Recovery = 103.90%			
37) #1,2-Dichloroethane-d4	5.413	67	112039	37.04	ug/L	0.00
Spiked Amount 40.000			Recovery = 92.60%			
46) #Toluene-d8	8.448	98	733759	40.52	ug/L	0.00
Spiked Amount 40.000			Recovery = 101.30%			
64) #4-Bromofluorobenzene	11.907	95	292601	40.52	ug/L	0.00
Spiked Amount 40.000			Recovery = 101.30%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	1.008	85	67868	9.00	ug/L	99
3) chloromethane	1.125	50	80416	9.07	ug/L	96
4) vinyl chloride	1.196	62	67092	9.11	ug/L	93
5) bromomethane	1.402	94	51466	11.42	ug/L	97
6) chloroethane	1.472	64	36818	11.36	ug/L	97
7) dichlorofluoromethane	1.613	67	113716	10.97	ug/L	96
8) trichlorofluoromethane	1.649	101	93016	9.84	ug/L	99
9) ethyl ether	1.866	74	35307	10.53	ug/L	93
10) acrolein	1.966	56	18513	11.15	ug/L	93
11) 1,1,2-trichloro-1,2,2-...	2.037	101	44382	9.46	ug/L	98
12) 1,1-dichloroethene	2.031	96	52549	10.67	ug/L	95
13) acetone	2.096	43	50323	9.99	ug/L	95
14) iodomethane	2.155	142	35366	11.27	ug/L	96
15) carbon disulfide	2.202	76	125228	15.93	ug/L	97
16) methyl acetate	2.384	43	65957	8.96	ug/L	98
17) methylene chloride	2.455	49	89273	9.99	ug/L	99
18) acrylonitrile	2.713	53	39838	9.17	ug/L	98
19) trans-1,2-dichloroethene	2.725	96	59404	10.28	ug/L	96
20) methyl (tert) butyl ether	2.743	73	173350	9.56	ug/L	100
21) 1,1-dichloroethane	3.190	63	107734	9.92	ug/L	99
22) vinyl acetate	3.290	43	72900	9.27	ug/L	98
23) 2,2-dichloropropane	3.954	77	58709	8.11	ug/L	99
24) cis-1,2-dichloroethene	3.972	96	67180	10.55	ug/L	92
25) 2-butanone (MEK)	4.049	43	43221	10.45	ug/L	91
26) bromochloromethane	4.343	49	52140	9.24	ug/L	91
27) tetrahydrofuran	4.449	71	11770	9.00	ug/L	91
28) chloroform	4.519	83	101922	9.58	ug/L	97
30) 1,1,1-trichloroethane	4.790	97	79119	8.93	ug/L	97
31) cyclohexane	4.866	56	84734	9.20	ug/L	95
32) carbon tetrachloride	5.090	117	66367	8.77	ug/L	99
33) 1,1-dichloropropene	5.113	75	81531	10.32	ug/L	98
34) benzene	5.484	78	244378	10.09	ug/L	96
35) 1,2-dichloroethane	5.549	62	80846	8.98	ug/L	98
36) heptane	6.013	57	22451	No Calib		
38) trichloroethene	6.619	130	70476	10.28	ug/L	98

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 10P0825.D
Acq On : 25 Aug 2015 12:13
Operator : DLV
Sample : STD3
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Aug 25 13:11:40 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	6.890	83	86688	9.51 ug/L	98
40) 1,2-dichloropropane	6.966	63	64022	9.77 ug/L	99
41) dibromomethane	7.137	93	40539	9.28 ug/L	99
42) bromodichloromethane	7.431	83	69759	9.22 ug/L	97
43) 2-chloroethyl vinyl ether	7.843	63	1532	2.58 ug/L #	41
44) cis-1,3-dichloropropene	8.101	75	69793	8.98 ug/L	92
45) 4-methyl-2-pentanone (...	8.384	43	79131	9.29 ug/L	94
47) toluene	8.542	91	262876	10.34 ug/L	97
48) trans-1,3-dichloropropene	8.907	75	61517	8.54 ug/L	96
49) 1,1,2-trichloroethane	9.137	83	53040	10.01 ug/L	96
51) tetrachloroethene	9.272	166	78246	9.71 ug/L	99
52) 1,3-dichloropropane	9.348	76	106958	9.78 ug/L	97
53) 2-hexanone (MBK)	9.542	43	60313	9.76 ug/L	98
54) dibromochloromethane	9.637	129	55025	8.86 ug/L	99
55) 1,2-dibromoethane	9.742	109	61734	9.58 ug/L #	100
56) chlorobenzene	10.413	112	172456	9.69 ug/L	98
57) 1-chlorohexane	10.460	55	50338	8.81 ug/L	92
58) 1,1,1,2-tetrachloroethane	10.542	131	53789	9.04 ug/L	97
59) ethylbenzene	10.595	91	280828	9.78 ug/L	99
60) m+p-xylene	10.754	106	214463	19.51 ug/L	99
61) o-xylene	11.248	106	104343	9.47 ug/L	99
62) styrene	11.272	104	161825	9.72 ug/L	99
63) bromoform	11.472	173	40771	8.29 ug/L	99
66) isopropylbenzene	11.736	105	252444	9.34 ug/L	98
67) bromobenzene	12.060	77	112199	9.17 ug/L	97
68) 1,1,2,2-tetrachloroethane	12.148	83	93862	9.25 ug/L #	95
69) 1,2,3-trichloropropane	12.166	110	32126	9.39 ug/L	96
70) 1,4-dichloro-2-butene	12.219	53	15108	7.65 ug/L	95
71) n-propylbenzene	12.260	120	71814	9.11 ug/L #	91
72) 2-chlorotoluene	12.331	126	72316	9.54 ug/L	97
73) 1,3,5-trimethylbenzene	12.501	105	215411	8.96 ug/L	98
74) 4-chlorotoluene	12.478	126	66187	8.96 ug/L	98
75) tert-butylbenzene	12.895	119	193680	9.12 ug/L	99
76) 1,2,4-trimethylbenzene	12.954	105	218018	9.16 ug/L	99
77) sec-butylbenzene	13.172	105	259830	8.91 ug/L	99
78) 1,3-dichlorobenzene	13.266	146	135468	9.54 ug/L	98
79) 4-isopropyltoluene	13.366	119	218189	9.04 ug/L	98
80) 1,4-dichlorobenzene	13.383	146	134292	9.52 ug/L	99
81) 1,2-dichlorobenzene	13.830	146	130424	9.13 ug/L	98
82) n-butylbenzene	13.877	91	168533	8.90 ug/L	98
83) hexachloroethane	14.136	201	26049	7.24 ug/L	91
84) 1,2-dibromo-3-chloropr...	14.813	157	19907	8.05 ug/L	91
85) 1,2,4-trichlorobenzene	15.830	180	61345	10.06 ug/L	99
86) hexachlorobutadiene	16.071	225	38439	7.42 ug/L	95
87) naphthalene	16.119	128	136724	9.14 ug/L	99
88) 1,2,3-trichlorobenzene	16.419	180	63302	9.85 ug/L	97
89) 2-methylnaphthalene	17.524	142	29125	8.64 ug/L	94

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

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 20P0825.D
Acq On : 25 Aug 2015 12:37
Operator : DLV
Sample : STD4
Misc :
ALS Vial : 7 Sample Multiplier: 1
Quant Time: Aug 25 13:11:51 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration



InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 20P0825.D
Acq On : 25 Aug 2015 12:37
Operator : DLV
Sample : STD4
Misc :
ALS Vial : 7 Sample Multiplier: 1
Quant Time: Aug 25 13:11:51 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	733857	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.377	117	604178	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	322706	40.00	ug/L	0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.801	111	186620	42.83	ug/L	0.00
Spiked Amount 40.000			Recovery = 107.07%			
37) #1,2-Dichloroethane-d4	5.413	67	112086	36.63	ug/L	0.00
Spiked Amount 40.000			Recovery = 91.58%			
46) #Toluene-d8	8.454	98	755293	41.23	ug/L	0.00
Spiked Amount 40.000			Recovery = 103.07%			
64) #4-Bromofluorobenzene	11.907	95	302718	40.78	ug/L	0.00
Spiked Amount 40.000			Recovery = 101.95%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	1.007	85	132176	17.33	ug/L	99
3) chloromethane	1.125	50	160741	18.93	ug/L	99
4) vinyl chloride	1.190	62	137922	18.52	ug/L	99
5) bromomethane	1.401	94	97232	21.20	ug/L	99
6) chloroethane	1.472	64	73210	22.33	ug/L	99
7) dichlorofluoromethane	1.613	67	214717	20.47	ug/L	97
8) trichlorofluoromethane	1.648	101	180678	18.90	ug/L	99
9) ethyl ether	1.866	74	70930	21.31	ug/L	91
10) acrolein	1.966	56	35960	22.52	ug/L #	96
11) 1,1,2-trichloro-1,2,2-...	2.037	101	90063	18.99	ug/L	98
12) 1,1-dichloroethene	2.031	96	103400	20.75	ug/L	96
13) acetone	2.096	43	80040	20.44	ug/L	89
14) iodomethane	2.154	142	80330	23.49	ug/L	98
15) carbon disulfide	2.201	76	254272	29.03	ug/L	99
16) methyl acetate	2.384	43	139701	18.76	ug/L	97
17) methylene chloride	2.454	49	168626	20.34	ug/L	100
18) acrylonitrile	2.713	53	81274	18.49	ug/L	98
19) trans-1,2-dichloroethene	2.725	96	117922	20.18	ug/L	98
20) methyl (tert) butyl ether	2.743	73	348236	18.99	ug/L	100
21) 1,1-dichloroethane	3.190	63	210858	19.20	ug/L	99
22) vinyl acetate	3.290	43	144696	24.39	ug/L	98
23) 2,2-dichloropropane	3.960	77	116093	15.86	ug/L	98
24) cis-1,2-dichloroethene	3.972	96	130165	20.21	ug/L	97
25) 2-butanone (MEK)	4.048	43	85962	20.55	ug/L	89
26) bromochloromethane	4.342	49	105691	18.51	ug/L	93
27) tetrahydrofuran	4.448	71	23928	18.09	ug/L	90
28) chloroform	4.519	83	208685	19.39	ug/L	100
30) 1,1,1-trichloroethane	4.790	97	165081	18.42	ug/L	97
31) cyclohexane	4.866	56	173279	18.59	ug/L	98
32) carbon tetrachloride	5.095	117	134702	17.59	ug/L	98
33) 1,1-dichloropropene	5.119	75	158921	19.88	ug/L	99
34) benzene	5.489	78	488619	19.95	ug/L	96
35) 1,2-dichloroethane	5.548	62	167898	18.43	ug/L	99
36) heptane	6.013	57	24530	No Calib		
38) trichloroethene	6.619	130	145312	20.95	ug/L	97

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 20P0825.D
Acq On : 25 Aug 2015 12:37
Operator : DLV
Sample : STD4
Misc :
ALS Vial : 7 Sample Multiplier: 1
Quant Time: Aug 25 13:11:51 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.889	83	178028	19.31 ug/L	99
40)	1,2-dichloropropane	6.966	63	127328	19.21 ug/L	99
41)	dibromomethane	7.136	93	85605	19.37 ug/L	98
42)	bromodichloromethane	7.431	83	142697	18.65 ug/L	99
43)	2-chloroethyl vinyl ether	7.842	63	2965	15.36 ug/L #	41
44)	cis-1,3-dichloropropene	8.101	75	151331	19.24 ug/L	90
45)	4-methyl-2-pentanone (...	8.383	43	168164	19.51 ug/L	96
47)	toluene	8.542	91	522387	20.32 ug/L	99
48)	trans-1,3-dichloropropene	8.907	75	137967	18.94 ug/L	93
49)	1,1,2-trichloroethane	9.136	83	102040	19.04 ug/L	96
51)	tetrachloroethene	9.272	166	155260	18.74 ug/L	97
52)	1,3-dichloropropane	9.348	76	210014	18.69 ug/L	100
53)	2-hexanone (MBK)	9.542	43	124620	19.63 ug/L	96
54)	dibromochloromethane	9.636	129	116163	18.20 ug/L	98
55)	1,2-dibromoethane	9.742	109	127536	19.25 ug/L #	100
56)	chlorobenzene	10.413	112	353242	19.31 ug/L	99
57)	1-chlorohexane	10.460	55	104009	17.71 ug/L	93
58)	1,1,1,2-tetrachloroethane	10.542	131	115292	18.84 ug/L	98
59)	ethylbenzene	10.589	91	564044	19.10 ug/L	98
60)	m+p-xylene	10.754	106	439659	38.91 ug/L	99
61)	o-xylene	11.248	106	216394	19.11 ug/L	99
62)	styrene	11.272	104	337172	19.70 ug/L	98
63)	bromoform	11.471	173	90289	17.85 ug/L	99
66)	isopropylbenzene	11.736	105	513041	18.67 ug/L	100
67)	bromobenzene	12.060	77	222214	17.85 ug/L	99
68)	1,1,2,2-tetrachloroethane	12.148	83	188290	18.25 ug/L #	98
69)	1,2,3-trichloropropane	12.166	110	66310	19.06 ug/L	96
70)	1,4-dichloro-2-butene	12.219	53	32054	15.96 ug/L	97
71)	n-propylbenzene	12.260	120	146739	18.30 ug/L	95
72)	2-chlorotoluene	12.330	126	144129	18.70 ug/L	97
73)	1,3,5-trimethylbenzene	12.501	105	452061	18.49 ug/L	99
74)	4-chlorotoluene	12.477	126	137380	18.28 ug/L	98
75)	tert-butylbenzene	12.895	119	389280	18.02 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	447985	18.50 ug/L	100
77)	sec-butylbenzene	13.171	105	548515	18.49 ug/L	100
78)	1,3-dichlorobenzene	13.266	146	277591	19.22 ug/L	99
79)	4-isopropyltoluene	13.371	119	448909	18.28 ug/L	99
80)	1,4-dichlorobenzene	13.377	146	274310	19.12 ug/L	98
81)	1,2-dichlorobenzene	13.830	146	266368	18.34 ug/L	98
82)	n-butylbenzene	13.877	91	354192	18.38 ug/L	100
83)	hexachloroethane	14.136	201	55992	15.30 ug/L	93
84)	1,2-dibromo-3-chloropr...	14.812	157	42194	16.78 ug/L	96
85)	1,2,4-trichlorobenzene	15.830	180	140752	17.78 ug/L	99
86)	hexachlorobutadiene	16.071	225	78434	14.88 ug/L	98
87)	naphthalene	16.118	128	343693	17.45 ug/L	98
88)	1,2,3-trichlorobenzene	16.418	180	140454	17.25 ug/L	98
89)	2-methylnaphthalene	17.524	142	74779	17.89 ug/L	98

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

```
InstName   : 350
Data Path  : C:\gcms\1\data\082515\
Data File  : 40P0825.D
Acq On     : 25 Aug 2015  13:02
Operator   : DLV
Sample     : STD5
Misc       :
ALS Vial   : 8   Sample Multiplier: 1
Quant Time: Aug 25 13:21:56 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration
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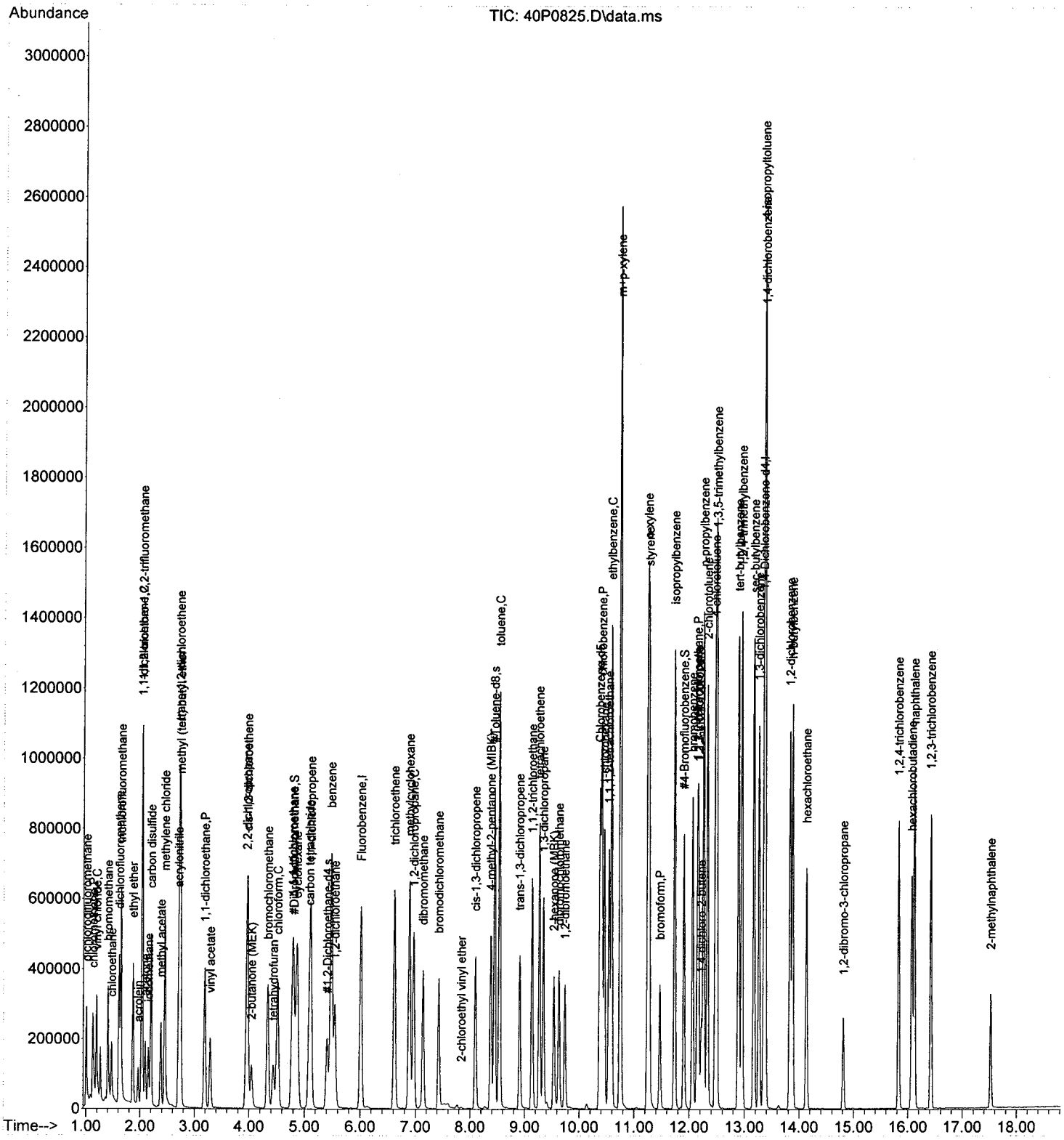


InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 40P0825.D
Acq On : 25 Aug 2015 13:02
Operator : DLV
Sample : STD5
Misc :
ALS Vial : 8 Sample Multiplier: 1
Quant Time: Aug 25 13:21:56 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

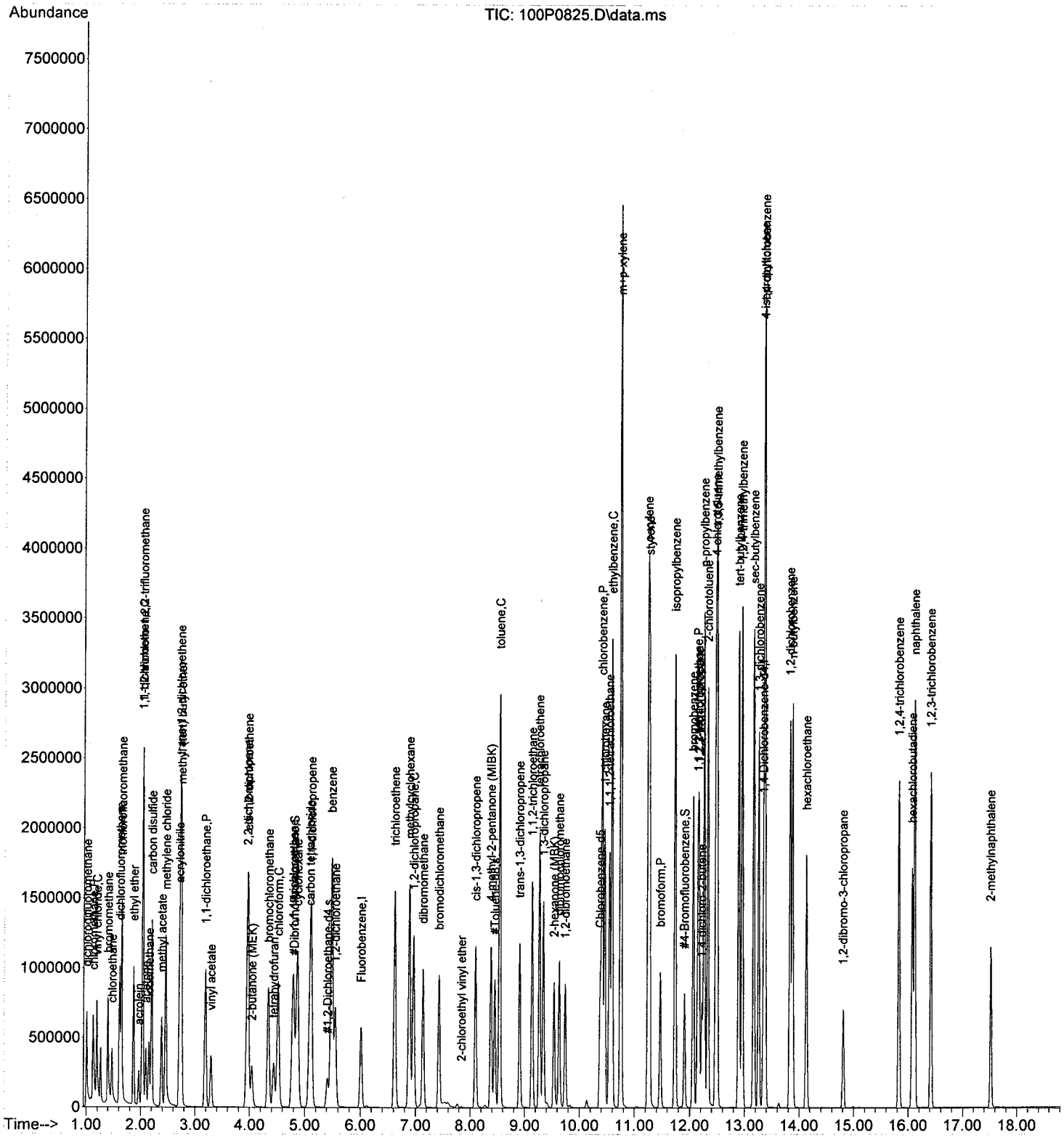
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	754057	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.378	117	622554	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.348	152	329683	40.00	ug/L	0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.807	111	187840	41.96	ug/L	0.00
Spiked Amount 40.000			Recovery = 104.90%			
37) #1,2-Dichloroethane-d4	5.413	67	113724	36.17	ug/L	0.00
Spiked Amount 40.000			Recovery = 90.42%			
46) #Toluene-d8	8.448	98	770813	40.95	ug/L	0.00
Spiked Amount 40.000			Recovery = 102.38%			
64) #4-Bromofluorobenzene	11.907	95	302322	39.53	ug/L	0.00
Spiked Amount 40.000			Recovery = 98.83%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	1.008	85	272589	34.78	ug/L	100
3) chloromethane	1.125	50	330264	38.88	ug/L	100
4) vinyl chloride	1.190	62	291303	38.07	ug/L	98
5) bromomethane	1.402	94	205416	44.56	ug/L	98
6) chloroethane	1.472	64	144377	42.87	ug/L	99
7) dichlorofluoromethane	1.613	67	448028	41.57	ug/L	99
8) trichlorofluoromethane	1.649	101	376803	38.35	ug/L	100
9) ethyl ether	1.866	74	144376	42.62	ug/L	92
10) acrolein	1.966	56	74912	46.90	ug/L	96
11) 1,1,2-trichloro-1,2,2-...	2.037	101	183309	37.61	ug/L	99
12) 1,1-dichloroethene	2.031	96	216785	42.33	ug/L	91
13) acetone	2.096	43	157311	46.64	ug/L	94
14) iodomethane	2.155	142	195006	51.04	ug/L	99
15) carbon disulfide	2.202	76	591895	62.05	ug/L	97
16) methyl acetate	2.384	43	286231	37.40	ug/L	97
17) methylene chloride	2.455	49	323535	39.67	ug/L	97
18) acrylonitrile	2.707	53	169273	37.47	ug/L	100
19) trans-1,2-dichloroethene	2.725	96	244608	40.74	ug/L	97
20) methyl (tert) butyl ether	2.743	73	733115	38.90	ug/L	99
21) 1,1-dichloroethane	3.190	63	439221	38.92	ug/L	99
22) vinyl acetate	3.290	43	338873	65.74	ug/L	97
23) 2,2-dichloropropane	3.960	77	248519	33.04	ug/L	98
24) cis-1,2-dichloroethene	3.972	96	270954	40.94	ug/L	97
25) 2-butanone (MEK)	4.043	43	196563	45.73	ug/L	91
26) bromochloromethane	4.343	49	222412	37.91	ug/L	94
27) tetrahydrofuran	4.443	71	48791	35.90	ug/L	90
28) chloroform	4.519	83	437899	39.61	ug/L	99
30) 1,1,1-trichloroethane	4.790	97	349028	37.91	ug/L	98
31) cyclohexane	4.866	56	360795	37.67	ug/L	96
32) carbon tetrachloride	5.090	117	292570	37.19	ug/L	99
33) 1,1-dichloropropene	5.113	75	330215	40.21	ug/L	98
34) benzene	5.484	78	1004613	39.92	ug/L	96
35) 1,2-dichloroethane	5.548	62	340335	36.36	ug/L	98
36) heptane	6.013	57	23899	No Calib		
38) trichloroethene	6.619	130	296496	41.59	ug/L	99

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 40P0825.D
Acq On : 25 Aug 2015 13:02
Operator : DLV
Sample : STD5
Misc :
ALS Vial : 8 Sample Multiplier: 1
Quant Time: Aug 25 13:21:56 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.890	83	369002	38.96 ug/L	98
40)	1,2-dichloropropane	6.966	63	265527	38.99 ug/L	100
41)	dibromomethane	7.137	93	175431	38.63 ug/L	99
42)	bromodichloromethane	7.431	83	303947	38.66 ug/L	98
43)	2-chloroethyl vinyl ether	7.843	63	4609	31.18 ug/L #	94
44)	cis-1,3-dichloropropene	8.101	75	324788	40.18 ug/L	91
45)	4-methyl-2-pentanone (...	8.378	43	419334	47.36 ug/L	97
47)	toluene	8.542	91	1078277	40.83 ug/L	100
48)	trans-1,3-dichloropropene	8.907	75	300274	40.11 ug/L	93
49)	1,1,2-trichloroethane	9.137	83	216511	39.32 ug/L	98
51)	tetrachloroethene	9.272	166	321936	37.70 ug/L	99
52)	1,3-dichloropropane	9.348	76	436961	37.74 ug/L	99
53)	2-hexanone (MBK)	9.542	43	310038	47.39 ug/L	94
54)	dibromochloromethane	9.637	129	252364	38.37 ug/L	98
55)	1,2-dibromoethane	9.742	109	267060	39.12 ug/L #	100
56)	chlorobenzene	10.413	112	726803	38.56 ug/L	99
57)	1-chlorohexane	10.460	55	215206	35.56 ug/L	90
58)	1,1,1,2-tetrachloroethane	10.542	131	247403	39.25 ug/L	97
59)	ethylbenzene	10.589	91	1194547	39.26 ug/L	99
60)	m+p-xylene	10.754	106	923542	79.33 ug/L	98
61)	o-xylene	11.248	106	455120	39.01 ug/L	99
62)	styrene	11.272	104	733705	41.60 ug/L	97
63)	bromoform	11.472	173	203694	39.09 ug/L	98
66)	isopropylbenzene	11.736	105	1066634	37.99 ug/L	100
67)	bromobenzene	12.060	77	465519	36.59 ug/L	98
68)	1,1,2,2-tetrachloroethane	12.148	83	396409	37.61 ug/L #	95
69)	1,2,3-trichloropropane	12.166	110	131505	36.99 ug/L	99
70)	1,4-dichloro-2-butene	12.219	53	70128	34.18 ug/L	94
71)	n-propylbenzene	12.260	120	313218	38.23 ug/L	94
72)	2-chlorotoluene	12.330	126	297326	37.76 ug/L	99
73)	1,3,5-trimethylbenzene	12.501	105	959060	38.40 ug/L	99
74)	4-chlorotoluene	12.472	126	297530	38.76 ug/L	95
75)	tert-butylbenzene	12.895	119	828325	37.53 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	946427	38.25 ug/L	100
77)	sec-butylbenzene	13.172	105	1152862	38.04 ug/L	100
78)	1,3-dichlorobenzene	13.260	146	583472	39.54 ug/L	99
79)	4-isopropyltoluene	13.366	119	951537	37.93 ug/L	98
80)	1,4-dichlorobenzene	13.378	146	572557	39.06 ug/L	98
81)	1,2-dichlorobenzene	13.830	146	568204	38.29 ug/L	99
82)	n-butylbenzene	13.877	91	765591	38.90 ug/L	99
83)	hexachloroethane	14.136	201	132506	35.43 ug/L	98
84)	1,2-dibromo-3-chloropr...	14.813	157	95768	37.28 ug/L	93
85)	1,2,4-trichlorobenzene	15.830	180	337581	36.45 ug/L	99
86)	hexachlorobutadiene	16.071	225	171942	31.94 ug/L	98
87)	naphthalene	16.119	128	919722	39.37 ug/L	98
88)	1,2,3-trichlorobenzene	16.419	180	339723	35.95 ug/L	98
89)	2-methylnaphthalene	17.524	142	196240	38.55 ug/L	99

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

```
InstName   : 350
Data Path  : C:\gcms\1\data\082515\
Data File  : 100P0825.D
Acq On     : 25 Aug 2015  13:27
Operator   : DLV
Sample     : STD6
Misc       :
ALS Vial   : 9   Sample Multiplier: 1
Quant Time: Aug 25 14:06:16 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration
```



InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 100P0825.D
Acq On : 25 Aug 2015 13:27
Operator : DLV
Sample : STD6
Misc :
ALS Vial : 9 Sample Multiplier: 1
Quant Time: Aug 25 14:06:16 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	743983	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	623050	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.348	152	339923	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	189024	42.80 ug/L	0.00
Spiked Amount 40.000			Recovery	= 107.00%	
37) #1,2-Dichloroethane-d4	5.413	67	114033	36.76 ug/L	0.00
Spiked Amount 40.000			Recovery	= 91.90%	
46) #Toluene-d8	8.454	98	770982	41.51 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.77%	
64) #4-Bromofluorobenzene	11.907	95	305517	39.91 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.77%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	1.007	85	657508	85.03 ug/L	97
3) chloromethane	1.125	50	810933	98.30 ug/L	100
4) vinyl chloride	1.190	62	714907	94.68 ug/L	99
5) bromomethane	1.396	94	484967	119.45 ug/L	97
6) chloroethane	1.472	64	347956	104.71 ug/L	100
7) dichlorofluoromethane	1.613	67	1094383	102.91 ug/L	98
8) trichlorofluoromethane	1.649	101	901627	93.01 ug/L	99
9) ethyl ether	1.866	74	350422	105.45 ug/L	94
10) acrolein	1.966	56	184421	118.84 ug/L #	96
11) 1,1,2-trichloro-1,2,2-...	2.037	101	445440	92.62 ug/L	98
12) 1,1-dichloroethene	2.031	96	521366	103.19 ug/L	91
13) acetone	2.096	43	350702	115.79 ug/L	96
14) iodomethane	2.154	142	561680	126.49 ug/L	98
15) carbon disulfide	2.201	76	1597519	164.64 ug/L	99
16) methyl acetate	2.384	43	761286	100.81 ug/L	97
17) methylene chloride	2.454	49	751396	96.00 ug/L	96
18) acrylonitrile	2.707	53	419009	94.01 ug/L	100
19) trans-1,2-dichloroethene	2.719	96	600876	101.44 ug/L	97
20) methyl (tert) butyl ether	2.743	73	1772549	95.33 ug/L	99
21) 1,1-dichloroethane	3.190	63	1083771	97.34 ug/L	100
22) vinyl acetate	3.290	43	619417	135.10 ug/L	96
23) 2,2-dichloropropane	3.960	77	641624	86.45 ug/L	98
24) cis-1,2-dichloroethene	3.972	96	685216	104.95 ug/L	96
25) 2-butanone (MEK)	4.043	43	473924	111.76 ug/L	95
26) bromochloromethane	4.343	49	538573	93.05 ug/L	95
27) tetrahydrofuran	4.437	71	129637	96.67 ug/L	84
28) chloroform	4.519	83	1086918	99.64 ug/L	99
30) 1,1,1-trichloroethane	4.790	97	866935	95.44 ug/L	97
31) cyclohexane	4.866	56	879206	93.05 ug/L	96
32) carbon tetrachloride	5.090	117	740295	95.37 ug/L	100
33) 1,1-dichloropropene	5.113	75	820826	101.30 ug/L	99
34) benzene	5.484	78	2445585	98.49 ug/L	97
35) 1,2-dichloroethane	5.548	62	841987	91.17 ug/L	99
36) heptane	6.013	57	23947	No Calib #	
38) trichloroethene	6.619	130	735308	104.55 ug/L	99

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 100P0825.D
Acq On : 25 Aug 2015 13:27
Operator : DLV
Sample : STD6
Misc :
ALS Vial : 9 Sample Multiplier: 1
Quant Time: Aug 25 14:06:16 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 12 12:00:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	6.889	83	918171	98.24 ug/L	97
40) 1,2-dichloropropane	6.966	63	654047	97.35 ug/L	100
41) dibromomethane	7.136	93	442849	98.83 ug/L	99
42) bromodichloromethane	7.431	83	783522	101.02 ug/L	99
43) 2-chloroethyl vinyl ether	7.842	63	7629	79.00 ug/L #	95
44) cis-1,3-dichloropropene	8.101	75	844015	105.84 ug/L	90
45) 4-methyl-2-pentanone (...	8.378	43	953656	109.16 ug/L	95
47) toluene	8.542	91	2660959	102.11 ug/L	99
48) trans-1,3-dichloropropene	8.907	75	796632	107.85 ug/L	92
49) 1,1,2-trichloroethane	9.136	83	532510	98.02 ug/L	98
51) tetrachloroethene	9.272	166	765964	89.63 ug/L	99
52) 1,3-dichloropropane	9.348	76	1084016	93.55 ug/L	99
53) 2-hexanone (MBK)	9.542	43	700485	106.99 ug/L	92
54) dibromochloromethane	9.636	129	673334	102.30 ug/L	100
55) 1,2-dibromoethane	9.742	109	658953	96.44 ug/L #	100
56) chlorobenzene	10.413	112	1802995	95.57 ug/L	98
57) 1-chlorohexane	10.460	55	531004	87.66 ug/L	86
58) 1,1,1,2-tetrachloroethane	10.542	131	624839	99.04 ug/L	97
59) ethylbenzene	10.595	91	2939671	96.55 ug/L	99
60) m+p-xylene	10.754	106	2289051	196.47 ug/L	98
61) o-xylene	11.248	106	1121439	96.05 ug/L	99
62) styrene	11.272	104	1846346	104.60 ug/L	97
63) bromoform	11.472	173	548918	105.26 ug/L	99
66) isopropylbenzene	11.742	105	2680602	92.59 ug/L	100
67) bromobenzene	12.060	77	1158516	88.33 ug/L	99
68) 1,1,2,2-tetrachloroethane	12.148	83	955642	87.93 ug/L #	97
69) 1,2,3-trichloropropane	12.166	110	330992	90.31 ug/L	93
70) 1,4-dichloro-2-butene	12.219	53	198122	93.65 ug/L	89
71) n-propylbenzene	12.260	120	791370	93.69 ug/L	94
72) 2-chlorotoluene	12.330	126	736458	90.71 ug/L	98
73) 1,3,5-trimethylbenzene	12.501	105	2389971	92.80 ug/L	100
74) 4-chlorotoluene	12.477	126	727949	91.97 ug/L	97
75) tert-butylbenzene	12.895	119	2072952	91.10 ug/L	99
76) 1,2,4-trimethylbenzene	12.954	105	2416946	94.74 ug/L	99
77) sec-butylbenzene	13.171	105	2899325	92.79 ug/L	100
78) 1,3-dichlorobenzene	13.266	146	1444169	94.92 ug/L	99
79) 4-isopropyltoluene	13.366	119	2418200	93.48 ug/L	99
80) 1,4-dichlorobenzene	13.377	146	1421203	94.04 ug/L	99
81) 1,2-dichlorobenzene	13.830	146	1425187	93.14 ug/L	99
82) n-butylbenzene	13.877	91	1966632	96.91 ug/L	99
83) hexachloroethane	14.136	201	357620	92.75 ug/L	95
84) 1,2-dibromo-3-chloropr...	14.807	157	259539	97.98 ug/L	96
85) 1,2,4-trichlorobenzene	15.830	180	945519	92.28 ug/L	99
86) hexachlorobutadiene	16.071	225	438344	78.97 ug/L	99
87) naphthalene	16.118	128	2786710	102.92 ug/L	98
88) 1,2,3-trichlorobenzene	16.418	180	963132	92.58 ug/L	98
89) 2-methylnaphthalene	17.518	142	681110	96.98 ug/L	98

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

```
InstName   : 350
Data Path  : C:\gcms\1\data\082515\
Data File  : 200P0825.D
Acq On     : 25 Aug 2015  14:39
Operator   : DLV
Sample     : STD7
Misc       :
ALS Vial   : 12   Sample Multiplier: 1
Quant Time: Aug 25 14:58:34 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title  : 8260B : 5030
QLast Update : Tue Aug 25 14:50:08 2015
Response via : Initial Calibration
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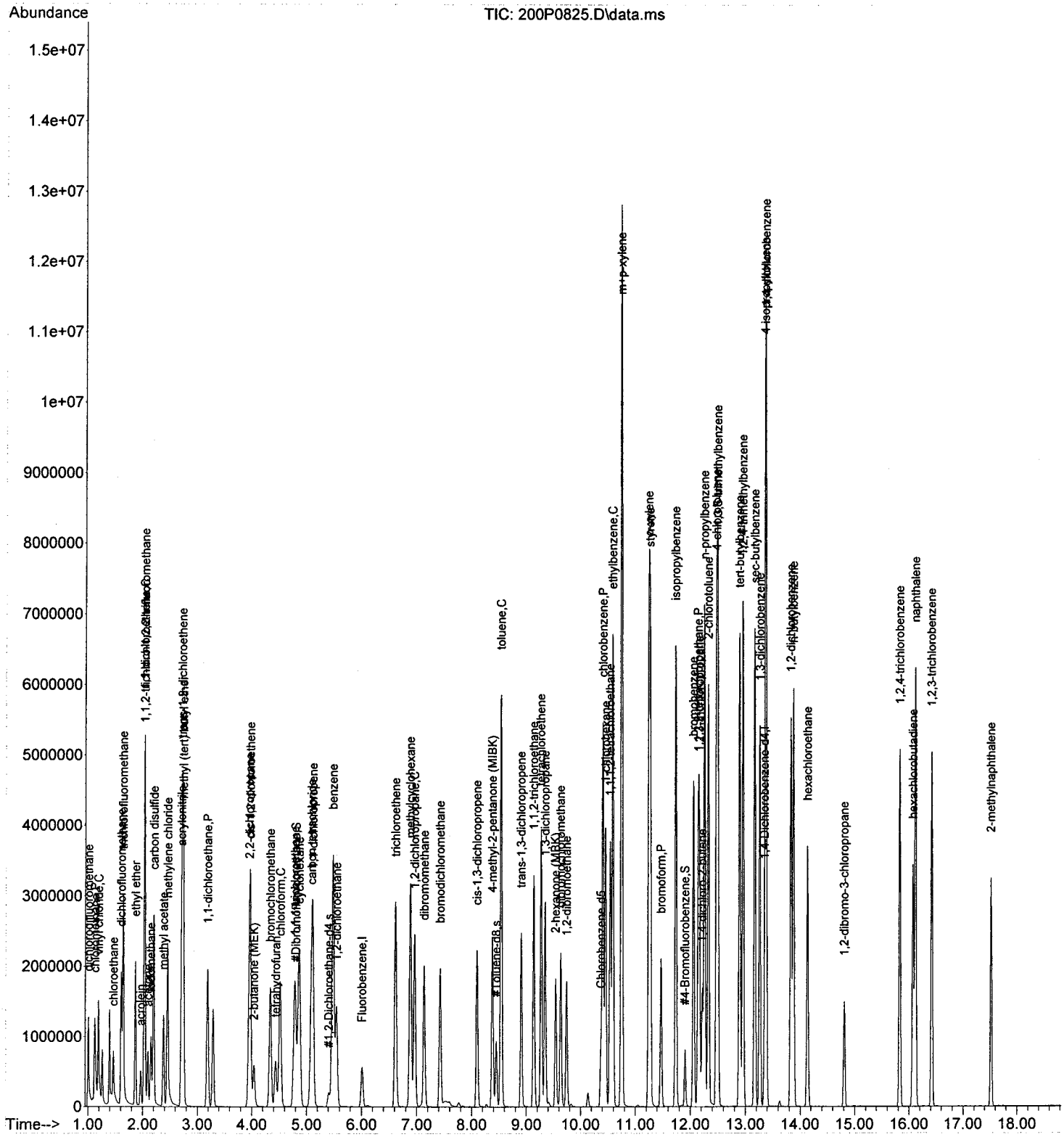


InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 200P0825.D
Acq On : 25 Aug 2015 14:39
Operator : DLV
Sample : STD7
Misc :
ALS Vial : 12 Sample Multiplier: 1
Quant Time: Aug 25 14:58:34 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Tue Aug 25 14:50:08 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.008	96	738374	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	616178	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.348	152	343254	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.802	111	191558	43.70 ug/L	0.00
Spiked Amount 40.000			Recovery = 109.25%		
37) #1,2-Dichloroethane-d4	5.408	67	112085	36.41 ug/L	0.00
Spiked Amount 40.000			Recovery = 91.02%		
46) #Toluene-d8	8.449	98	762787	41.38 ug/L	0.00
Spiked Amount 40.000			Recovery = 103.45%		
64) #4-Bromofluorobenzene	11.907	95	312611	41.30 ug/L	0.00
Spiked Amount 40.000			Recovery = 103.25%		
Target Compounds					Qvalue
2) dichlorodifluoromethane	1.008	85	1294231	168.65 ug/L	98
3) chloromethane	1.125	50	1598690	196.28 ug/L	100
4) vinyl chloride	1.190	62	1444705	192.79 ug/L	99
5) bromomethane	1.396	94	865556	Below Cal	98
6) chloroethane	1.467	64	691507	209.67 ug/L	99
7) dichlorofluoromethane	1.608	67	2192116	207.71 ug/L	98
8) trichlorofluoromethane	1.643	101	1811666	188.30 ug/L	100
9) ethyl ether	1.867	74	708956	215.38 ug/L	94
10) acrolein	1.961	56	373169	243.56 ug/L #	96
11) 1,1,2-trichloro-1,2,2-...	2.037	101	883356	185.08 ug/L	99
12) 1,1-dichloroethene	2.031	96	1048643	209.13 ug/L	92
13) acetone	2.096	43	668193	229.90 ug/L	95
14) iodomethane	2.149	142	1271563	237.79 ug/L	99
15) carbon disulfide	2.202	76	3318263	341.38 ug/L	99
16) methyl acetate	2.378	43	1486347	198.33 ug/L	97
17) methylene chloride	2.455	49	1499403	194.99 ug/L	96
18) acrylonitrile	2.708	53	821609	185.74 ug/L	98
19) trans-1,2-dichloroethene	2.719	96	1211364	206.06 ug/L	97
20) methyl (tert) butyl ether	2.743	73	3556280	192.72 ug/L	100
21) 1,1-dichloroethane	3.184	63	2161686	195.63 ug/L	100
22) vinyl acetate	3.290	43	2362680	Below Cal	97
23) 2,2-dichloropropane	3.955	77	1297537	176.16 ug/L	98
24) cis-1,2-dichloroethene	3.972	96	1347835	208.00 ug/L	97
25) 2-butanone (MEK)	4.037	43	965867	229.49 ug/L	94
26) bromochloromethane	4.337	49	1072324	186.67 ug/L	95
27) tetrahydrofuran	4.437	71	256095	192.42 ug/L	86
28) chloroform	4.519	83	2152277	198.80 ug/L	100
30) 1,1,1-trichloroethane	4.784	97	1776626	197.07 ug/L	97
31) cyclohexane	4.861	56	1778130	189.61 ug/L	97
32) carbon tetrachloride	5.090	117	1551946	201.45 ug/L	100
33) 1,1-dichloropropene	5.113	75	1638538	203.74 ug/L	99
34) benzene	5.484	78	4881160	198.07 ug/L	97
35) 1,2-dichloroethane	5.549	62	1680647	183.36 ug/L	99
36) heptane	6.008	57	26026	No Calib	
38) trichloroethene	6.619	130	1383567	198.22 ug/L	98

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : 200P0825.D
Acq On : 25 Aug 2015 14:39
Operator : DLV
Sample : STD7
Misc :
ALS Vial : 12 Sample Multiplier: 1
Quant Time: Aug 25 14:58:34 2015
Quant Method : C:\gcms\1\methods\8260B-W51.M
Quant Title : 8260B : 5030
QLast Update : Tue Aug 25 14:50:08 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.884	83	1846783	199.10 ug/L	97
40)	1,2-dichloropropane	6.960	63	1309116	196.33 ug/L	100
41)	dibromomethane	7.137	93	887214	199.51 ug/L	99
42)	bromodichloromethane	7.431	83	1639693	213.01 ug/L	99
43)	2-chloroethyl vinyl ether	7.837	63	12572	Below Cal #	93
44)	cis-1,3-dichloropropene	8.096	75	1645552	207.92 ug/L	90
45)	4-methyl-2-pentanone (...	8.378	43	1922242	221.70 ug/L	94
47)	toluene	8.543	91	5336870	206.35 ug/L	99
48)	trans-1,3-dichloropropene	8.907	75	1630216	222.39 ug/L	93
49)	1,1,2-trichloroethane	9.137	83	1084813	201.21 ug/L	99
51)	tetrachloroethene	9.272	166	1496175	177.04 ug/L	99
52)	1,3-dichloropropane	9.348	76	2158166	188.32 ug/L	99
53)	2-hexanone (MBK)	9.537	43	1402615	216.62 ug/L	92
54)	dibromochloromethane	9.631	129	1394060	214.16 ug/L	99
55)	1,2-dibromoethane	9.743	109	1340017	198.31 ug/L #	100
56)	chlorobenzene	10.413	112	3637070	194.94 ug/L	98
57)	1-chlorohexane	10.460	55	1071354	178.84 ug/L	85
58)	1,1,1,2-tetrachloroethane	10.543	131	1283631	205.73 ug/L	98
59)	ethylbenzene	10.590	91	5875457	195.12 ug/L	100
60)	m+p-xylene	10.754	106	4518159	392.12 ug/L	99
61)	o-xylene	11.248	106	2256874	195.45 ug/L	99
62)	styrene	11.272	104	3737415	214.09 ug/L	96
63)	bromoform	11.472	173	1188607	230.47 ug/L	99
66)	isopropylbenzene	11.737	105	5370120	183.69 ug/L	99
67)	bromobenzene	12.060	77	2326517	175.65 ug/L	99
68)	1,1,2,2-tetrachloroethane	12.148	83	2077392	189.29 ug/L #	97
69)	1,2,3-trichloropropane	12.166	110	653740	176.63 ug/L	96
70)	1,4-dichloro-2-butene	12.219	53	422162	197.62 ug/L #	81
71)	n-propylbenzene	12.260	120	1593908	186.86 ug/L	94
72)	2-chlorotoluene	12.331	126	1437418	175.32 ug/L	99
73)	1,3,5-trimethylbenzene	12.501	105	4723280	181.63 ug/L	99
74)	4-chlorotoluene	12.478	126	1463401	183.09 ug/L	96
75)	tert-butylbenzene	12.895	119	4134105	179.91 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	4807429	186.62 ug/L	99
77)	sec-butylbenzene	13.172	105	5825672	184.64 ug/L	100
78)	1,3-dichlorobenzene	13.266	146	2899898	188.76 ug/L	98
79)	4-isopropyltoluene	13.366	119	4874636	186.62 ug/L	98
80)	1,4-dichlorobenzene	13.378	146	2850414	186.79 ug/L	98
81)	1,2-dichlorobenzene	13.831	146	2856182	184.85 ug/L	99
82)	n-butylbenzene	13.878	91	4043153	197.30 ug/L	99
83)	hexachloroethane	14.136	201	778558	199.96 ug/L #	90
84)	1,2-dibromo-3-chloropr...	14.807	157	566719	211.87 ug/L	94
85)	1,2,4-trichlorobenzene	15.831	180	2012119	190.14 ug/L	100
86)	hexachlorobutadiene	16.072	225	888343	158.49 ug/L	100
87)	naphthalene	16.119	128	5981117	197.98 ug/L	98
88)	1,2,3-trichlorobenzene	16.419	180	2019710	188.40 ug/L	98
89)	2-methylnaphthalene	17.519	142	1886422	192.02 ug/L	98

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

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Laboratory ID: 5H26009-SCV1
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWM
Standard ID: 5081062
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
Acetone	40.0	38.3	96	80-120
Acrolein	40.0	38.8	97	80-120
Acrylonitrile	40.0	38.9	97	80-120
Benzene	40.0	39.0	98	80-120
Bromobenzene	40.0	37.4	94	80-120
Bromochloromethane	40.0	39.2	98	80-120
Bromodichloromethane	40.0	39.6	99	80-120
Bromoform	40.0	39.4	99	80-120
Bromomethane	40.0	38.0	95	80-120
n-Butylbenzene	40.0	40.7	102	80-120
sec-Butylbenzene	40.0	38.8	97	80-120
tert-Butylbenzene	40.0	38.2	96	80-120
Carbon Disulfide	40.0	44.2	111	80-120
Carbon Tetrachloride	40.0	41.6	104	80-120
Chlorobenzene	40.0	36.8	92	80-120
Chloroethane	40.0	41.3	103	80-120
2-Chloroethyl Vinyl Ether	40.0	29.2	73 *	80-120
Chloroform	40.0	38.9	97	80-120
1-Chlorohexane	40.0	40.4	101	80-120
Chloromethane	40.0	33.6	84	80-120
2-Chlorotoluene	40.0	36.5	91	80-120
4-Chlorotoluene	40.0	38.5	96	80-120
Cyclohexane	40.0	44.0	110	80-120
1,2-Dibromo-3-chloropropane	40.0	37.4	94	80-120
Dibromochloromethane	40.0	39.5	99	80-120
1,2-Dibromoethane	40.0	39.6	99	80-120
Dibromomethane	40.0	39.0	98	80-120

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Laboratory ID: 5H26009-SCV1
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWM
Standard ID: 5081062
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
trans-1,4-Dichloro-2-butene	40.0	36.7	92	80-120
1,2-Dichlorobenzene	40.0	37.6	94	80-120
1,3-Dichlorobenzene	40.0	37.0	93	80-120
1,4-Dichlorobenzene	40.0	37.3	93	80-120
Dichlorodifluoromethane	40.0	30.7	77 *	80-120
1,1-Dichloroethane	40.0	38.2	96	80-120
1,2-Dichloroethane	40.0	39.7	99	80-120
1,1-Dichloroethene	40.0	36.4	91	80-120
cis-1,2-Dichloroethene	40.0	40.2	101	80-120
trans-1,2-Dichloroethene	40.0	38.4	96	80-120
1,2-Dichloroethene (Total)	80.0	78.6	98	80-120
Dichlorofluoromethane	40.0	37.6	94	80-120
1,2-Dichloropropane	40.0	39.5	99	80-120
1,3-Dichloropropane	40.0	40.2	101	80-120
2,2-Dichloropropane	40.0	41.6	104	80-120
1,1-Dichloropropene	40.0	38.2	96	80-120
cis-1,3-Dichloropropene	40.0	43.3	108	80-120
trans-1,3-Dichloropropene	40.0	39.6	99	80-120
Ethylbenzene	40.0	39.1	98	80-120
Ethyl Ether	40.0	43.5	109	80-120
Hexachlorobutadiene	40.0	37.8	95	80-120
2-Hexanone	40.0	39.5	99	80-120
Iodomethane	40.0	41.6	104	80-120
Isopropylbenzene	40.0	40.6	102	80-120
4-Isopropyltoluene	40.0	39.1	98	80-120
Methyl Acetate	40.0	38.7	97	80-120
Methyl tert-Butyl Ether	40.0	40.0	100	80-120

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Laboratory ID: 5H26009-SCV1
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWM
Standard ID: 5081062
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
Methylcyclohexane	40.0	43.6	109	80-120
Methylene Chloride	40.0	37.9	95	80-120
2-Butanone (MEK)	40.0	39.2	98	80-120
4-Methyl-2-pentanone (MIBK)	40.0	40.7	102	80-120
Naphthalene	40.0	33.5	84	80-120
n-Propylbenzene	40.0	38.2	96	80-120
Styrene	40.0	42.4	106	80-120
1,1,1,2-Tetrachloroethane	40.0	39.2	98	80-120
1,1,2,2-Tetrachloroethane	40.0	41.0	103	80-120
Tetrachloroethene	40.0	38.8	97	80-120
Tetrahydrofuran	40.0	40.5	101	80-120
Toluene	40.0	39.5	99	80-120
1,2,3-Trichlorobenzene	40.0	34.3	86	80-120
1,2,4-Trichlorobenzene	40.0	34.4	86	80-120
1,1,1-Trichloroethane	40.0	40.8	102	80-120
1,1,2-Trichloroethane	40.0	40.4	101	80-120
Trichloroethene	40.0	38.4	96	80-120
Trichlorofluoromethane	40.0	37.1	93	80-120
1,2,3-Trichloropropane	40.0	36.5	91	80-120
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	46.5	116	80-120
1,2,4-Trimethylbenzene	40.0	39.0	98	80-120
1,3,5-Trimethylbenzene	40.0	40.4	101	80-120
Vinyl Acetate	40.0	69.8	175 *	80-120
Vinyl Chloride	40.0	37.8	95	80-120
Xylene, Meta + Para	80.0	77.7	97	80-120
Xylene, Ortho	40.0	39.1	98	80-120
Xylene (Total)	120	117	98	80-120

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8260B

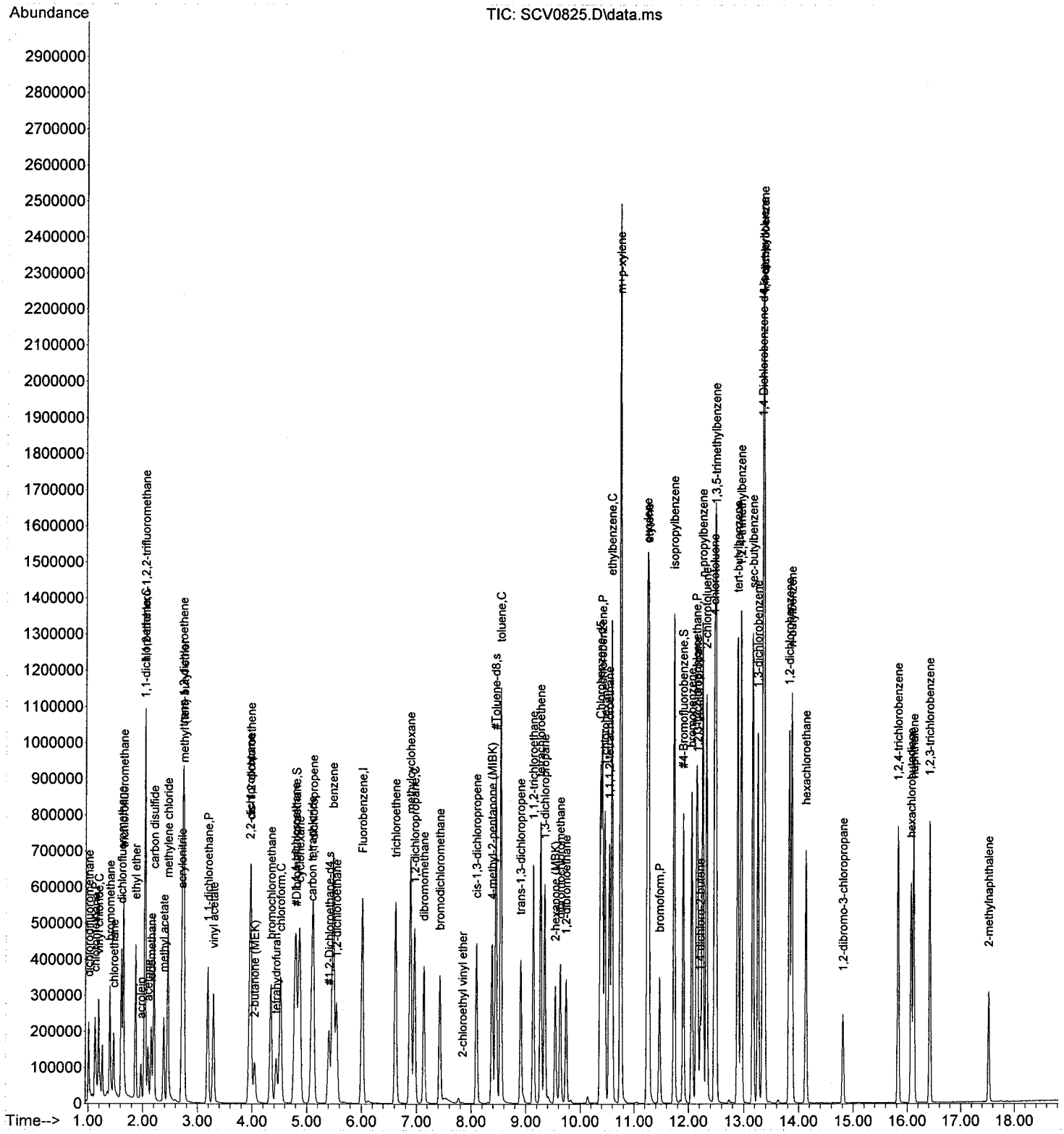
Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Laboratory ID: 5H26009-SCV1
Sequence: 5H26009

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWM
Standard ID: 5081062
Calibration: 5H26013

Analyte	Expected (ug/L)	Found (ug/L)	% Rec.	QC Limit
Dichlorobenzenes (Total)	120	112	93	80-120
Dibromofluoromethane	40.0	40.5	101	80-120
1,2-Dichloroethane-d4	40.0	40.0	100	80-120
Toluene-d8	40.0	40.6	102	80-120
4-Bromofluorobenzene	40.0	40.9	102	80-120

* Values outside of QC limits

```
InstName  : 350
Data Path : C:\gcms\1\data\082515\
Data File : SCV0825.D
Acq On    : 25 Aug 2015  16:19
Operator  : DLV
Sample    : SCV1
Misc      :
ALS Vial  : 16   Sample Multiplier: 1
Quant Time: Aug 26 08:11:02 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration
```



InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : SCV0825.D
Acq On : 25 Aug 2015 16:19
Operator : DLV
Sample : SCV1
Misc :
ALS Vial : 16 Sample Multiplier: 1
Quant Time: Aug 26 08:11:02 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	740805	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.377	117	626152	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	339631	40.00	ug/L	0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.807	111	186106	40.48	ug/L	0.00
Spiked Amount 40.000			Recovery = 101.20%			
37) #1,2-Dichloroethane-d4	5.413	67	112467	40.03	ug/L	0.00
Spiked Amount 40.000			Recovery = 100.08%			
46) #Toluene-d8	8.448	98	764864	40.61	ug/L	0.00
Spiked Amount 40.000			Recovery = 101.53%			
64) #4-Bromofluorobenzene	11.907	95	314527	40.87	ug/L	0.00
Spiked Amount 40.000			Recovery = 102.18%			
Target Compounds						Qvalue
2) dichlorodifluoromethane	1.007	85	204621	30.68	ug/L	98
3) chloromethane	1.125	50	288997	33.57	ug/L	100
4) vinyl chloride	1.190	62	266012	37.78	ug/L	99
5) bromomethane	1.401	94	189011	37.97	ug/L	99
6) chloroethane	1.472	64	152521	41.32	ug/L	97
7) dichlorofluoromethane	1.613	67	420143	37.59	ug/L	98
8) trichlorofluoromethane	1.649	101	348736	37.14	ug/L	99
9) ethyl ether	1.866	74	155954	43.48	ug/L	99
10) acrolein	1.966	56	71875	38.76	ug/L	98
11) 1,1,2-trichloro-1,2,2-...	2.037	101	211711	46.47	ug/L	96
12) 1,1-dichloroethene	2.031	96	194687	36.38	ug/L	97
13) acetone	2.096	43	144746	38.32	ug/L	99
14) iodomethane	2.154	142	231178	41.55	ug/L	99
15) carbon disulfide	2.201	76	631126	44.22	ug/L	97
16) methyl acetate	2.384	43	280543	38.68	ug/L	99
17) methylene chloride	2.454	49	296508	37.87	ug/L	98
18) acrylonitrile	2.707	53	163468	38.90	ug/L	97
19) trans-1,2-dichloroethene	2.725	96	231443	38.41	ug/L	99
20) methyl (tert) butyl ether	2.743	73	708779	40.05	ug/L	98
21) 1,1-dichloroethane	3.190	63	414540	38.16	ug/L	98
22) vinyl acetate	3.290	43	517640	69.80	ug/L	100
23) 2,2-dichloropropane	3.960	77	259305	41.63	ug/L	99
24) cis-1,2-dichloroethene	3.972	96	273416	40.18	ug/L	96
25) 2-butanone (MEK)	4.043	43	187334	39.15	ug/L	95
26) bromochloromethane	4.343	49	208877	39.17	ug/L	99
27) tetrahydrofuran	4.437	71	50390	40.48	ug/L	98
28) chloroform	4.519	83	417385	38.93	ug/L	100
30) 1,1,1-trichloroethane	4.790	97	339433	40.76	ug/L	99
31) cyclohexane	4.866	56	387684	44.05	ug/L	98
32) carbon tetrachloride	5.090	117	289597	41.64	ug/L	97
33) 1,1-dichloropropene	5.113	75	313897	38.17	ug/L	99
34) benzene	5.484	78	953115	38.96	ug/L	100
35) 1,2-dichloroethane	5.548	62	330072	39.70	ug/L	97
36) heptane	6.013	57	24766	No Calib	#	
38) trichloroethene	6.619	130	274416	38.39	ug/L	96

InstName : 350
Data Path : C:\gcms\1\data\082515\
Data File : SCV0825.D
Acq On : 25 Aug 2015 16:19
Operator : DLV
Sample : SCV1
Misc :
ALS Vial : 16 Sample Multiplier: 1
Quant Time: Aug 26 08:11:02 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.889	83	387712	43.55 ug/L	99
40)	1,2-dichloropropane	6.966	63	256117	39.53 ug/L	99
41)	dibromomethane	7.136	93	167496	38.96 ug/L	97
42)	bromodichloromethane	7.431	83	290217	39.56 ug/L	99
43)	2-chloroethyl vinyl ether	7.842	63	3260	29.19 ug/L #	44
44)	cis-1,3-dichloropropene	8.101	75	326803	43.31 ug/L	99
45)	4-methyl-2-pentanone (...	8.383	43	364162	40.67 ug/L	99
47)	toluene	8.542	91	1048812	39.50 ug/L	98
48)	trans-1,3-dichloropropene	8.907	75	273347	39.64 ug/L	99
49)	1,1,2-trichloroethane	9.136	83	214584	40.42 ug/L	99
51)	tetrachloroethene	9.272	166	309564	38.78 ug/L	98
52)	1,3-dichloropropane	9.348	76	448386	40.25 ug/L	100
53)	2-hexanone (MBK)	9.542	43	266274	39.47 ug/L	99
54)	dibromochloromethane	9.636	129	248584	39.47 ug/L	98
55)	1,2-dibromoethane	9.742	109	259882	39.65 ug/L #	100
56)	chlorobenzene	10.413	112	686292	36.82 ug/L	99
57)	1-chlorohexane	10.460	55	214087	40.43 ug/L	97
58)	1,1,1,2-tetrachloroethane	10.542	131	236681	39.21 ug/L	99
59)	ethylbenzene	10.589	91	1158707	39.12 ug/L	100
60)	m+p-xylene	10.754	106	891957	77.73 ug/L	99
61)	o-xylene	11.248	106	432222	39.06 ug/L	99
62)	styrene	11.272	104	743493	42.41 ug/L	98
63)	bromoform	11.472	173	198461	39.41 ug/L	98
66)	isopropylbenzene	11.736	105	1100213	40.63 ug/L	100
67)	bromobenzene	12.060	77	451775	37.43 ug/L	98
68)	1,1,2,2-tetrachloroethane	12.148	83	410893	41.03 ug/L #	97
69)	1,2,3-trichloropropane	12.166	110	129547	36.53 ug/L	99
70)	1,4-dichloro-2-butene	12.219	53	67524	36.74 ug/L	98
71)	n-propylbenzene	12.260	120	296458	38.17 ug/L	100
72)	2-chlorotoluene	12.330	126	274732	36.50 ug/L	100
73)	1,3,5-trimethylbenzene	12.501	105	951749	40.37 ug/L	98
74)	4-chlorotoluene	12.471	126	284073	38.52 ug/L	98
75)	tert-butylbenzene	12.895	119	795330	38.15 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	923530	38.96 ug/L	100
77)	sec-butylbenzene	13.171	105	1107181	38.81 ug/L	99
78)	1,3-dichlorobenzene	13.260	146	550668	37.01 ug/L	100
79)	4-isopropyltoluene	13.366	119	932750	39.06 ug/L	100
80)	1,4-dichlorobenzene	13.377	146	548769	37.29 ug/L	99
81)	1,2-dichlorobenzene	13.830	146	548431	37.55 ug/L	99
82)	n-butylbenzene	13.877	91	757907	40.73 ug/L	99
83)	hexachloroethane	14.136	201	132263	40.94 ug/L	99
84)	1,2-dibromo-3-chloropr...	14.813	157	89748	37.37 ug/L	95
85)	1,2,4-trichlorobenzene	15.830	180	310606	34.37 ug/L	99
86)	hexachlorobutadiene	16.071	225	157155	37.85 ug/L	97
87)	naphthalene	16.118	128	739384	33.52 ug/L	100
88)	1,2,3-trichlorobenzene	16.418	180	312396	34.27 ug/L	98
89)	2-methylnaphthalene	17.524	142	183840	36.82 ug/L	99

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

CONTINUING CALIBRATION CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-CCV1
Lab File ID: CCV0831.D
Injection Date: 08/31/15
Injection Time: 09:13
Calibration Date: 08/25/15 00:00
Calibration: 5H26013
Sequence: 5H31031
Instrument ID: 350

Analyte	Type	CONC. (ug/L)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	L	40.0	37.0	0.2429079	0.1897891		-7.4	20
Acrolein	L	40.0	38.6	0.1078172	9.672738E-02		-3.4	20
Acrylonitrile	A	40.0	36.6	0.2268935	0.2077931		-8.4	20
Benzene	A	40.0	42.4	1.321046	1.399977		6.0	20
Bromobenzene	A	40.0	38.5	1.421424	1.36949		-3.7	20
Bromochloromethane	A	40.0	42.0	0.2879189	0.3019759		4.9	20
Bromodichloromethane	A	40.0	45.4	0.3961286	0.4496704		13.5	20
Bromoform	A	40.0	44.9	0.3217362	0.3614476	0.1	12.3	20
Bromomethane	A	40.0	47.9	0.2687524	0.3215837		19.7	20
n-Butylbenzene	A	40.0	44.7	2.191295	2.447828		11.7	20
sec-Butylbenzene	A	40.0	42.5	3.360235	3.571484		6.3	20
tert-Butylbenzene	A	40.0	41.2	2.454996	2.527825		3.0	20
Carbon Disulfide	A	40.0	48.0	0.7706061	0.9250004		20.0	20
Carbon Tetrachloride	A	40.0	46.8	0.3755413	0.4398513		17.1	20
Chlorobenzene	A	40.0	40.6	1.190829	1.208722	0.3	1.5	20
Chloroethane	A	40.0	43.9	0.1993172	0.2188148		9.8	20
2-Chloroethyl Vinyl Ether	L	40.0	50.5	6.029331E-03	7.610467E-03		26.2	20 *
Chloroform	A	40.0	41.9	0.578894	0.6059075		4.7	20
1-Chlorohexane	A	40.0	42.4	0.3382377	0.3587918		6.1	20
Chloromethane	A	40.0	39.3	0.4648787	0.4563052	0.1	-1.8	20
2-Chlorotoluene	A	40.0	41.5	0.8864107	0.9194028		3.7	20
4-Chlorotoluene	A	40.0	41.4	0.868571	0.8998206		3.6	20
Cyclohexane	A	40.0	42.0	0.4752035	0.4985801		4.9	20
1,2-Dibromo-3-chloropropane	A	40.0	38.4	0.2828443	0.271147		-4.1	20
Dibromochloromethane	A	40.0	43.8	0.4023441	0.4401485		9.4	20
1,2-Dibromoethane	A	40.0	42.0	0.418745	0.4391174		4.9	20
Dibromomethane	A	40.0	43.1	0.232149	0.250161		7.8	20
trans-1,4-Dichloro-2-butene	A	40.0	35.7	0.2164315	0.1932294		-10.7	20
1,2-Dichlorobenzene	A	40.0	40.8	1.719952	1.756306		2.1	20

CONTINUING CALIBRATION CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-CCV1
Lab File ID: CCV0831.D
Injection Date: 08/31/15
Injection Time: 09:13
Calibration Date: 08/25/15 00:00
Calibration: 5H26013
Sequence: 5H31031
Instrument ID: 350

		CONC. (ug/L)		Response Factor			% Diff. / Drift	
Analyte	Type	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	40.0	41.5	1.752316	1.817249		3.7	20
1,4-Dichlorobenzene	A	40.0	41.1	1.732977	1.782243		2.8	20
Dichlorodifluoromethane	A	40.0	47.2	0.3601594	0.4252236		18.1	20
1,1-Dichloroethane	A	40.0	41.3	0.5865016	0.6060892	0.1	3.3	20
1,2-Dichloroethane	A	40.0	41.8	0.4489691	0.4690049		4.5	20
1,1-Dichloroethene	A	40.0	45.0	0.2889432	0.3253089		12.6	20
cis-1,2-Dichloroethene	A	40.0	41.5	0.3674153	0.3812024		3.8	20
trans-1,2-Dichloroethene	A	40.0	42.2	0.3253244	0.3432795		5.5	20
1,2-Dichloroethene (Total)	A	80.0	83.7	0.3463699	0.3622409		4.6	20
Dichlorofluoromethane	A	40.0	42.2	0.6035669	0.6363668		5.4	20
1,2-Dichloropropane	A	40.0	42.2	0.3498421	0.3687296		5.4	20
1,3-Dichloropropane	A	40.0	39.7	0.7116203	0.705983		-0.8	20
2,2-Dichloropropane	A	40.0	48.0	0.3362873	0.4032123		19.9	20
1,1-Dichloropropene	A	40.0	41.9	0.4439988	0.4648259		4.7	20
cis-1,3-Dichloropropene	A	40.0	45.8	0.4074579	0.4669198		14.6	20
trans-1,3-Dichloropropene	A	40.0	46.9	0.3723347	0.436539		17.2	20
Ethylbenzene	A	40.0	41.6	1.891914	1.966915		4.0	20
Ethyl Ether	A	40.0	41.0	0.1936776	0.1984261		2.5	20
Hexachlorobutadiene	A	40.0	45.2	0.4890004	0.5520251		12.9	20
2-Hexanone	A	40.0	35.1	0.431018	0.3780529		-12.3	20
Iodomethane	L	40.0	36.6	0.2395991	0.2689662		-8.6	20
Isopropylbenzene	A	40.0	40.0	3.189026	3.189524		0.02	20
4-Isopropyltoluene	A	40.0	42.4	2.812276	2.979821		6.0	20
Methyl Acetate	A	40.0	35.5	0.3915756	0.3474482		-11.3	20
Methyl tert-Butyl Ether	A	40.0	40.4	0.9556535	0.9643803		0.9	20
Methylcyclohexane	A	40.0	46.5	0.4806737	0.5588154		16.3	20
Methylene Chloride	L	40.0	41.4	0.5332895	0.4352652		3.4	20
2-Butanone (MEK)	A	40.0	34.8	0.2583963	0.2247603		-13.0	20
4-Methyl-2-pentanone (MIBK)	A	40.0	38.9	0.4835147	0.4698947		-2.8	20

CONTINUING CALIBRATION CHECK
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
SDG: 50069-43
Client: CH2M HILL - VA
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Lab Sample ID: 5H31031-CCV1
Lab File ID: CCV0831.D
Injection Date: 08/31/15
Injection Time: 09:13
Calibration Date: 08/25/15 00:00
Calibration: 5H26013
Sequence: 5H31031
Instrument ID: 350

Analyte	Type	CONC. (ug/L)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Naphthalene	Q	40.0	36.4	2.254165	2.394431		-9.1	20
n-Propylbenzene	A	40.0	42.2	0.9146965	0.9640193		5.4	20
Styrene	A	40.0	43.5	1.119964	1.218808		8.8	20
1,1,1,2-Tetrachloroethane	A	40.0	44.1	0.3855716	0.4252249		10.3	20
1,1,2,2-Tetrachloroethane	L	40.0	41.6	1.261874	1.225849	0.3	3.9	20
Tetrachloroethene	A	40.0	43.5	0.5099935	0.5545298		8.7	20
Tetrahydrofuran	A	40.0	34.4	6.721635E-02	5.772992E-02		-14.1	20
Toluene	A	40.0	42.4	1.433768	1.52171		6.1	20
1,2,3-Trichlorobenzene	L	40.0	36.6	0.9135334	0.9877274		-8.6	20
1,2,4-Trichlorobenzene	L	40.0	37.0	0.9187511	0.9917212		-7.6	20
1,1,1-Trichloroethane	A	40.0	44.4	0.4496857	0.4992097		11.0	20
1,1,2-Trichloroethane	A	40.0	43.1	0.286637	0.3091167		7.8	20
Trichloroethene	A	40.0	43.1	0.3859327	0.4154103		7.6	20
Trichlorofluoromethane	A	40.0	45.0	0.5070193	0.5707952		12.6	20
1,2,3-Trichloropropane	A	40.0	36.6	0.4176677	0.3818737		-8.6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	40.0	46.8	0.2459735	0.2874689		16.9	20
1,2,4-Trimethylbenzene	A	40.0	41.4	2.792134	2.888418		3.4	20
1,3,5-Trimethylbenzene	A	40.0	41.7	2.776393	2.892481		4.2	20
Vinyl Acetate	A	40.0	69.9	0.4004601	0.6996468		74.7	20 *
Vinyl Chloride	A	40.0	44.2	0.3801529	0.4198843		10.5	20
Xylene, Meta + Para	A	80.0	84.9	0.7330702	0.7782491		6.2	20
Xylene, Ortho	A	40.0	42.9	0.7068788	0.7581782		7.3	20
Xylene (Total)	A	120	128	0.7243397	0.7715588		6.5	20
Dichlorobenzenes (Total)	A	120	123	1.735082	1.785266		2.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : CCV0831.D
Acq On : 31 Aug 2015 09:13
Operator : DLV
Sample : CCV
Misc :
ALS Vial : 2 Sample Multiplier: 1
Quant Time: Aug 31 09:40:47 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial 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	1.000	1.000	0.0	91	0.00
2		dichlorodifluoromethane	0.360	0.425	-18.1	107	0.00
3	P	chloromethane	0.465	0.456	1.9	95	0.00
4	C	vinyl chloride	0.380	0.420	-10.5	99	0.00
5		bromomethane	0.269	0.322	-19.7	108	0.00
6		chloroethane	0.199	0.219	-10.1	104	0.00
7		dichlorofluoromethane	0.604	0.636	-5.3	98	0.00
8		trichlorofluoromethane	0.507	0.571	-12.6	104	0.00
9		ethyl ether	0.194	0.198	-2.1	95	0.00
10		acrolein	0.108	0.097	10.2	89	0.00
11		1,1,2-trichloro-1,2,2-trifl	0.246	0.287	-16.7	108	0.00
12	C	1,1-dichloroethene	0.289	0.325	-12.5	103	0.00
13		acetone	0.243	0.190	21.8	83	0.00
14		iodomethane	0.240	0.269	-12.1	95	0.00
15		carbon disulfide	0.771	0.925	-20.0	107	0.00
16		methyl acetate	0.392	0.347	11.5	83	0.00
17		methylene chloride	0.533	0.435	18.4	93	0.00
18		acrylonitrile	0.227	0.208	8.4	84	0.00
19		trans-1,2-dichloroethene	0.325	0.343	-5.5	97	0.00
20		methyl (tert) butyl ether	0.956	0.964	-0.8	90	0.00
21	P	1,1-dichloroethane	0.587	0.606	-3.2	95	0.00
22		vinyl acetate	0.400	0.700	-75.0#	142	0.00
23		2,2-dichloropropane	0.336	0.403	-19.9	112	0.00
24		cis-1,2-dichloroethene	0.367	0.381	-3.8	97	0.00
25		2-butanone (MEK)	0.258	0.225	12.8	79	0.00
26		bromochloromethane	0.288	0.302	-4.9	93	0.00
27		tetrahydrofuran	0.067	0.058	13.4	81	0.00
28	C	chloroform	0.579	0.606	-4.7	95	0.00
29	S	#Dibromofluoromethane	0.248	0.261	-5.2	96	0.00
30		1,1,1-trichloroethane	0.450	0.499	-10.9	98	0.00
31		cyclohexane	0.475	0.499	-5.1	95	0.00
32		carbon tetrachloride	0.376	0.440	-17.0	103	0.00
33		1,1-dichloropropene	0.444	0.465	-4.7	97	0.00
34		benzene	1.321	1.400	-6.0	96	0.00
35		1,2-dichloroethane	0.449	0.469	-4.5	95	0.00
36		heptane	0.000	0.000	0.0	0#	0.00
37	s	#1,2-Dichloroethane-d4	0.152	0.151	0.7	91	0.00
38		trichloroethene	0.386	0.415	-7.5	96	0.00
39		methylcyclohexane	0.481	0.559	-16.2	104	0.00
40	C	1,2-dichloropropane	0.350	0.369	-5.4	96	0.00
41		dibromomethane	0.232	0.250	-7.8	98	0.00
42		bromodichloromethane	0.396	0.450	-13.6	102	0.00
43		2-chloroethyl vinyl ether	0.006	0.008	-33.3#	114	0.00
44		cis-1,3-dichloropropene	0.407	0.467	-14.7	99	0.00
45		4-methyl-2-pentanone (MIBK)	0.484	0.470	2.9	77	0.00
46	s	#Toluene-d8	1.017	1.054	-3.6	94	0.00
47	C	toluene	1.434	1.522	-6.1	97	0.00

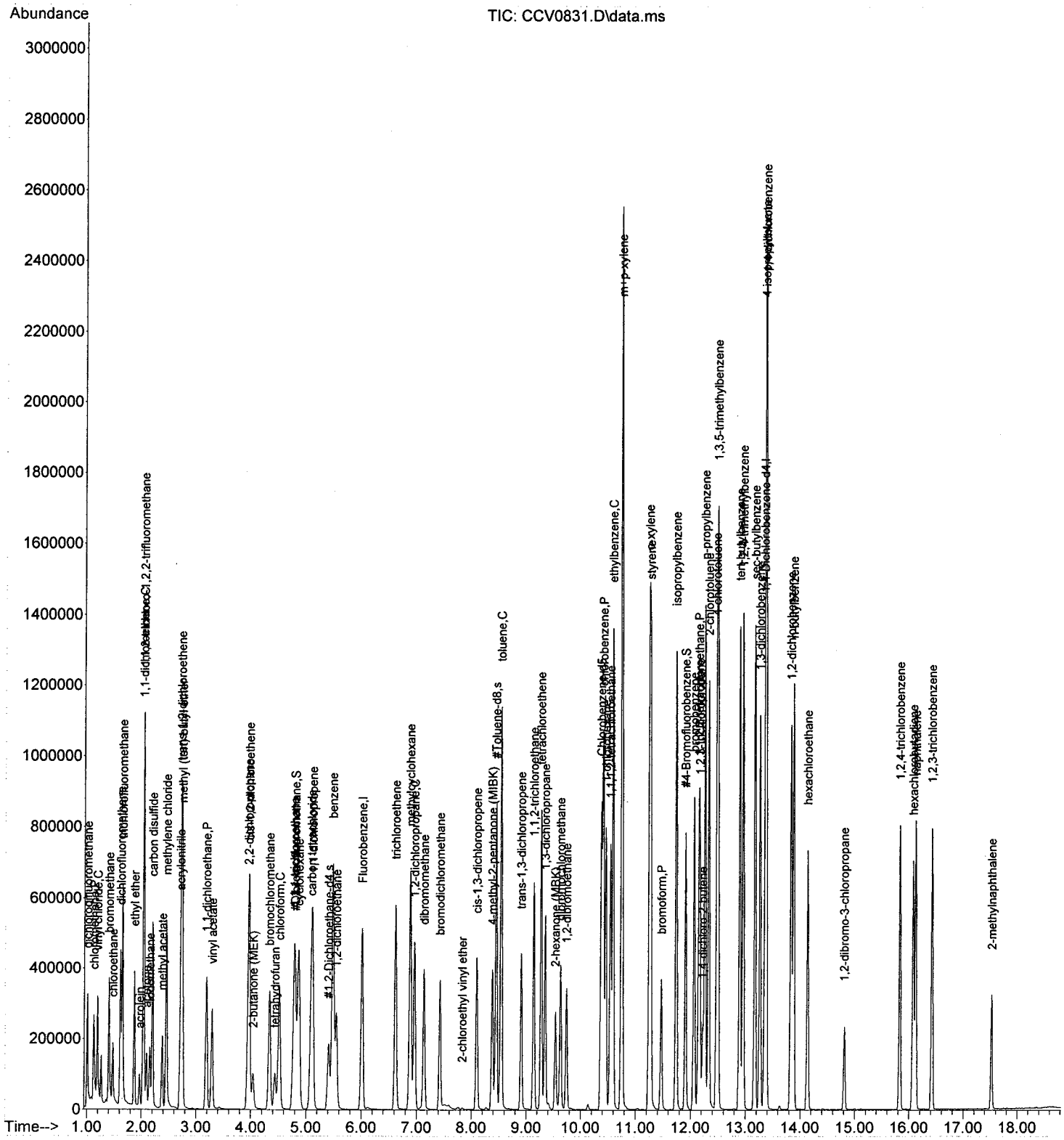
InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : CCV0831.D
Acq On : 31 Aug 2015 09:13
Operator : DLV
Sample : CCV
Misc :
ALS Vial : 2 Sample Multiplier: 1
Quant Time: Aug 31 09:40:47 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial 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)
48		trans-1,3-dichloropropene	0.372	0.437	-17.5	100	0.00
49		1,1,2-trichloroethane	0.287	0.309	-7.7	98	0.00
50		Chlorobenzene-d5	1.000	1.000	0.0	96	0.00
51		tetrachloroethene	0.510	0.555	-8.8	103	0.00
52		1,3-dichloropropane	0.712	0.706	0.8	96	0.00
53		2-hexanone (MBK)	0.431	0.378	12.3	73	0.00
54		dibromochloromethane	0.402	0.440	-9.5	104	0.00
55		1,2-dibromoethane	0.419	0.439	-4.8	98	0.00
56	P	chlorobenzene	1.191	1.209	-1.5	99	0.00
57		1-chlorohexane	0.338	0.359	-6.2	99	0.00
58		1,1,1,2-tetrachloroethane	0.386	0.425	-10.1	103	0.00
59	C	ethylbenzene	1.892	1.967	-4.0	98	0.00
60		m+p-xylene	0.733	0.778	-6.1	101	0.00
61		o-xylene	0.707	0.758	-7.2	99	0.00
62		styrene	1.120	1.219	-8.8	99	0.00
63	P	bromoform	0.322	0.361	-12.1	106	0.00
64	S	#4-Bromofluorobenzene	0.492	0.500	-1.6	99	0.00
65	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00
66		isopropylbenzene	3.189	3.190	-0.0	100	0.00
67		bromobenzene	1.421	1.369	3.7	98	0.00
68	P	1,1,2,2-tetrachloroethane	1.262	1.226	2.9	103	0.00
69		1,2,3-trichloropropane	0.418	0.382	8.6	97	0.00
70		1,4-dichloro-2-butene	0.216	0.193	10.6	92	0.00
71		n-propylbenzene	0.915	0.964	-5.4	103	0.00
72		2-chlorotoluene	0.886	0.919	-3.7	103	0.00
73		1,3,5-trimethylbenzene	2.776	2.892	-4.2	101	0.00
74		4-chlorotoluene	0.869	0.900	-3.6	101	0.00
75		tert-butylbenzene	2.455	2.528	-3.0	102	0.00
76		1,2,4-trimethylbenzene	2.792	2.888	-3.4	102	0.00
77		sec-butylbenzene	3.360	3.571	-6.3	103	0.00
78		1,3-dichlorobenzene	1.752	1.817	-3.7	104	0.00
79		4-isopropyltoluene	2.812	2.980	-6.0	104	0.00
80		1,4-dichlorobenzene	1.733	1.782	-2.8	104	0.00
81		1,2-dichlorobenzene	1.720	1.756	-2.1	103	0.00
82		n-butylbenzene	2.191	2.448	-11.7	107	0.00
83		hexachloroethane	0.381	0.441	-15.7	111	0.00
84		1,2-dibromo-3-chloropropane	0.283	0.271	4.2	94	0.00
85		1,2,4-trichlorobenzene	0.919	0.992	-7.9	98	0.00
86		hexachlorobutadiene	0.489	0.552	-12.9	107	0.00
87		naphthalene	2.278	2.394	-5.1	87	0.00
88		1,2,3-trichlorobenzene	0.914	0.988	-8.1	97	0.00
89		2-methylnaphthalene	0.574	0.585	-1.9	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

```
InstName   : 350
Data Path  : C:\gcms\1\data\083115\
Data File  : CCV0831.D
Acq On     : 31 Aug 2015  09:13
Operator   : DLV
Sample     : CCV
Misc       :
ALS Vial   : 2   Sample Multiplier: 1
Quant Time: Aug 31 09:40:47 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration
```



InstName : 350
Data Path : C:\gcms\1\data\083115\
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Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	687737	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	596435	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.348	152	333262	40.00 ug/L	0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.801	111	179728	42.11 ug/L	0.00
Spiked Amount 40.000			Recovery	= 105.28%	
37) #1,2-Dichloroethane-d4	5.407	67	103985	39.86 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.65%	
46) #Toluene-d8	8.448	98	724704	41.44 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.60%	
64) #4-Bromofluorobenzene	11.907	95	298006	40.66 ug/L	0.00
Spiked Amount 40.000			Recovery	= 101.65%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	1.007	85	292442	47.23 ug/L	97
3) chloromethane	1.125	50	313818	39.26 ug/L	97
4) vinyl chloride	1.190	62	288770	44.18 ug/L	100
5) bromomethane	1.402	94	221165	47.86 ug/L	99
6) chloroethane	1.472	64	150487	43.91 ug/L	97
7) dichlorofluoromethane	1.613	67	437653	42.17 ug/L	100
8) trichlorofluoromethane	1.649	101	392557	45.03 ug/L	100
9) ethyl ether	1.866	74	136465	40.98 ug/L	97
10) acrolein	1.966	56	66523	38.65 ug/L	99
11) 1,1,2-trichloro-1,2,2-...	2.037	101	197703	46.75 ug/L	98
12) 1,1-dichloroethene	2.031	96	223727	45.03 ug/L	95
13) acetone	2.090	43	130525	37.05 ug/L	97
14) iodomethane	2.154	142	184978	36.57 ug/L	99
15) carbon disulfide	2.201	76	636157	48.01 ug/L	98
16) methyl acetate	2.378	43	238953	35.49 ug/L	98
17) methylene chloride	2.454	49	299348	41.36 ug/L	96
18) acrylonitrile	2.707	53	142907	36.63 ug/L	98
19) trans-1,2-dichloroethene	2.719	96	236086	42.21 ug/L	97
20) methyl (tert) butyl ether	2.743	73	663240	40.37 ug/L	99
21) 1,1-dichloroethane	3.184	63	416830	41.34 ug/L	98
22) vinyl acetate	3.290	43	481173	69.88 ug/L	100
23) 2,2-dichloropropane	3.954	77	277304	47.96 ug/L	99
24) cis-1,2-dichloroethene	3.972	96	262167	41.50 ug/L	97
25) 2-butanone (MEK)	4.043	43	154576	34.79 ug/L	98
26) bromochloromethane	4.337	49	207680	41.95 ug/L	96
27) tetrahydrofuran	4.437	71	39703	34.35 ug/L	98
28) chloroform	4.519	83	416705	41.87 ug/L	99
30) 1,1,1-trichloroethane	4.784	97	343325	44.41 ug/L	99
31) cyclohexane	4.860	56	342892	41.97 ug/L	98
32) carbon tetrachloride	5.090	117	302502	46.85 ug/L	100
33) 1,1-dichloropropene	5.113	75	319678	41.88 ug/L	100
34) benzene	5.484	78	962816	42.39 ug/L	98
35) 1,2-dichloroethane	5.548	62	322552	41.79 ug/L	98
36) heptane	6.013	57	21268	No Calib #	
38) trichloroethene	6.619	130	285693	43.06 ug/L	97

InstName : 350
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ALS Vial : 2 Sample Multiplier: 1
Quant Time: Aug 31 09:40:47 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.884	83	384318	46.50 ug/L	98
40)	1,2-dichloropropane	6.960	63	253589	42.16 ug/L	100
41)	dibromomethane	7.136	93	172045	43.10 ug/L	95
42)	bromodichloromethane	7.431	83	309255	45.41 ug/L	97
43)	2-chloroethyl vinyl ether	7.836	63	5234	50.49 ug/L #	82
44)	cis-1,3-dichloropropene	8.101	75	321118	45.84 ug/L	98
45)	4-methyl-2-pentanone (...	8.378	43	323164	38.87 ug/L	98
47)	toluene	8.542	91	1046536	42.45 ug/L	99
48)	trans-1,3-dichloropropene	8.907	75	300224	46.90 ug/L	98
49)	1,1,2-trichloroethane	9.136	83	212591	43.14 ug/L	98
51)	tetrachloroethene	9.272	166	330741	43.49 ug/L	99
52)	1,3-dichloropropane	9.348	76	421073	39.68 ug/L	99
53)	2-hexanone (MBK)	9.536	43	225484	35.08 ug/L	99
54)	dibromochloromethane	9.630	129	262520	43.76 ug/L	99
55)	1,2-dibromoethane	9.742	109	261905	41.95 ug/L #	100
56)	chlorobenzene	10.413	112	720924	40.60 ug/L	98
57)	1-chlorohexane	10.460	55	213996	42.43 ug/L	95
58)	1,1,1,2-tetrachloroethane	10.542	131	253619	44.11 ug/L	99
59)	ethylbenzene	10.589	91	1173137	41.59 ug/L	99
60)	m+p-xylene	10.754	106	928350	84.93 ug/L	100
61)	o-xylene	11.248	106	452204	42.90 ug/L	98
62)	styrene	11.272	104	726940	43.53 ug/L	98
63)	bromoform	11.472	173	215580	44.94 ug/L	100
66)	isopropylbenzene	11.736	105	1062947	40.01 ug/L	99
67)	bromobenzene	12.060	77	456399	38.54 ug/L	95
68)	1,1,2,2-tetrachloroethane	12.148	83	408529	41.57 ug/L #	98
69)	1,2,3-trichloropropane	12.166	110	127264	36.57 ug/L	96
70)	1,4-dichloro-2-butene	12.219	53	64396	35.71 ug/L	93
71)	n-propylbenzene	12.260	120	321271	42.16 ug/L	97
72)	2-chlorotoluene	12.330	126	306402	41.49 ug/L	96
73)	1,3,5-trimethylbenzene	12.495	105	963954	41.67 ug/L	97
74)	4-chlorotoluene	12.472	126	299876	41.44 ug/L	97
75)	tert-butylbenzene	12.895	119	842428	41.19 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	962600	41.38 ug/L	99
77)	sec-butylbenzene	13.171	105	1190240	42.51 ug/L	100
78)	1,3-dichlorobenzene	13.260	146	605620	41.48 ug/L	98
79)	4-isopropyltoluene	13.366	119	993061	42.38 ug/L	99
80)	1,4-dichlorobenzene	13.377	146	593954	41.14 ug/L	100
81)	1,2-dichlorobenzene	13.830	146	585310	40.85 ug/L	100
82)	n-butylbenzene	13.877	91	815768	44.68 ug/L	99
83)	hexachloroethane	14.136	201	146902	46.34 ug/L	97
84)	1,2-dibromo-3-chloropr...	14.807	157	90363	38.35 ug/L	96
85)	1,2,4-trichlorobenzene	15.830	180	330503	36.98 ug/L	97
86)	hexachlorobutadiene	16.071	225	183969	45.16 ug/L	98
87)	naphthalene	16.118	128	797973	36.36 ug/L	99
88)	1,2,3-trichlorobenzene	16.418	180	329172	36.55 ug/L	99
89)	2-methylnaphthalene	17.524	142	194926	39.19 ug/L	98

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

TRIMATRIX
LABORATORIES

SECTION - C

RAW QUALITY CONTROL DATA

USEPA-8260B

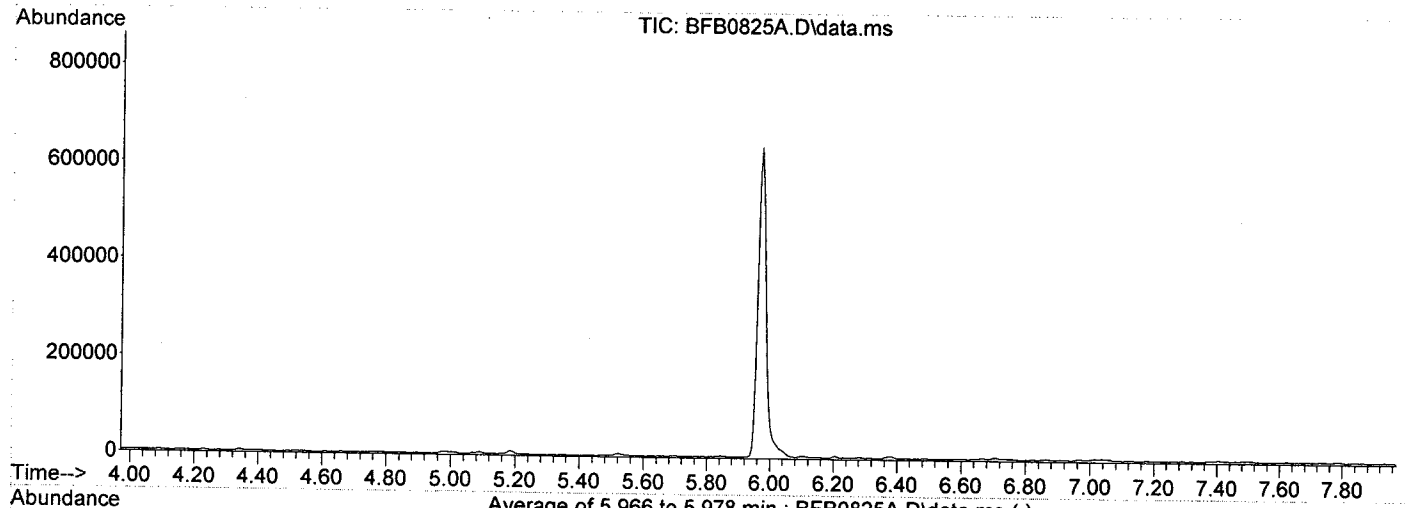
This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

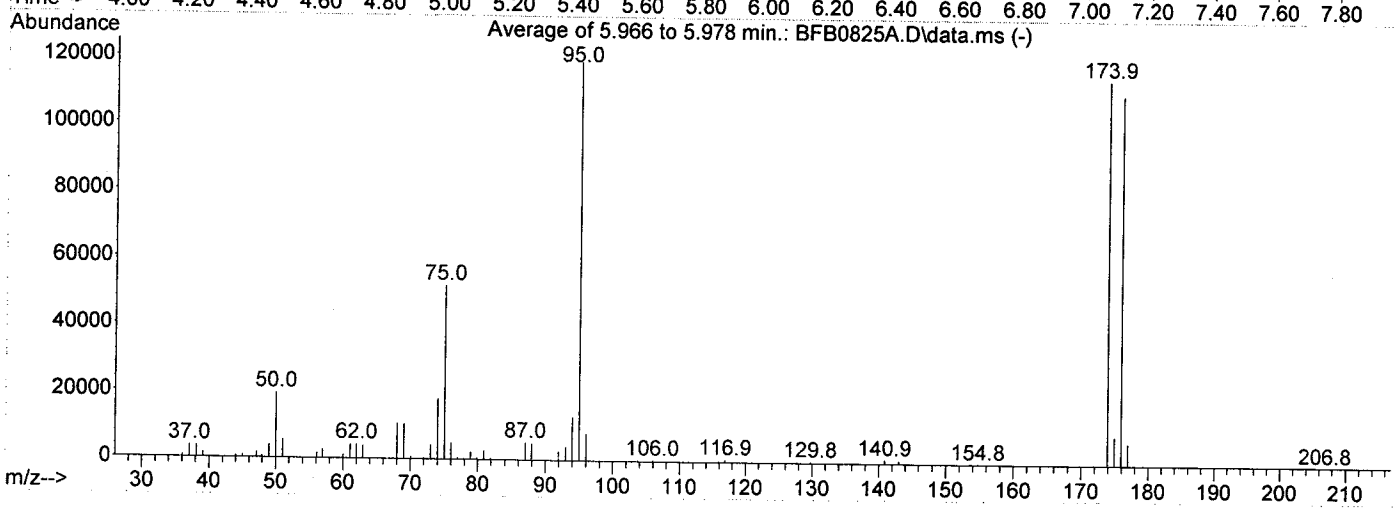
5560 Corporate Exchange Court SE ▲ Grand Rapids, MI 49512 ▲ Phone: 616.975.4500 ▲ Fax: 616.942.7463 ▲ www.trimatrixlabs.com

Data Path : C:\gcms\1\data\082515\
Data File : BFB0825A.D
Acq On : 25 Aug 2015 10:06
Operator : DLV
Sample : BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\gcms\1\methods\8260B-W51.M
Title : 8260B : 5030
Last Update : Tue Aug 25 14:50:08 2015





AutoFind: Scans 854, 855, 856; Background Corrected with Scan 845

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.3	19453	PASS
75	95	30	60	43.6	51976	PASS
95	95	100	100	100.0	119112	PASS
96	95	5	9	6.8	8045	PASS
173	174	0.00	2	0.2	286	PASS
174	95	50	100	96.4	114835	PASS
175	174	5	9	7.5	8670	PASS
176	174	95	101	96.1	110397	PASS
177	176	5	9	6.0	6667	PASS

BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	927	50.00	19453	65.20	202	77.85	576
37.05	3778	51.00	5653	66.90	420	78.90	2334
38.10	3693	51.95	302	68.00	10635	79.90	717
39.10	1667	54.75	208	69.00	10521	80.90	2761
40.00	42	56.10	1673	70.10	843	81.90	624
42.70	53	57.00	2771	72.00	622	87.00	5320
44.00	665	60.00	1168	73.00	4395	87.90	5105
45.00	991	61.05	4262	74.00	18101	90.30	61
47.10	1714	62.00	4395	75.00	51976	90.70	86
47.95	661	62.95	3938	76.00	4990	91.10	227
49.00	4122	63.85	321	76.95	551	91.95	2933

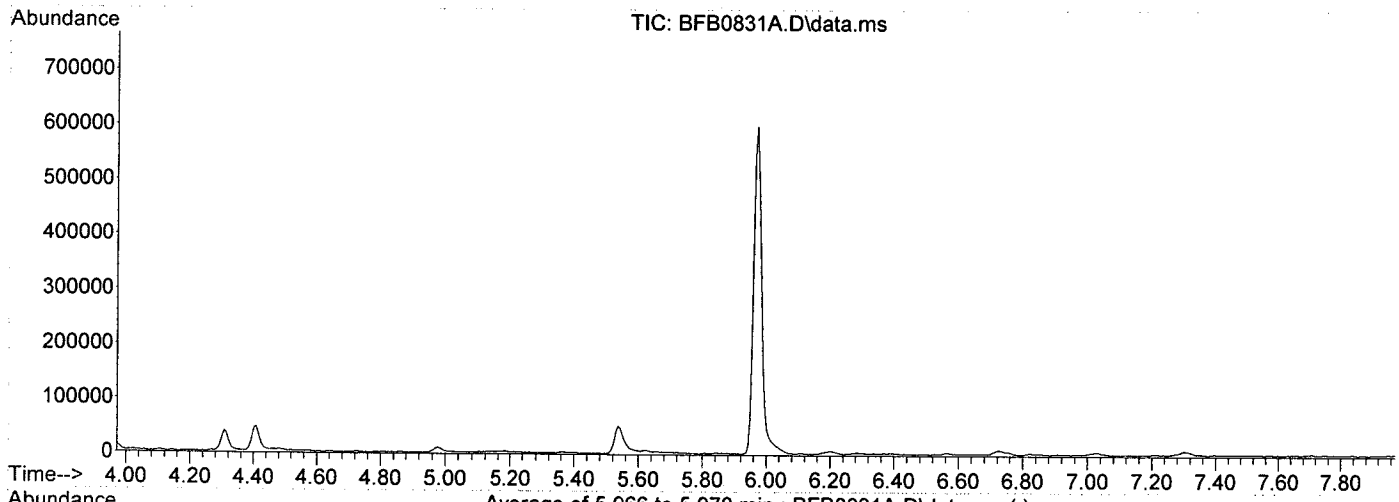
Average of 5.966 to 5.978 min.: BFB0825A.D\data.ms
BFB
Modified:subtracted

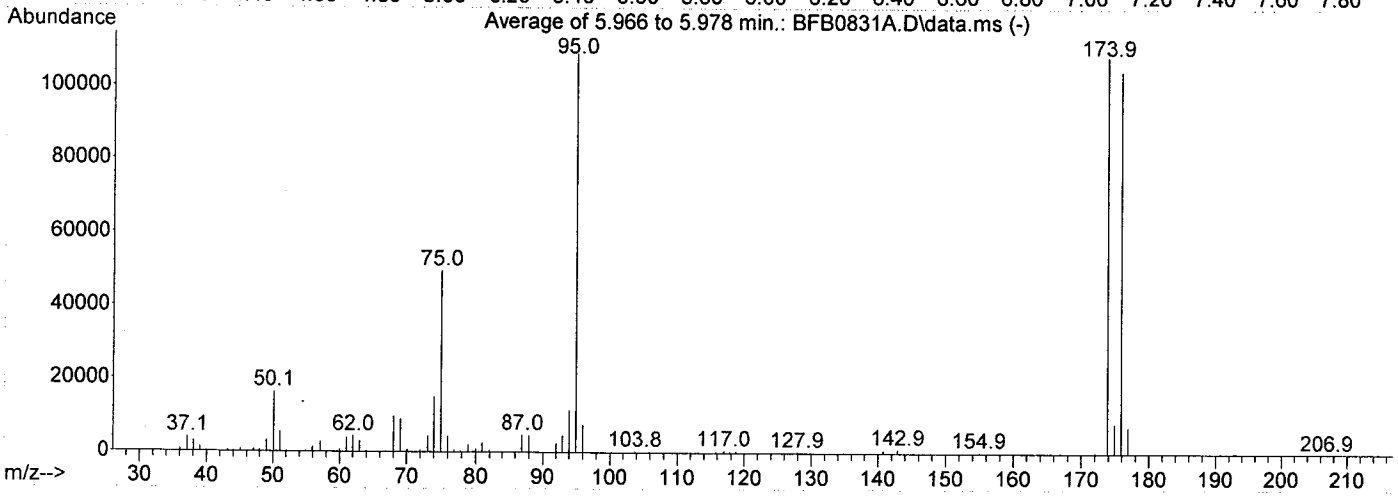
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	4211	117.80	125	139.60	104	172.80	286
94.00	13020	118.00	258	140.90	1258	173.90	114835
95.00	119112	118.80	371	143.00	1111	174.90	8670
96.00	8045	119.00	139	145.75	205	175.90	110397
97.10	264	127.75	468	147.80	310	176.90	6667
103.70	463	128.70	75	149.95	176	177.85	133
104.70	225	128.95	212	152.85	188	178.10	57
105.95	507	129.75	529	154.75	285	206.85	24
114.80	56	130.80	108	158.70	155		
115.90	344	134.85	278	160.90	196		
116.90	909	137.00	279	171.85	414		

Data Path : C:\gcms\1\data\083115\
Data File : BFB0831A.D
Acq On : 31 Aug 2015 08:46
Operator : DLV
Sample : BFB
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\gcms\1\methods\8260B-W52.M
Title : 8260B : 5030
Last Update : Wed Aug 26 08:11:00 2015





AutoFind: Scans 854, 855, 856; Background Corrected with Scan 846

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.1	16494	PASS
75	95	30	60	45.5	49704	PASS
95	95	100	100	100.0	109259	PASS
96	95	5	9	7.1	7766	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	99.4	108645	PASS
175	174	5	9	7.7	8333	PASS
176	174	95	101	96.4	104691	PASS
177	176	5	9	7.1	7419	PASS

FSW 9-1-15

BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	838	46.90	471	57.90	187	70.90	183
37.10	4092	47.10	843	60.00	884	71.20	81
38.05	3085	48.00	645	61.05	4123	72.00	590
39.00	1397	49.00	3206	62.00	4501	73.10	4420
39.90	317	50.10	16494	63.00	3118	74.00	15252
40.95	99	51.05	5578	63.95	369	75.00	49704
42.30	117	52.00	253	64.95	306	76.00	4494
43.15	497	52.90	122	66.85	334	76.95	741
44.00	400	54.90	350	68.00	9989	77.85	442
45.05	862	55.95	1401	69.00	9197	78.95	2183
45.90	53	57.10	2821	70.10	713	80.00	906

Average of 5.966 to 5.978 min.: BFB0831A.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
80.90	2565	96.00	7766	127.90	488	154.95	452
81.95	582	97.10	123	128.50	75	156.85	128
83.20	53	103.75	492	129.85	383	157.10	52
85.95	278	105.85	422	130.75	183	159.00	209
86.95	4828	106.85	123	134.75	289	160.80	52
88.00	4644	112.90	54	136.95	246	171.70	159
90.80	314	114.70	54	140.75	936	172.05	494
92.00	2597	115.75	439	142.90	1189	173.90	108645
93.00	4762	116.95	730	145.70	146	174.90	8333
94.00	11677	117.80	454	146.00	62	175.90	104691
95.00	109259	118.70	578	147.75	277	176.90	7419

Average of 5.966 to 5.978 min.: BFB0831A.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.90	171						
206.90	60						

00146

METHOD BLANK DATA SHEET
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc. SDG: 50069-43

Client: CH2M HILL - VA Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Matrix: Water Laboratory ID: 1509221-BLK1 File ID: BLK0831.D

Prepared: 08/31/15 07:00 Analyzed: 08/31/15 10:48

Preparation: 5030B Aqueous Purge & Initial/Final: 5 mL / 5 mL

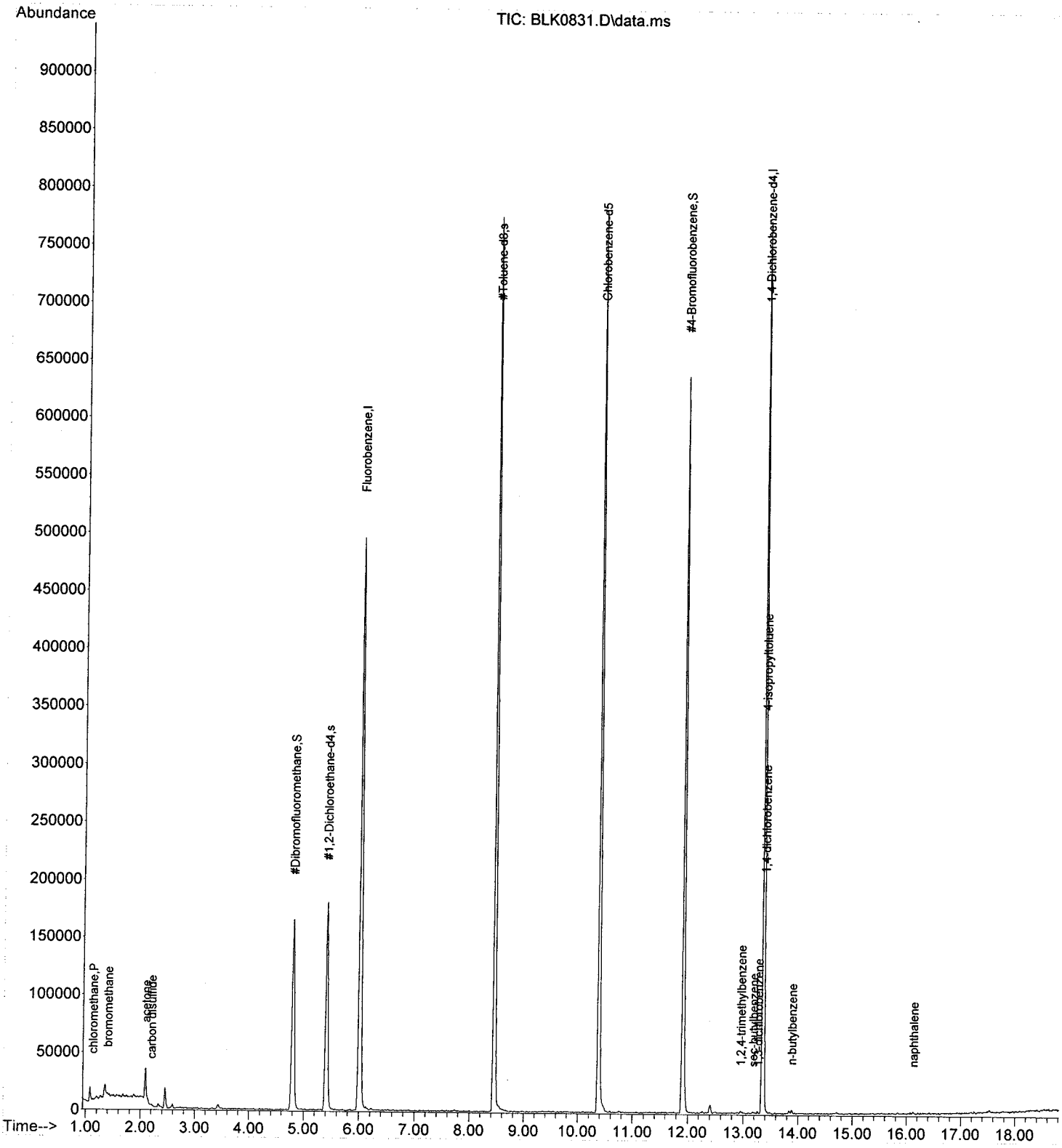
QC Batch: 1509221 Sequence: 5H31031 Calibration: 5H26013 Instrument: 350

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
91-20-3	Naphthalene	0.50	ug/L	0.20	0.50	5.0	U

System Monitoring Compound	Added (ug/L)	Conc. (ug/L)	% REC	QC Limits	Q
Dibromofluoromethane	40.0	39.0	97	85 - 115	
1,2-Dichloroethane-d4	40.0	39.3	98	70 - 120	
Toluene-d8	40.0	39.9	100	85 - 120	
4-Bromofluorobenzene	40.0	37.2	93	75 - 120	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
Fluorobenzene	668580	6.013	754057	6.013	
Chlorobenzene-d5	557789	10.377	622554	10.378	
1,4-Dichlorobenzene-d4	281974	13.354	329683	13.348	

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : BLK0831.D
Acq On : 31 Aug 2015 10:48
Operator : DLV
Sample : BLK
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Aug 31 11:10:57 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



8260B-W52.M Mon Aug 31 11:10:58 2015

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : BLK0831.D
Acq On : 31 Aug 2015 10:48
Operator : DLV
Sample : BLK
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Aug 31 11:10:57 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

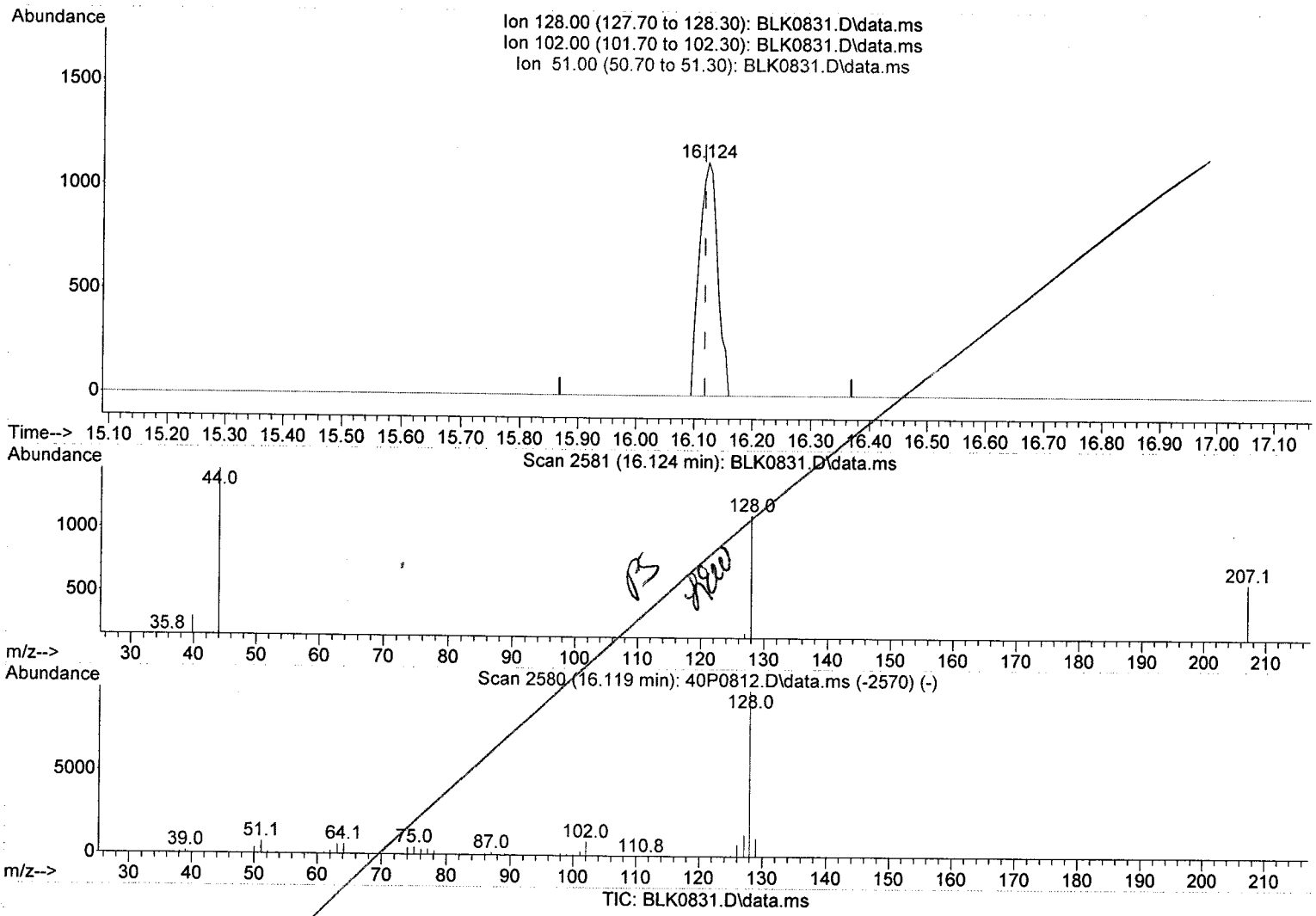
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	668580	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.377	117	557789	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	281974	40.00 ug/L	# 0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.801	111	161695	38.97 ug/L	0.00
Spiked Amount 40.000			Recovery	= 97.42%	
37) #1,2-Dichloroethane-d4	5.407	67	99705	39.32 ug/L	0.00
Spiked Amount 40.000			Recovery	= 98.30%	
46) #Toluene-d8	8.448	98	677537	39.86 ug/L	0.00
Spiked Amount 40.000			Recovery	= 99.65%	
64) #4-Bromofluorobenzene	11.907	95	255370	37.25 ug/L	0.00
Spiked Amount 40.000			Recovery	= 93.13%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.000		0	N.D.	
3) chloromethane	1.125	50	1555	PS ~~0.20~~ ug/L #	42
4) vinyl chloride	0.000		0	N.D.	
5) bromomethane	1.401	94	1553	0.35 ug/L	94
6) chloroethane	0.000		0	N.D.	
7) dichlorofluoromethane	0.000		0	N.D.	
8) trichlorofluoromethane	0.000		0	N.D.	
9) ethyl ether	0.000		0	N.D.	
10) acrolein	0.000		0	N.D.	
11) 1,1,2-trichloro-1,2,2-...	0.000		0	N.D.	
12) 1,1-dichloroethene	0.000		0	N.D.	
13) acetone	2.096	43	27899	3.44 ug/L	95
14) iodomethane	0.000		0	N.D.	
15) carbon disulfide	2.201	76	1435	0.11 ug/L #	73
16) methyl acetate	0.000		0	N.D.	
17) methylene chloride	2.454	49	9245	Below Cal	91
18) acrylonitrile	0.000		0	N.D.	
19) trans-1,2-dichloroethene	0.000		0	N.D.	
20) methyl (tert) butyl ether	0.000		0	N.D.	
21) 1,1-dichloroethane	0.000		0	N.D.	
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	0.000		0	N.D.	
24) cis-1,2-dichloroethene	0.000		0	N.D.	
25) 2-butanone (MEK)	0.000		0	N.D.	
26) bromochloromethane	0.000		0	N.D.	
27) tetrahydrofuran	0.000		0	N.D.	
28) chloroform	0.000		0	N.D.	
30) 1,1,1-trichloroethane	0.000		0	N.D.	
31) cyclohexane	0.000		0	N.D.	
32) carbon tetrachloride	0.000		0	N.D.	
33) 1,1-dichloropropene	0.000		0	N.D.	
34) benzene	0.000		0	N.D.	
35) 1,2-dichloroethane	0.000		0	N.D.	
36) heptane	0.000		0	N.D.	
38) trichloroethene	6.013	57	20791	No Calib #	
	0.000		0	N.D.	

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : BLK0831.D
Acq On : 31 Aug 2015 10:48
Operator : DLV
Sample : BLK
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Aug 31 11:10:57 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	0.000		0	N.D.	
40) 1,2-dichloropropane	0.000		0	N.D.	
41) dibromomethane	0.000		0	N.D.	
42) bromodichloromethane	0.000		0	N.D.	
43) 2-chloroethyl vinyl ether	0.000		0	N.D.	
44) cis-1,3-dichloropropene	0.000		0	N.D.	
45) 4-methyl-2-pentanone (...	8.448	43	1246	N.D.	
47) toluene	0.000		0	N.D.	
48) trans-1,3-dichloropropene	0.000		0	N.D.	
49) 1,1,2-trichloroethane	0.000		0	N.D.	
51) tetrachloroethene	0.000		0	N.D.	
52) 1,3-dichloropropane	0.000		0	N.D.	
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	0.000		0	N.D.	
55) 1,2-dibromoethane	0.000		0	N.D.	
56) chlorobenzene	0.000		0	N.D.	
57) 1-chlorohexane	0.000		0	N.D.	
58) 1,1,1,2-tetrachloroethane	0.000		0	N.D.	
59) ethylbenzene	0.000		0	N.D.	
60) m+p-xylene	0.000		0	N.D.	
61) o-xylene	0.000		0	N.D.	
62) styrene	0.000		0	N.D.	
63) bromoform	0.000		0	N.D.	
66) isopropylbenzene	0.000		0	N.D.	
67) bromobenzene	0.000		0	N.D.	
68) 1,1,2,2-tetrachloroethane	0.000		0	N.D.	
69) 1,2,3-trichloropropane	0.000		0	N.D.	
70) 1,4-dichloro-2-butene	0.000		0	N.D.	
71) n-propylbenzene	0.000		0	N.D.	
72) 2-chlorotoluene	0.000		0	N.D.	
73) 1,3,5-trimethylbenzene	0.000		0	N.D.	
74) 4-chlorotoluene	0.000		0	N.D.	
75) tert-butylbenzene	0.000		0	N.D.	
76) 1,2,4-trimethylbenzene	12.954	105	1879	0.10 ug/L #	30
77) sec-butylbenzene	13.177	105	1549	0.07 ug/L #	55
78) 1,3-dichlorobenzene	13.266	146	1216	0.10 ug/L #	25
79) 4-isopropyltoluene	13.371	119	1273	0.06 ug/L #	51
80) 1,4-dichlorobenzene	13.377	146	1361	0.11 ug/L #	1
81) 1,2-dichlorobenzene	0.000		0	N.D.	
82) n-butylbenzene	13.883	91	2560	0.17 ug/L #	32
83) hexachloroethane	0.000		0	N.D.	
84) 1,2-dibromo-3-chloropr...	0.000		0	N.D.	
85) 1,2,4-trichlorobenzene	0.000		0	N.D.	
86) hexachlorobutadiene	0.000		0	N.D.	
87) naphthalene	16.124	128	2419	PS ~~2.08~~ ug/L #	79
88) 1,2,3-trichlorobenzene	0.000		0	N.D.	
89) 2-methylnaphthalene	0.000		0	N.D.	

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

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : BLK0831.D
Acq On : 31 Aug 2015 10:48
Operator : DLV
Sample : BLK
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Aug 31 11:10:57 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



(87) naphthalene

16.124min (+ 0.005) 2.08 ug/L

response 2419

Ion	Exp%	Act%
128.00	100.00	100.00
102.00	7.80	0.00
51.00	6.70	0.00
0.00	0.00	0.00

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SWMU350-GW49-30-15C-1

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-MS1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

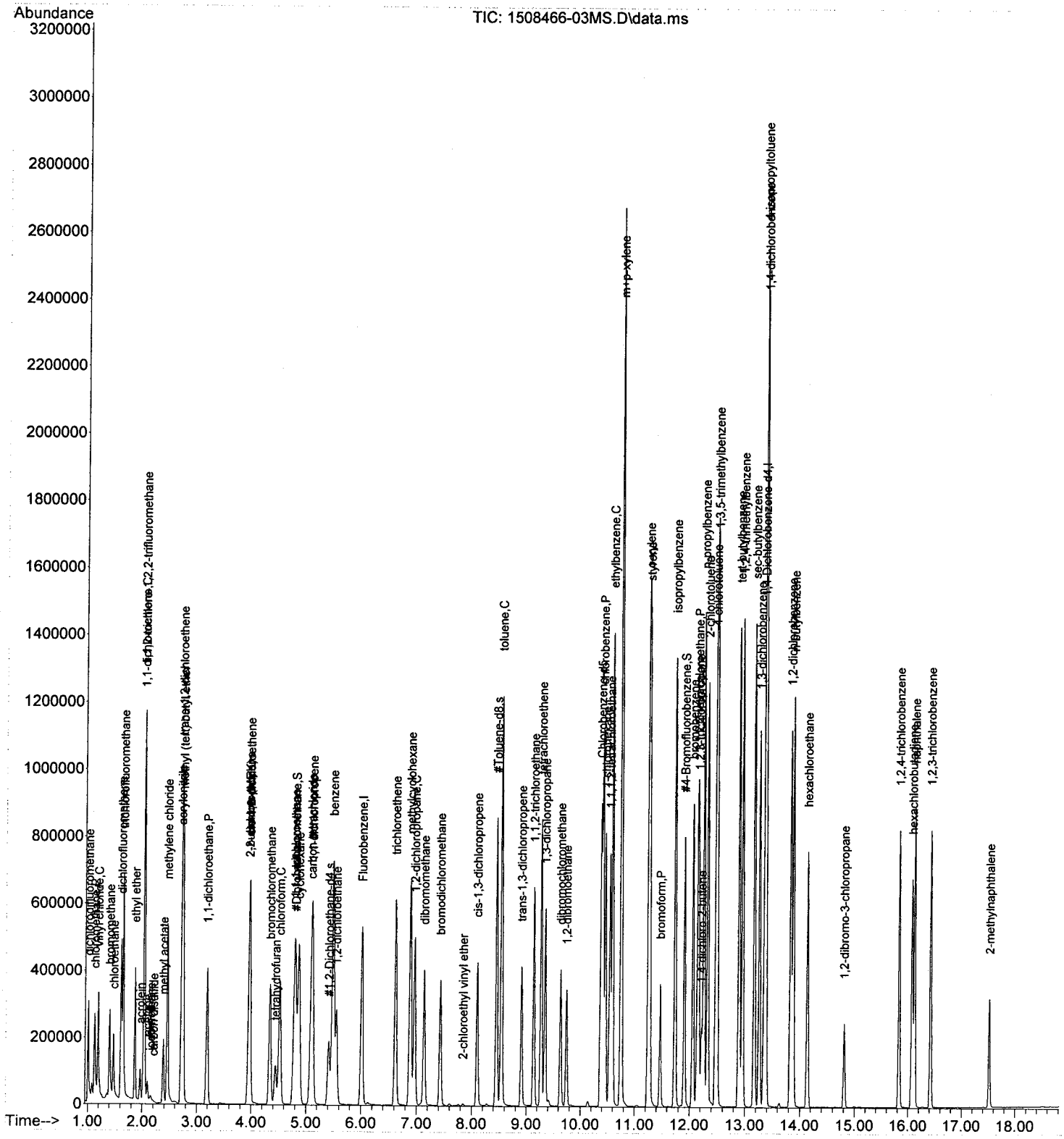
Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Naphthalene	40.0	ND	36.9	92	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03MS.D
Acq On : 31 Aug 2015 18:42
Operator : DLV
Sample : 1508466-03MS
Misc : CH2M HILL
ALS Vial : 25 Sample Multiplier: 1
Quant Time: Sep 01 06:54:28 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03MS.D
Acq On : 31 Aug 2015 18:42
Operator : DLV
Sample : 1508466-03MS
Misc : CH2M HILL
ALS Vial : 25 Sample Multiplier: 1
Quant Time: Sep 01 06:54:28 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	700844	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	606942	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.348	152	351818	40.00 ug/L	0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	193789	44.56 ug/L	0.00
Spiked Amount 40.000			Recovery	= 111.40%	
37) #1,2-Dichloroethane-d4	5.413	67	112173	42.20 ug/L	0.00
Spiked Amount 40.000			Recovery	= 105.50%	
46) #Toluene-d8	8.454	98	734679	41.23 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.07%	
64) #4-Bromofluorobenzene	11.907	95	308194	41.32 ug/L	0.00
Spiked Amount 40.000			Recovery	= 103.30%	
Target Compounds					Qvalue
2) dichlorodifluoromethane	1.008	85	280412	44.44 ug/L	97
3) chloromethane	1.125	50	317567	38.99 ug/L	100
4) vinyl chloride	1.190	62	302468	45.41 ug/L	100
5) bromomethane	1.402	94	175355	37.24 ug/L	99
6) chloroethane	1.472	64	154904	44.36 ug/L	98
7) dichlorofluoromethane	1.613	67	478762	45.27 ug/L	97
8) trichlorofluoromethane	1.649	101	420116	47.29 ug/L	100
9) ethyl ether	1.866	74	142652	42.04 ug/L	97
10) acrolein	1.966	56	67390	38.42 ug/L	98
11) 1,1,2-trichloro-1,2,2-...	2.037	101	199027	46.18 ug/L	99
12) 1,1-dichloroethene	2.031	96	236105	46.64 ug/L	98
13) acetone	2.096	43	32814	4.60 ug/L	97
14) iodomethane	2.155	142	25366	9.66 ug/L	96
15) carbon disulfide	2.202	76	1840	0.14 ug/L #	73
16) methyl acetate	2.384	43	227239	33.12 ug/L	98
17) methylene chloride	2.454	49	309127	41.94 ug/L	96
18) acrylonitrile	2.713	53	161969	40.74 ug/L	100
19) trans-1,2-dichloroethene	2.725	96	258982	45.44 ug/L	96
20) methyl (tert) butyl ether	2.743	73	682674	40.77 ug/L	100
21) 1,1-dichloroethane	3.190	63	443130	43.12 ug/L	99
22) vinyl acetate	0.000		0	N.D.	
23) 2,2-dichloropropane	3.960	77	241140	40.93 ug/L	98
24) cis-1,2-dichloroethene	3.972	96	284623	44.21 ug/L	95
25) 2-butanone (MEK)	3.960	43	7840	1.73 ug/L	96
26) bromochloromethane	4.343	49	219461	43.50 ug/L	96
27) tetrahydrofuran	4.443	71	48052	40.80 ug/L	94
28) chloroform	4.519	83	447782	44.15 ug/L	99
30) 1,1,1-trichloroethane	4.790	97	356973	45.31 ug/L	98
31) cyclohexane	4.866	56	363008	43.60 ug/L	100
32) carbon tetrachloride	5.096	117	318125	48.35 ug/L	98
33) 1,1-dichloropropene	5.113	75	338427	43.50 ug/L	99
34) benzene	5.490	78	1018465	44.00 ug/L	100
35) 1,2-dichloroethane	5.548	62	335344	42.63 ug/L	97
36) heptane	6.013	57	22733	No Calib	
38) trichloroethene	6.619	130	297153	43.94 ug/L	98

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03MS.D
Acq On : 31 Aug 2015 18:42
Operator : DLV
Sample : 1508466-03MS
Misc : CH2M HILL
ALS Vial : 25 Sample Multiplier: 1
Quant Time: Sep 01 06:54:28 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.890	83	381865	45.34 ug/L	98
40)	1,2-dichloropropane	6.966	63	264652	43.18 ug/L	100
41)	dibromomethane	7.137	93	177478	43.63 ug/L	96
42)	bromodichloromethane	7.431	83	311385	44.86 ug/L	99
43)	2-chloroethyl vinyl ether	7.842	63	6981	66.08 ug/L #	93
44)	cis-1,3-dichloropropene	8.101	75	312935	43.83 ug/L	98
45)	4-methyl-2-pentanone (...	8.448	43	1809	N.D.	
47)	toluene	8.542	91	1094796	43.58 ug/L	100
48)	trans-1,3-dichloropropene	8.907	75	284542	43.62 ug/L	99
49)	1,1,2-trichloroethane	9.136	83	220457	43.90 ug/L	98
51)	tetrachloroethene	9.278	166	342876	44.31 ug/L	100
52)	1,3-dichloropropane	9.348	76	436238	40.40 ug/L	99
53)	2-hexanone (MBK)	0.000		0	N.D.	
54)	dibromochloromethane	9.636	129	264052	43.25 ug/L	95
55)	1,2-dibromoethane	9.742	109	266823	41.99 ug/L #	100
56)	chlorobenzene	10.413	112	750566	41.54 ug/L	97
57)	1-chlorohexane	10.460	55	217089	42.30 ug/L	96
58)	1,1,1,2-tetrachloroethane	10.542	131	251808	43.04 ug/L	99
59)	ethylbenzene	10.595	91	1230718	42.87 ug/L	99
60)	m+p-xylene	10.754	106	963617	86.63 ug/L	99
61)	o-xylene	11.248	106	467231	43.56 ug/L	98
62)	styrene	11.272	104	734752	43.24 ug/L	99
63)	bromoform	11.472	173	209556	42.93 ug/L	98
66)	isopropylbenzene	11.742	105	1105315	39.41 ug/L	99
67)	bromobenzene	12.060	77	465931	37.27 ug/L	94
68)	1,1,2,2-tetrachloroethane	12.148	83	431005	41.54 ug/L #	97
69)	1,2,3-trichloropropane	12.166	110	134903	36.72 ug/L	96
70)	1,4-dichloro-2-butene	12.219	53	63704	33.46 ug/L	96
71)	n-propylbenzene	12.260	120	331475	41.20 ug/L	99
72)	2-chlorotoluene	12.330	126	311850	40.00 ug/L	98
73)	1,3,5-trimethylbenzene	12.501	105	995206	40.75 ug/L	98
74)	4-chlorotoluene	12.472	126	302586	39.61 ug/L	99
75)	tert-butylbenzene	12.895	119	873230	40.44 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	993113	40.44 ug/L	99
77)	sec-butylbenzene	13.172	105	1227884	41.55 ug/L	99
78)	1,3-dichlorobenzene	13.266	146	620574	40.26 ug/L	99
79)	4-isopropyltoluene	13.366	119	1020597	41.26 ug/L	99
80)	1,4-dichlorobenzene	13.377	146	603213	39.57 ug/L	100
81)	1,2-dichlorobenzene	13.830	146	608602	40.23 ug/L	99
82)	n-butylbenzene	13.877	91	819676	42.53 ug/L	99
83)	hexachloroethane	14.136	201	143989	43.02 ug/L	99
84)	1,2-dibromo-3-chloropr...	14.807	157	94181	37.86 ug/L	97
85)	1,2,4-trichlorobenzene	15.830	180	336723	35.81 ug/L	98
86)	hexachlorobutadiene	16.071	225	176581	41.06 ug/L	96
87)	naphthalene	16.118	128	856207	36.87 ug/L	99
88)	1,2,3-trichlorobenzene	16.418	180	338987	35.74 ug/L	99
89)	2-methylnaphthalene	17.524	142	203896	38.90 ug/L	96

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

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SWMU350-GW49-30-15C-1

USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.

Client: CH2M HILL - VA

Matrix: Water

QC Batch: 1509221

SDG: 50069-43

Project: 8012 CTO-WE2A Camp Lejeune SWMU 350

Laboratory ID: 1509221-MSD1

Preparation: 5030B Aqueous Purge & Trap

Initial/Final: 5 mL / 5 mL

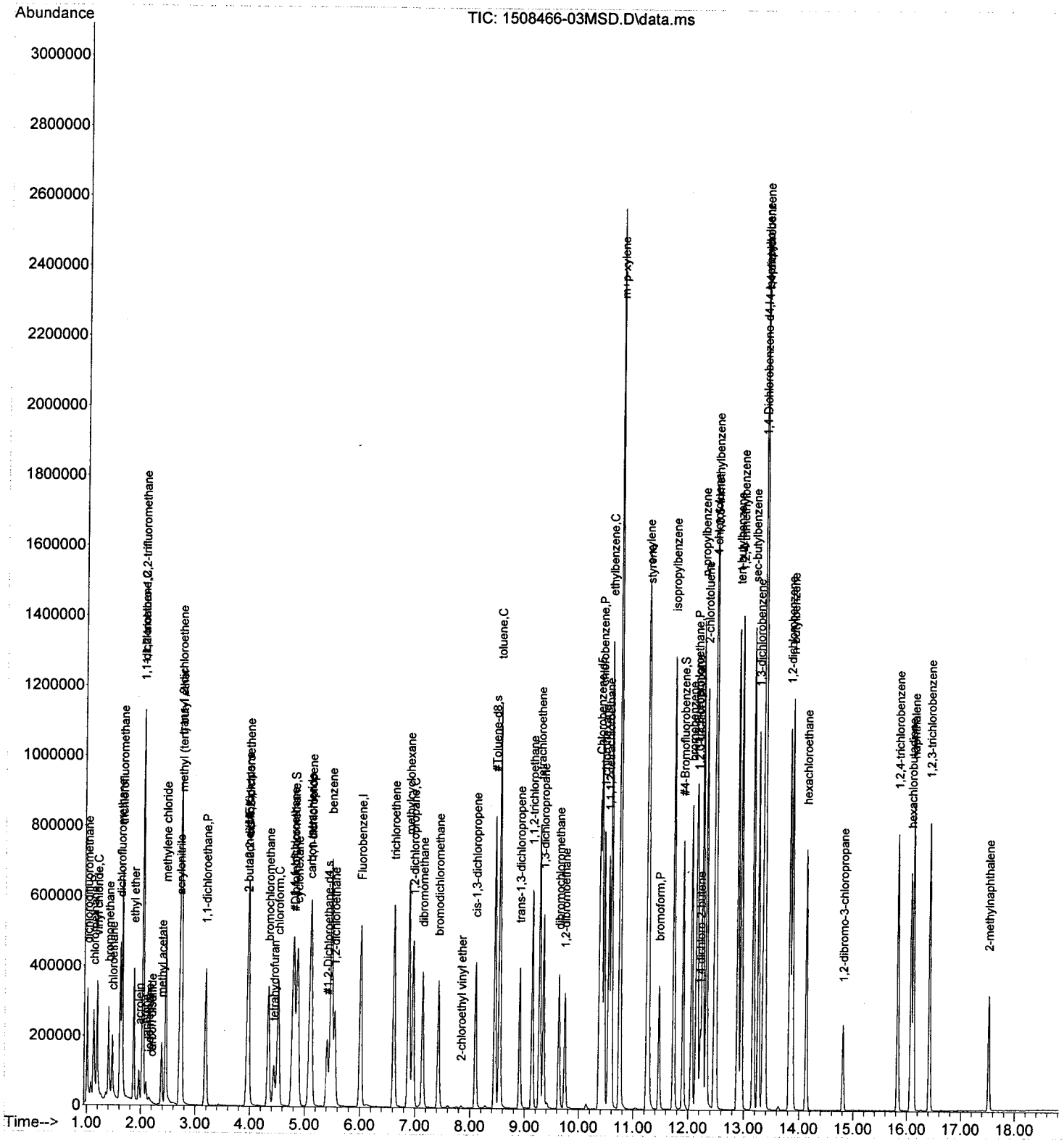
Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Naphthalene	40.0	38.1	95	3	30	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03MSD.D
Acq On : 31 Aug 2015 19:07
Operator : DLV
Sample : 1508466-03MSD
Misc : CH2M HILL
ALS Vial : 26 Sample Multiplier: 1
Quant Time: Sep 01 06:54:34 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03MSD.D
Acq On : 31 Aug 2015 19:07
Operator : DLV
Sample : 1508466-03MSD
Misc : CH2M HILL
ALS Vial : 26 Sample Multiplier: 1
Quant Time: Sep 01 06:54:34 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.013	96	687691	40.00	ug/L	0.00
50) Chlorobenzene-d5	10.378	117	599382	40.00	ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	337511	40.00	ug/L	0.00
System Monitoring Compounds						
29) #Dibromofluoromethane	4.807	111	189497	44.41	ug/L	0.00
Spiked Amount 40.000			Recovery	=	111.02%	
37) #1,2-Dichloroethane-d4	5.413	67	106892	40.98	ug/L	0.00
Spiked Amount 40.000			Recovery	=	102.45%	
46) #Toluene-d8	8.454	98	715849	40.94	ug/L	0.00
Spiked Amount 40.000			Recovery	=	102.35%	
64) #4-Bromofluorobenzene	11.907	95	296044	40.19	ug/L	0.00
Spiked Amount 40.000			Recovery	=	100.48%	
Target Compounds						Qvalue
2) dichlorodifluoromethane	1.007	85	312661	50.49	ug/L	99
3) chloromethane	1.125	50	324005	40.54	ug/L	98
4) vinyl chloride	1.190	62	318806	48.78	ug/L	96
5) bromomethane	1.402	94	175747	38.04	ug/L	99
6) chloroethane	1.472	64	153139	44.69	ug/L	98
7) dichlorofluoromethane	1.613	67	459749	44.31	ug/L	98
8) trichlorofluoromethane	1.649	101	412438	47.32	ug/L	99
9) ethyl ether	1.866	74	137865	41.40	ug/L	98
10) acrolein	1.966	56	65820	38.24	ug/L	99
11) 1,1,2-trichloro-1,2,2-...	2.037	101	192666	45.56	ug/L	99
12) 1,1-dichloroethene	2.031	96	225659	45.43	ug/L	98
13) acetone	2.096	43	31160	4.26	ug/L	96
14) iodomethane	2.154	142	21794	9.14	ug/L	99
15) carbon disulfide	2.201	76	1596	0.12	ug/L #	73
16) methyl acetate	2.384	43	206975	30.74	ug/L	96
17) methylene chloride	2.454	49	299237	41.35	ug/L	98
18) acrylonitrile	2.707	53	157810	40.46	ug/L	98
19) trans-1,2-dichloroethene	2.725	96	250381	44.77	ug/L	97
20) methyl (tert) butyl ether	2.743	73	654199	39.82	ug/L	98
21) 1,1-dichloroethane	3.190	63	425777	42.23	ug/L	100
22) vinyl acetate	0.000		0	N.D.		
23) 2,2-dichloropropane	3.960	77	232278	40.18	ug/L	100
24) cis-1,2-dichloroethene	3.972	96	272588	43.15	ug/L	95
25) 2-butanone (MEK)	3.954	43	6808	1.53	ug/L	77
26) bromochloromethane	4.343	49	205870	41.59	ug/L	92
27) tetrahydrofuran	4.443	71	44579	38.58	ug/L	99
28) chloroform	4.519	83	433724	43.58	ug/L	100
30) 1,1,1-trichloroethane	4.790	97	346453	44.81	ug/L	99
31) cyclohexane	4.866	56	349583	42.79	ug/L	99
32) carbon tetrachloride	5.095	117	300395	46.53	ug/L	100
33) 1,1-dichloropropene	5.113	75	331242	43.39	ug/L	100
34) benzene	5.484	78	985075	43.37	ug/L	99
35) 1,2-dichloroethane	5.548	62	315780	40.91	ug/L	99
36) heptane	6.013	57	21715	No Calib		
38) trichloroethene	6.619	130	278181	41.93	ug/L	99

Quantitation Report (Not Reviewed)

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : 1508466-03MSD.D
Acq On : 31 Aug 2015 19:07
Operator : DLV
Sample : 1508466-03MSD
Misc : CH2M HILL
ALS Vial : 26 Sample Multiplier: 1
Quant Time: Sep 01 06:54:34 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) methylcyclohexane	6.889	83	366920	44.40 ug/L	98
40) 1,2-dichloropropane	6.966	63	255088	42.41 ug/L	99
41) dibromomethane	7.137	93	171798	43.04 ug/L	96
42) bromodichloromethane	7.431	83	297365	43.66 ug/L	98
43) 2-chloroethyl vinyl ether	7.842	63	6293	60.71 ug/L #	97
44) cis-1,3-dichloropropene	8.101	75	304492	43.47 ug/L	98
45) 4-methyl-2-pentanone (...	0.000		0	N.D.	
47) toluene	8.542	91	1060501	43.02 ug/L	99
48) trans-1,3-dichloropropene	8.907	75	273290	42.69 ug/L	99
49) 1,1,2-trichloroethane	9.136	83	207206	42.05 ug/L	98
51) tetrachloroethene	9.278	166	319995	41.87 ug/L	100
52) 1,3-dichloropropane	9.348	76	413875	38.81 ug/L	100
53) 2-hexanone (MBK)	0.000		0	N.D.	
54) dibromochloromethane	9.636	129	247036	40.97 ug/L	99
55) 1,2-dibromoethane	9.742	109	251828	40.13 ug/L #	100
56) chlorobenzene	10.413	112	722549	40.49 ug/L	98
57) 1-chlorohexane	10.460	55	211055	41.64 ug/L	97
58) 1,1,1,2-tetrachloroethane	10.542	131	241836	41.86 ug/L	99
59) ethylbenzene	10.589	91	1176825	41.51 ug/L	100
60) m+p-xylene	10.754	106	917582	83.53 ug/L	100
61) o-xylene	11.248	106	441820	41.71 ug/L	100
62) styrene	11.272	104	709196	42.26 ug/L	99
63) bromoform	11.472	173	202894	42.08 ug/L	99
66) isopropylbenzene	11.736	105	1065948	39.61 ug/L	100
67) bromobenzene	12.060	77	449969	37.52 ug/L	94
68) 1,1,2,2-tetrachloroethane	12.148	83	411863	41.38 ug/L #	98
69) 1,2,3-trichloropropane	12.166	110	128799	36.55 ug/L	98
70) 1,4-dichloro-2-butene	12.219	53	63115	34.56 ug/L	100
71) n-propylbenzene	12.260	120	321076	41.60 ug/L	93
72) 2-chlorotoluene	12.330	126	297192	39.74 ug/L	96
73) 1,3,5-trimethylbenzene	12.501	105	966930	41.27 ug/L	99
74) 4-chlorotoluene	12.477	126	291260	39.74 ug/L	100
75) tert-butylbenzene	12.895	119	844570	40.77 ug/L	99
76) 1,2,4-trimethylbenzene	12.954	105	946946	40.19 ug/L	99
77) sec-butylbenzene	13.172	105	1192838	42.07 ug/L	100
78) 1,3-dichlorobenzene	13.260	146	596289	40.33 ug/L	99
79) 4-isopropyltoluene	13.366	119	997387	42.03 ug/L	100
80) 1,4-dichlorobenzene	13.377	146	579220	39.61 ug/L	99
81) 1,2-dichlorobenzene	13.830	146	577149	39.77 ug/L	100
82) n-butylbenzene	13.877	91	806950	43.64 ug/L	98
83) hexachloroethane	14.136	201	141030	43.93 ug/L	98
84) 1,2-dibromo-3-chloropr...	14.813	157	91297	38.25 ug/L	97
85) 1,2,4-trichlorobenzene	15.830	180	334224	36.93 ug/L	98
86) hexachlorobutadiene	16.071	225	177912	43.12 ug/L	99
87) naphthalene	16.118	128	853136	38.08 ug/L	99
88) 1,2,3-trichlorobenzene	16.418	180	336484	36.86 ug/L	98
89) 2-methylnaphthalene	17.518	142	202974	40.07 ug/L	99

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

LCS / LCS DUPLICATE RECOVERY
USEPA-8260B

Laboratory: TriMatrix Laboratories, Inc.
Client: CH2M HILL - VA
Matrix: Water

SDG: 50069-43
Project: 8012 CTO-WE2A Camp Lejeune SWMU 350
Laboratory ID: 1509221-BS1
Preparation: 5030B Aqueous Purge & Trap
Initial/Final: 5 mL / 5 mL

QC Batch: 1509221
Sequence: 5H31031

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Naphthalene	40.0	36.2	90	55 - 140	ug/L

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

```
InstName   : 350
Data Path  : C:\gcms\1\data\083115\
Data File  : BS0831.D
Acq On     : 31 Aug 2015  09:38
Operator   : DLV
Sample     : BS
Misc       :
ALS Vial   : 3   Sample Multiplier: 1
Quant Time: Aug 31 09:58:18 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title  : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration
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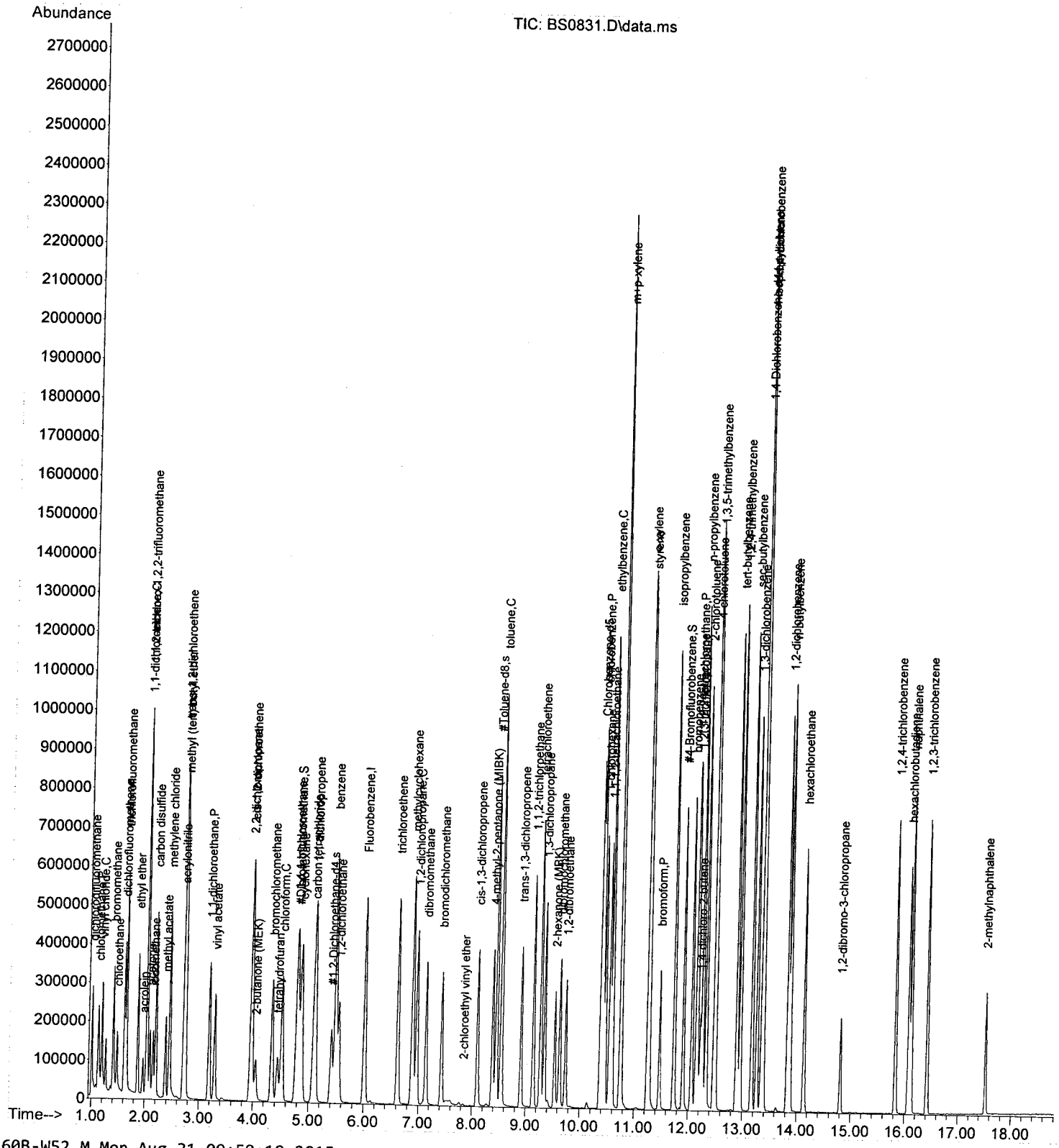

8260B-W52.M Mon Aug 31 09:58:19 2015

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : BS0831.D
Acq On : 31 Aug 2015 09:38
Operator : DLV
Sample : BS
Misc :
ALS Vial : 3 Sample Multiplier: 1
Quant Time: Aug 31 09:58:18 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.013	96	695695	40.00 ug/L	0.00
50) Chlorobenzene-d5	10.378	117	608012	40.00 ug/L	0.00
65) 1,4-Dichlorobenzene-d4	13.354	152	336738	40.00 ug/L	0.00
System Monitoring Compounds					
29) #Dibromofluoromethane	4.807	111	184165	42.66 ug/L	0.00
Spiked Amount 40.000			Recovery = 106.65%		
37) #1,2-Dichloroethane-d4	5.413	67	105237	39.88 ug/L	0.00
Spiked Amount 40.000			Recovery = 99.70%		
46) #Toluene-d8	8.454	98	726629	41.08 ug/L	0.00
Spiked Amount 40.000			Recovery = 102.70%		
64) #4-Bromofluorobenzene	11.907	95	293033	39.22 ug/L	0.00
Spiked Amount 40.000			Recovery = 98.05%		
Target Compounds					Qvalue
2) dichlorodifluoromethane	1.007	85	274428	43.81 ug/L	98
3) chloromethane	1.125	50	298290	36.89 ug/L	100
4) vinyl chloride	1.190	62	269617	40.78 ug/L	100
5) bromomethane	1.402	94	202907	43.41 ug/L	99
6) chloroethane	1.472	64	131759	38.01 ug/L	97
7) dichlorofluoromethane	1.613	67	409087	38.97 ug/L	99
8) trichlorofluoromethane	1.649	101	353037	40.03 ug/L	99
9) ethyl ether	1.866	74	131119	38.92 ug/L	98
10) acrolein	1.966	56	69634	39.98 ug/L	98
11) 1,1,2-trichloro-1,2,2-...	2.037	101	170249	39.80 ug/L	98
12) 1,1-dichloroethene	2.031	96	198303	39.46 ug/L	97
13) acetone	2.096	43	148074	42.29 ug/L	99
14) iodomethane	2.154	142	190708	37.17 ug/L	98
15) carbon disulfide	2.201	76	577378	43.08 ug/L	99
16) methyl acetate	2.384	43	243924	35.82 ug/L	98
17) methylene chloride	2.454	49	280580	38.18 ug/L	96
18) acrylonitrile	2.707	53	153659	38.94 ug/L	99
19) trans-1,2-dichloroethene	2.725	96	218067	38.54 ug/L	98
20) methyl (tert) butyl ether	2.743	73	639293	38.46 ug/L	100
21) 1,1-dichloroethane	3.190	63	393177	38.54 ug/L	97
22) vinyl acetate	3.290	43	457978	65.75 ug/L	99
23) 2,2-dichloropropane	3.960	77	247533	42.32 ug/L	99
24) cis-1,2-dichloroethene	3.972	96	251436	39.35 ug/L	94
25) 2-butanone (MEK)	4.043	43	172790	38.45 ug/L	99
26) bromochloromethane	4.343	49	189791	37.90 ug/L	92
27) tetrahydrofuran	4.443	71	46414	39.70 ug/L	91
28) chloroform	4.519	83	387698	38.51 ug/L	100
30) 1,1,1-trichloroethane	4.790	97	312842	40.00 ug/L	98
31) cyclohexane	4.866	56	313908	37.98 ug/L	99
32) carbon tetrachloride	5.090	117	272392	41.70 ug/L	100
33) 1,1-dichloropropene	5.113	75	292246	37.84 ug/L	99
34) benzene	5.484	78	888623	38.68 ug/L	99
35) 1,2-dichloroethane	5.548	62	304071	38.94 ug/L	98
36) heptane	6.013	57	22541	No Calib #	
38) trichloroethene	6.619	130	262445	39.10 ug/L	97

InstName : 350
Data Path : C:\gcms\1\data\083115\
Data File : BS0831.D
Acq On : 31 Aug 2015 09:38
Operator : DLV
Sample : BS
Misc :
ALS Vial : 3 Sample Multiplier: 1
Quant Time: Aug 31 09:58:18 2015
Quant Method : C:\gcms\1\methods\8260B-W52.M
Quant Title : 8260B : 5030
QLast Update : Wed Aug 26 08:11:00 2015
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39)	methylcyclohexane	6.889	83	331282	39.63 ug/L	97
40)	1,2-dichloropropane	6.966	63	237107	38.97 ug/L	100
41)	dibromomethane	7.137	93	161053	39.89 ug/L	97
42)	bromodichloromethane	7.431	83	287371	41.71 ug/L	98
43)	2-chloroethyl vinyl ether	7.842	63	4721	45.02 ug/L #	98
44)	cis-1,3-dichloropropene	8.101	75	303771	42.87 ug/L	98
45)	4-methyl-2-pentanone (...	8.384	43	329524	39.18 ug/L	96
47)	toluene	8.542	91	961580	38.56 ug/L	100
48)	trans-1,3-dichloropropene	8.907	75	280618	43.33 ug/L	98
49)	1,1,2-trichloroethane	9.136	83	199765	40.07 ug/L	97
51)	tetrachloroethene	9.272	166	302514	39.02 ug/L	99
52)	1,3-dichloropropane	9.348	76	393854	36.41 ug/L	100
53)	2-hexanone (MBK)	9.542	43	241134	36.81 ug/L	99
54)	dibromochloromethane	9.636	129	246833	40.36 ug/L	100
55)	1,2-dibromoethane	9.742	109	248230	39.00 ug/L #	100
56)	chlorobenzene	10.413	112	654221	36.14 ug/L	98
57)	1-chlorohexane	10.460	55	188839	36.73 ug/L	94
58)	1,1,1,2-tetrachloroethane	10.542	131	230220	39.28 ug/L	99
59)	ethylbenzene	10.589	91	1066885	37.10 ug/L	99
60)	m+p-xylene	10.754	106	834156	74.86 ug/L	100
61)	o-xylene	11.248	106	408777	38.04 ug/L	100
62)	styrene	11.272	104	671454	39.44 ug/L	97
63)	bromoform	11.472	173	204359	41.79 ug/L	99
66)	isopropylbenzene	11.736	105	957106	35.65 ug/L	100
67)	bromobenzene	12.060	77	413282	34.54 ug/L	94
68)	1,1,2,2-tetrachloroethane	12.148	83	395697	39.88 ug/L #	97
69)	1,2,3-trichloropropane	12.166	110	124606	35.44 ug/L	97
70)	1,4-dichloro-2-butene	12.219	53	66661	36.59 ug/L	96
71)	n-propylbenzene	12.260	120	295849	38.42 ug/L	94
72)	2-chlorotoluene	12.330	126	274564	36.79 ug/L	97
73)	1,3,5-trimethylbenzene	12.501	105	877649	37.55 ug/L	99
74)	4-chlorotoluene	12.472	126	271612	37.15 ug/L	97
75)	tert-butylbenzene	12.895	119	759446	36.75 ug/L	99
76)	1,2,4-trimethylbenzene	12.954	105	877171	37.32 ug/L	99
77)	sec-butylbenzene	13.171	105	1066617	37.71 ug/L	100
78)	1,3-dichlorobenzene	13.260	146	549225	37.23 ug/L	99
79)	4-isopropyltoluene	13.366	119	900492	38.04 ug/L	99
80)	1,4-dichlorobenzene	13.377	146	544570	37.33 ug/L	99
81)	1,2-dichlorobenzene	13.830	146	541530	37.40 ug/L	100
82)	n-butylbenzene	13.877	91	736368	39.92 ug/L	99
83)	hexachloroethane	14.136	201	126965	39.64 ug/L	96
84)	1,2-dibromo-3-chloropr...	14.807	157	93790	39.39 ug/L	97
85)	1,2,4-trichlorobenzene	15.830	180	307762	34.35 ug/L	98
86)	hexachlorobutadiene	16.071	225	166876	40.54 ug/L	98
87)	naphthalene	16.118	128	801396	36.17 ug/L	99
88)	1,2,3-trichlorobenzene	16.418	180	312551	34.55 ug/L	96
89)	2-methylnaphthalene	17.518	142	190654	38.18 ug/L	98

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

TRIMATRIX LABORATORIES

SECTION - C

PREPARATION LOGS / MISCELLANEOUS

USEPA-8260B

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TriMatrix Laboratories, Inc.

PREPARATION BATCH 1509221

Printed: 8/31/2015 12:05:17PM

Volatiles MS, Water, 5030B Aqueous Purge & Trap

Surrogate #1 = 5050783 (Static)

Batch Comments: (none)

Standard	Description	Solvent	LotNum
5050783	8260B Static Surrogate 04-24-15	MeOH 38701	CJ-0680a
5081236	8260 Working Standard B 08-26-1	MeOH 99494	NA

Work Order	Analysis	Work Order	Analysis	Work Order	Analysis
1508466	8260B TCL OLM 4.3 VOAs	1508466	8260B DoD VOAs plus custom	1508487	8260B TCL OLM 4.3 VOAs
1508500	8260B TCL OLM 4.3 VOAs				

Balance ID: none **pH Meter:** none

Lab Number	Contain	Prepared	By	Initial (mL)	Final (mL)	uL Surrogate	Source ID	Spike ID	uL Spike	Client / QC Type	Extraction Comments
1509221-BLK1		Aug-31-15 07:00	DLV	5	5	1				BLANK	
1509221-BS1		Aug-31-15 07:00	DLV	5	5	1		5081236	2	LCS	
1509221-MS1		Aug-31-15 07:00	DLV	5	5	1	1508466-03			MATRIX SPIKE	
1509221-MSD1		Aug-31-15 07:00	DLV	5	5	1	1508466-03			MATRIX SPIKE DUP	
1508466-01	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-02	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-03	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-03	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	Added for BatchQC in: 1509221
1508466-04	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-05	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-06	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-07	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-08	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-09	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-10	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508466-11	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL - VA	
1508487-03	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL/Portland	Wtr TB and Soil Low Level VOCs
1508500-03	A	Aug-31-15 07:00	DLV	5	5	1				CH2M HILL/Portland	Wtr TB and Soil Low Level VOCs

Comments:

Analyst Initials:

Volatiles MS, Water, Aug-31-15

Instrument = 350, Calibration = 5H26013

Sequence Analyses:
8260B DoD VOAs plus custom
8260B TCL OLM 4.3 VOAs

Lab Number	*Analysis*	*Contain*	*STD ID*	*ISTD ID*	*Client / QC Type*	*Extraction Comments*
5H31031-TUN1	QC		5061380	5080129	MS TUNE	
5H31031-CCV1	QC		5080798	5080129	CALIBRATION CHECK	
1509221-BS1	QC			5080129	LCS	
1509221-BLK1	QC			5080129	BLANK	
1508487-03	8260B TCL OLM 4.3 VOAs	A		5080129	CH2M HILL/Portland	Wtr TB and Soil Low Level VOCs
1508500-03	8260B TCL OLM 4.3 VOAs	A		5080129	CH2M HILL/Portland	Wtr TB and Soil Low Level VOCs
1508466-01	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-02	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-03	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-04	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-06	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-07	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-08	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-09	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-10	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-11	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1508466-05	8260B DoD VOAs plus custom	A		5080129	CH2M HILL - VA	
1509221-MS1	QC			5080129	MATRIX SPIKE	
1509221-MSD1	QC			5080129	MATRIX SPIKE DUP	

Comments:

Analyst Initials:

TRIMATRIX LABORATORIES

Instrument Number:	350	Acquisition Information		Temperature Program		Standard Information	
Column Type:	DB-624	Multiplier Voltage:		Step #1	40° C for 5 minutes	Curve Date:	8-25-15
Column Installation Date:	6/1/2013	Scan Range:	35-300	Step #2	12° C/minute to 200° C, hold for 0.5 minute	IS/SS Std.:	5080129
Injector Temperature:	200° C	Scan Rate:		Step #3		Working Std:	5081000
Detector Temperature:	230° C	Filament Delay:		Step #4		App. IX Std:	
Purge Flow (mL/min):		Quantitation Method:		Step #5		LCS Std:	5080959

Date	Analyst	Method	Standard Prep uL Used	Standard Prep Final Vol. (mL)	Comments	pH <2	Acquisition Time	Client	Sample ID	Dilution	Matrix
8-25-15	DLJ	8260B	25	50			10:02		BFB0825A		
							10:33		R1		
			1	200			10:58		0.5P0825		
			1	100			11:23		1P0825		
			5	1			11:48		5P0825		
			5	50			12:13		10P0825		
			10				12:37		20P0825		
			20				13:02		40P0825		
			50				13:27		100P0825		
							13:52		10ALOD		
							14:14		R2		
			100	50			14:39		200P0825		
							15:03		R3		
							15:29		R4		
			5	100			15:54		524SCV		
			20	50			16:19		SOV0825		
											DLJ 8/26/15

TRIMATRIX LABORATORIES

Instrument Number:	350	Acquisition Information		Temperature Program		Standard Information	
Column Type:	DB-624	Multiplier Voltage:		Step #1	40° C for 5 minutes	Curve Date:	8-25-15
Column Installation Date:	6/1/2013	Scan Range:	35-300	Step #2	12° C/minute to 200° C, hold for 0.5 minute	IS/SS Std.:	5080129
Injector Temperature:	200° C	Scan Rate:		Step #3		Working Std:	5081236
Detector Temperature:	230° C	Filament Delay:		Step #4		App. IX Std:	
Purge Flow (mL/min):		Quantitation Method:		Step #5		LCS Std:	

Date	Analyst	Method	Standard Prep uL Used	Standard Prep Final Vol. (mL)	Comments	pH <2	Acquisition Time	Client	Sample ID	Dilution	Matrix
8-31-15	DLV	8260B	25	50			8:46	QC	BFB0831A		
			20				9:13		CCV0831		
			20				9:38		BS0831		
							10:00		B1		
							10:22		B2		
							10:48		BLK0831		
						✓	11:12	[redacted]	1508487-03		
						✓	11:37		1508500-03		
						✓	12:02	[redacted]	1508455-08		
						✓	12:27	CH2M Hill	1508466-01		
						✓	12:52		02		
						✓	13:17		03		
						✓	13:42		04		
						✓	14:07		06		
						✓	14:32		07		
						✓	14:57		08		
						✓	15:22		09		
						✓	15:47		10		
						✓	16:12		11		
						✓	16:37		05		

TRIMATRIX LABORATORIES

Date	Analyst	Method	Standard Prep uL Used	Standard Prep Final Vol. (mL)	Comments	pH <2	Acquisition Time	Client	Sample ID	Dilution	Matrix
8-31-15	DLJ	8260B				✓	17:02	[redacted]	1508473-01		
						✓	17:27		02		
						✓	17:52		08		
						✓	18:17	[redacted]	1508505-01	20x	
							18:42	CH2M Hill	1508466-03MS		
							19:07		03MSD		
											DLJ 8-31-15

CH2M HILL - VA
8012 CTO-WE2A Camp Lejeune SWMU 350

END OF REPORT

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Individual sample results relate only to the sample tested.
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